

THE DYNAMIC NATURE OF VALUE: A LONGITUDINAL STUDY

Lesley Ledden

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ABSTRACT

Accepting the view that the marketing process is centred on exchange between two parties (Hunt, 2002), it follows that exchange will take place between two (or more) parties when each party trades something of value in return for something of greater value. Consequently the logical conclusion is that value is the cornerstone of marketing (see for example Eggert and Ulaga, 2002; Holbrook, 2005). Perceptions of value can vary over time and experience (Eggert and Ulaga, 2002; Woodall, 2003; Sánchez-Fernandez and Iniesta-Bonillo, 2007). However, even though the temporal nature of value is widely acknowledged, research in this area has been largely overlooked, and while there is limited investigation within the b2b domain (see Flint *et al.*, 2002; Beverland and Lockshin, 2003; Eggert *et al.*, 2006) a literature search has been unable to identify any research that examines actual changes in perceptions of value within consumer research. Consequently, the aim of this study is to empirically examine the temporal stability (i.e., the nature and strength) of the functional relationships between value and its antecedents and outcomes.

In order to address the above aim a theoretically grounded model is proposed. Based on common acceptance among researchers (see review by Woodall, 2003) value is conceptualised as the result of a 'trade-off' between benefits (*get*) and sacrifices (*give*). However, instead of treating value as a composite higher order construct the behaviours of its two components (*get* and *give*) with the following constructs are examined separately: service quality and personal values (terminal and instrumental) are modelled as determinants while satisfaction and intention are the outcomes of value. In addition the impact of knowledge (cognitive; Woodruff, 1997) and emotions (affective; Richins, 1997) as direct determinants of value and additionally as moderators of the value to satisfaction relationship is tested.

The research was conducted within the Higher Education sector among consumers of postgraduate education at a London business school. To test the temporal stability and pattern of development of the functional relationships between the value components and their above defined nomologically related constructs, related data were collected longitudinally from two sample of cohorts at three points in time (i.e., the beginning, middle and end of their studies) via a personally (Times 1 and 2) and internet (Time 3) administered questionnaire. A total of 34 and 45 usable responses were collected from Cohorts 1 and 2 respectively over the three time points. The data were analysed using Partial Least Squares.

Analysis indicates that the *give* component of value should be separated into money, and time and effort (denoted in this study as *give*). There is support for knowledge and emotions as direct determinants of the now three value components rather than as moderators of the relationships between these components and satisfaction. Comparisons between the two cohorts reveal the existence of a number of significant differences in the relative strength of corresponding relationships. Finally, in terms of the focal interest of this study, there is substantial evidence of the temporal nature of the functional relationships of the value components. Four of the hypothesised relationships are supported only at a single time point, while a number of significant changes in the strength of the functional relationships between the three points in time are identified.

The research is considered to make the following contributions to the subject matter. It confirms the idiosyncratic nature of the value components in terms of their functional relationship with antecedents and consequences. It highlights the need to consider the location of monetary sacrifice within the *give* component. The existence of a time lag before some determinants have a significant impact on the formation of value is identified. There is tentative evidence to suggest that as consumption progresses, value is formed by a larger number of determinants. For the *get* component, significant variations in the strength of its functional relationships over time are found to exist.

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PART A: INTRODUCTION

The opening part of the thesis comprises a single chapter, Chapter A1, which briefly sets out the theoretical underpinnings of the study together with the research aim and objectives. The expected contributions of the study, methodological considerations and the limitations of the research are also discussed.

CHAPTER A1: INTRODUCTION

A1.1 AIM AND SCOPE OF THE CHAPTER

The aim of this chapter is to present an overview of the present research. It begins by discussing the background and domain of the research and introducing the study's focal construct of interest, namely consumer perceived value. The value construct in relation to the education domain is briefly discussed in order to contextualise the present research. Issues in value research are highlighted, and the focus of this thesis is explained and rationalised. The study's aim and objectives are advanced, the research design employed in the research is briefly outlined and the limitations are stated. Finally, the structure of the thesis is explained.

A1.2 BACKGROUND AND DOMAIN OF THE RESEARCH

The departure point of this research is the premise that as value is at the centre of exchange, value is thus the cornerstone of marketing. According to Molm *et al.* (2001:164), "no concept is more fundamental to exchange theory than value". The exchange theory paradigm emanates from the sociology discipline and although it is not considered synonymous with marketing theory (Blois, 2003), Bagozzi (1975) in his seminal work argues that it provides a useful framework for conceptualising marketing behaviour. Bagozzi (1975:32) further argues that marketing "...is a special case of exchange theory" that is predicated on the notion of *quid pro quo*, i.e. "...something of value in exchange for something of value" (1975:33). The exchange axiom has been the subject of considerable discourse by academics (e.g., Luck, 1969; Kotler and Levy, 1969; Bagozzi, 1975; Houston and Gassenheimer, 1987; Parvatiyar and Sheth, 1994) and in the process it has evolved from a narrow economic definition specifying a dyadic market transaction in which physical goods are directly exchanged for money, to a wider view as a social process between two or more actors who may or may not interact directly, and where the exchange may embrace tangible and intangible offerings by businesses and non-profit organisations (Hunt, 2002). Presently, and despite postmodernist dissent (e.g., Brown, 1999), the concept of exchange is commonly accepted as the foundation of normative marketing theory (Kotler and Levy, 1969; Hunt, 1991; Payne and Holt, 2001).

The above position is clearly articulated by Holbrook (2005:46) who contends that "...if we accept the Kotlerian definition of marketing as managerial activities that lead toward the facilitation and consummation of exchanges, and if we follow Kotler

and Levy in regarding an exchange as a trading relationship between two parties in which each gives up something of value in return for something of greater value, it follows immediately that customer value is the basic foundation for everything we do in marketing.” Although this view limits exchange to a dyadic relationship, it is accepted by many authors, for example Eggert and Ulaga (2002:107) who argue that “...the value concept is closely linked to the exchange theory of marketing”; thus, since voluntary market exchange centres on the idea that both buyer and seller expect to be better off after the exchange, value is located at the core of marketing. Similarly, Baker *et al.* (2003) summarise that as customer value is realised through the marketing exchange mechanism, it is therefore value that is at the heart of marketing.

Value as a marketing philosophy is further articulated by Webster (2002:76) who observes the integrative properties of value when stating: “Customer value is the intellectual linking mechanism bringing together views of marketing as culture, strategy and tactics”. Moreover, creating superior customer value is considered to be a powerful strategy for organisations to gain and sustain competitive advantage (Sheth *et al.*, 1991; Woodruff, 1997; Patterson and Spreng, 1997; Lindgreen and Wynstra, 2005) and can assist in the allocation of resources when designing and delivering services (Cronin *et al.*, 2000).

More recently, value is viewed as a key building block in the arguments presented by scholars who advocate a service-dominant logic in marketing, in which the focus of exchange is the process itself (and not the thing being exchanged) and the emphasis shifts from the producer to the consumer as the co-creator of value (Vargo and Lusch, 2004). Still further evidence of value’s ascendancy appeared in 2008 when the American Marketing Association updated its definition of marketing to acknowledge value’s central position: “Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large”.

From the above debate it is clear that value currently occupies a pre-eminent position in the marketing domain. This leads to the conclusion that there is a compelling case for the importance of research into the value construct, a proposition that is supported by the Marketing Science Institute’s inclusion of value on its list of research priorities for 2006-2008 (Sánchez-Fernández and Iniesta-Bonillo, 2007).

A1.2.1 Scope of extant research

In terms of the scope of extant research, value is mainly investigated in three broad and sometimes overlapping areas, i.e. marketing strategy, which focuses on value creation for competitive advantage (Slater and Narver, 1994; Cronin *et al.*, 2000; Slater and Narver, 2000; Webster, 2002), the business-to-business (b2b) domain and the business-to-consumer (b2c) domain. The dominant stream of b2b research addresses value primarily from the perspective of relationship value and networking (Flint *et al.*, 1997, 2002; Sirdeshmukh *et al.*, 2002; Möller and Törrönen, 2003; Ulaga and Eggert, 2005). The present study is located in the b2c domain, where research mainly focuses on proposing and validating conceptualisations and typologies of value (e.g., Sheth *et al.*, 1991; Holbrook, 1994; Babin *et al.*, 1994; Lai, 1995; Mathwick *et al.*, 2001; Sweeney and Soutar, 2001; Petrick, 2002; Roig *et al.*, 2006; Ruiz *et al.*, 2008), assessing the relative strength of individual dimensions of value (e.g., LeBlanc and Nguyen, 1999; Bourdeau *et al.*, 2002; Stafford, 1994; Sánchez-Fernández *et al.*, 2009) and investigating value's antecedent and outcome relationships (e.g. Bolton and Drew, 1991; McDougall and Levesque, 2000; Sweeney *et al.*, 1999; Chen and Dubinsky, 2003; Ledden *et al.*, 2007; Hsu, 2008).

Research in the b2c domain is concerned with the notion of consumer value, which considers "...what consumers want and believe they get from buying and using a seller's product" (Woodruff, 1997:140). Consumer value is something that is perceived by consumers rather than being objectively determined by the seller (Woodruff, 1997; Khalifa, 2004); indeed, the perceptual nature of consumer value is its most widely accepted characteristic (Woodruff, 1997; Day and Crask, 2000; Khalifa 2004). Woodall (2003:1) noted that researchers have given the concept a range of names, for example *customer value*, *consumer value*, *perceived value*, *customer perceived value*. He defined the expression *value for the customer* as an overarching term that captures the concept of value as something that is "...perceived/derived/experienced by a customer and which explains their [...] connection to a particular good or service". The present study centres on the notion of customer perceived value within the field of consumer research, thus it is located in the b2c domain.

A1.2.2 Value in the educational domain

Value can be viewed as having particular relevance in the educational domain from two perspectives. In the first, value has recently emerged as an important foundation for the dissemination of marketing theory and knowledge with the

appearance of higher education marketing management textbooks structured around the core theme of value (Styles, 2004; Dubois *et al.*, 2007). Furthermore, value is currently part of the curricula of undergraduate and MBA courses that aim to focus students' learning on concepts that are fundamental to marketing (Smart *et al.*, 1999; Baker *et al.*, 2003).

The second perspective of value in the educational domain considers the education experience itself as the object of consumption, where consumption takes place within a services context and the student is the consumer of education. The first principles of this perspective can be found in Lovelock's (1983:10) seminal taxonomy of the nature of services, which classifies education as a service that provides "intangible actions directed at people's minds", thus supporting the legitimacy of education as a service domain. The literature evidences clear recognition of the importance of value in the consumption of education; firstly, from the standpoint of the institution, there is an increased realisation among educators that value can offer the means by which to evaluate and tailor educational offerings that both optimise the learning experience (Hannaford *et al.*, 2005; Unni, 2005) and deliver higher student satisfaction (Stafford, 1994; LeBlanc and Nguyen, 1999; Ledden *et al.*, 2007; Ledden and Kalafatis, 2009).

Leading from the above, Maringe (2006) contends that, in the climate of increased competition among HE providers, there is a growing imperative for educators to understand the choice and decision-making process among applicants. Maringe (2006:467) goes on to argue that the introduction of student fees "may result in greater consumerist behaviour by applicants", wherein an applicant's judgment of 'value for money' could significantly influence his or her choice of institution. Following this argument, from the standpoint of the student the literature provides evidence that students' perceptions of value underpin not only their decision making process in terms of their choice of institution at which to study (Stafford, 1994; Fisher *et al.*, 2007), but also their evaluative assessment of the education provision received (Hannaford *et al.*, 2005; Unni, 2005) and consequently their sense of satisfaction with it (Ledden *et al.*, 2007; Ledden and Kalafatis, 2009).

The above debate demonstrates the importance and relevance of value in the educational domain, not only as a subject in the curricula of marketing education, but more importantly in terms of salience to the present study as a driver of students' decision making in terms of choice of institution and as a significant influencer of students' feelings of satisfaction with their educational provision. Consequently, the debate in this section provides a rationale and justification for the implementation of the present research in the educational domain.

A1.2.3 Summary and conclusion

In conclusion, the central position of value in marketing legitimises its primacy as a topic for research. While extant research is located in the marketing strategy, b2c and b2b domains, this study centres on the notion of customer perceived value within the field of consumer research, thus it is located in the b2c domain. The particular area in which this study is focused is the educational sector, which is classified as part of the wider services domain. Moreover, the important role that value has in influencing students' decision-making processes in terms of choice of institution as well as their evaluation of the education experience justifies the selection of education as an appropriate context in which to investigate the consumer value construct.

A1.3 ISSUES IN VALUE RESEARCH

Despite the above-debated pivotal position of value, the literature demonstrates a lack of convergence as to its definition, conceptualisation and operationalisation (Day and Crask, 2000; Woodall, 2003). Moreover, there are problems in differentiating it from the concepts of values, quality and satisfaction (Day and Crask, 2000; Sánchez-Fernández and Iniesta-Bonillo, 2007). Despite the abstract and polysemic nature of the construct (Gallarza and Saura, 2006), there is some consensus as to value's key characteristics; in particular authors accept that value perceptions: (a) are the result of an interaction between a subject, i.e. the consumer, and some object, i.e. a product, service or experience (Holbrook, 1994; Payne and Holt, 2001); (b) vary across different situations and the type of offering under consideration (Zeithaml, 1988; Grönroos, 1997); (c) are relative to existing competition (Butz and Goodstein, 1996; Holbrook, 1999); (d) are personal and idiosyncratic and depend on customer characteristics (Bolton and Drew, 1991; Brady and Robertson, 1999); and (e) vary across time and stages of a consumer's interaction with an object (Parasuraman, 1997; Woodruff, 1997; Patterson and Spreng, 1997; Chen and Dubinsky, 2003; Woodall, 2003; Khalifa, 2004; Smith and Colgate, 2007). The above debate demonstrates areas of convergence and divergence within the value literature, and those that have particular relevance to this study are briefly debated below.

A1.3.1 Definition of value

Although researchers are unable to agree on a single, unified definition of value (Chapter B1 offers a full discussion regarding various authors' attempts to articulate

a clear definition), an early and still widely quoted definition is provided by Zeithaml (1988:14) who states:

“Perceived value is the consumer’s overall assessment of the utility of a product based on perceptions of what is received and what is given. Though what is received varies across consumers (i.e., some may want volume, others high quality, still others convenience) and what is given varies (i.e., some are concerned only with money expended, others with time and effort), value represents a trade-off of the salient give and get components.”

This leads to the notion of value as a composite of the ‘give’ and ‘get’ components, which has received wide acceptance amongst researchers across the b2c and b2b domains (e.g., Bolton and Drew, 1991; Cronin *et al.*, 1997; Patterson and Spreng, 1997; McDougall and Levesque, 2000; Parasuraman and Grewal, 2000; Eggert and Ulaga, 2002; Kleijnen *et al.*, 2007). ‘Get’ describes the benefits/utility received through the purchase or consumption of some good or service, encompassing both its core, intrinsic attributes/benefits (e.g. functionality) as well as extrinsic aspects related to its purchase/ownership and consumption/use (e.g. prestige). ‘Give’ represents the sacrifice that consumers are prepared to make in order to obtain the offering, encompassing both monetary costs (e.g., the price paid) and non-monetary costs (e.g., time and/or effort spent in its acquisition). Value is thus perceived as the outcome of the ‘give-get’ trade-off. This definition represents an important departure point for the present study and is adopted by the author as the basis for the conceptual framework (Chapter C1). The author asks the reader to note that, from this point forward, the words ‘give’ and ‘get’ are italicised (in-text, but not in tables) when used to distinguish the components of value in order to clarify meaning.

A1.3.2 Conceptualisations of value

There is continuing debate regarding the conceptualisation of value as a uni-dimensional construct, whether measured by a single item or a multiple set of items (e.g., Dodds *et al.*, 1999; Sweeney *et al.* 1999; Cronin *et al.* 2000; Oh, 2003) or as a composite of multiple dimensions (Sheth *et al.*, 1991a,b; Holbrook, 1999; Sánchez *et al.*, 2006). Furthermore, there is increasing evidence of value as a multifaceted higher order factor of lower order constructs, each comprising a set of distinct dimensions (Lin *et al.*, 2005; Ledden *et al.*, 2007; Ruiz *et al.*, 2008). Some researchers, however, treat sacrifice as an antecedent rather than a part of value (e.g., Dodds *et al.*, 1991; Cronin *et al.*, 1997; Teas and Agarwal, 2000) while still others omit to include aspects of sacrifice (e.g., de Ruyter *et al.*, 1997; Long and Schiffman 2000; Bourdeau *et al.*, 2002; Jones *et al.*, 2006). These conceptualisations are inconsistent with definitions of value that clearly specify

sacrifice as a component of value rather than a determinant, e.g. Zeithaml (1988), McDougall and Levesque (2000) and Woodall (2003).

Based on Zeithaml's (1988) definition as briefly outlined in Section A1.3.1, the contention in the present research is that value is a composite of the *give* and *get* components, which are themselves multi-dimensional higher order constructs of their respective dimensions (a full discussion is offered in Chapter C1).

A1.3.3 Distinguishing value from other constructs

Value's loose definition has led to the term being used interchangeably and therefore confusingly with concepts such as satisfaction, quality and values (Day and Crask, 2000; Payne and Holt, 2001; Woodall, 2003), particularly the personal values that represent an individual's enduring beliefs that guide their behaviour in life, such as beliefs of right and wrong (e.g., Rokeach, 1968; Vinson *et al.*, 1977a,b). According to Rokeach (1968:550), personal values are defined thus:

"Values have to do with modes of conduct and end-states of existence. More formally, to say that a person 'has a value' is to say that he has an enduring belief that a particular mode of conduct or that a particular end-state of existence is personally and socially preferable to alternative modes of conduct or end-states of existence".

The confusion between value and values is explained and to some extent exacerbated by language, explicitly the pluralisation of the word 'value', which is something that is noted by authors such as Payne and Holt (2001) and Woodall (2003). Holbrook (1994) makes an important distinction between value in the singular and values in the plural by defining the former as a preference judgment and the latter as the criteria by which such preference judgments are made; thus, value is related to, but distinct from, the concept of values. Consumers' value perceptions are therefore influenced by the (personal) values they hold.

Oliver (1996:143) recognises that though value and personal values can be linked (for example end states of enjoyment can be obtained through the consumption of some object) there is an important distinction between the two: "...the value derived from consumption does not share a one-to-one overlap with values desired by individuals in general [...] personal values reflect desirable end states in life sought by all individuals". Personal values are influencers of purchase decisions (Lai, 1995; Day and Crask, 2000; Long and Schiffman, 2000; Lages and Fernandes, 2005) and related research found personal values to be a significant determinant of consumer value (Ledden *et al.*, 2007).

According to Sánchez-Fernández and Iniesta-Bonillo (2007) a conceptual confusion between quality and value arises because both are personal, subjective and context-specific evaluative judgements. Nonetheless, there is empirical evidence in both the b2c and b2b domains that product or service quality is a discrete construct and a significant determinant of value (see for example Cronin *et al.*, 1997; Patterson and Spreng, 1997; Brady and Robertson, 1999; Lapierre *et al.*, 1999; Sweeney *et al.*, 1999; Teas and Agarwal, 2000; Agarwal and Teas, 2001; Chen and Dubinsky, 2003; Spiteri and Dion, 2004; Kumar and Grisaffe, 2004). Some authors, however, contend that quality is sub-component of overall value perceptions (Holbrook, 1999; Sweeney and Soutar, 2001; Petrick, 2002), something that is explored in detail as part of the literature review in Chapters B2 and B3.

Moving lastly to the distinction between value and satisfaction, Eggert and Ulaga (2002:110) outline an important difference between value as a "...cognitive based construct which captures any benefits-sacrifice discrepancy in much the same way disconfirmation does for variations between expectations and perceived performance", and satisfaction as an affective state resulting from the use or consumption of some object. Sweeney and Soutar (2001) note that while value perceptions can be formed pre-, during and post-consumption, the satisfaction judgment is conditional on consumption or use; thus, value and satisfaction are discrete constructs. Parasuraman (1997), on the other hand, raises a concern regarding the conceptual distance between value and satisfaction, questioning whether there is a meaningful, practical distinction between the two constructs in terms of their measurement. Despite these diverging views, there is considerable research that supports satisfaction as a discrete construct, even though the causal direction of the value-satisfaction relationship is disputed. Bolton and Drew (1991) and Duman and Mattila (2005), for example, find evidence of satisfaction as an antecedent to value, while at the same time there is a raft of empirical support for satisfaction as an outcome of value (e.g., McDougall and Levesque, 2000; Cronin *et al.*, 1997, 2000; Carpenter, 2008; Williams and Soutar, 2009).

In terms of other outcomes of value, researchers have found evidence of value as a direct determinant of behavioural outcomes such as: (a) repurchase intentions (Brady and Robertson, 1999; Cronin *et al.*, 2000; Choi *et al.*, 2004); (b) loyalty (Jones *et al.*, 2006; Carpenter, 2008); (c) willingness to buy (Dodds *et al.*, 1991; Chen and Dubinsky, 2003); (d) word of mouth or recommendation (Choi *et al.*, 2004; Jones *et al.*, 2006; Brodie *et al.*, 2009) and (e) willingness to pay more, i.e. pay a premium price (Pihlström and Brush, 2008). While there is substantial evidence concerning the significant impact of value on intentions, other authors find

only an indirect effect mediated by satisfaction (e.g., Overby and Lee, 2006; Mathwick *et al.* 2001; Gallarza and Saura, 2006; Hsu, 2008). Value and its functional relationships forms the focus of the discussion in Chapter B3.

In summary, the literature evidences debate in differentiating value from other constructs with which it shares certain characteristics, while its relationships with quality, satisfaction and intention are the subject of ongoing debate. The premise adopted in this research is that service quality and personal values are determinants of value perceptions, and that value impacts on intention only through satisfaction.

A1.3.4 The temporal aspect of value

Of the issues outlined above in Section A1.3, the proposition that value is a dynamic construct forms the central focus of the present research. Eggert and Ulaga (2002:110) state that "...customer perceived value [...] can be considered as a pre- or post- purchase construct", a view supported by Woodall (2003:4) who states "...we individually value different things and at different times in different ways". Moreover, Woodruff (1997:141) observes that "...customers may consider value at different times, such as when making a purchase decision or when experiencing product performance during or after use. Each of these contexts centres on a quite different consumer judgement task". Thus it follows that perceptions of value can change as consumers progress from decision making to acquisition to use and eventual disposal of purchases made. This proposition is further supported by Sánchez-Fernández and Iniesta-Bonillo (2007:443), who state that "...customer perceived value is not [...] a one-off phenomenon; rather, it must be seen as an ongoing assessment within an evolving customer relationship".

The above views are implicit in the four temporal expressions of value defined by Woodall (2003): (1) desired value or expected value, which implies a pre-purchase evaluation; (2) acquisition value or exchange value, which relates to the point of exchange; (3) received value or use value, which takes place during consumption, and (4) post purchase/performance value or redemption value that occurs after consumption. The author categorises these expressions as *ex ante* value, transaction value, *ex post* value and disposition value respectively, and concludes by stating that "...customer evaluation of VC (value for the customer) therefore will vary over time and a good/service that appears 'good value' at one particular point may not remain so at a later point along the consumption continuum...the dominant value 'form' at disposal may represent VC as something totally different to that which appealed to the customer at purchase" (Woodall, 2003:24). This analysis is in line with evidence

of differences in consumers' pre- and post-consumption perceptions (Gardial *et al.*, 1994; Grewal *et al.*, 1998).

Review of the related literature identified a small number of empirically based research papers that address value's temporal nature (Flint *et al.*, 1997; Flint and Woodruff, 2001; Flint *et al.*, 2002; Beverland and Lockshin, 2003; Eggert *et al.*, 2006). Eggert *et al.* (2006) examine changes to the importance of value creating dimensions but the authors do not include potential determinants of changes. The remaining papers, i.e., Flint *et al.* (1997), Flint and Woodruff (2001), Flint *et al.* (2002) and Beverland and Lockshin (2003) are predominantly concerned with theory development and focus on desired value change. All the papers are located in the b2b domain and the investigations take a relationship building approach that is largely based on stages of market evolution or relationship life cycle. Furthermore, with the exception of Beverland and Lockshin (2003) the rest do not account for changes in real time, i.e. a quasi-longitudinal approach was employed by Eggert *et al.* (2006) while Flint *et al.* (2002) investigated desired value change through a cross-sectional methodology.

In summary, the above debate illustrates a paucity of research that examines actual changes in perceptions of value, while the impact of potential drivers of such changes has not been examined. Furthermore, the effects of such changes in value perceptions on its functional relationships has not been examined. In further support of this contention, the need for research into the dynamic nature of value is identified by Sánchez-Fernández and Iniesta-Bonillo (2007) in their comprehensive review of the subject. This debate leads to a clear imperative of the need to examine the nature and consequences of value change over time within the b2c domain.

A1.4 AIM AND OBJECTIVES OF THE STUDY

From the foregoing discussion it is clear that consumer value has assumed an important position on the marketing research agenda. At the same time, although there is a lack of complete convergence as to its conceptualisation and operationalisation and moreover researchers report variations in its antecedent and outcome relationships, nevertheless some consensus does appear to be taking place. Despite acknowledgement of the dynamic and temporal nature of consumers' perceptions of value, however, extant literature is silent in terms of related empirical investigations.

In attempting to address these shortcomings, the aim of this study is to empirically examine the temporal stability (i.e., the nature and strength) of the functional

relationships between value and its antecedents and outcomes. In order to achieve this aim, four objectives are identified:

1. Construct a theoretically grounded conceptual framework that depicts: (a) the structure of value in terms of its component parts and their respective dimensions, and (b) the functional relationships between value and its antecedents and outcomes;
2. Derive/identify appropriate conceptualisations and operationalisations of the focal constructs;
3. Identify and implement suitable techniques to collect and analyse data in an appropriate research domain;
4. Embed the results within extant literature and offer theoretical and managerial recommendations.

The results of this study are expected to make a contribution to the subject matter in three ways. Firstly and most importantly, this is considered to be the first documented effort to investigate the effects of value change over time in the b2c domain. Secondly, the study aims to contribute to debate regarding the conceptualisation and operationalisation of value as a multi-dimensional higher order construct. Lastly, the study is expected to contribute to the body of work that investigates value’s functional relationships with antecedent and outcome constructs.

A1.5 THE RESEARCH PROCESS

The adopted research design follows the framework proposed by Sekaran (2003) and is discussed in detail in Part C. A summary of the research process is depicted in Figure A1.1 and is briefly debated.

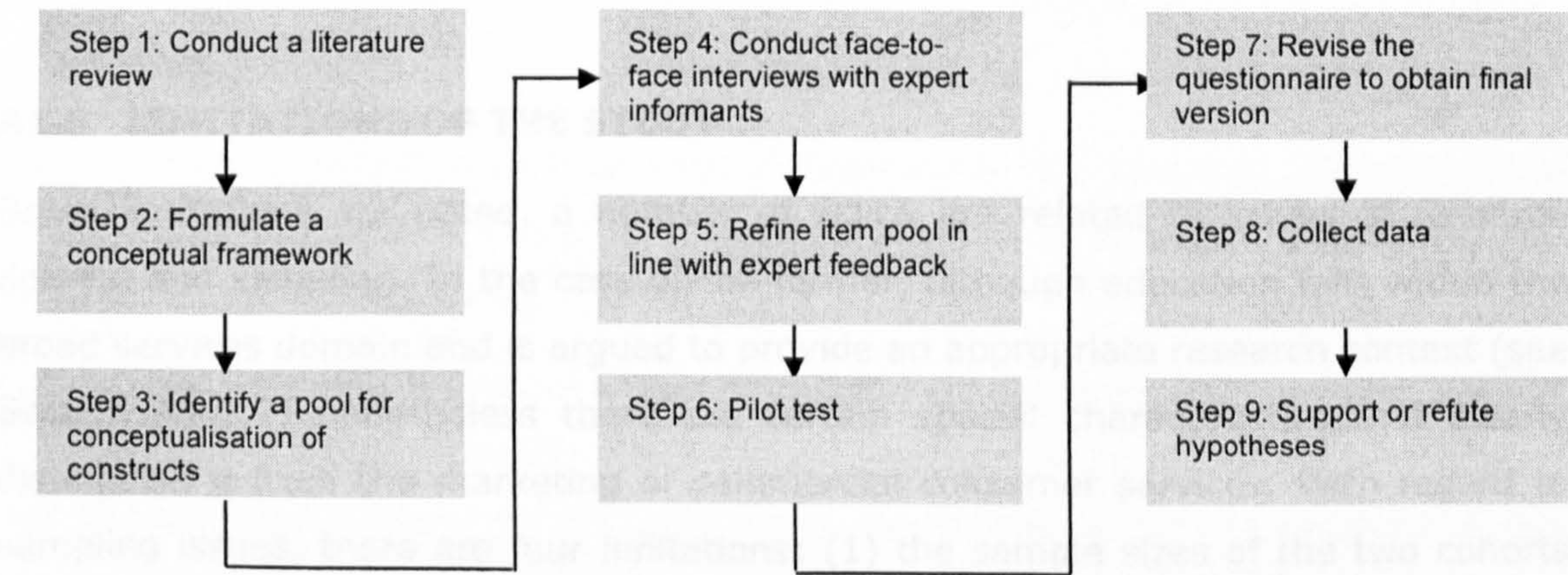


Figure A1.1 Flow diagram outlining the research process

A comprehensive literature review enabled the author to obtain an appreciation of the subject matter, which confirmed the legitimacy of the research (Step 1) and guided the formulation of the theoretically-grounded conceptual framework (Step 2). The constructs under examination are customer perceived value (the focal construct), service quality, personal values, knowledge, emotions (antecedents), and satisfaction and intention (direct and indirect outcomes respectively). Further review of the literature enabled the author to identify appropriate conceptualisations and operationalisations of the research constructs through the examination of a variety of existing scales. With the exception of the knowledge construct, this generated an initial pool of indicators for each construct (Step 3). No appropriate pre-existing scales could be identified for knowledge and consequently scale items were generated through qualitative research in the exploratory stage of the research.

Assessment of the appropriateness of the indicators for the research constructs was carried out through consultation with expert informants (Step 4). On the strength of the feedback, revisions were implemented and some indicators were removed (Step 5); the resultant initial questionnaire was piloted and accordingly revised (Steps 6 and 7).

The final questionnaire was administered to consumers of higher education at a London business school, specifically postgraduate students enrolled on a one-year master's degree. Two sample groups of respondents (the second to cross-validate the structural model) were surveyed through a longitudinal design on perceptions of their educational experience at three points in time via a personally (Times 1 and 2) and internet (Time 3) administered questionnaire. The points in time were chosen to reflect key stages of consumption. A total of 34 (Cohort 1) and 45 (Cohort 2) usable responses were collected (Step 8). The hypothesised functional relationships and the predictive powers of the research model are tested using Partial Least Squares (Step 9).

A1.6 LIMITATIONS OF THE STUDY

Some limitations are noted, a number of which are related to issues of research domain and sampling. In the case of the former, although education falls within the broad services domain and is argued to provide an appropriate research context (see Section A1.2.2) nonetheless there are certain special characteristics that clearly distinguish it from the marketing of commercial consumer services. With regard to sampling issues, there are four limitations: (1) the sample sizes of the two cohorts are at the limits of analytical requirements; (2) perceptions of the respondents are

framed by the structure and nature of the specific course of study on which they are enrolled; (3) only responses from those respondents who successfully completed the course of study are included; and (4) despite broad similarities between the two cohorts, inevitably there are cultural and background differences, the possible confounding effects of which could not be accounted for. Collectively, the above suggest that care should be taken in generalising the findings across different sectors and purchase situations.

Given the nature of the educational consumption experience, students' academic performance could have impacted on their perceptions of value; however, such information was not collected. Moreover, in the process of drawing conclusions from the results, assumptions (based on anecdotal evidence) are made regarding financial issues such as payment of fees. Formal collection of related information would have helped to support these conclusions. Additionally, measurement of the knowledge construct is on the basis of self-report items, hence there is no objective verification of students' level of knowledge at any point of the study.

Finally, although a longitudinal design is implemented, the time frame accounts for value perceptions only during consumption. A longer period of examination to include pre- (e.g., prior to enrolment) and post- (e.g., after graduation) value perceptions would have enhanced understanding of the subject matter. With these limitations in mind, recommendations for further research are discussed at the very end of this thesis.

A1.7 STRUCTURE OF THE THESIS

This thesis comprises five parts (Parts A – E), each of which is sub-divided into one or more constituent chapters. Part A comprises a single chapter (Chapter A1) that has provided an overview of the research, briefly setting out the study's theoretical underpinnings, the research aim and objectives and expected contributions of the study, methodological considerations and the limitations of the research.

Part B offers a critical review of extant literature in the domain, addressing the nature and definitions of value, its conceptualisation and operationalisation as well as antecedents and outcomes.

Part C addresses the adopted research design. The conceptual framework of the research is outlined in Chapter C1 together with the research model and related hypotheses. Justification of the philosophy underpinning the research and the paradigm within which it is conducted is also briefly discussed. Chapters C2, C3 and

C4 offer comprehensive debate as to the decisions taken in the collection and analysis of the data.

The penultimate part of this thesis presented in Part D offers a detailed discussion on the analysis of the data collected, in which the quality of the measurement model (i.e., reliability, validity and multicollinearity) is tested in Chapters D1, D2 and D3, while Chapter D4 reports on the fit of the structural model and the testing of the research hypotheses.

Finally, Part E contains a single chapter (Chapter E1) in which the findings presented in Chapter D4 are systematically debated in relation to the aim and objectives stated in Part A before proceeding to embed the results within extant literature. Overall conclusions are presented together with a discussion of the contributions of the research and suggestions and recommendations for future research.

PART B: REVIEW OF LITERATURE

This part of the thesis aims to present a coherent discussion of the value literature, with reference to the related research constructs where appropriate. The reader is reminded that while extant research on value is located both in the b2c and b2b domains, this study focuses on perceived value within in the field of consumer research, i.e. it is located in the b2c domain. The structure of this part of the thesis is as follows:

- **Chapter B1** offers a debate as to the nature and characteristics of value and its various definitions. The aim is to provide a foundation for the discussion in the remainder of the review.
- **Chapter B2** builds on the understanding of the nature of value provided in Chapter 1 and goes on to critique alternative conceptualisations of value and the various ways in which they are operationalised.
- **Chapter B3** concludes the literature review by discussing value's structural relationships with other constructs, i.e. its antecedents and consequences.

Before moving on, the author takes this opportunity to clarify certain nomenclature used frequently in this review: firstly, though the perceptual nature of value is universally accepted, prefixing the word 'value' with the word 'perceived' is not undertaken for the sake of brevity and to improve overall readability. The second point of clarification concerns the word 'product', which in this work is used in the broadest sense to mean "the tangible and intangible attributes related not just to physical goods but also to services, ideas, people, places, experiences, and even a mix of these various elements" (Baines *et al.*, 2008:354).

Lastly, the author takes this opportunity to remind the reader that the terms *give* and *get* are italicised (in-text, but not in tables) when used to distinguish the components of value in order to clarify meaning.

CHAPTER B1: THE NATURE OF VALUE

B1.1 INTRODUCTION

As briefly discussed in Section A1.2, there is a clear consensus as to the central position of value in marketing and its primacy as a topic for research. At the same time, the nature of the value construct has been variously described as “abstract and polysemous” (Gallarza and Saura, 2006) and even “somewhat nebulous” (Sánchez-Fernández and Iniesta-Bonillo, 2007:428), and moreover its multifaceted and complex character make it difficult to define, conceptualise and measure (Day and Crask, 2000).

In response to the above ambiguity, this chapter aims to provide an understanding of the nature of value and what it *is* as the building block for the literature review. To achieve this aim, the debate in this chapter is structured around the various definitions of value found in the literature and attempts to deconstruct each. Accepting some overlap, the scheme is to group definitions in four broad categories that represent competing approaches to defining value, i.e. value as *give* and *get*, value as affect versus value as cognition, value as a means-end hierarchy, and value as experiential. As a prelude, the author first offers a brief debate that seeks to establish the essence of the word ‘value’ and its connection to the study of value as a related discipline.

B1.2 TOWARDS A GENERIC DEFINITION OF VALUE

Woodall (2003:3) observes that “The literature on value *per se* is as broad as it is extensive, and is represented as much in the fields of economics and philosophy as it is in the domain of business”. With this in mind, a preliminary examination of the dictionary definition of value is considered a useful starting point before moving on to discuss definitions of value found in the literature. While reference to Collins Dictionary (2008) elucidates the meaning of value *per se*, at the same time it holds some initial clues as to why a common connotation of value in the present research context is so difficult to pinpoint. Value is therein explained as:

1. The desirability of something, often in terms of its usefulness or exchangeability;
2. An amount of money considered to be a fair exchange for something;
3. Something worth the money it cost;
4. Values: the moral principles and beliefs of a person or group;
5. To assess the worth or desirability of (something);
6. To hold (someone or something) in high regard.

Accordingly, value can be said to span a range of discrete meanings from pecuniary interpretations such as 'amount of money' and 'cost' to utilitarian concepts such as 'usefulness' and 'exchangeability' and more abstract notions such as 'desirability', 'regard', 'worth' and 'beliefs'. Moreover, values in the plural (definition 4) holds a specifically different meaning from value in the singular (see Sections A1.3.3 and C1.3.2).

This multiplicity of meanings is reflected in axiology, i.e. the study of the theory of value (from the Greek *axios* – worth, and *logos* – theory), which emerged as a relatively new and separate discipline of philosophy in the first decade of the 20th century (Hart, 1971). Within this discipline, the quest for a definition of value occupied the attention of notable theorists and philosophers who sought to capture the essential nature and meaning of value under a variety of taxonomies, for example aesthetics and beauty, economics and utility, religion and morality (Sheldon, 1914; Perry, 1914; Reid, 1931), extrinsic and intrinsic value (Hartman, 1951, 1973) and need-driven value (Handy, 1960).

The influence of the above noted early theorists can be seen in the thinking of contemporary researchers of value in the marketing domain (Danaher and Mattsson, 1994; Holbrook, 1994; de Ruyter *et al.*, 1997; Mathwick *et al.*, 2001), for whom a precise definition of value has proved equally elusive (Babin *et al.*, 1994; Holbrook, 1994; Day and Crask, 2000); indeed, as shall become clear in the following section, the value concept is argued by authors to possess, in some measure, *all* of the properties discussed above. On this point it is interesting to note Woodall's (2003) suggestion that value may be viewed as a gestalt property, insofar that, as a whole, it is greater than the sum of its individual and disparate parts. This multifariousness lends some understanding as to why the consumer value construct is so widely interpreted; Khalifa (2004:646) goes further, stating that value is "...one of the most overused and misused concepts in social sciences in general and management literature in particular".

In spite of the above debate, it is argued that Sheldon's (1914:116) enduring axiom "One specific property of value is exchangeability" (i.e., giving something and receiving something different in return) is particularly relevant to the concept of value in the marketing domain and appears as a recurrent theme in the definitions of value presently found in the marketing literature. This contention is best exemplified by Zeithaml (1988) whose early definition of value and its related conceptual underpinnings dominates definitions of value and is discussed in the following section.

B1.3 VALUE AS 'GIVE AND GET'

The canon of literature on which this thesis is grounded has its nascent roots in the work of Zeithaml (1988), who was among the first to popularise the concept of consumer value within the marketing domain (Sánchez-Fernández and Iniesta-Bonillo, 2007). Review of literature reveals Zeithaml's as the most commonly cited definition, which emanates from the author's means-end approach to investigating quality, price and value. In this respect Zeithaml's definition overlaps with means-end derived definitions explored in Section B1.5, but it is included here because of its major contribution in influencing later definitions and conceptualisations of value. In her exploratory study, Zeithaml finds that consumers' value perceptions are idiosyncratic and personal in nature and are expressed in a variety of ways that place different emphases on aspects such as price and product benefits. Zeithaml (1988:13) advances four expressions of value that reflect these differing views:

1. "Value is low price";
2. "Value is whatever I want in a product";
3. "Value is the quality I get for the price I pay";
4. "Value is what I get for what I give".

Some respondents to her study considered value simply as the lowest possible price they wanted to pay: in other words, what they had to give up was the most important part of their value perceptions (expression 1). Other respondents considered a product's desired benefits to be more important (expression 2). Some respondents thought of value as a trade-off solely between quality and price (expression 3), while still others perceived value as comprising all relevant desired benefits and all relevant sacrifices (expression 4), the latter whether judged in terms of price or on bases such as convenience. Zeithaml (1988:14) amalgamates these expressions of value into a single, overarching definition:

"Perceived value is the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given. Though what is received varies across consumers (i.e., some may want volume, others high quality, still others convenience) and what is given varies (i.e., some are concerned only with money expended, others with time and effort), value represents a trade-off of the salient give and get components".

'Get' refers to the value obtained through a product's benefits and attributes while 'give' refers to the forfeit made to acquire them; thus, value is a trade-off between *get* and *give*. This concept of value broadly aligns with economic utility theory (Lancaster, 1971), which holds that value arises from the difference between the utility provided by a product's attributes and benefits and the disutility incurred as a result of the price paid (Thaler, 1985; Spreng *et al.*, 1993; Oliver, 1996; Sánchez-

Fernández and Iniesta-Bonillo, 2007). The central idea is that high value is perceived when a product's benefits or attributes are greater than the costs involved in its acquisition. Some authors note that consumers are influenced more by sacrifices than benefits (Ravald and Grönroos, 1996; Woodall, 2003) and place more importance on reducing sacrifice rather than increasing benefits (Sweeney *et al.*, 1999). Heskett *et al.* (1997), however, suggest that value is not simply the outcome of low price, while Woodall (2003) points out that consideration to both benefits and sacrifices must take place for the value assessment to be established. From this perspective, Woodall (2003:4) observes that consumer value can be thought of as "...essentially utilitarian in nature". Yang and Peterson (2004) link value to equity theory, a conceptually similar idea that refers to customers' evaluation of what constitutes a fair or deserved exchange for the perceived cost. It is argued that both utility theory and equity theory centre on the idea of getting something in return for giving something else, which is consistent with the concept of value as the centre of exchange (see Section A1.2).

Various authors have criticised the value-as-utility position as providing a narrow view that does not capture the complexity and richness of the construct due to its excessive focus on the cognitive and rational elements of consumers' choice decisions (de Ruyter *et al.*, 1997; Sánchez-Fernández and Iniesta-Bonillo, 2007). While agreeing with this view, the present author argues that the benefits-sacrifice trade-off can be interpreted in a broader sense as a complex, multi-dimensional structure encompassing intrinsic and extrinsic benefits and monetary and non-monetary sacrifices (Zeithaml, 1988; Sheth *et al.*, 1991a,b). Intrinsic attributes are integral/built-in to the product while extrinsic attributes are related to the product's possession, use or consumption but are not part of the product itself (Sánchez-Fernández and Iniesta-Bonillo, 2007).

To illustrate the above debate, a car's ability to convey its driver from A to B represents its intrinsic, functional benefits (i.e., a mode of transport) while the prestige that may be conveyed through driving, say, a Mercedes represents an extrinsic, subjective benefit associated with abstract or emotional gains (Ravald and Grönroos, 1996). Consider further a mid-journey car breakdown that requires an expensive repair lasting no longer than the driver's destination; this might still result in high perceived value if the utility of the repair fits the consumer's frame of reference, i.e., getting to the destination on time, whereby relief is the extrinsic *get* benefit (Ravald and Grönroos; 1996). Thus, *get* is related to the situational and contextual conditions within which consumers make value judgments and the

dimensional approach therefore responds to criticisms of uni-dimensional research as being narrow and simplistic (Babin *et al.*, 1994; Mathwick *et al.* 2001; Sweeney and Southar, 2001; Williams and Soutar, 2009) and even “somewhat arcane” (Huber *et al.*, 2007:556). Williams and Soutar (2009) suggest that a multi-dimensional approach is more appropriate in services contexts due to the heterogeneity of the service experience and because the consumer-producer interaction is characterised by complex sociological and psychological aspects of consumption. Indeed, in all but three of the 46 multi-dimensional papers reviewed here, value is investigated in the services domain.

The majority of the multi-dimensional literature can be broadly grouped into four main areas, i.e. (1) the utilitarian and hedonic value approach; (2) consumption values (Sheth *et al.*, 1991a,b); (3) Holbrook’s typology; and (4) axiology. Each represents a different but not unrelated dimensional approach. Sánchez-Fernández and Iniesta-Bonillo (2007) and Sánchez-Fernández *et al.* (2009) similarly note this broad categorisation of the literature. The columns in Table B2.4 indicate each area of research and its relevant value dimensions. Other research that cannot be fitted within the four areas is discussed separately (column five). Authors adopting each framework are shown (in date order) in the relevant column. The table provides the structure for the discussion in the remainder of this section.

Table B2.4 Areas of multi-dimensional value research

Utilitarian and hedonic	Consumption values	Holbrook’s typology	Axiology	Other research
Hedonic Utilitarian	Conditional Emotional Epistemic Functional Social	Efficiency Excellence Status Esteem Play Aesthetics Ethics Spirituality	Emotional Logical Practical	Various
Babin <i>et al.</i> (1994) Babin & Attaway (2000) Bourdeau <i>et al.</i> (2002) Jones <i>et al.</i> (2006) Overby & Lee (2006) Rintamäki <i>et al.</i> (2006) Carpenter (2008)	Sheth <i>et al.</i> (1991a,b) Stafford (1994) LeBlanc & Nguyen (1999) Long & Schiffman (2000) Sweeney & Soutar (2001) Petrick (2002) Wang <i>et al.</i> (2004) Pura (2005) Roig <i>et al.</i> (2006) Sánchez <i>et al.</i> (2006) Sánchez-Garcia <i>et al.</i> (2007) Beldona <i>et al.</i> (2006) Ledden <i>et al.</i> (2007) Moliner <i>et al.</i> (2007) Pihlström & Brush (2008) Williams & Soutar (2009) Moliner (2009)	Holbrook (1994, 1999) Steenkamp & Geyskens (2000) Mathwick <i>et al.</i> (2001) Kim (2002) Gallarza & Saura (2006) Joo (2007) Keng <i>et al.</i> (2007) Sánchez-Fernández <i>et al.</i> (2009) NB: The shaded cells denote studies classified as uni-dimensional (see Table B2.1) but which are also included for discussion here due to their adoption of Holbrook’s typology.	Mattsson (1990, 1992) Danaher & Mattsson (1994, 1998) de Ruyter <i>et al.</i> (1997a) de Ruyter <i>et al.</i> (1997b) Lemmink <i>et al.</i> (1998) Huber <i>et al.</i> (2007)	Heinonen (2004, 2006, 2007) Lin <i>et al.</i> (2005) Ruiz <i>et al.</i> (2008) Heinonen & Strandvik (2009)

B2.3.1 Utilitarian and hedonic dimensions of value

Value dimensions	Adopting authors	Research domain
Hedonic Utilitarian	Babin <i>et al.</i> (1994) Babin & Attaway (2000) Bourdeau <i>et al.</i> (2002) Jones <i>et al.</i> (2006) Overby & Lee (2006) Rintamäki <i>et al.</i> (2006) Carpenter (2008)	Seminal paper: shopping – mall Shopping – mall Internet use and shopping Shopping – mall Shopping – internet Shopping – mall Shopping – supermarket

Discussion turns first to those studies that are grouped in the utilitarian and hedonic column in Table B2.4, which is reproduced above for ease of reference with the addition of each study’s research domain to provide contextual understanding. Though not the most densely researched area of value, the utilitarian and hedonic concept of value fundamentally distinguishes the different dimensions of value that are discussed in the rest of this section, and as such they merit early debate. Sánchez-Fernández and Iniesta-Bonillo (2007) in their extensive review of the consumer value literature similarly delineate the utilitarian/hedonic distinction as a founding concept of multi-dimensional value research. Given that the studies in this section primarily focus on value of the shopping experience and therefore represent a relatively homogeneous body of research, debate is structured chronologically.

Holbrook and Hirschman as early as 1982 made the point that information-processing and cognitive-based models for investigating consumption behaviour offered only a limited view of the phenomenon. They called for a broadening of this field of enquiry to include consideration of “consumer fantasies, feelings and fun” (Holbrook and Hirschman, 1982:139). While Holbrook (1994, 1999) went on to develop his ideas on the experiential nature of consumption through his typology of value (discussion forthcoming in Section B2.3.3), Babin *et al.* (1994) recognised that shopping involves experiential as well as functional outcomes. They opined that value is realised through the entire shopping experience, and not simply as a result of product acquisition. The authors aimed to examine this duality by developing the PSV (Personal Shopping Value) scale to measure the utilitarian and hedonic aspects of the shopping experience, which they define thus:

- Utilitarian value relates to shopping that is triggered by a functional need and therefore is goal-directed and task-related. Shopping in this sense may be viewed as ‘work’, i.e. as an arduous or difficult job, a duty, or even an unpleasant but necessary chore. At the same time, work-related shopping might also be enjoyed by consumers for providing a sense of reward (Babin *et al.*, 1994). Value is realised if the task is fulfilled successfully, i.e. when a purchase transpires or is completed efficiently. A purchase is not necessary,

however, if the goal is to obtain information to inform a future purchase. Under the above conditions, the shopping experience is instrumental, functional and cognitive in nature and provides a means to an end.

- Hedonic value results when shopping is undertaken for the sake of fun and playfulness rather than to complete a task and therefore reflects the entertainment aspects of shopping and its related emotional responses. Making a purchase is incidental to the experience of shopping. Increased arousal, heightened involvement, a sense of escapism or adventure and fantasy fulfilment all represent aspects of hedonic shopping value; in this sense the shopping experience is the end in itself. Hedonic value can also be realised when the thrill and excitement of finding a bargain extends value perceptions well beyond the boundaries of the rational, functional price-utility interaction. Compared with utilitarian value, hedonic value is abstract and subjective, self-purposeful and self-oriented (Rintamäki *et al.*, 2006).

Put simply, utilitarian value symbolises shopping as 'work' while hedonic value symbolises shopping as 'play', or, as neatly summarised by Babin *et al.* (1994:647) "shopping with a goal" in contrast to "shopping as a goal". The utilitarian dimension represents the consumer as *Homo Economicus* (the rational, economic man) and the hedonic dimension as *Homo Ludens* (the man as player) (Babin *et al.*, 1994). The two types of value are not mutually exclusive; both may be present in a shopping experience, although one may inhibit the other, for example if the heightened emotions inherent in hedonic value interfere with task-related objectives of utilitarian value (Babin *et al.*, 1994).

Babin *et al.* (1994) go on to explain the rigorous processes undertaken to develop, purify and confirm the psychometric properties of their scale, which adhere to accepted good practice. The result is a 15-item scale comprising 11 items to measure hedonic value and four to measure utilitarian value; the greater size of the former accounts for the richer and more subjective nature of the hedonic dimension in capturing emotional and non-rational responses to the shopping experience. The results revealed hedonic and utilitarian value as important variables in explaining overall satisfaction. Babin and Attaway (2000) later extend Babin *et al.*'s (1994) conceptualisation and incorporate the effects of negative and positive affect on hedonic and utilitarian shopping value. They operationalise the key variables with the same scales, however the focus of the second study is on the interaction between the affect variables and the value dimensions and their overall effect on consumers' behaviour.

Based on Babin *et al.*'s (1994) conceptualisation, Bourdeau *et al.* (2002) investigate the value of internet usage among two groups of student users, i.e., email users and web users. The authors develop a set of scales in accordance with good practice and confirm their psychometric properties. Five dimensions are identified: utilitarian and hedonic value correspond to Babin *et al.*'s conceptualisation. A third, social value, represents the value that derives from interacting and communicating with others in order to make friends and meet people. To these, the authors add two context-specific dimensions, which are learning (i.e., using the internet to obtain news and information) and purchasing (i.e., using the internet as a retail channel). A deficiency of the methodology is that respondents were required to self-classify as either email users or internet users. Given that the former is a specific function of the latter, an inherent difficulty arises in adequately discriminating between the two groups; indeed, the authors themselves allude to the possibility that students might use email and the internet simultaneously. For this reason, arguably the overall importance of the results is diminished; for example, the finding that social value is a stronger dimension of value for email users than web users (according to the authors' classification of each) is evidently self-fulfilling.

Jones *et al.* (2006) and Carpenter (2008) extend Babin *et al.*'s (1994) study by examining the relative impacts of the utilitarian and hedonic dimensions on satisfaction and behavioural variables, i.e. loyalty, word of mouth and repatronage intentions. Both studies operationalise adaptations of Babin *et al.*'s (1994) PSV scale in the high street retail environment and find a differential effect of the utilitarian and hedonic dimensions on the outcome variables. A shortcoming that both studies share concerns the data collection method, in which respondents are required to complete a questionnaire with their last shopping trip in mind, rather than completing a questionnaire *during* the shopping trip as per Babin *et al.*'s (1994) methodology. Given the immediacy of emotions in the consumption experience and the inevitable corruption of memory over time, possible measurement error resulting from recall bias undermines confidence in the results (Malhotra and Birks, 2003).

Utilitarian and hedonic value are investigated by Overby and Lee (2006) in the context of internet shopping in order to determine the effect of the value dimensions on preference and intentions, and whether shopping frequency moderates their effect. The authors provide only superficial debate as to the derivation of the measurement scales and although they refer to extant published research, they do not relate scale items to their specific sources. Examination of the wording of the items reveals that while hedonic value is operationalised in a similar fashion to the studies discussed above, utilitarian value is treated as economic utility rather than

functional utility, which represents a different interpretation of Babin *et al.*'s (1994) conceptualisation. Accordingly, the indicators include economic value of the e-retailer, product price-quality, time utility provided by the e-retailer, and whether items purchased from the e-retailer are a 'good buy'. In this respect Overby and Lee's (2006) treatment of utilitarian value mirrors the VFM approach to value that is common in the uni-dimensional research stream (see Section B2.2). The authors state that the aim of the study is to investigate value of the shopping experience (and specifically not the value of the products being purchased), however the conflation of product-related and shopping-related indicators suggests that content validity of the utilitarian value construct and thus the robustness of the results could be called into question.

The utilitarian and hedonic dimensions in the context of department store shopping are the subject of Rintamäki *et al.*'s (2006) study. Utilitarian value is treated similarly to Overby and Lee (2006) as economic utility and additionally includes the utility conveyed through convenience. Hedonic value resides in the entertainment and exploration possibilities offered by the shopping experience. A third dimension, social value, is realised through a sense of status and enhanced self-esteem that derives from the shopping experience; thus, shopping is a social act that enables the consumer to construct his identity as he wishes to be seen by others through the symbolism of the products he purchases and the stores in which he is seen. The authors suggest that the social value-seeking consumer can be characterised as *Homo Faber* (the working man).

The above-discussed conceptualisation of social value demonstrates an entirely different interpretation to Bourdeau *et al.* (2002), for whom social value emanates from communication with others. Rintamäki *et al.*'s conceptualisation thus aligns closely with Sheth *et al.*'s (1991a,b) social consumption value and Holbrook's (1994, 1999) status value, both of which are discussed later in Sections B2.3.2 and B2.3.3 respectively. Accordingly, total customer value is conceptualised as a higher order factor of utilitarian, social and hedonic values, which themselves are second order factors comprised of two sub-dimensions each, i.e. utilitarian comprises monetary savings and convenience, social comprises status and self-esteem, and hedonic comprises entertainment and exploration. The resulting higher order model represents the benefits of the shopping experience, but does not include a representation of its sacrifices.

Moving on to discuss construct measures, Rintamäki *et al.* state that they develop these especially for the study through qualitative research but offer little debate regarding the process involved. They do, however, test reliability and validity of the

measurement model and confirm the overall structural model through appropriate accepted practices. In terms of methodological rigour, a strength of the study is the authors’ recognition of the importance of minimising memory-based bias by collecting data from respondents as they shopped rather than relying on memory recall, thus the authors overcome the earlier-discussed limitations of the studies by Jones *et al.* (2006) and Carpenter (2008).

To summarise in this section, the utilitarian and hedonic stream of research responded to criticisms of the conventional cognitive-dominant, information-processing paradigm as offering a narrow explanation of consumption behaviour. The value concept is therefore broadened to accommodate the experiential nature of consumption in which value derives from symbolic, emotional and hedonic aspects of the shopping experience. Of the studies reviewed, most cohere around a similar operationalisation of the utilitarian and hedonic dimensions. In the former, value is realised through the functional or economic utility of the shopping experience, or a combination of both, whereby shopping provides the means to achieve some end. In the latter, hedonic value inheres through the subjective, pleasurable experiences that result from the shopping experience itself. Social value is added by some authors to reflect an additional self-oriented value received through the shopping experience, though this is operationalised variously.

Babin *et al.*’s (1994) work is seminal in the specific domain of utilitarian/hedonic shopping behaviour and moreover it provides a broad canvas on which to ground enquiry into value as a multi-dimensional construct. Value is characterised by its cognitive, functional, instrumental and utilitarian dimensions as well as those that embrace its hedonic, affective, experiential and emotional side.

B2.3.2 Sheth *et al.*’s (1991a,b) consumption values

Value dimensions	Adopting authors	Research domain
Conditional	Sheth <i>et al.</i> (1991a,b)	Seminal conceptual paper
Emotional	Stafford (1994)	Education
Epistemic	LeBlanc & Nguyen (1999)	Education
Functional	Ledden <i>et al.</i> (2007)	Education
Social	Pura (2005)	Mobile phones
	Pihlström & Brush (2008)	Mobile phones
	Sweeney & Soutar (2001)	PERVAL scale – durable goods
	Wang <i>et al.</i> (2004)	PERVAL scale – banking services
	Beldona <i>et al.</i> (2006)	PERVAL scale – tourism
	Williams & Soutar (2009)	PERVAL – tourism
	Petrick (2002)	SERV-PERVAL scale – tourism
	Sánchez <i>et al.</i> (2006)	GLOBAL scale – tourism
	Roig <i>et al.</i> (2006)	GLOBAL scale – banking services
	Moliner <i>et al.</i> (2007)	GLOBAL scale – ceramic tiles & tourism
	Sánchez-Garcia <i>et al.</i> (2007)	GLOBAL scale – tourism
	Moliner (2009)	GLOBAL scale – hospital services
	Long & Schiffman (2000)	Airlines

This section moves on to discuss Sheth *et al.*'s (1991a,b) theory of consumption values, the second column in Table B2.4 which is abridged above for ease of reference. The excerpt table also includes each study's research domain, both to provide contextual understanding and to serve as a convenient device with which to structure debate in this section.

According to Sánchez-Fernández and Iniesta-Bonillo (2007), the consumption values theory is one of the most important contributions in value research due to its conceptualisation of value as a multi-dimensional structure; as demonstrated by the above table, it has influenced a sizeable canon of work. Before moving on to discuss it, as a side note this author argues that though Sheth *et al.* present their work as a theory, in fact it is questionable whether this description adequately reflects the definition of such. While a theory results from deductive reasoning in which facts are acquired through observation, Sheth *et al.*'s study is the result of an inductive process through exploration of associated literatures (Sekaran, 2003). In this sense the work reflects a conceptual framework rather than being developed through testable hypotheses, but nonetheless in this format it provides the dominant model for conceptualising value multi-dimensionally.

Informed by an extensive examination of literatures within the consumer behaviour, marketing, economics, psychology and sociology domains, Sheth and his colleagues identify five values that influence consumers' choices in the buy/not buy or use/not use situation or when choosing one product type over another, or one brand over another brand. Three fundamental propositions underpin the theory: (1) consumer choice is a function of multiple consumption values; (2) the values make differential contributions in the choice situation; (3) the values are independent of each other. Thus, all or any of the consumption values can influence a decision and can contribute additively and incrementally to choice; consumers weight the values differently in specific buying situations, and are usually willing to trade-off one value in order to obtain more of another. The five consumption values are: functional value, social value, emotional value, epistemic value and conditional value; each is discussed in turn.

- **Functional value** associates with a product's utility and needs-fulfilment and derives from its intrinsic capacity for functional, utilitarian or physical performance, i.e., a product's ability to fulfil the function that it has been created to provide. In this sense, functional value aligns with the means-end approach to value in which consumers' consumption goals and the consequences of use are salient in the value judgment (Woodruff, 1997). A product acquires functional value through its attributes such as convenience, reliability, durability

and price. This value aligns with economic utility theory and is believed to be the primary driver of consumer choice (Sheth *et al.*, 1991a,b). LeBlanc and Nguyen (2000) observe that the constructs of functional value are often identified as the determinants of product quality, while Cronin *et al.* (1997) note that quality is commonly identified as the most important *get* component, although the position of quality as a determinant or a component of value, whether product or service quality, is the subject of debate (see Section B3.2 on antecedents of value). Functional value aligns with the utilitarian value dimension discussed in Section B2.3.1. As shall become clear from the forthcoming discussion, various authors adopting the consumption values theory operationalise functional value on the basis of price and quality.

- **Social value** is defined as the perceived utility acquired from a product's association with a particular demographic, cultural or social group. The social image of a product can influence consumers' choice, particularly with highly visible purchases such as cars or clothing. Sheth *et al.* observe that products can possess symbolic or conspicuous consumption value in excess of their functional value. The opinion of the consumer's reference groups can play an important part in the consumer's evaluation of the product. This value aligns with the subjective norm in Azjen's (1991) theory of planned behaviour, in which an individual's behaviour in a given situation is influenced by their perceptions of how referent others expect them to behave; thus the subjective norm is a determinant of behavioural intentions (Moliner *et al.*, 2007). Social value broadly associates with hedonic consumption.
- **Emotional value** associates with extrinsic aspects of value in terms of a product's ability to arouse feelings or affective states, for example certain foods can stimulate feelings of comfort while some consumers are said to have emotional relationships with their possessions (Fournier, 1998). The premise that emotions can contribute to value perceptions, whether positive (joy, excitement) or negative (fear, anger) is evident in uni-dimensional (e.g., Zeithaml, 1988) and experiential (e.g., Holbrook, 1994; Mathwick *et al.*, 2001) research streams but is dominant in the latter. Emotional value and the hedonic dimension of value explored in Section B2.3.1 are strongly related.
- **Epistemic value** is defined as a product's ability to arouse curiosity, provide novelty or satisfy a desire for knowledge. Thus, an 'alternative brand may be chosen to alleviate boredom with an existing product, to satisfy a desire to learn or experience something new, or in response to an arousal of interest.

Epistemic value may be seen as an influencer of purchase intention and switching behaviour.

- Lastly, **conditional value** derives from its ability to provide temporary functional or social value in a specific situation or context, thus this value is contingent on the particular circumstances facing the consumer at the point of choice. Sheth *et al.* (1991b:69) state that conditional value is “necessarily transient in nature”, while Sweeney and Soutar (2001) suggest that conditional value is a special case of other types of value. This dimension associates with the view that value perceptions are situational and contextual and relate to the individual consumer’s frame of reference. Conditional value therefore does not exist outside of the use situation and so provides extrinsic rather than intrinsic utility; Christmas cards, for example, have only seasonal value while a car repair has value only at the point of a breakdown.

Sheth *et al.* (1991a,b) claim that their theory has been operationalised in over 200 applications through the development of a vigorous methodology, thus they offer documented evidence of the ability of their theory to describe, explain and predict the consumption behaviour of individuals in any buying situation. The author’s review identified 16 articles that operationalise value using Sheth *et al.*’s typology, all of which employ multi-item scales to measure the value dimensions. As indicated at the beginning of this section, discussion hereafter is grouped by research domain, starting with education.

Education studies

Three studies ground their research in the consumption values in order to explore educational value of consumers of higher education (Stafford, 1994; LeBlanc and Nguyen, 1999; Ledden *et al.*, 2007).

Operationalising all five consumption values, Stafford (1994) develops scales to measure students’ perceived value of marketing electives in order to understand which values are most predictive of course choice. Though claiming to follow Sheth *et al.*’s methodology, the author fails to report a robust process for scale development or whether tests are undertaken to assess the scales’ psychometric properties. The limited qualitative stage (one focus group of eight students) and the inferred lack of appropriate procedures for scale purification and piloting (see Churchill, 1979) together suggest a poorly constructed research instrument. The implication of these deficiencies is a set of findings that are, at worst, questionable, and at best, incomplete.

LeBlanc and Nguyen (1999) investigate the relative importance of six dimensions of value on business students' overall evaluation of their degree course. They conceptualise functional value along two separate dimensions, i.e. economic value reflected as price/quality and measured as VFM, and want satisfaction reflecting the value derived from achieving career goals, thus functional value represents both the *give-get* comparison and a measure of the product's intrinsic functionality. Epistemic and social value are operationalised according to Sheth *et al.*'s definition. Image value is added to reflect the value imbued by the reputation of the business school, however the authors do not include conditional value. Scale reliability is assessed through appropriate techniques, however tests for validity are not discussed.

All five consumption values are employed by Ledden *et al.* (2007) in their study of educational value and its interplay with personal values. The five values together with a sixth, image value (as in LeBlanc and Nguyen's (1999) conceptualisation) are treated as components of value's *get* dimension. Unlike LeBlanc and Nguyen, price is considered separately (i.e., not included in functional value) as monetary sacrifice, which, together with non-monetary sacrifice (i.e., time and effort) comprise value's *give* dimension; thus, the authors extend Sheth *et al.*'s conceptualisation by adding a direct measure of sacrifice. The psychometric properties of the scales are tested in line with accepted good practice. The authors find empirical support for value as a higher third order formative construct of *give* and *get*, and *give* and *get* as second order formative constructs of functional, epistemic, social, emotional, conditional and image value (first order *get* dimensions) and monetary and non-monetary sacrifices (first order *give* dimensions).

Considering the three above debated papers collectively, the variation in the way the value dimensions are treated and the different foci of the studies renders a direct comparison difficult, however it is interesting to note that while Stafford report conditional value as the most important determinant of choice, this value was not included in LeBlanc and Nguyen's study. Accepting the possibility of measurement error in either or both studies, this discrepancy supports Sheth *et al.*'s argument that conditional value is a special case of the consumption situation and provides empirical evidence of the situational and context-specific nature of value, even within the same research context. A further difference is the treatment of the sacrifice element of value, which is omitted in Stafford's study and treated only simplistically on a monetary-only basis (i.e., VFM) in LeBlanc and Nguyen's. Only Ledden *et al.* incorporate a direct measure that includes the price paid as well as non-monetary forfeits (i.e., time and effort), thus aligning more closely with earlier debate in which value is defined as a composite of multiple *gives* and *gets*.

Mobile phone studies

Two studies (Pura, 2005; Pihlström and Brush, 2008) emanate from the same research group based at a Finnish business school, and both investigate value in the mobile phone services industry. The studies operationalise *Sheth et al.*'s functional value in a similar way to LeBlanc and Nguyen (1999) as two dimensions representing monetary value treated as VFM, and needs-fulfilment modelled as convenience, i.e. in terms of time expended or saved. Although not explicitly stated, together these dimensions offer a representation, albeit relatively circumscribed, of value's sacrifice element. Both studies operationalise social value, emotional value, conditional value and epistemic value identically and in very close alignment with *Sheth et al.*'s conceptualisation.

Where the two studies differ is in their conceptual frameworks, i.e. in terms of value and its structural relationships. Pura conceptualises each dimension as having a direct impact on behavioural outcomes, whereas Pihlström and Brush propose that conditional value and epistemic value impact on behaviour only through monetary, convenience, emotional and social values, i.e. that the former two dimensions are antecedent to the latter. The authors argue that conditional and epistemic values represent contextual and situation-specific constructs that determine a different order of value perceptions.

The construct measures for both studies were mostly borrowed from scales employed in previous related value research, with only the conditional value scale being specially developed; all are rigorously tested for reliability and validity. Collectively, though adopting different structural models, both studies offer robust treatments of *Sheth et al.*'s consumption values framework. Moreover, each offers a relatively comprehensive multi-dimensional view of value insofar that both include its *get* and *give* components, albeit *give* is explored somewhat narrowly.

The PERVAL scale

Sheth et al.'s (1991a,b) typology has spawned a number of efforts to develop generic scales to measure the dimensions of value in a variety of choice, consumption or use situations, most notably the PERVAL scale developed by Sweeney and Soutar (2001), the GLOVAL scale developed by Sánchez *et al.* (2006), and Petrick's (2002) SERV-PERVAL scale. Turning firstly to PERVAL, Sweeney and Soutar (2001:204) propose that a "more sophisticated" measure of value is required to understand fully how consumers value products in a variety of purchase situations. In opposition to *Sheth et al.*'s proposition that the consumption values

are independent, the authors argue that the value dimensions, although separate, are interrelated, although in fact the potential relationships between dimensions are not tested.

Following accepted procedures for scale development (Churchill, 1979) and rigorous tests to confirm the psychometric properties of the scale (e.g., Fornell and Larcker, 1981) an initial pool of 107 items was reduced to 19 along four dimensions: social value, emotional value, functional value in terms of product quality, and functional value treated as price/VFM. Accordingly, functional value is treated in a similar way to LeBlanc and Nguyen (1999), Pura (2005) and Pihlström and Brush (2008) as two constructs, one capturing price-related considerations and the other intrinsic, product-related variables; however, the difference here is that the product-related variable is treated as quality. This is in contradiction to the body of literature that finds quality, whether product (Sweeney *et al.*, 1997; Chen and Dubinsky, 2003) or service (Oh, 1999; Brodie *et al.*, 2009) as an antecedent to value, something that is discussed in more depth in Chapter B3.

Sheth *et al.*'s conditional and epistemic dimensions were not tested during the exploratory stage of Sweeney and Soutar's research and consequently are unrepresented in the final scale. The authors argue that, as conditional value represents situational factors derived from temporary social or functional value and thus is a specific case of other types of value, this consumption value is less salient in the case of the particular domain of their study (i.e., durable goods) and hence it is not included in the light of the study's aim to develop a general measure of value. Similarly, the authors posit that the omission of epistemic value is due to the goods rather than experiential (i.e., services) nature of the research domain, in which the value derived from variety seeking and novelty may be of lesser importance. The present author argues that even if a dimension is less salient than another, it does not preclude it from being present in some measure; in other words, its relative strength is weaker than other dimensions. The omission of these two dimensions in the empirical testing of the PERVAL scale appears contrary to Sweeney and Soutar's aim of developing a generic scale to measure a variety of purchase situations, thus, in the view of this author, the study's overall robustness is weakened.

Literature review identified three further papers that employ the PERVAL scale: in the first, Wang *et al.* (2004) operationalise the scale almost identically to Sweeney and Soutar in the context of banking services and identify four dimensions, i.e. sacrifices, functional value expressed as quality, emotional value and social value. Though the authors claim that the sacrifices dimension extends PERVAL's functional-VFM dimension to include monetary and non-monetary sacrifices, scrutiny of the

wording of the scale items reveals that, in fact, it reflects only price-based costs, i.e. 'reasonable price', 'VFM', 'economy', 'discounts', and 'other expenses'.

In the second paper, Beldona *et al.* (2006) investigate value in the tourism industry and identify five apparently different dimensions from Sweeney and Soutar (2001) and Wang *et al.* (2004), which they name product, price, social, choice (i.e., the range of holidays on offer) and service (i.e., staff considerations). On close inspection, the product dimension is revealed to contain almost identical items to PERVAL's functional-quality and emotional dimensions, while the authors' price dimension contains identical indicators to PERVAL's functional-VFM dimension; thus, in essence only the names of certain PERVAL dimensions are changed, although the choice and service dimensions do appear to be distinct. Further scrutiny of the service dimension's scale items reveals considerable overlap with Parasuraman *et al.*'s (1988) SERVQUAL, which measures perceived service quality. Given the substantial body of empirical evidence that finds service quality to be a discrete construct from value (e.g., Cronin *et al.*, 1997; Brady and Robertson, 1999; Hsu, 2008; and debate in Chapter B3), arguably Beldona *et al.*'s conceptualisation of the service dimension as a component of value is incorrect.

In the third study, Williams and Soutar (2009) extend the PERVAL scale and address one of the shortcomings mentioned earlier by including epistemic value as a relevant value dimension in the context of adventure holidays. Although not reported in previous applications of PERVAL the authors noted that the functional-product quality and functional-VFM dimensions were closely correlated, even though conditions of discriminant validity were not breached. The conclusion is that the two dimensions might conflate in certain contexts in a similar way to how 'value for money' is measured as a price-quality evaluation in uni-dimensional research.

The SERV-PERVAL scale

Based broadly on the PERVAL scale, Petrick (2002) aims to extend the measurement of value beyond products by creating the SERV-PERVAL scale, which measures post-purchase service value in the leisure industry. The author identifies five dimensions: quality, emotional response, monetary price, behavioural price (i.e., time and effort expended in making the purchase) and reputation. The latter dimension represents the status of the product as reflected by the image of the provider, which is similar to LeBlanc and Ngyuen's (1999) and Ledden *et al.*'s (2007) image value of an education provider. Petrick's study is another within the multi-dimensional stream of research that includes quality as a dimension of value, which, as argued earlier in

this section, is questionable given the substantial body of evidence that supports quality as a discrete construct and an antecedent of value.

A strength of the study is that it broadens PERVAL to include non-monetary sacrifice, however at the same time it omits a measure of social value and in so doing moves further away from Sheth *et al.*'s consumption values theory. In terms of methodological rigour, however, the author provides a detailed explanation of the procedures undertaken to assess the psychometric properties of the scale, in which adherence to accepted good practice is demonstrated. The present author could find no studies that replicate the SERV-PERVAL scale beyond the author's later work (e.g., Petrick, 2004a,b).

The GLOVAL scale

Attention turns next to the GLOVAL scale developed by Sánchez *et al.* (2006). In an attempt to broaden the PERVAL scale which, according to the authors, is limited because it captures only post-purchase value, the GLOVAL scale seeks to measure "real" (Sánchez *et al.*, 2006:397) value perceptions that are modified by the experience of consumption, i.e., value as it is perceived pre-purchase, during purchase, during consumption and after consumption. The study considers value not only in relation to the product being purchased – here, a holiday – but also in relation to the travel agency from which the holiday package is purchased. Thus, the scale aims to measure both the purchase experience and the consumption experience.

The authors develop their scale with similar methodological rigour to Sweeney and Soutar (2001) and find empirical evidence for value as a formative higher order factor of six dimensions: (1) functional value of the establishment, and (2) functional value of the personnel, both of which relate to perceptions of the travel agency; (3) functional value of product quality, i.e. the quality of the holiday itself; (4) functional value of price measured as VFM; (5) emotional value, measured as the value that derives from the purchase process rather than from the holiday itself; and lastly (6) social value, relating to the status derived from both using the travel agency and taking the holiday. Although the dimensions differ, the structure of value as a formative higher order construct aligns with Ledden *et al.* (2007).

The GLOVAL authors claim that the scale captures value perceptions pre- and during purchase as well as during and post consumption, which suggests that a longitudinal approach would offer a preferred methodology to adequately capture value perceptions as these distinct stages, however in fact the study is cross-sectional,

with the questionnaire administered at a single point in time. Though the precise timing of the survey in relation to respondents' point of purchase or consumption is not stated, a post-consumption administration is clearly implied; thus, respondents are required to think back through the stages of purchase and consumption, which raises the issue of response bias due to the limitations of human memory. Moreover, purchase perceptions and consumption perceptions will inevitably coalesce over time, with the holiday perceptions (i.e., those that resonate more strongly and have the most longevity) dominating; this eventuality is especially so in the case of tourism when the gap between booking and taking holiday is often an extended period of many months (Kozak, 2001).

Examination of the wording of the GLOVAL questionnaire items reveals that the two dimensions of agency-related value (i.e., functional value of the establishment and of the personnel) are based on Parasuraman *et al.*'s (1988) SERVQUAL and thus represent measures of service quality, despite the body of literature that positions service quality as a distinct construct. Furthermore, it appears that service quality is used as a proxy for pre-and during-purchase value, and though the authors claim that perceived quality should be seen as an antecedent of value perceptions, in fact it is treated here as part of value. Consequently, analytically the temporal issues implied in the study's aim are not addressed, and moreover there is (1) considerable conceptual overlap between value and service quality and (2) an unresolved question regarding the structure of value as a hierarchy (e.g., Pilhström and Brush, 2008) versus value as a higher order factor (e.g., Ledden *et al.*, 2007; Ruiz *et al.*, 2008).

Three further studies by the collaborating authors of the GLOVAL scale, i.e., Roig *et al.* (2006), Moliner *et al.* (2007) and Sánchez-García *et al.* (2007) replicate the GLOVAL scale in the contexts of banking, ceramic tiles and tourism. The studies operationalise the dimensions of value in an identical fashion and thereby confirm the psychometric properties of the scale in a broader range of contexts.

A fourth study by Moliner (2009) adapts the GLOVAL scale to reflect the context-specific nature of the study, i.e. hospital services. GLOVAL's four functional dimensions (i.e., price, facilities, personnel and quality) are operationalised together with non-monetary costs, which the author includes as an additional dimension to represent the sacrifice expended in terms of waiting for treatment and appointments. The emotional and social values are omitted, and consequently value in this study is conceptualised on a mainly functional and cognitive basis. Given earlier debate in which the multi-dimensional perspective of value aims to emphasise its experiential and affective elements, it is argued that this treatment of value is

incomplete without an emotional value dimension, especially when considering that healthcare represents a particularly emotions-laden consumption experience (Dubé *et al.*, 1996; Bailey *et al.*, 2001).

Airlines

Attention turns lastly to the remaining paper that operationalises Sheth *et al.*'s consumption values. Long and Schiffman (2000) locate their research in the personal values domain, but confusingly go on to operationalise Sheth *et al.*'s consumption values as a means by which to segment the market for airline travel. This conceptual straddling of the personal values and consumer value domains is considered to contribute to the confusion noted in Section A1.3.3 in distinguishing between the two constructs (Sánchez-Fernández and Iniesta-Bonillo, 2007).

The authors generate a pool of items according to Churchill's (1979) seminal guidelines and the reliability and validity of the construct measures are reported according to accepted procedures. Through exploratory factor analysis the authors identify five dimensions of value that each comprise two sub-dimensions, thus: (1) emotional value comprises gratified and disappointed; (2) social value comprises practical/self-confident and status seeking; (3) epistemic comprises experientially-driven and knowledge-driven; (4) conditional comprises pragmatic and reward-seeking; (5) functional comprises cost of belonging (i.e., time and effort expended) and compensating advantage (i.e., benefits such as free upgrades) and accounts for the *give-get* aspect of value. Unfortunately the authors do not provide the wording for the complete set of scale items, however from the examples provided a measure of financial sacrifice appears to be omitted; neither is there any mention of price as a variable in the paper's discussion. While the study offers an otherwise relatively comprehensive operationalisation of value's *get* dimension, the limited treatment of the *give* component renders it as an overall incomplete conceptualisation of value.

Summary of the consumption values approach

To summarise the studies reviewed in this section, though not all studies include every one of the five consumption values, there is a certain degree of consistency as to how the same values are treated; in particular, the emotional, social, epistemic and conditional values, where included, are treated relatively uniformly. The notable exception is the functional dimension, which varies not only between studies but also in respect of authors' interpretation of Sheth *et al.*'s (1991a,b) definition of functional value. Sheth and his colleagues emphasise that, when measuring

functional value, "...only *salient* attributes should be included [...] the number and type of these is unique to each situation" (italics in original). The authors also stress that though price can sometimes be considered as the most salient functional attribute, it is only a primary source of functional value in choice situations where products are judged to be equivalent or where there is little or no differentiation among them, for example in the case of commodities in industrial markets or petrol in consumer markets.

The above propositions give rise to two concerns regarding authors' treatment of functional value. Firstly, with the exception of Stafford (1994), Long and Schiffman (2000), Ledden *et al.* (2007) and Moliner (2009), all of the studies reviewed treat functional value as an explicit case of price (mainly VFM) and quality considerations, although Pihlström and Brush (2008) and Pura (2005) do include items to measure convenience and LeBlanc and Nguyen (1999) needs-satisfaction alongside price, but even so price considerations dominate. Given that value in all of these studies is investigated in relation to highly differentiated and, for the most part, high-involvement products, in the light of the above argument such a treatment is clearly conceptually inadequate.

The above concern leads directly to the second, in which quality is treated as a functional attribute of a product. This author argues that quality is an extrinsic, higher-level abstraction (Zeithaml, 1988) rather than a concrete product attribute; consequently, accepting earlier debate in which functional value represents a product's intrinsic attributes, quality must be outside of value and is not a part of it. According to this logic, the studies referred to above effectively operationalise quality as a proxy for a product's actual functional value, and therefore align with the narrow, uni-dimensional view of value as discussed in Section B2.2. Accepting Sheth *et al.*'s view that functional value is the primary driver of choice behaviour, this limited treatment of the construct that appears in much of the multi-dimensional research suggests that the completeness of such studies, i.e. in offering a truly comprehensive picture of how consumers perceive value, is questionable.

One final point worthy of note concerns the omission in the majority of studies of an explicit measure of sacrifice; only Petrick (2002), Ledden *et al.* (2007) and Moliner (2009) conceptualise value's *give* element separately as a composite of monetary and non-monetary costs. Accepting the studies that include price or VFM as an element of functional value, the lack of a measure of non-monetary costs presents only a partial picture of the sacrifices that are considered in the value judgment. This observation is especially pertinent given the high level of involvement inherent in the majority of the studies' domains of interest, whereby costs such as search time,

effort and risk are likely to constitute important elements of the value assessment (Cronin *et al.*, 1997).

To conclude, Sheth *et al.*'s (1991a,b) theory of consumption values occupies a central position in the value literature as a pioneer of research into the multi-dimensional nature of the construct (Sánchez-Fernández and Iniesta-Bonillo, 2007). In particular Sheth *et al.*'s framework is important in offering a comprehensive basis for scale development in a variety of consumption domains; however its main limitation is that though some form of sacrifice is implied in its functional dimension, the framework lacks a specific measure of such.

B2.3.3 Holbrook’s (1994, 1999) typology

Value dimensions	Adopting authors	Research domain
Efficiency	Holbrook (1994, 1999)	Seminal conceptual paper
Excellence	Mathwick <i>et al.</i> (2001)	Shopping – Internet and mall
Status	Keng <i>et al.</i> (2007)	Shopping – mall
Esteem	Joo (2007)	Shopping – Internet
Play	Kim (2002)	Shopping – conceptual application
Aesthetics	Gallarza & Saura (2006)	Tourism
Ethics	Steenkamp & Geyskens (2000)	Internet usage
Spirituality	Sánchez-Fernández <i>et al.</i> (2009)	Services – restaurant

This debate in this section focuses on Holbrook’s (1994, 1999) typology of value, the third column in Table B2.4 which, as in previous sections, is abridged above and includes each study’s research domain to provide contextual understanding and the basis on which to structure debate.

With his definition of value discussed in Section B1.6 as a starting point, Holbrook (1994, 1999) draws deeply from axiology (i.e., the study of the theory of value, as discussed in Section B1.2) to construct a typology of value that aims to account for the value perceived by consumers in the consumption experience. Underlying the typology are three dichotomous continua:

- **Extrinsic versus intrinsic:** This continuum characterises a founding distinction in axiology between extrinsic and intrinsic value. Extrinsic value derives from consumption that takes places as a means to some functional or utilitarian end, i.e. to fulfil some purpose, aim or goal, and therefore aligns with the view of value that is grounded in utility theory (Zeithaml, 1988; Dodds *et al.*, 1991) and with value conceptualised as a means-end hierarchy (Spreng *et al.*, 1993; Woodruff, 1997). Conversely, intrinsic value is realised when the consumption experience is the end in itself, i.e. consumption is valued for its own sake, for example listening to music or spending a day at the beach (Holbrook, 1999). On the latter point it is important to note that intrinsic value resides in the

experience that is consumed by the subject, and specifically not in the object. Thus, the beach has no intrinsic value, but the experience of visiting it does. The extrinsic-intrinsic dichotomy associates with the utilitarian and hedonic dimensions of consumption discussed earlier in Section B2.3.1.

- **Self-oriented versus other-oriented:** Holbrook contends that this continuum also represents a broad consensus in axiology. Self-orientated value resides in the effect that consumption has on oneself or for one’s own sake; thus, self-oriented value derives from a consumption experience that is prized by the consumer personally. Conversely, other-oriented value relates to a consumer’s experience that is valued for its effect on others, or when a product is consumed for the sake of others. ‘Others’ may exist at a micro level (family, friends, colleagues) or even a sub-micro level (the ‘inner self’), at an intermediate level (community, country, planet) or the macro level (God, Mother Nature, a higher being). Thus, a day at the beach could be both self-oriented (I value it for my own enjoyment) or other-oriented (I derive value from the enjoyment it gives my family). Self-oriented value is predominantly associated with hedonic forms of value (Section B2.3.1).
- **Active versus reactive:** Active value involves the physical or mental manipulation of an object by the subject, that is, something that is actively done to or with a product by a consumer. It could involve a tangible object (driving a car) or an intangible object (solving a crossword puzzle). Reactive value on the other hand results from a subject’s response to an object, or put another way, the consumer allows an object to act upon him; for example, a consumer might experience rapture from a church meeting, appreciate a painting in an art gallery, or be emotionally moved by a poignant film. Thus in the former, “I act upon it” and in the latter “it acts upon me” (Holbrook, 1996:139).

Holbrook (1999:9) states that though the dimensions are presented as simple dichotomies, each should be thought of as a continuum running “...from one extreme to the other with various gradations in between”. The 2x2x2 matrix that results from this schema produces an eight-celled typology of consumer values represented in Table B2.5 below, a summarised version of which appeared in Table B2.4. The eight types of value are efficiency, excellence, status, esteem, play, aesthetics, ethics, and spirituality; examples of each type are shown in parentheses. According to Holbrook, the values are compresent and can commingle in any consumption situation. This is in contrast to Sheth *et al.*’s (1991a,b) consumption values, which, according to the authors, are independent. There is considerable depth and complexity to be found in the axiological and philosophical positions that

underpin the values, and on each Holbrook offers extensive debate; however it is not the purpose of this thesis to probe such issues and instead a brief summary is offered below.

Table B2.5 Holbrook’s typology

		Extrinsic	Intrinsic
Self-oriented	Active	Efficiency (O/I ratio; convenience)	Play (fun)
	Reactive	Excellence (quality)	Aesthetics (beauty)
Other oriented	Active	Status (success)	Ethics (justice, morality)
	Reactive	Esteem (reputation, materialism)	Spirituality (faith, ecstasy)

Source: Holbrook, M.B. (1999), Introduction to consumer value, in M.B. Holbrook (Ed.), *Consumer Value: a framework for analysis and research*, 1-28, New York: Routledge

- **Efficiency** (extrinsic, self-oriented, active): This value results from the active use of a product as a means by which to achieve some self-directed purpose. Holbrook states that efficiency is commonly measured as a ratio of input to outputs (the O/I ratio), expressed as results in relation to resources expended or benefits to costs, i.e. the maximum achievement of a given goal within the resources available to achieve it. A primary example of an output is convenience, where time is the key input. As shall become clear in the forthcoming debate, the O/I ratio is commonly interpreted as the *give-get* function of value, in which a product’s benefits are the received output of consumption and the sacrifices expended are the inputs (Sánchez-Fernández et al., 2009). As shall be demonstrated in later debate, the *gets* and *gives* are mostly narrowly characterised as convenience and price, even though Holbrook’s definition allows a much broader interpretation.
- **Excellence** (extrinsic, self-oriented, reactive): This type of value differs from efficiency insofar that it is an extrinsic (means to an end) value that involves the consumer’s *response* to a consumption experience, for example admiration, appreciation, apprehension. Holbrook explains that quality is a specific condition of excellence in that it represents the consumer’s judgment about the performance of a product in terms of its superiority or ability to serve as a means to the desired end. This contention sparks a considerable controversy in the value literature regarding whether quality should be treated as a determinant or a dimension of value (see Chapter B3).
- **Status** (extrinsic, other-oriented, active): Status (or in Holbrook’s 1994 version of the typology, politics) relates to the value derived from consumption when it achieves a favourable response from someone else. As Holbrook (1999:15) succinctly explains, “...politically, we seek status by adjusting our consumption

in a manner that affects those whom we wish to influence". Thus, status value is the active pursuit of consumption experiences that are aimed at achieving success or advantage, e.g. people are said to "dress for success" if they desire to make a favourable impression, say, on a potential employer (Holbrook, 1994:49).

- **Esteem** (extrinsic, other-oriented, reactive): Closely related to status is esteem, which Holbrook explains is the reactive or passive counterpart to status and is based upon social reputation or prestige. Value in esteem arises from a consumer's ownership of his possessions, which he values because they serve to define his reputation. In other words, he appreciates his own consumption as a means by which to enhance his standing in the eyes of others. Here, the concept of conspicuous consumption is once again salient. Holbrook acknowledges that status and esteem seem rather difficult to separate conceptually, and their distinction relies upon a subtle interpretation of the active-reactive dichotomy; thus the difference lies in distinguishing the value derived from the display of consumption on others (i.e., status: he acts upon it) versus the value derived from the sense of self that the product bestows on its owner (i.e., esteem: the product acts upon him).
- **Play** (intrinsic, self-oriented, active): This value is a self-directed consumption experience that is enjoyed for its own sake; that is, something that is consumed purely for the sheer fun of it; the product serves no other purpose than to provide entertainment and pleasure to the consumer. Play associates with the hedonic dimension of consumption (see Babin *et al.*, 1994 and Section B2.3.1).
- **Aesthetics** (intrinsic, self-oriented, reactive): In contrast to the active pleasure of play or doing things for fun, aesthetics is concerned with the reactive or passive appreciation of self-directed consumption, e.g. the enjoyment of appreciating a beautiful work of art or enjoying watching a game of football. Like play, the consumption experience is enjoyed for its own sake and, in itself, serves no practical purpose. Aesthetics can be viewed as a reactive form of hedonic value.
- **Ethics** (intrinsic, other-oriented, active): Otherwise indicated as morality in Holbrook's 1994 version of the typology, ethics involves the value in consumption that takes place with concern for how it will affect others, or for the sake of others. In line with the intrinsic nature of this value, the consumption experience is valued for its own sake. Concepts such as altruism, philanthropy, morality, justice, duty, and responsibility are salient. Broadly, consumption is valued because it is the 'right thing to do' or because it is for a greater good.

Examples of such consumption include charity support (Bennett and Gabriel, 2000), ethical consumerism (Shaw and Clarke, 1999) and green consumerism (Chan and Lau, 2000).

- **Spirituality** (intrinsic, other-oriented, reactive): The reactive counterpart of ethics, spirituality involves consumption that is oriented towards the appreciation of some higher 'other' such as a divine power or deity or even one's "inner being" (Holbrook, 1999:23). The consumption experience provides value through ecstasy or rapture associated with mysticism, faith, devotion or worship that inheres, for example, in religious faith. In addition, Brown (1999) and Rintamäki *et al.* (2006) observe that the shopping experience itself is sometimes characterised as sacred or magical.

Though, arguably, Holbrook's typology is conceptualised at a higher level of abstraction, it shares some conceptual overlap with Sheth *et al.*'s (1991a,b) consumption values. The self-oriented values of efficiency and its counterpart excellence align with Sheth *et al.*'s functional value, in which a product's utility and attributes contribute to its ability to fulfil its core purpose in satisfying needs and achieving consumption goals. Other-oriented esteem and its counterpart status both align closely with Sheth *et al.*'s social value, in which a product's symbolism or its association with people and society imbue perceptions of value, with special relevance to conspicuous consumption in the case of high-status products. Social and subjective norms are also salient when a person's consumption behaviour fits within the frame of reference of influential others.

Though not sharing a one-to-one overlap, Sheth *et al.*'s emotional value exhibits congruence with all four types of intrinsic value because at this end of the extrinsic-intrinsic continuum it is the consumption *experience* that is the end in itself and is valued for its own sake; ergo, value resides in the gamut of emotions and affective states that result from that experience. Thus, play evokes feelings of joy, fun, happiness; ethics both assuages guilt or remorse and leads to feelings of virtue and righteousness; aesthetics generates a sense of awe and admiration or even fear and loathing; lastly, spirituality engenders deep emotional responses such as piety, ecstasy, and devotion. The link between emotions and intrinsic value is noted by Yoo (2007).

There is a body of research across multiple disciplines such as education, psychology and anthropology that points to the role of play as a mechanism for learning throughout a person's life (Rieber, 1996), and consequently Holbrook's play value can be associated with Sheth *et al.*'s epistemic value, which relates to the value derived from learning or experiencing something new.

Only Sheth *et al.*'s conditional value cannot be directly related to Holbrook's schema, which appears explicable in view of its nature as a value that is derived through a specific situation or context. However, an alternative view is that conditional value is subsumed within the continua underpinning Holbrook's typology, i.e. that any of the eight values derived from the consumption episode are contingent on whether and to what extent the episode is extrinsic or intrinsic, self-oriented or other-oriented, active or reactive; in other words, value is inherently a function of some situation or context, thus the value derived from the situation depends upon the location of the episode within each consumption dimension.

A limitation that both Sheth *et al.*'s (1991a,b) consumption values and Holbrook's (1994, 1999) typology share is the lack of a direct measure of sacrifice, even though, as discussed earlier, aspects of sacrifice are implicit within Holbrook's efficiency value and Sheth *et al.*'s functional value. This lack of explicitness accounts for the inconsistent way in which authors have interpreted these particular dimensions. Moreover, the omission of a discrete sacrifice component has led to a major emphasis on the value that is *received* during consumption experiences, i.e. the *get* component.

A further constraint of Holbrook's typology is the intricacy of its structure and the subtlety of the distinctions between some values, e.g. between status and esteem, and ethics and spirituality, which render it difficult to operationalise. This inherent complexity accounts for the partial way in which authors have empirically tested the typology (Sánchez-Fernández *et al.*, 2009), which leads the present discussion to the studies that adopt Holbrook's typology to operationalise the value construct. The remaining discussion is structured according to the sequence of papers identified in the excerpt table located at the beginning of this section.

Shopping – internet and mall

According to this author's review of literature, Mathwick *et al.* (2001) appear to be the first authors to test empirically Holbrook's typology. The authors develop an experiential value scale (EVS) to assess the retail shopping experience of internet and catalogue shoppers, and then test the impact of value on consumer preference. The authors (and indeed the majority of authors who subsequently follow their operationalisation) focus on only four of Holbrook's eight values, i.e. the extrinsic and intrinsic values located along the self-oriented dimension, namely efficiency and excellence (extrinsic) and play and aesthetics (intrinsic).

The authors provide no debate to explain why their testing of Holbrook's typology is only partial, i.e. it focuses on the self-oriented values and excludes the other-oriented values. The inference is that as shopping is a self-directed activity, only the self-oriented values are salient, although clearly this offers a simplistic explanation that discords with Holbrook's concept of value debated earlier in this section. Sánchez-Fernández *et al.* (2009) allude to the difficulty in operationalising other-oriented values but do not explain the nature of the difficulty. The present author concludes that whereas self-oriented value accounts for the effect of consumption on the consumer directly and is therefore relatively easy for the consumer to evaluate, conversely other-oriented value derives from the effect that consumption has on others, and as such it requires a more subtle, introspective and psychological evaluation that is difficult to tap into and measure accurately among respondents and consumption situations.

Of the extrinsic values captured by the EVS scale, the authors argue that efficiency in the context of shopping represents all the financial, temporal, behavioural and psychological resources that yield a return for the consumer, thus they define a higher order factor they name consumer return on investment (CROI) which comprises two first order factors, i.e. economic utility, representing the VFM/quality-price relationship, and efficiency in relation to the time and effort invested in shopping at the website/catalogue. Excellence is treated as a single factor representing the perceived superiority of the website/catalogue.

Of the two intrinsic values, aesthetics is treated as a higher order of two factors that define the reactive aesthetic response to the design of the website or catalogue, one that measures its visual appeal and the other its entertainment value. Play is the counterpart of aesthetics and accounts for the active role that the consumer takes in the exchange. Play is treated as a higher order factor of escapism, which measures the website/catalogue's ability to enable the shopper to "get away from it all" (Mathwick *et al.*, 2001:44) and enjoyment, which measures the extent to which shopping at the website/catalogue is enjoyed for its own sake.

The EVS scale is developed by combining pre-existing commercial qualitative data sets with relevant published scales, which generates an initial pool of items that are first reduced through face and content validity checks with expert judges and then confirmed through factor analysis. Subsequently the scale is tested to confirm its psychometric properties and then further purified during model testing. All stages of scale development reported by the authors are rigorously in accordance with accepted good practice. Although not explicitly articulated, the scale includes through its CROI dimension a measure of sacrifice in terms of price and time/effort,

and in this respect it overcomes a limitation of the scales discussed earlier in offering a direct measure of sacrifice that considers both monetary and non-monetary outputs. Despite its strengths, however, and while accepting the afore-mentioned difficulty in operationalising other-oriented values (Sánchez-Fernández *et al.*, 2009), the omission of these must be viewed as a limitation because it renders an incomplete examination of Holbrook's typology.

An abridged version of Mathwick *et al.*'s (2001) EVS scale is operationalised by Keng *et al.* (2007) in the context of mall shopping in Taiwan, who extend the scope of the study to include the impact of the service encounter in terms of a consumer's personal and physical interaction with the mall on extrinsic and intrinsic experiential value. They maintain the main focus on the four self-oriented extrinsic/intrinsic values, presumably for the reasons proposed by the author in the above debate, but reduce Mathwick *et al.*'s higher order structure to four uni-dimensional constructs. Service excellence is retained as a single factor and aesthetics represents only visual appeal (entertainment value is removed). Escapism is removed from playfulness and represents only the enjoyment aspect. Finally CROI is shortened to efficiency value and thus economic value is removed. The obvious limitation of this treatment is the lack of any kind of measure for sacrifice, however circumscribed. In this sense Keng *et al.*'s study investigates only value's *get* dimension.

In an attempt to broaden Holbrook's (1994, 1999) typology and extend Mathwick *et al.*'s (2001) operationalisation to the context of the internet shopping behaviour of Korean consumers, Joo (2007) proposes a 2x2 value framework classified by two dimensions named value orientation and interactivity. The former is based upon Holbrook's extrinsic-intrinsic dimension while the latter reconceptualises Holbrook's active-reactive dimension to reflect the extent to which two or more parties interact. The four quadrants of the matrix yield seven value types: (1) economy (product price, transaction cost); (2) convenience (website interface, order tracking); (3) speed (quick fulfilment/delivery, reduced shopping time); (4) trust (quality, reliability, assurance, responsiveness, complaints handling); (5) personalisation (website customisation/personalisation); (6) community (knowledge sharing); (7) emotion (enjoyment, playfulness, web design).

From an examination of the wording of the scale items it appears that economy, convenience and speed can be aligned with Holbrook's efficiency value, these representing sacrifice in terms of price, time and effort; however, they are classified by Joo as reactive, whereas in Holbrook's typology efficiency is an active value. Joo's trust dimension parallels Holbrook's excellence value, yet Joo positions trust as intrinsic whereas Holbrook locates excellence in the extrinsic domain. The scale

items for excellence borrow heavily from Parasuraman *et al.*'s (1988) SERVQUAL, which implies that service quality is conceptualised here as a dimension of value. Joo's emotion construct appears to be operationally defined by Holbrook's play and aesthetics, while personalisation and community could be shoe-horned into Holbrook's status and ethics.

Unfortunately, Joo offers limited debate on how the above constructs are operationalised and provides no information as to the derivation of the scale items; thus, while the author confirms their psychometric properties, it is not known whether the scales are specially developed for the study or adapted from existing work in the domain. In summary, although Joo's operationalisation bears face validity with Holbrook's typology and is to some extent similar in approach to Mathwick *et al.* (2001), in fact its underpinning theoretical framework is largely indefinable, which serves to undermine the study's coherency.

Shopping – conceptual application

With Holbrook's typology as its theoretical foundation, Kim (2002) proposes a conceptual framework to examine the sources of value for consumers in the context of shopping. Following Mathwick *et al.*'s (2001) approach, Kim's study focuses only on self-oriented values, i.e. efficiency (extrinsic-active), excellence (extrinsic-reactive), play (intrinsic-active) and aesthetics (intrinsic-reactive). Other-oriented values of status, esteem, ethics and spirituality are omitted. Kim rationalises this decision on the basis that shopping is primarily a self-oriented activity, however the present author contends that this premise presents a narrow perspective of shopping value. With earlier debate concerning the difficulty of measuring other-oriented values as a caveat, nonetheless shopping for the sake of others (i.e., role shopping) and to please others (i.e., social shopping) are known to be distinct motivators of shopping behaviour (Babin *et al.*, 1994; Arnold and Reynolds, 2003), thus the value derived from such consumption experiences may be categorised as ethics value. Moreover status value and esteem value are characterised by conspicuous consumption, materialism and the passive appreciation of one's possessions, all of which are necessarily realised through shopping experiences (Rintamäki *et al.*, 2006). Thus, Kim's neglect of the other-oriented values renders the conceptualisation incomplete.

Kim conceptualises the self-oriented values in relation to the value that derives from Internet and mall shopping. Efficiency accounts for convenience value, e.g. one-stop shopping offered by malls versus the 24-hour accessibility of the Internet, and the

resources expended in terms of time, effort and money, such as time spent in traffic and parking at the mall versus set-up costs and navigation issues for the web. Excellence relates to product performance in terms of quality/selection/price for both mall and internet shopping, and customer service in terms of the retailer's response to customer needs, whether personal and in real-time (mall) or 'virtually' and asynchronously (internet). Play accounts for sensory stimulation and entertainment value, whether all five senses (mall) or sight and sound alone (internet), and the social interaction of shopping whether in person (mall) or through chat rooms (internet). Lastly, aesthetics relates to the ambience generated by the shopping experience, e.g. the visual display of the mall or the virtual display of the website. This conceptualisation shares some common ground with Mathwick *et al.* (2001) with the exception that price is included as an element of excellence while for Mathwick *et al.* it is a component of efficiency, the latter treatment aligning more closely with Holbrook's definition.

The study offers a circumscribed analytical tool for determining the elements of value that are uniquely associated with the self-oriented values of mall and internet shopping, however to date, no evidence of its empirical testing can be found in the literature.

Tourism and internet usage

The debate so far demonstrates that Holbrook's typology is exclusively applied to the shopping experience; however Gallarza and Saura (2006) extend the scope of its operationalisation to the tourism domain. Consistent with Mathwick *et al.* (2001), Keng *et al.* (2007) and Kim (2002) they operationalise the self-oriented values but at the same time they overcome the limitations of previous studies by adding social value, which combines other-oriented aspects of status and esteem. Together these five values account for positive inputs to value. Negative inputs to value are conceptualised as three separate constructs, perceived monetary cost (i.e., cost of the trip), perceived risk (e.g., risk from natural disaster, terrorism, fraud) and time/effort (e.g., time spent in planning, opportunity costs). In this way, resources expended are not included in efficiency as in Mathwick *et al.* (2001) and Kim (2002), which instead focuses on functional aspects of the tourism experience such as food and facilities. Excellence is treated identically to Joo (2007) as service quality and similarly borrows from SERVQUAL. Play and aesthetics relate to enjoying the trip and the beauty of towns and landscapes. Social value accounts for belongingness and relationships with fellow tourists.

Accordingly, Gallarza and Saura's study is one of the few discussed so far that explicitly operationalises *give* multi-dimensionally as a composite of monetary and non-monetary forfeits. In this respect it is comparable to Ledden *et al.* (2007) who adopt a similar approach using Sheth *et al.*'s (1991a,b) consumption values to operationalise the *get* component. At the same time, however, there is a key difference in that Ledden *et al.* treat value as a higher order construct of *give* and *get*, whereas Gallarza and Saura treat the *give* and *get* dimensions as antecedents of value, which they measure separately as VFM. Thus, in fact the authors conceptualise value uni-dimensionally as an outcome of multiple antecedents.

In an identical way to Gallarza and Saura, Steenkamp and Geyskens (2006) ground their study in Holbrook's (1994, 1999) concept of value but treat the four dimensions they identify (i.e., utilitarian experience, emotional experience, privacy, customisation) as determinants of perceived value, which is conceptualised as an overall expression of value. Not only do these determinants bear very little resemblance to Holbrook's value types, moreover examination of the perceived value scale items shows them to be more strongly associated with value's behavioural outcomes than with value itself, e.g., intention to revisit the website, intention to bookmark the website. Consequently, this conceptualisation demonstrates a considerable departure from the operational definition of the construct as an expression of what is received in relation to what is given.

Further to the above debate, the author contends that the studies by Gallarza and Saura and Steenkamp and Geyskens model value in a way that is conceptually and nomologically flawed (Lin *et al.*, 2005; Ruiz *et al.*, 2008). In support, Lin *et al.* (2005:319) state that structural representations of this kind not only "violate the fundamental definition" of value but are also "conceptually tautological" (p.321) because they imply that the dimensions of value and perceived/overall value are distinct concepts. Consequently, though literature supports the value construct as a composite of multiple dimensions, these studies treat value and its dimensions as separate though causally related constructs.

Services – restaurant

Sánchez-Fernández *et al.* (2009), with Morris Holbrook as a collaborating author, operationalise Holbrook's typology in the services context, specifically for consumers of a restaurant. They seek to offer a complete operationalisation of the typology by including a representation of all eight values in their consumer value model, in which value is conceptualised as a higher order factor of six dimensions: (1) efficiency is

consistent with Mathwick *et al.* (2001) and Kim (2002) representing price, time and effort spent in the restaurant, though unlike Mathwick *et al.* the indicators are combined in a single dimension; (2) excellence represents quality of the staff and food; (2) social value is treated identically to Gallarza and Saura (2006) in combining status and esteem to characterise the feelings associated with social status and belongingness; (4) play and (5) aesthetics are both treated very similarly to previous studies to represent escapism, enjoyment and visual appeal; finally, (6) given the conceptual closeness of the ethics and spirituality values and the difficulty in operationalising them separately, the authors provide an argument for combining them as a single index, i.e. altruistic value, which captures the ethical and moral interest of patronising a vegetarian restaurant and the sense of spirituality embodied in its atmosphere.

In terms of scale development, the authors offer a limited discussion regarding the derivation of the scale items but assert that the psychometric properties of the measures are confirmed. In short, Sánchez-Fernández *et al.* provide the first attempt to operationalise Holbrook's entire typology, albeit treating the other-oriented values in a relatively circumscribed way, and thus the study is to be commended.

Summary of Holbrook's typological approach

To summarise this section, Holbrook's (1994, 1999) typology is extremely influential, both in providing authors with a framework to operationalise value and as the foundation for critique and debate concerning the nature of the consumer value construct (Leclerc and Schmitt, 1999; Oliver, 1999; Solomon, 1999; Richins, 1999; Grayson, 1999; Wagner, 1999; Smith, 1999; Brown, 1999). Of the studies reviewed in this section, the majority focus on the self-oriented values and only two additionally include other-oriented dimensions (Gallarza and Saura, 2006; Sánchez-Fernández *et al.*, 2009). In every study, excellence is treated as quality, in terms of either product quality or service quality, and as shall become clear in Chapter B3 the position of quality as a component or dimension of value is the subject of much debate. Play and aesthetics are treated very similarly throughout in terms of their operational definition, though the studies vary in terms of scale items.

The main area of divergence is the variety of ways that the efficiency dimension is treated, i.e., some authors focus solely on outputs such as convenience (Keng *et al.*, 2007), some focus solely on inputs such as price, time and effort (Sánchez-Fernández *et al.*, 2009) while still others include price, time and effort together with

convenience (i.e., outputs and inputs combined) (Mathwick *et al.*, 20010; Kim, 2002; Joo, 2007). Gallarza and Saura (2006) adopt a different approach by treating efficiency as an output along a functional dimension (i.e., the core facilities and infrastructures offered by a tourist destination) but model price, time and effort as separate constructs, although it is to be remembered that these authors in fact treat the dimensions of value as antecedents.

In the view of this author, the above-debated emphasis on convenience as the single output of efficiency offers a narrow view, given that Holbrook’s definition specifies outputs as representing all relevant functional aspects of an object’s ability to achieve the consumer’s consumption goals (1994, 1999); thus, in this respect, Gallarza and Saura’s (2006) treatment appears to provide a more rounded interpretation, although once more the caveat is the noted shortcoming of the analytical treatment of the value dimensions as antecedents.

Finally, Holbrook’s typology includes only a circumscribed measure of sacrifice and therefore its major focus is on the perceived benefits of consumer value. This is a shortcoming that is noted by the author himself (Holbrook, 1999:187) who observes that though he has “made room” for the benefits-to-costs ratio within the efficiency cell of the typology, value is largely implied as a “cost-free benefit”. The lack of a prescribed measure of sacrifice explains to some extent the inconsistency in authors’ approaches. The complexity involved in exploring the nuances of the other-oriented values and the delicacy of the distinctions between some values has rendered it difficult to operationalise, which accounts for the small number of studies attempting to do so. Nonetheless Holbrook’s work and the efforts of those operationalising it have added considerable richness to the consumer value debate.

B2.3.4 Axiological dimensions of value

Dimensions of value	Adopting authors	Research domain
Emotional Logical Practical	Mattsson (1990, 1992) Danaher & Mattsson (1994) Danaher Mattsson (1998) de Ruyter <i>et al.</i> (1997a) de Ruyter <i>et al.</i> (1997b) Lemmink <i>et al.</i> (1998) Huber <i>et al.</i> (2007)	Seminal conceptual papers Services – hotel visitation Services – hotel, conference, restaurant Services – hotel visitation Tourism – museum visitation Services – hotel visitation Services – car repair

Debate now turns to the body of work that is grouped in the axiological dimensions of value, as depicted in the fourth column in Table B2.4 and abridged as above, which also includes each study’s research domain. Given the homogeneity of the papers in this section, the debate follows a mostly chronological sequence.

Jan Mattsson (1990, 1992) was among the first marketing scholars to conceptualise value based on Robert Hartman's (1951, 1973) axiological system of extrinsic, intrinsic and systemic value, which explains a generic model of value that takes into account its cognitive, affective and rational elements. As noted earlier, the distinction between extrinsic and intrinsic value is one of the few universally accepted axiological 'truths' (Lemmink *et al.*, 1998); as discussed in Section B2.3.3, Holbrook (1994, 1999) dichotomises extrinsic and intrinsic value in one of three continua that underpin his typology of consumer value.

Robert Hartman (1951, 1973) explains that extrinsic value represents the practical, functional or utilitarian use of an object as a means to a specific end, whereas intrinsic value represents the emotional response to or an affective appreciation of a consumption experience, or where the consumption experience is the end in itself. Thus, as already noted, the extrinsic and intrinsic dimensions share a close conceptual correspondence with utilitarian and hedonic consumption values respectively. Systemic value reflects the relationships that inhere between constructs during their interaction, for example the relationship between benefits and sacrifices (Lemmink *et al.*, 1998; Sánchez-Fernández and Iniesta-Bonillo, 2007). Thus, systemic value is a function of the consumption experience and does not reside in the object (de Ruyter *et al.*, 1997a). In accordance with this debate, Mattsson (1990) translated Hartman's three dimensions as follows:

- The practical (extrinsic) dimension relates to the concrete or physical aspects of a consumption experience that can be cognitively understood;
- The emotional (intrinsic) dimension relates to all the emotions engendered by consumption, or the 'gestalt' experience (Lemmink *et al.*, 1998);
- The logical (systemic) dimension relates to the rational element of a consumption experience, as in the rationality of a sequence of events. According to Huber *et al.* (2007) this dimension accounts for the sacrifices expended in the consumption experience.

According to Mattsson (1990) the emotional dimension is richer in content than the practical, which in turn is richer than the logical; hence $E > P > L$ represents an order of richness (Danaher and Mattsson, 1994; Lemmink *et al.*, 1998). The system enables the concrete and abstract properties of value to be matched during the valuation process, the result of which is the value judgment itself (Lemmink *et al.*, 1998). The value of something depends upon the fulfilment of its concept (Hartman, 1973); thus the degree to which fulfilment takes place is defined as positive value, and the degree of non-fulfilment as negative value (Mattsson, 1990).

Drawing on the work discussed above, Danaher and Mattsson (1994, 1998) use the system to investigate value in the context of service encounters, firstly in hotel visitation (1994) and later (1998) comparing service encounters of differing levels of complexity, i.e. a restaurant visit, conference attendance, and hotel visitation. In these contexts, the practical dimension (P) relates to physical and functional aspects of the service, such as food, accommodation, conference room facilities; the emotional dimension (E) relates to the emotions resulting from the service experience; lastly the logical (L) dimension relates to the rational and abstract components of the service encounter, such as whether aspects are correct or incorrect, right or wrong, or at the appropriate standard. Perceptions of service quality and price are also salient within the logical dimension.

The authors propose that a consumer's satisfaction with the service will be affected cumulatively by the value perceived at each successive touch-point over the duration of the consumption experience. They construct an index of measures that includes a context-specific item – one each for E, P, and L – for each encounter. The encounter episodes are: arrival, food, service (restaurant: 1998 study); arrival, coffee break, lunch, room (conference attendance: 1998 study); and check-in, room, restaurant, breakfast and check-out (hotel visitation: 1994 and 1998 studies). Satisfaction is measured at each encounter and globally at the end of the service delivery. Analysis is conducted to determine the relative impacts of the value dimensions on satisfaction at each point in the encounter.

De Ruyter *et al.* (1997a,b), Lemmink *et al.* (1998) and Huber *et al.* (2007) replicate Danaher and Mattsson (1994) in the context of various services. De Ruyter *et al.* (1997a,b) replicate the E>L>P methodology in the case of hotel visitation (1997a) and museum visitation (1997b). In the latter study the stages of encounter reflect the museum context, representing museum entrance, temporary collection, permanent collection, restaurant, museum shop, wardrobe. In both studies, the logical dimension is operationalised in terms of value for money. Lemmink *et al.* (1998) test the E>L>P methodology on three segments of restaurant users, i.e. business users, special occasion users, and diners in a hurry. The service encounter stages are reception, ordering, meal, check-out. Huber *et al.* (2007) operationalise the same dimensions in the context of a car repair service, and add a fourth, risk, which represents a customer's uncertainty about the quality-cost judgment. The service encounter stages are telephone date, reception, discussion with mechanic, payment, vehicle transfer.

Turning to how the E>L>P dimensions are measured in the above studies, the precise wording of scale items is tailored in each case to account for the context-

specific nature of the service encounters (Danaher and Mattsson, 1994); thus, the items capture consumers' reactions to a particular encounter in the service delivery along each of the emotional, logical and practical dimensions. An examination of the content of the concepts/phrases used enables an appreciation of how the dimensions are operationalised and their correspondence to operationalisations of value discussed previously:

- The emotional dimension associates with phrases such as pleasant greeting, caring waiter, attractive food (Lemmink *et al.*, 1998); nice treatment, fine/calm atmosphere, cosy room (de Ruyter *et al.*, 1997a,b); friendly greeting (Danaher and Mattsson, 1998); treated courteously, pleasant atmosphere (Huber *et al.*, 2007).
- The practical dimension associates with words such as good seating, good food (Lemmink *et al.*, 1998); well-composed collection (de Ruyter *et al.*, 1997b); quick check-in/check-out (Danaher and Mattsson, 1994; de Ruyter *et al.*, 1997b); easy to understand invoice (Huber *et al.*, 2007).
- The logical dimension associates with efficient procedure, efficient ordering (Lemmink *et al.*, 1998); correct bill, correct payment, (Danaher and Mattsson, 1994; de Ruyter *et al.*, 1997a,b); right standard, right price (Danaher and Mattsson, 1998); right price/quality (Huber *et al.*, 2007); value for money (Danaher and Mattsson, 1994; de Ruyter *et al.*, 1997a,b; Lemmink *et al.*, 1998).
- Huber *et al.*'s (2007) risk dimension associates with possible problems with cancellation, bad organisation, incorrect payment handling, and vehicle return.

The above demonstrates a broad association with types of value discussed in earlier sections of this chapter. The emotional dimension corresponds to Sheth *et al.*'s (1991a,b) emotional consumption value and Holbrook's (1994, 1999) intrinsic values (play, aesthetics, ethics and spirituality), these representing the value derived from emotional responses to consumption experiences that are valued for their own sake. The practical dimension aligns with Holbrook's efficiency and Sheth *et al.*'s (1991a,b) functional value in terms of the value that derives from a product's core functionality and utility in serving a means to an end. There is correspondence between the emotional and practical dimensions and the hedonic and utilitarian dimensions respectively, as discussed earlier in Section B2.3.1.

In terms of the logical dimension, as noted earlier this accounts for the value arising from the interplay of related constructs and consequently associates with the *give-get* concept that underpins both uni- and multi-dimensional research, though in the

studies discussed above *give-get* is expressed relatively narrowly as price-quality/VFM. Though the logical dimension provides at least a partial explanation, and with Huber *et al.*'s (2007) risk dimension aside, what is missing among the E>L>P dimensions is an explicit representation of sacrifice.

Summary of the axiological approach

The E>L>P dimensions bear conceptual resemblance to concepts underpinning both uni- and multi-dimensional approaches to value research. Most notable among them at a generic level is the influence of the practical (extrinsic) and emotional (Intrinsic) dimensions on Holbrook's (1994, 1999) value typology. Moreover, a degree of similarity is noted between the E>L>P dimensions and certain of Sheth *et al.*'s (1991a,b) consumption values and Holbrook's (1994, 1999) value types. The key issue concerning the axiological stream of value research is its concentration in the area of service delivery in which value is investigated primarily as an input to satisfaction rather than as the focal research construct of interest. Consequently, this stream of research is less focused on developing understanding of the consumer value construct itself and does not seek to provide an explanation of, or insights into, the *sources* of value. In the latter respect, Holbrook's (1994, 1999) value typology and Sheth *et al.*'s (1991a,b) theory of consumption values together with the associated research that both have spawned offer a greater contribution and richness to the overall debate on the nature and types of consumer value; nonetheless, the axiological stream of research offers another perspective on which to broaden knowledge in the wider value domain.

B2.3.5 Other multi-dimensional research

Dimensions of value	Adopting authors	Research domain
Various	Heinonen (2004, 2006, 2007) Heinonen & Strandvik (2009) Lin <i>et al.</i> (2005) Ruiz <i>et al.</i> (2008)	Internet banking (all three papers) Internet travel Shopping – Internet Services – various

Review of the literature identified a small number of isolated conceptualisations of value that could not be fitted into any of the main categories discussed earlier, i.e. those indicated in the fifth column in Table B2.4 (reprised above). None of these works have attracted an adopting body of researchers, together representing a piece-meal approach to investigating value; they are discussed here very briefly for the sake of completeness.

Heinonen (2004, 2006, 2007) and Heinonen and Standvick (2009) argue for a different conceptualisation of value in which the underpinning dimensions of perceived quality can be used to specify value in the context of e-service delivery. The authors state that while the benefits-sacrifice perspective of value is relevant, it does not sufficiently identify the source of value-in-use in the services context. They identify four dimensions they name temporal, spatial, functional and technical: thus, in terms of service delivery the dimensions relate to when (temporal), where (spatial), how (functional) and what (technical) is delivered. Benefits or sacrifices can be perceived along any of the four dimensions; understanding which are the value-adding or value-decreasing dimensions can enable an organisation to improve its value proposition. In this respect, the value model offers managers a diagnostic tool for adjusting service delivery rather than offering insight into the dimensions of perceived value of the service product itself.

Lin *et al.* (2005) and Ruiz *et al.* (2008) conceptualise value as a multi-dimensional formative higher order construct, the former study within the e-services context and the latter in a variety of service domains. While the focus of the studies is on measurement and model specification, both conceive value as a composite of *give* and *get* components and thus they overcome the limitation of studies discussed in earlier sections that focus only on the *get* dimensions of value. Lin *et al.* include four context-specific *get* dimensions of fulfilment/reliability, website design, security/privacy and customer service, and represent sacrifice solely as financial cost. Ruiz *et al.* conceptualise price, time and effort as an index of sacrifice, while service quality, service equity (i.e., service provider preference) and confidence benefits (i.e., risk and anxiety reduced by trust in service provider) together represent *gets*. As discussed in previous sections, a problem that both treatments share is the representation of elements of service quality as components rather than antecedents to value.

B2.4 SUMMARY AND CONCLUSION

Discussion in this chapter has focused on the two competing paradigms within which value is conceptualised. Discussion in Section B2.2 reveals that considerable ambiguity inheres to the uni-dimensional treatment of value. While the majority of studies conceptualise value as 'value for money', at the same time there is substantial variation in the operationalisation of this concept. For the most part, neither VFM nor overall treatments of value explicitly articulate the constituents of *get*, which are only either vaguely implied or narrowly specified in the remainder. The *get* component is also variously expressed, for the most part as a price

consideration with only a few studies additionally including time and effort spent while some studies include no expression of sacrifice at all. Lastly, the comparative nature of value is mostly overlooked, with only a few studying specifying value as a comparison of 'getting' and 'giving'. Given this debate, the uni-dimensional treatment of value calls into question whether its meaning is shared among respondents and moreover it renders comparison between findings difficult.

From the debate offered in Section B2.3 it is clear that considerable complexity exists in conceptualising value as a multi-dimensional construct. The literature shows that the majority of extant multi-dimensional research can be grouped into four main categories, each representing a different but not mutually exclusive approach: hedonic versus utilitarian experiential value, Sheth *et al.*'s (1991a,b) consumption values, Holbrook's (1994, 1999) typology of value, and the axiological approach. A fifth group of work accounts for a small number of studies that adopt an independent perspective.

Within each of the four major research streams there is a relatively strong thread of consistency, with the majority of authors operationalising the particular framework along very similar lines. The exceptions are Sheth *et al.*'s (1991a,b) functional value and Holbrook's (1994, 1999) efficiency value, which, within each stream, are interpreted by authors more widely; interestingly, these values share the equivalent meaning in representing the value that is obtained from a product's functional utility. A possible explanation for this divergence is that these dimensions encompass the input-output ratio or *give-get* function of value, which authors have represented differently, e.g. as price-quality, value for money, convenience-time, needs-want fulfilment, core product attributes, time and effort expended, etc. For the most part, these treatments can be likened to the representation of value as VFM within the uni-dimensional stream of research.

In terms of research context, Holbrook's (1994, 1999) typology is exclusively applied within the services and shopping domains, which reflects its emphasis on experiential value. Hedonic and utilitarian research is executed entirely in the shopping domain, whether mall, supermarket or internet, and once again this reflects the experiential nature of the consumption experience in which the focus of consumption is the shopping act itself. Similarly, the axiological stream of research concentrates on services, reflecting its aim of examining the role of value in the service delivery process. Only Sheth *et al.*'s (1991a,b) consumption values theory is applied across a range of goods and services. This is largely due to its use as a basis for scale development, i.e. the GLOVAL (Sánchez *et al.*, 2006), PERVAL (Sweeney

and Soutar, 2001) and SERV-PERV (Petrick, 2002) scales, which are employed by authors to measure value across a range of consumption situations.

Taking a parsimonious view of the multi-dimensional research reviewed here, the main themes underpinning the four broad research streams exhibit considerable conceptual overlap that coalesce under two headings which we can call the cognitive and affective elements of value. The cognitive element accounts for the extrinsic, utilitarian and practical dimensions, in which value is functional, instrumental and task-related. Value is realised through the purchase, ownership, consumption and use of products that enable the consumer's consumption goals to be achieved: thus, value is realised as a means to achieve some pre-determined end. The affective element accounts for the intrinsic, hedonic and emotional dimensions, in which value is realised through the emotional response to the consumption situation. Value lies in the experience itself, and expressly not in the object. Value is therefore subjective, self-purposeful and self-fulfilling.

Despite the breadth of the above-debated dimensions/theories/frameworks in explaining the sources and types of value, the obvious caveat is the lack of an explicit conceptualisation of the sacrifice dimension of value, although this is represented to varying extents within certain of the studies reported here.

In conclusion, and with the above limitation in mind, the multi-dimensional stream of research adds considerable richness to the consumer value debate, broadening the value-as-utility paradigm that underpins uni-dimensional studies to a more complex and explanatory model of value that takes into account both the rational and emotional cues that signal value to the consumer. At the same time, however, the major focus of this research is on the benefits received in the value assessment while the nature and types sacrifices expended remain relatively unexplored.

To sum up, the uni-dimensional view of value offers a means by which to determine *whether* a product is perceived as having overall value, however its limitation is that the *sources* of value are not identified; moreover, the vagueness inherent in its operationalisation questions whether respondents share the same meaning of the construct. The multi-dimensional view, on the other hand, offers insight into the *nature* of value perceptions and how these are constituted, though a common operationalisation that embraces all of value's subtlety and complexity across various consumption contexts eludes researchers.

CHAPTER B3: VALUE AND ITS STRUCTURAL RELATIONSHIPS

B3.1 INTRODUCTION

The debate in this chapter turns to value and its relationship to other constructs. Of the 75 papers examined as part of the literature review that are discussed in relation to conceptualisations of value in Chapter B2, 24 are either theoretical/conceptual (Sheth *et al.*, 1991a,b; Holbrook, 1994, 1999; Kim, 2002); focus on scale development (Petrick, 2002; Roig *et al.*, 2006; Sánchez *et al.*, 2006; Sánchez-Garcia *et al.*, 2007; Babin *et al.*, 1994); the structure of value (Lin *et al.*, 2005; Rintamäki *et al.*, 2006; Ruiz *et al.*, 2008); value as a segmentation tool (Beldona *et al.*, 2006; Long and Schiffman, 2000; Swait and Sweeney, 2000); or on the relative strength/importance of individual dimensions of value (Heinonen, 2004, 2006, 2007; Heinonen and Strandvik, 2009; Bourdeau *et al.*, 2002; Stafford, 1994; Sánchez-Fernández *et al.*, 2009; LeBlanc and Nguyen, 1999); consequently these studies do not focus on value’s structural relationships and thus they are not included in the forthcoming discussion. The rest of the chapter is structured in two sections, the first focuses on antecedents to value and the second on value’s outcomes.

B3.2 ANTECEDENTS OF VALUE

Table B3.1, which is located at the end of this chapter to assist the flow of debate, identifies 28 studies (25 uni-dimensional, 3 multi-dimensional) that investigate the antecedents of consumer value. The first two columns indicate author(s) names and whether the studies are uni- or multi-dimensional. The third and fourth columns indicate the most commonly identified antecedents of value (i.e., quality and sacrifice) while the final column indicates other, less common determinants.

The table demonstrates that there is considerable convergence among 22 studies, all of which are uni-dimensional, in providing empirical evidence of quality as a significant antecedent of value, whether in the context of products (e.g., calculators and stereo headsets: Dodds *et al.*, 1991; bicycles: Grewal *et al.*, 1998; books and CDs: Chen and Dubinsky, 2003), or services (e.g., tourism: Hsu, 2008; hotels: Oh, 1999; healthcare: Choi *et al.*, 2004; telephone services: Bolton and Drew, 1991).

The above finding confirms value and quality as discrete constructs and thus mitigates the confusion in some quarters regarding their similarity, given that both involve personal, subjective, context-specific judgements (Sánchez-Fernández and Iniesta-Bonillo, 2007). At the same time, however, it highlights the continuing

debate regarding the quality-value relationship alluded to in discussion regarding value's conceptualisation (Section B2.3) and represents a major discrepancy in the literature. Specifically, in the multi-dimensional school of thought, quality is commonly identified as a sub-dimension or component of value (Holbrook, 1994, 1999, and see debate in Section B2.3.3), in which quality is viewed as a core, intrinsic benefit – either the sole benefit or one among many – received through the consumer's interaction with some object. In this treatment, quality is a special class of value: thus, value is a super-ordinate construct that subsumes quality (Oliver, 1999; Sánchez-Fernandez *et al.*, 2009). In uni-dimensional studies, value is treated as an overall evaluation, either as VFM or as a global judgement, in which the individual elements of value are not accounted for. In this sense, perceptions of quality *create* or lead to perceptions of value: thus, quality and value are separate but related constructs in a causal model.

Despite the above debate, in the uni-dimensional studies by Lai *et al.* (2009), Hsu (2008) and Choi *et al.* (2004) quality is not only modelled as a determinant of value but is also represented in the operationalisation of the value construct itself, whereby the VFM treatment of value considers the quality gained in relation to the price paid (see Table B3.1 and the debate in Section B2.1.1); consequently, the studies suffer from confounding effects caused by a lack of discriminant validity.

Returning to Table B3.1, a high degree of convergence is demonstrated among 20 uni-dimensional studies that find empirical support for sacrifice as a significant determinant of value. Accepting the earlier-debated consensus that value comprises *give* and *get* components (Section B1.3), the obvious deficiency of this finding is that sacrifice, by definition, must be inherently part of the value construct rather than existing outside of it as a determinant. Notwithstanding this, Table B3.1 reveals that sacrifice has been treated variously but at the same time almost exclusively as a financial forfeit, e.g. the price paid, relative price (i.e., in relation to a similar product), price expensiveness, and perceived price. Furthermore, Bolton and Drew (1991) use household income as another financial measure of sacrifice in view of the study's contextual focus on local telephone services where prices are regulated and change only infrequently; consequently income can be regarded as a context-specific determinant. Agarwal and Teas (2001, 2004) and Teas and Agarwal (2000) treat sacrifice as opportunity costs, where the price paid for a product represents money that cannot be spent on other things. Grewal *et al.* (1998) find that actual selling price and consumer's reference price are both direct determinants of acquisition value (i.e. overall perceived consumer value), while reference price affects only

transaction value (i.e., the value obtained through deal-seeking: Lichtenstein *et al.*, 1990).

The shortcoming discussed earlier regarding the double-counting of quality perceptions is demonstrated once more with regard to certain studies that model price as a determinant of value, given that these also include price as part of the value assessment (see studies marked § in Table B2.1 in Section B2.2 and the related debate); again, these studies also suffer from confounding effects caused by the threat to discriminant validity.

In terms of non-monetary sacrifice, Baker *et al.* (2002) incorporate time and effort and psychic costs (i.e., store atmosphere) as well as price into their value model, but only price is found to be significantly related to value. Accepting the debate regarding the position of sacrifice as a component of value versus sacrifice as a determinant of value, this finding runs counter to the accepted view of sacrifice as comprising both monetary and non-monetary forfeits. The experimental nature of the study design is likely to account for this discrepancy, which used video-tape recordings of a retail environment to simulate the shopping experience; thus, perceptions of search time, effort and store atmosphere had to be imagined/constructed in respondents' minds rather than residing in memory as the result of real sacrifices made in an actual purchase situation. In contradiction to Baker *et al.*'s finding, Gallarza and Saura (2006) in their study of students' tourism experiences discover that while time and effort do have a significant affect on value, conversely monetary cost and risk do not. The authors' proposed explanation for this discrepancy is that most of the students in the sample did not pay for their holiday as it was offered by their parents, while in terms of risk, perceptions of such are less obvious to a young population.

Turning to risk as an element of sacrifice, risk is represented by some as one indicator of overall sacrifice (e.g. Cronin *et al.*, 1997; Hackman *et al.*, 2006), as a separate determinant of combined risks (e.g. financial and performance risk: Sweeney *et al.*, 1999; Snoj *et al.*, 2004) or as a number of individual determinants. Taking the latter approach, Agarwal and Teas (2001, 2004) conceptualise risk as two separate constructs, i.e. performance risk and financial risk. They find that the relationship between sacrifice and value is mediated through financial risk, while the quality-value relationship is mediated through performance risk. Sweeney *et al.* (1999) and Snoj *et al.* (2004) on the other hand, find that risk has a significant (and negative) direct impact on value, and moreover risk in the former study is the dominant determinant; conversely, Chen and Dubinsky's (2003) hypothesis of a negative inverse relationship between risk and value was not supported. Kleijnen *et*

al. (2007) conceptualise sacrifice as comprising risk and effort, whereby risk is a higher order of three first order factors, financial risk, performance risk and security risk. The authors find that both risk and effort have a significant negative impact on value.

Two studies identify satisfaction as a significant determinant of value, which brings into focus the debate regarding the direction of the causal relationship between satisfaction and value. Bolton and Drew (1991) and Dunman and Mattila (2005) find empirical support for satisfaction as a direct determinant of value perceptions, and in the former study satisfaction also impacts on value through quality. Oliver (1999) offers extensive debate as to possible explanations for the satisfaction-value relationship. While this is outside the scope of this literature review, briefly he opines that there is merit in both the satisfaction→value and the value→satisfaction concepts. He argues that if value is viewed as a desirable end-state of consumption, then being satisfied provides value. At the same time when value is considered as a benefits-costs comparison, value becomes a satisfaction comparator, thus value provides satisfaction. As shall become apparent in the following section, there is overwhelming evidence to support the latter view, i.e. that satisfaction is an outcome and not an antecedent of value. Given the dominant operationalisation of value as a function of *give-get*, this latter body of evidence appears more convincing than the former. Moreover, this proposition follows the logic of the argument presented in Section B1.4, whereby the cognitive-affective-conative paradigm supports a sequential order in which value as a cognitive-oriented construct precedes satisfaction as an affective-oriented construct (Williams and Soutar, 2009).

Finally, authors have identified a variety of other antecedents to value, most of which can be broadly grouped into three areas. Of those that merit discussion, the first represents personal and subjective influencers of value perceptions, thus demonstrating the highly individualised and idiosyncratic nature of the value construct (Zeithaml, 1988; Brady and Robertson, 1999). Bolton and Drew (1991), for example, point to customers' personal characteristics, which they measure through demographic variables (e.g., age), as having a small but significant influence on value; in particular they find that older customers value telephone services more highly. Similarly, and of direct relevance to the present research, Ledden *et al.* (2007) find that consumers' personal values have a significant impact on value. As discussed earlier, consumption values are intrinsically part of the consumer value construct (Sheth *et al.*, 1991a,b, and see Section B2.3.2) whereas personal values relate to an individual's enduring beliefs that guide the way they behave in their every day lives (Rokeach, 1968; Vinson *et al.*, 1977a,b; and see

Section A1.3.3). Two types of values symbolise personal values: instrumental values associate with behavioural characteristics (e.g., ambition, honesty), while terminal values associate with desired end-states of existence (e.g., freedom, security). Ledden *et al.* (2007) find that terminal and instrumental values both impact on value's *get* dimension, while only terminal values is significantly related to *give*. Though personal values have long been considered an important construct in influencing purchase behaviour (Lai, 1995; Long and Schiffman, 2000; Lages and Fernandes, 2005), the study by Ledden *et al.* (2007) appears to be the only one to offer empirical evidence of the impact of personal values on consumer value.

In the second grouping of determinants, company-related and brand-related constructs are found to be significantly related to value, i.e. store name and brand name (Dodds *et al.*, 1991), brand and company image, employee and company trust (Brodie *et al.*, 2009) and image (Lai *et al.*, 2009). Image of the institution was found to be a dimension of the value of education in studies by Ledden *et al.* (2007) and LeBlanc and Nguyen (1999).

Finally, several authors find that affective, emotional or self-oriented factors significantly influence value perceptions, for example, affect (Babin and Attaway, 2000), social, play and aesthetics (Gallarza and Saura, 2006), novelty and hedonics (Dunman and Mattila, 2005), emotional experience (Steenkamp and Geyskens, 2006) and valence of experience (Chen and Dubinsky, 2003). According to the discussion presented in Section B2.3, the multi-dimensional stream of research accounts for the emotional aspects of consumption while social, play, novelty, hedonic and aesthetics are represented as specific dimensions of value, and not antecedents. Indeed, the above-mentioned studies by Gallarza and Saura (2006) and Steenkamp and Geyskens (2006) both conceptualise value as a composite of multiple dimensions and develop measurement scales for each, however analytically both sets of authors treat the dimensions as antecedents by introducing an overall measure of value into their structural models. As debated in Section B2.3.3, such conceptualisations of value are argued by authors to be conceptually and analytically incorrect (Lin *et al.*, 2007; Ruiz *et al.*, 2008). In this respect, though aiming to contribute to the debate regarding the multi-dimensional nature of value, in reality the studies offer an operationalisation of value that, in the view of this author, serves mainly to obfuscate rather than elucidate the overall debate.

Finally, Pihlstöm and Brush's (2008) investigation in the mobile phone sector find empirical support for the conditional value and epistemic value dimensions as antecedents of other dimensions of value, with varying degrees of importance depending on the purpose of mobile use. While it is outside the scope of this

literature review to debate the findings here, briefly on the whole conditional value determines convenience, social and emotional value while epistemic value determines emotional, monetary and social value.

In summary, a number of antecedents are found to be significant determinants of value, with overwhelming evidence of quality as the dominant construct. Although variously operationalised, and in spite of wide acceptance of sacrifice as a component of value perceptions, there is also a convergence in identifying sacrifice as a determinant of value, mainly as monetary sacrifice in the guise of price and to a lesser extent as time, effort and risk. There is clearly a divergence as to whether some constructs are indeed determinants of value or whether they are dimensions, and this is particularly so in the case of sacrifice.

B3.3 CONSEQUENCES OF VALUE

The picture appears more straightforward with regard to value’s consequent relationships, which are indicated in Table B3.2 (as before, the table is located at the end of this chapter to ease the flow of debate). The table is structured in a similar fashion to Table B3.1, showing 42 studies (22 uni-dimensional and 20 multi-dimensional) in which satisfaction and behavioural intentions are the two outcomes of value.

Taking satisfaction first, 21 studies (9 uni-dimensional and 12 multi-dimensional) propose value as a significant determinant of satisfaction and all find empirical support for their hypotheses. In the case of the multi-dimensional studies, all relevant value dimensions are significantly related to satisfaction, for example studies within the hedonic/utilitarian stream of research find both value dimensions to be significantly related to satisfaction with the shopping experience (Jones *et al.*, 2006; Carpenter, 2008). Work in the axiological research stream demonstrate varying significant impacts of the logical, practical and emotional dimensions (and risk in the case of Huber *et al.* [2007]) on satisfaction with service delivery, depending on the service and the stage of delivery (Danaher and Mattsson 1994, 1998; de Ruyter *et al.*, 1997a,b; Lemmink *et al.*, 1998; Huber *et al.*, 2007). Authors using Sheth *et al.*’s (1991a,b) consumption values as their conceptual framework find that all relevant dimensions are significant determinants of satisfaction, even if the relative strengths of each are not equal (Sweeney and Soutar, 2001; Wang *et al.*, 2004; Moliner, 2007; Ledden *et al.*, 2007; Pihlström and Brush, 2008; Williams and Soutar, 2009). This finding is demonstrated across a range of services, e.g. spectator sports, long distance delivery service (Cronin *et al.*, 2000), fast food

(Cronin *et al.*, 2000; Brady and Robertson, 1999), tourism (Oh, 1999), mobile phones (Kleijnen *et al.* 2007; Lai *et al.*, 2009), health care (Cronin *et al.*, 2000; Choi *et al.*, 2004), education (Ledden *et al.*, 2007), shopping (Jones *et al.*, 2006), but is less studied in the case of goods, e.g. tiles (Moliner *et al.*, 2009).

Turning to behavioural intentions, the dominant form of treatment (17 studies) is as intention to repurchase and recommend, whether combined as a single construct (e.g., Baker *et al.*, 2002; Brady & Robertson, 1999; Brodie *et al.*, 2009; Cronin *et al.*, 1997) or separately as repurchase (e.g., Oh, 1999; Pura, 2005; Jones *et al.*, 2006; Joo, 2007) or recommend (Oh, 1999). Some authors additionally include word of mouth (e.g., Choi *et al.*, 2004; Yang and Peterson, 2004) or treat word of mouth as a separate construct (Jones *et al.*, 2006; Pihlström and Brush, 2008). Willingness to buy represents another operationalisation of intention in a further six studies (see Table B2.7 for details), followed by single examples such as willingness to pay more (Pihlström and Brush, 2008), store loyalty (Jones *et al.*, 2006; Carpenter, 2008), search intentions (Grewal *et al.*, 1998), and commitment (Pura, 2005). The temporal aspect of intention, for example whether articulated as the intention to buy again (i.e., repurchase) or as a future intention (i.e., willingness to buy) reflects individual studies' aims in capturing either pre-purchase (hence, intention as future behaviour) or post-purchase (hence, repurchase as repeat behaviour) value perceptions. The same logic provides an explanation why studies that measure future intentions (i.e., willingness to buy) do not include satisfaction as an intervening variable, since satisfaction is a specifically post-consumption evaluation – however, at the same time it also implies that post-purchase studies that do *not* include satisfaction as an outcome variable may be conceptually incomplete.

In the case of multi-dimensional studies, all value dimensions were found to be significantly related to intentions except where indicated in Table B2.7, for example Jones *et al.* (2006) in the case of shopping value found that whereas hedonic value significantly affected word of mouth, only utilitarian value determined intention to repurchase, although both dimensions impacted on store loyalty. Contextual differences are considered to account for the discrepancies between findings.

The major discrepancy concerning the value→intention relationship is whether it is direct or indirect, i.e., mediated by satisfaction. Though the majority of studies find a direct relationship between the two constructs and some a direct *and* indirect effect, six find that value impacts on intention only through satisfaction (i.e., Overby and Lee, 2006; Mathwick *et al.*, 2001; Gallarza and Saura, 2006; Hsu, 2008; McDougall and Levesque, 2000; Carpenter, 2008). In conclusion, there is considerable evidence supporting satisfaction and intention as consequences of value. However, there is

some uncertainty as to whether value's impact on intention is direct or whether it is mediated by satisfaction.

B3.4 SUMMARY AND CONCLUSION

From the debate offered in Sections B3.2 and B3.3 it is evident that the literature concerning value and its structural relationships bears strong convergence in some areas and yet diverges radically in others. In terms of antecedents of value, the explanation for these competing views is founded on whether value is treated uni- or multi-dimensionally. To explain, though there is strong empirical evidence of quality as an antecedent of value, the literature review also reveals that quality is conceptualised by some as a component or sub-dimension of value (Section B2.3). The debate in this chapter has demonstrated that the uni-dimensional view of value accounts for the first finding while the multi-dimensional view of value characterises the latter. The same interpretation explains why sacrifice is found by some authors to be a determinant of value and others a component of value (see again Section B2.3); however this time the logic is reversed insofar that literature unanimously supports the view of sacrifice as a component of value, and not (like quality) a separate determinant.

According to the above debate, it is argued that in the case of sacrifice, uni-dimensional models (i.e., in which sacrifice is a determinant of value) are lacking in conceptual rigour while multi-dimensional models (i.e., in which sacrifice is a dimension of value) are superior; however in the case of quality, the reverse is true, as there is more support for quality as a discrete construct and an antecedent of value (i.e., the uni-dimensional view) than quality as a component of value (i.e., the multi-dimensional view).

The picture is more harmonious in the case of value's consequent relationships, insofar that there is unanimous agreement among uni- and multi-dimensional conceptualisations that satisfaction is a significant consequence of value. The only area of uncertainty concerns value's relationship with behavioural intentions, i.e. whether: (a) value directly impacts on intentions; (b) the effects are both direct *and* indirect; or (c) the relationship is wholly mediated by satisfaction. The discrepancy partly relates to whether satisfaction is included as a variable, i.e. of the 21 studies that find direct relationships, seven examine pre-purchase value and thus satisfaction as a post-consumptive evaluation is not salient. Conversely, 14 studies examine post-purchase value yet do not include satisfaction as a variable, despite the undisputed role of satisfaction in shaping behavioural intentions; thus, the

nomological validity of these studies and consequently their results must surely be called into question.

Table B3.1 Antecedents to value

Author(s)	Uni/ Multi	Quality	Sacrifice	Other variables
Teas & Agarwal (2000)	U	✓ Product	✓ Opportunity costs	
Agarwal & Teas (2001)	U	✓ Product	✓ Opportunity costs ✓ Financial risk ✓ Performance risk	
Agarwal & Teas (2004)	U	✓ Product	✓ Opportunity costs ✓ Financial risk ✓ Performance risk	
Baker <i>et al.</i> (2002)	U	✓ Product	✓ Price expensiveness	
Sweeney <i>et al.</i> (1997)	U	✓ Product	✓ Relative price	
Sweeney <i>et al.</i> (1999)	U	✓ Product ✓ Service	✓ Relative price ✓ Financial/performance risk	
Snoj <i>et al.</i> (2004)	U	✓ Product	✓ Risk (functional, technical, social)	
Choi <i>et al.</i> (2004)	U	✓ Service		
Oh (1999)	U	✓ Service	✓ Perceived price	
Brady & Robertson (1999)	U	✓ Service	✓ Price paid, time, effort	
Cronin <i>et al.</i> (2000)	U	✓ Service	✓ Price paid, time, effort	
Cronin <i>et al.</i> (1997)	U	✓ Service	✓ Price paid, time, effort, risk	
Hackman <i>et al.</i> (2006)	U	✓ Service	✓ Price paid, time, risk	
Babin & Attaway (2000)	M			✓ Affect
Brodie <i>et al.</i> (2009)	U	✓ Service	✓ Price paid, waiting time, taxes	✓ Brand image ✓ Company image ✓ Employee trust ✓ Company trust
Sirohi <i>et al.</i> (1998)	U	✓ Product ✓ Service	✓ Relative price	✓ Competitor VFM ✓ Sales promotion perception
Bolton & Drew (1991)	U	✓ Service	✓ Household income	✓ Customer demographics ✓ Satisfaction
Gallarza & Saura (2006)	U	✓ Service	✓ Time, effort	✓ Efficiency ✓ Social ✓ Play ✓ Aesthetics
Lai <i>et al.</i> (2009)	U	✓ Service		✓ Image
Ledden <i>et al.</i> (2007)	M			✓ Personal values
Duman & Mattila (2005)	U			✓ Satisfaction ✓ Novelty (negative) ✓ Hedonics
Dodds <i>et al.</i> (1991)	U	✓ Product	✓ Price paid	✓ Store name ✓ Brand name
Kleijnen <i>et al.</i> (2007)	U		✓ Security risk ✓ Performance risk ✓ Financial risk ✓ Effort	✓ Time convenience ✓ User control ✓ Service compatibility
Grewal <i>et al.</i> (1998)	U	✓ Product	✓ Reference price (TV) ✓ Actual price (AV & TV)	✓ Transaction value
Hsu (2008)	U	✓ Service		✓ Trust
Steenkamp & Geyskens (2006)	U			✓ Utilitarian experience ✓ Emotional experience ✓ Website features
Chen & Dubinsky (2003)	U	✓ Product	✓ Relative price	✓ Valence of experience
Philstrom & Brush (2008)	M			✓ Conditional ✓ Epistemic

Key: ✓= direct significant relationship with value

Table B3.2 Consequences of value

Author(s)	Uni/Multi	Satisfaction (SF)	Behavioural Intentions
Danaher & Mattsson (1994)	M	✓	
Danaher & Mattsson (1994)	M	✓	
de Ruyter <i>et al.</i> (1997a)	M	✓	
de Ruyter <i>et al.</i> (1997b)	M	✓	
Huber <i>et al.</i> (2007)	M	✓	
Ledden <i>et al.</i> (2007)	M	✓	
Lemmink <i>et al.</i> (1998)	M	✓	
Moliner <i>et al.</i> (2007)	M	✓	
Pura (2005)	M		✓ Commitment – emotional, social, conditional ✓ Repurchase – conditional, monetary, convenience,
Jones <i>et al.</i> (2006)	M	✓	✓ Store loyalty – hedonic & utilitarian ✓ WOM – hedonic ✓ Repurchase intention – utilitarian ✓ Repurchase anticipation – hedonic utilitarian
Overby & Lee (2006)	M		✓ Preference ✓ Repurchase – only indirect via preference
Mathwick <i>et al.</i> (2001)	M		✓ Preference – only CROI and aesthetics ✓ Repurchase – only indirect via preference
Babin & Attaway (2000)	M		✓ Repatronage
Oh (1999)	U	✓	✓ Repurchase – direct & Indirect via SF ✓ Recommend – direct & indirect via SF
Butcher <i>et al.</i> (2002)	U		✓ Repurchase – for cafe & hairdresser but not naturopath
Pihlström & Brush (2008)	M		✓ Repurchase – monetary, convenience, emotional, social ✓ WOM – convenience, emotional, social ✓ Willingness to pay more – emotional, social
Joo (2007)	M		✓ Repurchase – only economy value
Keng <i>et al.</i> (2007)	M		✓ Repurchase & recommend
Duman & Mattila (2005)	U		✓ Repurchase & recommend
Baker <i>et al.</i> (2002)	U		✓ Repurchase & recommend
Brady & Robertson (1999)	U		✓ Repurchase & recommend
Brodie <i>et al.</i> (2009)	U		✓ Repurchase & recommend
Cronin <i>et al.</i> (1997)	U		✓ Repurchase & recommend
Sirohi <i>et al.</i> (1998)	U		✓ Repurchase & recommend
Hackman <i>et al.</i> (2006)	U	✓	✓ Repurchase & recommend – direct & indirect via SF
Cronin <i>et al.</i> (2000)	U	✓	✓ Repurchase & recommend – direct & indirect via SF
Lai <i>et al.</i> (2009)	U	✓	✓ Repurchase & recommend – direct & indirect via SF
Williams & Soutar (2009)	M	✓	✓ Repurchase & recommend – emotional, VFM, novelty direct; indirect – emotional, VFM
Wang <i>et al.</i> (2004)	M	✓	✓ Repurchase & recommend – only functional
Gallarza & Saura (2006)	U	✓	✓ Repurchase & recommend – only indirect via SF
Hsu (2008)	U	✓	✓ Repurchase & recommend – only indirect via SF
McDougall & Levesque (2000)	U	✓	✓ Repurchase & recommend – only indirect via SF
Choi <i>et al.</i> (2004)	U	✓	✓ Repurchase & recommend/WOM
Yang & Peterson (2004)	U	✓	✓ Repurchase & recommend/WOM – direct & indirect via SF
Carpenter (2008)	M	✓	✓ Store loyalty – only indirect through SF
Kleijnen <i>et al.</i> (2007)	U		✓ Willingness to buy
Chen & Dubinsky (2003)	U		✓ Willingness to buy
Dodds <i>et al.</i> (1991)	U		✓ Willingness to buy
Sweeney <i>et al.</i> (1997)	U		✓ Willingness to buy
Sweeney <i>et al.</i> (1999)	U		✓ Willingness to buy
Sweeney & Soutar (2001)	M		✓ Willingness to buy & recommend
Grewal <i>et al.</i> (1998)	U		✓ Willingness to buy ✓ Search intentions

Key: ✓= direct significant relationship with value except where stated; WOM=word of mouth

CHAPTER C1: CONCEPTUAL FRAMEWORK

C1.1 RESEARCH DESIGN

A research design provides an operational framework that ensures the study is relevant to the research problem and employs appropriate and coherent procedures that are consistent with the research paradigm within which it is conducted. Thus, research design should stem from the research problem and be driven by the type of study undertaken (Churchill and Iacobucci, 2005). The present research follows the research design framework suggested by Sekaran (2003), which is depicted in Figure C1.1. Each cell represents a discrete, though interrelated, set of activities and alternatives that must be considered in achieving a robust and coherent research design.

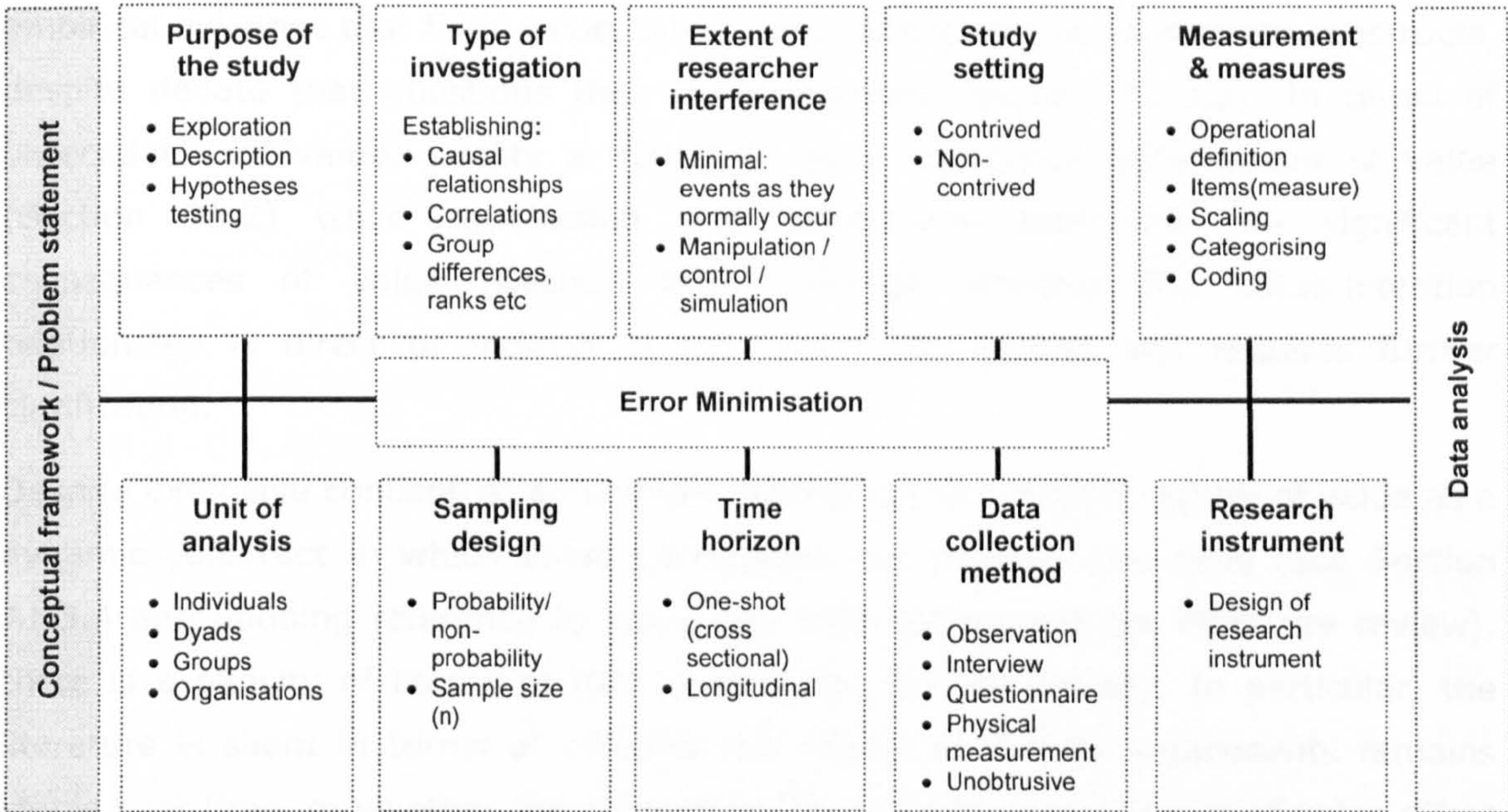


Figure C1.1 The research design framework

Source: Sekaran, U. (2003), *Research Methods for Business - A Skills Building Approach*, 4th Edition, p.118, New York: John Wiley and Sons

Although graphically the framework is depicted as a set of sequential steps, the interconnected nature of the process means that most of the design components were considered simultaneously; however, for the purpose of clarity, each is discussed in turn. The approach in this and the subsequent chapters in this part of the thesis is to present the framework at the start of each chapter, highlighting the components to be discussed therein. Hence, this chapter outlines the aim of the research and advances the conceptual framework and related hypotheses, concluding with a brief discussion of the philosophical stance of the researcher.

C1.2 RESEARCH AIM

From the debate offered in Section A1.2 it is apparent that the value construct is central to the marketing process. The literature review presented in Part B demonstrates that value is unanimously accepted as a judgment of benefits received in relation to sacrifices expended (Section B1.3), though there is a lack of convergence regarding its conceptualisation (Sections B2.2 and B2.3). The popular view of value as a uni-dimensional construct that prevailed in earlier research has begun to retreat as advances in understanding the value construct have resulted in its conceptualisation as a composite of multiple dimensions. This multi-dimensional perspective of value is emerging as the dominant paradigm for research in the domain due to its richness in explaining value's considerable complexity (Section B2.4).

In terms of value's relationships with other constructs, there is a substantial body of empirical evidence that finds value, quality and satisfaction to be discrete constructs, despite debate that questions their distinctiveness (Section A1.3.3). In terms of antecedents of value, quality is found to be a significant determinant of value (Section B3.2) while satisfaction and behavioural intentions are significant consequences of value (Section B3.3), though whether the value-intention relationship is direct or indirect is not universally agreed and requires further clarification.

Despite extensive conceptual agreement regarding the temporal nature of value as a dynamic construct in which value perceptions can change over time (see Section A1.3.4 and ongoing reference to value and time throughout the literature review), there is a paucity of literature that investigates this empirically. In particular, the literature is silent in terms of whether the impact of value's antecedents remains stable over time, or whether the differential impact of the components of value affect its outcome relationships equally at each stage of the consumption experience; consequently, a clear need for research emerges. In order to address this omission in the literature, the aim of this research is to examine empirically the temporal stability (i.e., the nature and strength) of the functional relationships between value and its antecedents and outcomes.

C1.3 CONCEPTUAL FRAMEWORK AND RELATED HYPOTHESES

According to Bagozzi (1994b), concepts only have meaning when they are related to a larger network of concepts that is used for the purposes of understanding, explaining or predicting a given phenomenon. Thus, value is placed within a

nomological network that allows investigation of the effects of value change on its structural relationships. Accordingly, the discussion in the remainder of this section turns firstly to the author's conceptualisation of value and goes on to explain and justify the conceptual framework for the research in which value is depicted together with its antecedent and outcome relationships.

C1.3.1 Conceptualisation of the value construct

Accepting the unanimous agreement in the literature of value as a judgment of benefits and sacrifices, value is conceptualised as comprising *give* and *get* components. Furthermore, there is emerging evidence from both the b2b and b2c domains that the *give* and *get* components have a differential effect on value's outcome relationships; thus, they should be treated as separate constructs rather than as a composite of overall value perceptions (Whittaker *et al.*, 2006; Ledden *et al.*, 2007; Gipp *et al.*, 2008; Ledden and Kalafatis, 2009).

According to the above debate and in line with extant literature (Section B1.3), the *get* component represents the benefits received during the consumption experience and is conceptualised as a composite of multiple dimensions according to Sheth *et al.*'s (1991a,b) theory of consumption values. This is considered to offer an appropriate basis on which to conceptualise value on the strength of: (1) its strong theoretical grounding across disciplines such as economics, sociology, psychology and consumer behavior; (2) its cross-sector stability of over 200 applications (Sheth *et al.*, 1991a); and (3) empirical evidence of its relevance in the educational domain (Stafford, 1994; LeBlanc and Nguyen, 1999; Ledden *et al.*, 2007).

The dimensions of the *get* component as conceptualised by Sheth *et al.* (1991a,b) (see Section B2.3.2 for a full debate) are briefly revisited and explained in relation to the context of the present research. Given the population of interest, i.e. consumers of postgraduate education, the object of consumption is the one-year master's degree being undertaken by the sample groups:

- Functional value relates to the intrinsic purpose of a product in terms of its ability to fulfil the function that it has been created to provide; thus, this value aligns with consumers' consumption goals and the consequences of use. In the present research, functional value associates with the purpose of the master's degree in assisting students' career advancement, i.e. in helping to achieve career goals;
- Social value represents extrinsic benefits derived through a product's societal associations, whereby the opinion of consumers' reference groups is important

in the evaluation of the benefits received. Social value in this research arises from the beliefs of influential others that taking the degree is a good thing to do;

- Emotional value represents extrinsic aspects of consumption in terms of a product's ability to arouse feelings and affective states. In the present research, this value associates with students' sense of pride, confidence and self-achievement in taking their degree;
- Epistemic value accounts for the value derived from a product's ability provide novelty, arouse curiosity or satisfy a desire for new knowledge. This value is particularly salient in the present research context and associates with the benefits that the degree offers in enabling students to acquire new knowledge;
- Conditional value represents a product's ability to provide temporary functional value in a specific situation, thus in the present research this value associates with the supporting facilities of the educational environment, i.e. the campus amenities and in-course learning materials;
- In addition to the five consumption values discussed above, image value accounts for the value derived from studying at a well thought-of institution, i.e. the status and reputation that attaches to the business school (LeBlanc and Nguyen, 1999; Ledden *et al.*, 2007).

Consistent with extant debate, the *give* component is conceptualised as a composite of monetary and non-monetary sacrifices expended in the consumption experience (e.g., Zeithaml, 1988; Cronin *et al.*, 1997; Ledden *et al.*, 2007). The financial costs relate to the course fees and associated costs of undertaking the degree. In the educational context, the consumption of a master's degree requires a substantial investment of time devoted to study, resulting in a lack of time to spend on other pursuits. Additionally, effort is required in order for the student to deal with the demands of the course. Thus, time and effort represent non-monetary sacrifices.

The above discussion leads to the conceptualisation of value as depicted in Figure C1.2. The *get* component is conceptualised as a formative higher order factor of six dimensions, i.e. functional, emotional, social, epistemic, conditional and image value. *Give* is conceptualised as a formative higher order factor of three dimensions, i.e. money, time and effort. Regarding the specification of the variables as formative in nature, a full explanation of formative versus reflective variables and justification for the adopted conceptualisation is offered in Section C3.2.5.

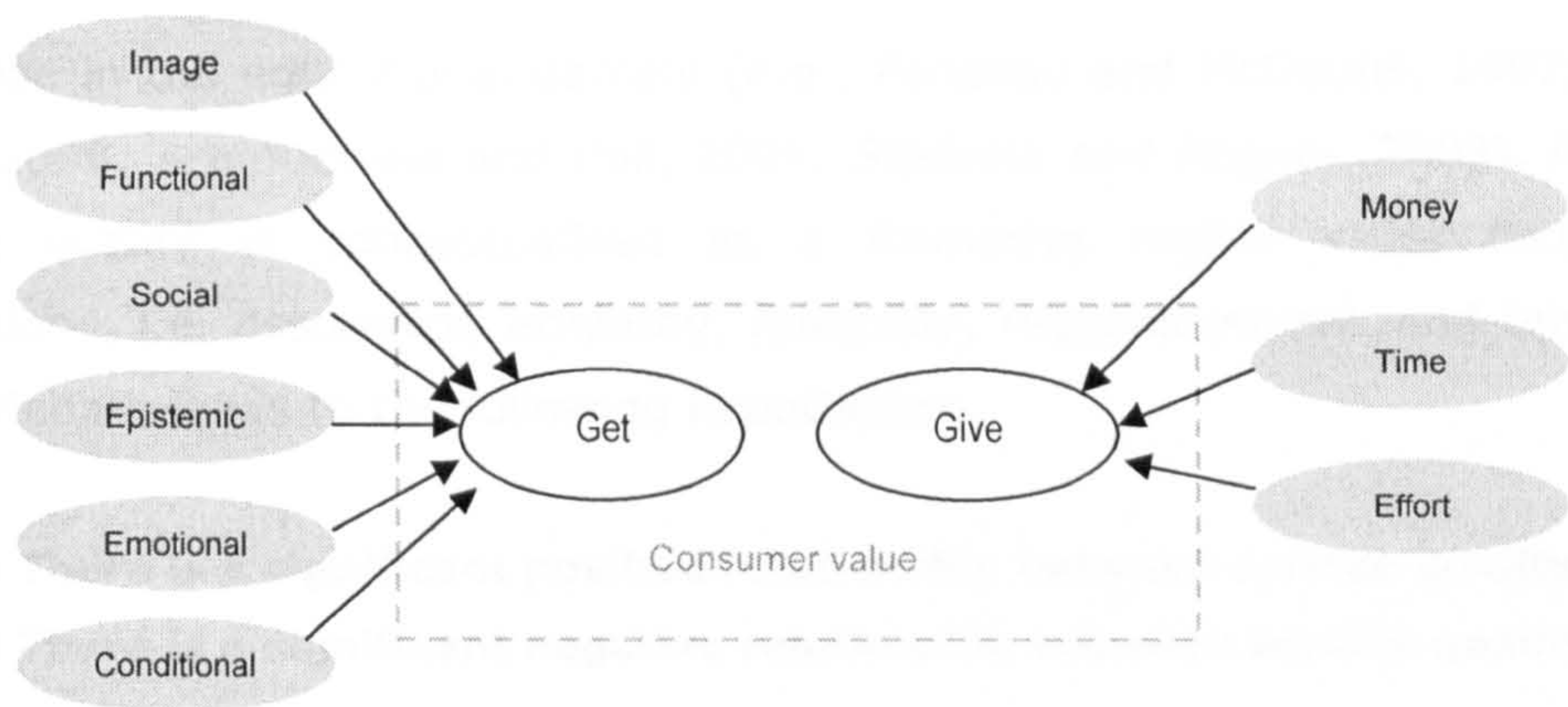


Figure C1.2 The give and get components of value and their dimensions

C1.3.2 The antecedents of value

According to Beverland and Lockshin (2003) in their study of value change in b2b markets, changes in value perceptions can be driven by factors that are external to the firm and/or internal to the firm. This concept is extended in the present research to represent influencing factors that are external to the consumer (i.e., situational circumstances that impact upon the consumer) and internal to the consumer (i.e., internally-constructed cognitive and emotional responses to contextual stimuli). This concept broadly aligns with Holbrook’s (1994, 1999) active-reactive continuum that underpins value judgments, where active value corresponds with internal factors (“I act upon it”) and reactive value with external factors (“it acts upon me”) (Holbrook, 1996:139; and see debate in Section B2.3.3).

Taking external factors first, these are represented through the inclusion of service quality. As discussed in Section B3.2, there is substantial evidence for quality, whether product or service, as a determinant of value; however, at the same time work in the multi-dimensional stream of research frequently includes quality as a dimension of value. As briefly debated in Section B2.3.2, the present author concurs with Zeithaml (1988) in viewing quality as a higher-level abstraction rather than a specific product attribute. Given that value perceptions at the product level relate to its intrinsic benefits and attributes, it follows that quality must sit outside, rather than being part of value; thus, it is a separate construct. In the present study, therefore, service quality is conceptualised as a discrete, higher-order construct and a determinant of value.

While acknowledging debate regarding alternative conceptualisations (e.g., Cuthbert, 1996a,b; Cook, 1997), service quality is conceptualised according to the model advanced by Parasuraman *et al.* (1988) on the strength of well-documented empirical evidence of its stability in a broad range of contexts and, specifically, of its

relevance in the educational domain (e.g., Pariseau and McDaniel, 1997; Engelland *et al.*, 2000; Arambewela and Hall, 2006; Stodnick and Rogers, 2008). Accordingly, service quality is conceptualised as a formative higher order factor of five dimensions, i.e. assurance, empathy, reliability, responsiveness, and tangibles. The above debate leads to the following hypotheses:

H1_A = There is a significant positive relationship between service quality and get.

H1_B = There is a significant negative relationship between service quality and give.¹

In terms of internal factors, three constructs are included: personal values, knowledge and emotions, each of which are introduced in turn.

The debate in Section B3.2 acknowledges the impact of consumers' personal characteristics on perceptions of value, and furthermore the relationship between personal values and consumer value is empirically supported in the author's previous research in the educational domain (Ledden *et al.*, 2007). Thus, personal values is included in the conceptual framework and is conceptualised according to Rokeach's (1968) value system along two dimensions, i.e. instrumental values associate with an individual's mode of conduct (how they behave in life) and terminal values relate to an individual's desired goals in life (what they want out of life); thus instrumental values influence the way that people go about achieving their terminal values. The values represent a stable and enduring set of beliefs, morals and ideals that guide people through their everyday lives and are not subject to change. This conceptualisation is adopted on the strength of its stability across multiple disciplines such as social psychology and decision sciences, and particularly within the marketing domain (e.g., Munson and McQuarrie, 1988; Allen *et al.*, 2002).

The decision to treat terminal and instrumental values as separate constructs rather than as dimensions of personal values as a higher order factor results from the author's previous research (Ledden *et al.*, 2007) in which the two constructs are found to have a differential impact on value perceptions. This leads to the following hypotheses (neither literature nor the author's previous study offers guidance on the sign of the relationships):

H2_A = There is a significant relationship between terminal values and get.

H2_B = There is a significant relationship between terminal values and give.

H3_A = There is a significant relationship between instrumental values and get.

H3_B = There is a significant relationship between instrumental values and give.

¹ The positive wording of the give measure implies a greater sacrifice, thus the relationship is expected to be negative.

While personal values are constant and unchanging, the knowledge and emotions constructs represent temporal internal factors that come into play during the consumption experience and collectively represent cognitive mechanisms and affective states, both of which are proposed to impact on value formation. This is implicitly supported by Flint *et al.* (2002) who identified affective strength and learning as aspects in desired value changes in business relationships, and by the inclusion of valence of experience and information in the study by Chen and Dubinsky (2003) on customer value of e-commerce.

The inclusion of knowledge is consistent with the accepted view that value is the result of use (Section B1.6) which in turn is related to the level of knowledge a consumer has about a particular product (Goodwin and Ball, 1999; Woodall, 2003); furthermore, Woodruff (1997) proposes that customer learning guides ongoing value perceptions (Section B1.5). In this study, knowledge represents the accumulated information/learning acquired by the student about the master's degree during its consumption.

As for emotions, the impact of consumers' affective states on pre- and post-consumption experience/evaluation is well documented in the literature (Westbrook and Oliver, 1991; Bagozzi *et al.*, 1999; Mano and Oliver, 1993; Richins, 1997) and in this investigation emotions are considered to represent students' prevailing affective states. The author emphasises that the emotions construct captures generally-felt emotions (e.g., happy, sad, depressed, anxious) whereas the emotional value dimension of value's *get* component captures perceptions of the specific value form that derives from consumption of the master's degree.

Accordingly, both knowledge and emotions capture respondents' particular state of knowledge/emotional feelings that prevail at three distinct time points in the consumption experience (discussion relating to the testing of the model follows in Section C1.3.4). Leading from this debate, the following hypotheses are advanced:

H4_A = There is a significant positive relationship between knowledge and get.

H4_B = There is a significant positive relationship between knowledge and give.

H5_A = There is a significant positive relationship between emotions and get.

H5_B = There is a significant positive relationship between emotions and give.

C1.3.3 The outcomes of value

In terms of consequences of value, in line with extant debate satisfaction is modelled as the key outcome of value and is conceptualised as overall satisfaction with the educational provision (Section B3.3). While the literature bears evidence of a direct relationship between value and intentions, much of this empirical work focuses on pre-purchase value and therefore does not include satisfaction (i.e., as a post-consumptive evaluation) as a variable (Section B3.3). At the same time, much of the research into post-purchase value does not include satisfaction as a variable, despite unanimous acceptance of the role of satisfaction in shaping behavioural intentions (Section B3.4). Consequently the author contends that a nomological network in which value impacts on intention only through satisfaction offers a conceptually stronger basis on which to investigate the value→intentions relationship (e.g., McDougall and Levesque, 2000; Gallarza and Saura, 2006; Hsu, 2007; Carpenter, 2008). Intention is conceptualised as the propensity to offer positive word of mouth recommendation. This discussion leads to the following hypotheses:

H6_A = There is a significant positive relationship between get and satisfaction.

H6_B = There is a significant negative relationship between give and satisfaction.

H7 = There is a significant positive relationship between satisfaction and intention.

Given that knowledge and emotions reflect temporal responses to contextual consumption stimuli, in addition to their hypothesised direct effects on the *give* and *get* components (Section C1.3.2) knowledge and emotions are also proposed to have a synergistic effect on the relationships between *give* and *get* and their outcomes, leading to the following hypotheses:

H8_A = Knowledge positively moderates the relationship between get and satisfaction.

H8_B = Knowledge positively moderates the relationship between give and satisfaction.

H9_A = Emotions positively moderates the relationship between get and satisfaction.

H9_B = Emotions positively moderates the relationship between give and satisfaction.

Based on the overall discussion in this section, the conceptual framework for the present study is advanced in Figure C1.3 (note that the lower order dimensions are removed to simplify graphic presentation).

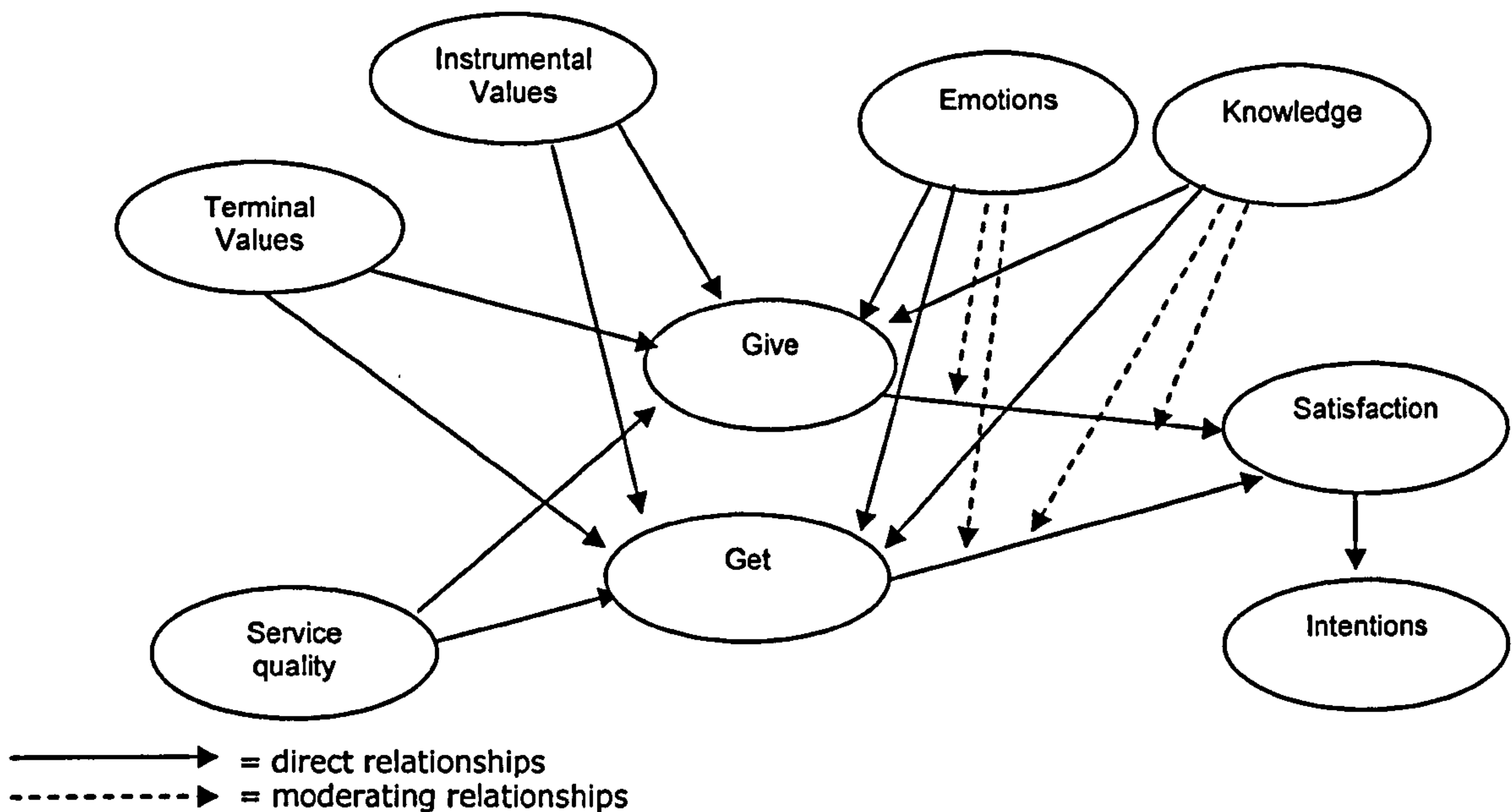


Figure C1.3 The conceptual framework

C1.3.4 Testing of the conceptual framework

A full debate of the methodological considerations/decisions taken in the execution of the research is offered in the following Chapters C2, C3 and C4; however, in order to help the reader gain an initial appreciation, and to provide a frame of reference for the discussion that ensues, a brief explanation of the stages involved in testing the conceptual framework follows.

To achieve the aim of the study, a longitudinal design is required; thus, the conceptual framework depicted in Figure C1.4 and the related hypotheses are tested at three points in time during the consumption of a one-year master’s degree, i.e. (1) at the start of the course, (2) halfway through the course after formal examinations, and (3) at the end of the course. The time points were chosen to reflect key moments in the delivery of the degree when students’ cognitive and affective states and their overall perceptions would be most acutely felt (see Section C2.5 for a full discussion). Furthermore, in view of the idiosyncratic nature of value perceptions, the model was tested on two cohorts of students for cross-validation.

The choice of student cohorts was based on the ability of the researcher to control the process of data collection (Section C2.6.3.1) and thus ensure the comparability of the consumption experience. Specifically, the cohorts represent two groups of students who studied the same one-year master’s degree in consecutive years; thus, the curriculum, assessments, attendance and staff are identical for both cohorts.

Table C1.1 indicates the data collected for each research construct for both cohorts at all three time points. At Time 1, all constructs are operationalised with the exception of service quality, which reflects the fact that, at the very start of the course, consumption of the educational provision is minimal and thus perceptions of service quality are not yet formed. At Times 2 and 3, data are collected for all constructs except terminal and instrumental values, which accounts for the conceptualisation of these constructs as a stable and enduring set of life-guiding values that are not subject to change (Rokeach, 1968).

Table C1.1 Data collection time points

	CONSTRUCT								
	Terminal values	Instrumental values	Service quality	Give	Get	Satisfaction	Intention	Knowledge	Emotions
Time 1	✓	✓	✗	✓	✓	✓	✓	✓	✓
Time 2	✗	✗	✓	✓	✓	✓	✓	✓	✓
Time 3	✗	✗	✓	✓	✓	✓	✓	✓	✓

Consequently, it is important to emphasise that, with the exception of H1_A and H1_B, the research hypotheses are tested at three points in time as shown in Table C1.2.

Table C1.2 Time frame for the hypothesis testing

	Time 1	Time 2	Time 3
H1 _A	✗	✓	✓
H1 _B	✗	✓	✓
H2 _A	✓	✓	✓
H2 _B	✓	✓	✓
H3 _A	✓	✓	✓
H3 _B	✓	✓	✓
H4 _A	✓	✓	✓
H4 _B	✓	✓	✓
H5	✓	✓	✓
H6 _A	✓	✓	✓
H6 _B	✓	✓	✓
H7 _A	✓	✓	✓
H7 _B	✓	✓	✓
H8 _A	✓	✓	✓
H8 _B	✓	✓	✓
H9 _A	✓	✓	✓
H9 _B	✓	✓	✓

C1.4 PHILOSOPHICAL STANCE OF THE RESEARCHER

The philosophical orientation of the researcher guides his or her decisions on research design (Williams and May, 1996; Creswell, 1998; Remenyi *et al.*, 1998; Smith, 2002; Churchill and Iacobucci, 2005; Ritchie and Lewis, 2003; Collis and Hussey, 2003). Research in the social sciences is dominated by two contrasting paradigms, the objectivist and the subjectivist, each of which is founded on distinct philosophical perspectives, as summarised in Table C1.3.

Table C1.3 Key features of the objectivist and subjectivist paradigms

	Objectivist paradigm	Subjectivist paradigm
Basic beliefs	<ul style="list-style-type: none">• The world is external / objective• The observer is independent• Science is value-free	<ul style="list-style-type: none">• The world is socially constructed/ subjective• The observer is part of what is observed• Science is driven by human interests
Researchers should	<ul style="list-style-type: none">• Focus on facts• Look for causality and fundamental laws• Reduce phenomena to simplest elements• Formulate and test hypotheses	<ul style="list-style-type: none">• Focus on meanings• Try to understand what is happening• Look at the totality of each situation• Develop ideas by induction from the data
Preferred methods	<ul style="list-style-type: none">• Operationalise concepts so they can be measured• Take large samples• Use mostly quantitative methods	<ul style="list-style-type: none">• Use multiple methods to establish different views of phenomena• Small samples investigated in depth or over time• Use mostly qualitative methods

Source: Based on Easterby-Smith *et al.* (1994) and adapted by the author from Remenyi *et al.* (1998), *Doing research in business and management: an introduction to process and method*, London: Sage.

The objectivist–subjectivist dichotomy has provided fertile ground for debate among social scientists from many disciplines, not least of all within the marketing domain. Though traditionally dominated by positivist ideals, marketing has its positivist detractors, for example Ardnt (1985:21) who claims that by clinging to its empiricist orientation, marketing has constrained itself to a “one-dimensional science concerned with technology and problem solving”. A decade later, Stephen Brown (1996) famously exhorted marketers to shrug off the shackles of conventional empiricist wisdom and acknowledge the freedom of relativistic alternatives offered by postmodern thinking, a view that, today, is widely expounded (e.g., Levy, 2006). Despite these contrasting views it seems that positivism remains in ascendancy while those such as veteran marketer Shelby Hunt (2003) continue to uphold the legitimacy of empiricist ideals as the vanguard of truth and knowledge in marketing.

When considering this debate in relation to her own position, the author found it difficult to decide her stance because the ontological contrasts between objectivism

and subjectivism seem too stark: is the social world a concrete structure that exists totally independently of the human beings who inhabit it? Or does it exist *only* inside our (individual) minds? These standpoints seem too polarised to reconcile easily, and in this respect the author found it useful to reflect on the view of the objectivist and subjectivist paradigms as the extremes of a continuum, with each position representing a pure form of thought that few researchers would adopt *in toto* (Collis and Hussey, 2003). With this and the foregoing debate regarding paradigmatic tensions in mind, the author locates her work broadly within the positivist paradigm. Justification for this decision lies in considering the aim, objectives and expected outcomes of the research, which are to use quantitative methods to investigate the relationships between pathways in a structural model and to test a set of hypotheses that explain these relationships.

CHAPTER C2: RESEARCH METHODOLOGY (Part 1)

C2.1 INTRODUCTION

This chapter focuses on the methodological considerations indicated by the shaded cells in Figure C2.1. Firstly, the purpose of the study and the type of investigation are discussed, followed by the extent of researcher interference and study setting. A discussion of the study’s time horizon and data collection methods concludes this chapter.

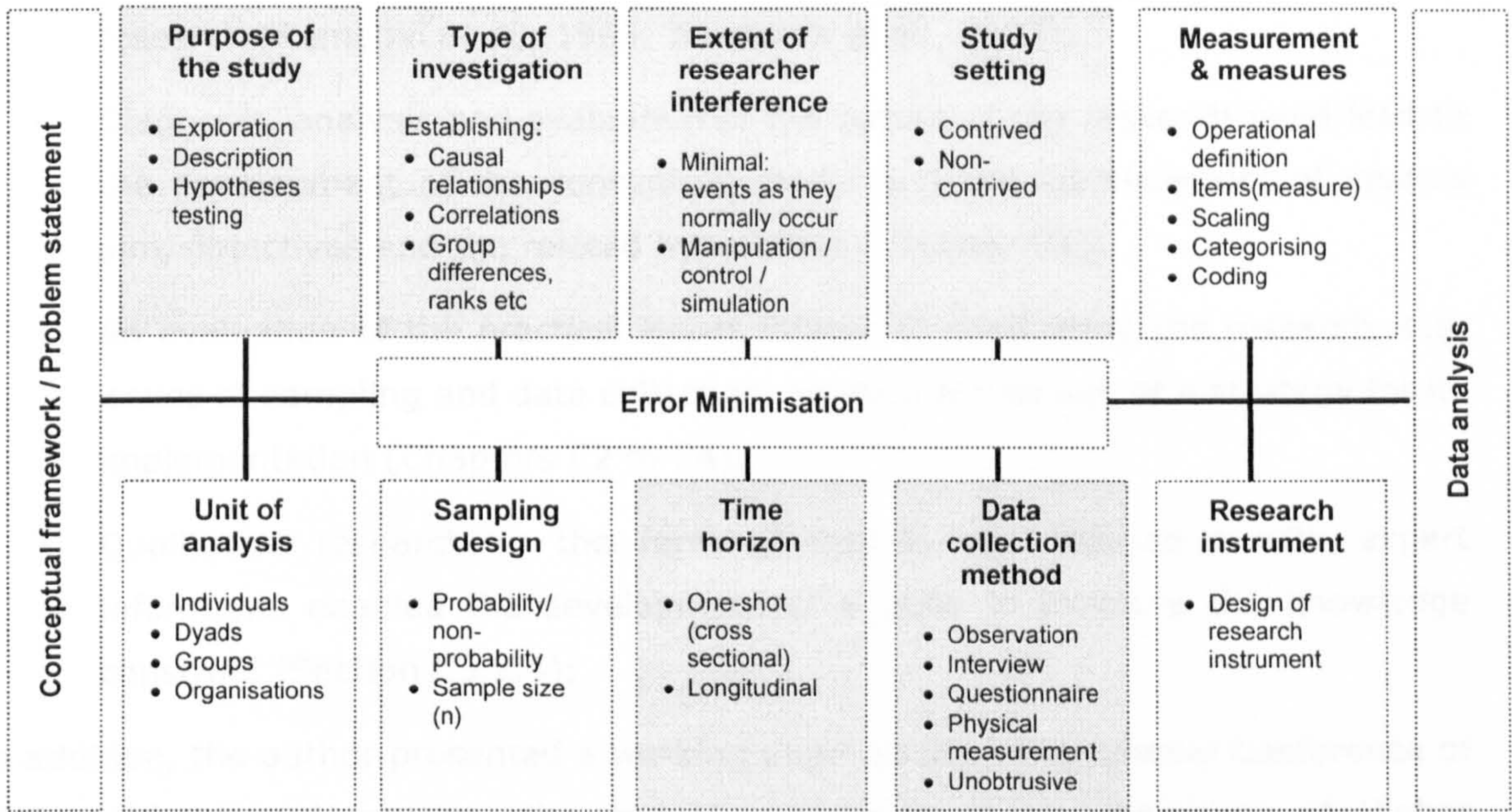


Figure C2.1 The research design framework for Section C2

Source: Sekaran, U. (2003), *Research Methods for Business - A Skills Building Approach*, 4th Edition, p.118, New York: John Wiley and Sons

C2.2 PURPOSE OF THE STUDY

Research design typically falls into three main categories, i.e., exploratory, descriptive and hypothesis testing (Sekaran, 2003). The chosen approach depends upon the extent of existing knowledge in the relevant field of research (Churchill and Iacobucci, 2005) and is linked to the philosophical stance of the researcher (see Section C1.4). A discussion of each category and its relevance to this research follows.

C2.2.1 Exploratory research

Exploratory research is undertaken when little is known about a phenomenon or research problem, and thus its main emphasis is on discovering ideas and insights and clarifying concepts (Ritchie and Lewis, 2003; Sekaran, 2003). Exploratory research also enables the researcher to become familiar with the research topic or problem as a foundation for theory building and formulating hypotheses, and in this respect it provides the building blocks for a robust research design (Denscombe, 2003). In this study, exploratory research was undertaken as following:

- An extensive review of the extant value literature (Part B) enabled the author to identify the need for the research and thus formulate a direction for the research (Remenyi *et al.*, 1998; Saunders *et al.*, 2003);
- Diagnosis, analysis and evaluation of the nature of the research need lead to the development of the conceptual model and the advancement of study's aim, objectives and the related hypotheses (Chapter C1);
- An evaluation of the practical issues related to conducting the research, e.g. issues of sampling and data collection, enabled the design of a strategy for its implementation (Chapters C2 to C4);
- Qualitative research in the form of face-to-face interviews with expert informants enabled the development of a scale to measure the knowledge construct (Section C3.2.4);

In addition, the author presented a working paper at the International Conference of Higher Education Marketing, the annual conference of the Marketing of Higher Education Special Interest Group of the Academy of Marketing (Ledden and Kalafatis, 2008). Participation at the conference enabled the author to discourse with academic experts in the field, which helped to clarify issues related to the study context.

C2.2.2 Descriptive research

The objective of descriptive research is to describe the profile or characteristics of the variable(s) of interest, whether persons, events, situations, markets, or functions of an organisation (Malhotra and Birks, 2003; Saunders *et al.*, 2003; Sekaran, 2003). In contrast to exploratory research, descriptive research is predicated upon existing knowledge and requires a clearly articulated research design resting upon a specific hypothesis (Churchill and Iacobucci, 2005). Although the present research builds upon extant knowledge and adopts a structured approach, its central focus

lies in investigating the relationships between constructs in a structural model and testing a set of related hypotheses (Section C1.3) rather than offering a description of the phenomena of interest, and thus descriptive research is not relevant to this study.

C2.2.3 Hypothesis testing

The objective of hypothesis testing is to elucidate the nature of possible relationships between two or more variables in a given situation (Churchill and Iacobucci, 2005; Malhotra and Birks, 2003; Sekaran, 2003). Malhotra and Birks (2003) point out that while a research question is interrogative, hypotheses are declarative and can be tested empirically, and thus the latter can provide an answer to the former. The relationships between the research problem, research questions and hypotheses together with the influence of the theoretical framework and analytical model (Chapter C1 provides a full debate) are depicted by Figure C2.2 below.

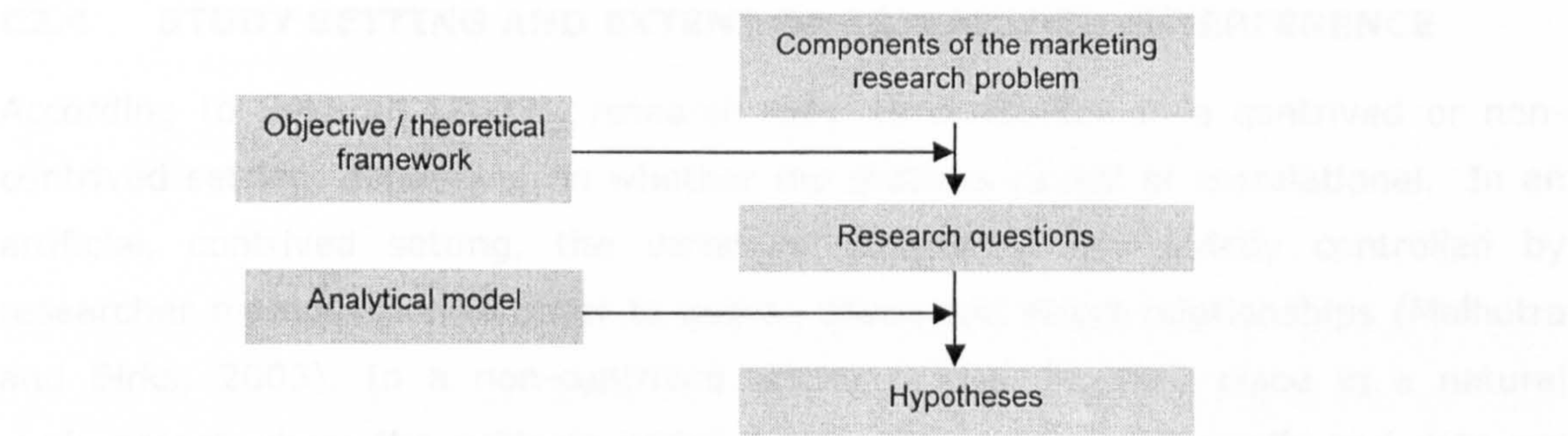


Figure C2.2 Development of research questions and hypotheses

Source: Malhotra, N.K. and Birks, D.F. (2003), *Marketing research: an applied approach*, 2nd European edition, p.48, Harlow: Prentice Hall

Given the central focus of this research is to test a set of hypotheses related to the temporality of relationships between constructs in a structural model, the purpose of this study can be defined as hypothesis testing.

C2.3 TYPE OF INVESTIGATION

Sekaran (2003) upholds that a researcher should determine whether a causal or correlational study is needed to answer the research question. The former is undertaken when it is necessary to establish a cause and effect relationship, while the latter is employed when the purpose is to identify associations between factors or constructs.

Establishing causal relationships is difficult because it is not possible to observe one variable causing a change in another, therefore causal relationships can be inferred but not observed (de Vaus, 2001; Malhotra and Birks, 2003). Inferring causal relationships is complex and relies upon satisfying three conditions, i.e. concomitant variation, time order consideration, and the elimination of other causal factors (Malhotra and Birks, 2003). Such an examination is predicated on strict experiment, and as will be seen in Section C2.4 this study contains no experimental control over the variables of interest and thus conditions of inference are not satisfied. The study does, however, include testing structural pathways in which claims as to relationships between the constructs are made, but as its focus is on establishing associations between the constructs rather than proving cause and effect, it should be considered as an *ex post facto* investigation. This approach is consistent with literature in the consumer value domain, for example the empirical studies by Cronin *et al.* (1997), Long and Schiffman (2000) and Chen and Dubinsky (2003), and see also Part B for a full debate of other empirical work in the field.

C2.4 STUDY SETTING AND EXTENT OF RESEARCHER INTERFERENCE

According to Sekaran (2003), research may be conducted in a contrived or non-contrived setting, depending on whether the study is causal or correlational. In an artificial, contrived setting, the variables of interest are strictly controlled by researcher manipulation in order to assess cause and effect relationships (Malhotra and Birks, 2003). In a non-contrived setting, research takes place in a natural environment where the subjects under investigation proceed normally and data are collected without the undue influence of the researcher. This type of study setting is often referred to as field research.

As will become clear in Section C2.6, data were collected from respondents in their normal, day-to-day student environment and thus the study setting for this research is non-contrived. While the author acknowledges the inevitability of Malhotra and Birks' (2003: 59) comment that the very act of "...measuring or observing humans may cause them to change" and accepts that researcher intervention is unavoidably inherent in research with human subjects, nonetheless the extent of researcher interference in this study is extremely minimal.

C2.5 TIME HORIZON

In terms of the temporal dimensions of research, two types of studies may be undertaken: (1) cross-sectional or one-shot, in which data are collected at a single

point in time, and (2) longitudinal, whereby data are collected at two or more points in time (Sekaran, 2003; Malhotra and Birks, 2003). Longitudinal design normally involves a fixed sample of respondents known as a panel, from which data can either be collected repeatedly on the same variables as in time-series analysis (true panel), or on different variables at different points in time (omnibus panel) (Churchill and Iacobucci, 2005). De Vaus (2001) also identifies trend studies within the scope of longitudinal design, in which data are collected from comparable (but not identical) samples over time, e.g. annual surveys which ask similar questions of different groups each year. Table C2.1 summarises the relative strengths and weakness of cross-sectional and longitudinal research design.

Table C2.1 Relative advantages and disadvantages of longitudinal and cross-sectional designs

Evaluation criteria	Cross-sectional design	Longitudinal design
Detecting change	x	✓
Large amount of data collection	x	✓
Accuracy	x	✓
Representativeness of the sample	✓	x
Response bias	✓	x
Key: ✓ = a relative advantage over the other design; x = a relative disadvantage		

Source: Malhotra, N.K. and Birks, D.F. (2003), *Marketing research: an applied approach*, 2nd European edition, p.68, Harlow: Prentice Hall

Taking into account the debate advanced by Rindfleisch *et al.* (2008), and given that the aim of the present research is to investigate the impact of value change over time, the decision to adopt of a longitudinal rather than a cross-sectional approach was fundamental to the study’s methodology; specifically, the study adopts the true panel method.

Data were initially collected from the same sample of respondents at three points in time. A second phase of data collection was subsequently carried out with a second sample in order to enable cross-validation of the research model (Section C1.3.4). This approach resulted in a total of six sets of data (see Table C2.2 below).

- **Phase 1:** October 2006–October 2007 – sample 1
- **Phase 2:** October 2007–October 2008 – sample 2

The time points were chosen to reflect key moments in the consumption experience (i.e., the delivery of the course of study) where students’ cognitive and affective states and their overall perceptions would be most acutely felt:

- **Time 1:** at the start of the course in October, specifically at the end of the first week’s Induction programme. Students’ perceptions at this point are embryonic; they are just beginning to familiarise themselves with the course and its performance indicators and what is expected of them over the next 12 months;
- **Time 2:** half way through the course in March. Students are now familiar with how the course works and its demands. They have experienced all of the taught lectures and have completed all Stage 1 group work and assessments, individual assessments and examinations. In addition they are about to embark on the dissertation, a major piece of independent work supervised one-to-one by an academic staff member.
- **Time 3:** at the end of the course after notification of final results in the following October. Consumption is now complete; students are reflecting on their experience over the last year and at the same time they are anticipating and planning their future.

The reader is asked to note that, in order to ease the flow of discussion in the remainder of this thesis, the sample of respondents at Phase 1 is hereafter referred to as Cohort 1 or C¹, while the sample at Phase 2 is referred to as Cohort 2 or C². To further simplify, the various time points will be referred to as T¹ (Time 1), T² (Time 2) and T³ (Time 3): thus, for example, a reference to Cohort 1 at Time 2 will be shown as C¹T². Table C2.2 below summarises the phases of data collection and indicates data collection points for both cohorts.

Table C2.2 Phases of data collection and time points

	Phase 1: October 2006–October 2007	Phase 2: October 2007–October 2008
Time point	Cohort 1	Cohort 2
Time 1: October	✓	✓
Time 2: March	✓	✓
Time 3: October	✓	✓

Before closing this section, attention returns briefly to Table C2.1 above to discuss the relative disadvantages of longitudinal design in relation to the present study. In terms of sample representativeness, this may be affected by response attrition if those who drop out differ in an important way from those who remain (Malhotra and Birks, 2003). In the present study, though there was some attrition in response rate over the three time points (see Section C4.5.1), intra-sample group homogeneity was considered to mitigate this risk. In terms of the risk of response bias due to

novelty or conditioning effects (Malhotra and Birks, 2003; Bryman and Bell, 2003), this was considered minimal for two reasons: (1) the samples comprised mature students studying the marketing discipline at Master's level, who, arguably, could be considered attuned to the marketing ethos and therefore less susceptible to such effects; and (2) participation in the study was over a relatively short period of time (one year) and required the completion of a very small number of questionnaires (three in total).

C2.6 DATA COLLECTION METHODS

Data can be categorised as primary and secondary; the former are originated by the researcher specifically for the purpose of the research project while the latter are originally collected for some other purpose (Saunders *et al.*, 2003). Secondary data in the form of the relevant academic literature and practitioner texts and journals were thoroughly reviewed in the exploratory stage of the research (Section C2.2.1), which served identify the need for the research (Section C1.2) and define the conceptual and operational definition of the constructs of interest (Section C3.2.1).

The focus of this section is on the primary data collected for this study. The available methods of data collection are briefly summarised followed by a discussion of the data collection method employed in the exploratory stage of the research in terms of scale development. Lastly, the methods employed in the main field research are debated.

C2.6.1 Alternative methods of primary data collection

Depending on the research paradigm and the overall research strategy a variety of data collection methods are available, which can be broadly categorised within the scope of either quantitative or qualitative research designs (Denscombe, 2003; Malhotra and Birks, 2003; Sekaran, 2003). Although Bryman and Bell (2003) point to the debate regarding the ambiguity of this distinction, nonetheless they acknowledge researchers' continued use of the terms as a useful umbrella for classifying different methods of business research. Similarly, Saunders *et al.* (2003), while recognising the complexity in defining the qualitative-quantitative divide, observe that three notable differences can be found between them as indicated in Table C2.3. Bryman and Bell (2003) argue that the importance of the differences between quantitative and qualitative research should not be exaggerated insofar that there can be some interconnectedness between the approaches. In the very broadest sense, then, quantitative methods are principally employed in

research design that is oriented in the positivist paradigm, where the emphasis is on deductive reasoning and theory testing. In contrast, qualitative methods tend to prevail in interpretivism, where the focus is on induction and theory generation (Bryman and Bell, 2003).

Table C2.3 Distinctions between quantitative and qualitative data

Quantitative data	Qualitative data
<ul style="list-style-type: none">• Based on meanings derived from numbers• Collection results in numerical and standardised data• Analysis conducted through the use of diagrams and statistics	<ul style="list-style-type: none">• Based on meanings expressed through words• Collection results in non-standardised data requiring classification into categories• Analysis conducted through the use of conceptualisation

Source: Saunders, M., Lewis, P. and Thornhill, A. (2003), *Research methods for business students*, 3rd edition, p.378, Harlow: Prentice Hall

The relative merits and demerits of the two designs have been widely discussed in the research methods literature (see for example Cresswell (1998), Richie and Lewis (2003), Bryman and Bell (2003), Saunders *et al.* (2003), Silverman (2005)) and while a debate is not offered here, the two designs are briefly summarised as following:

- **Quantitative research design** comprises two main methods of data collection; (1) observation techniques conducted by human or electronic methods involving the systematic recording and counting of patterns of behaviour of people, objects or events (Saunders *et al.*, 2003; Malhotra and Birks, 2003); (2) survey research, in which data are collected via a set of questions arranged in a pre-determined order, normally in the form of a questionnaire which can be either self-administered (the respondent completes it him/herself) or researcher administered (respondents' answers are recorded by the researcher) (Bryman and Bell, 2003; Saunders *et al.*, 2003; Sekaran, 2003);
- **Qualitative research design** comprises two main methods of data collection: (1) non-disguised or direct methods, i.e. participant observation, focus groups, or depth interviews (structured, semi-structured or unstructured) conducted face-to-face, via the telephone or computer-assisted; (2) disguised or indirect methods, i.e. projective techniques (Creswell, 1998; Ritchie and Lewis, 2003).

The following sections go on to debate the specific data collection methods employed in the present study.

C2.6.2 Data collection method for the exploratory research

The literature review revealed no appropriate existing scale that could be borrowed or modified to measure the knowledge construct; furthermore, and consistent with research by Srinivasan and Ratchford (1991), the high level of context-specificity required a scale to be developed especially for the population under investigation. Qualitative research was therefore undertaken in the exploratory stage of the research to develop a scale to measure respondents' familiarity with the practical elements of their education provision, such as timetables, catering and library facilities, course regulations, etc.

After evaluating the various qualitative methods available to the researcher (see Section C2.6.2) and acknowledging Churchill and Iacobucci's (2005) view that interviews are particularly useful in the exploratory stages of research for developing understanding of a phenomenon, face-to-face interviews was chosen as the most appropriate method to uncover a greater depth of insight than might be obtained from a focus group. Moreover this method overcame an attendant difficulty of focus groups in identifying a meeting time that is convenient for all participants. Consequently, and in line with good practice advocated by Silverman (2005), interviewees were purposively-selected (see Section C4.3.2 for sampling decisions) from the Kingston Business School staff on the basis of their experience and expertise in postgraduate course management/administration and course design; in this respect the interviews took the form of a key-informant survey (Churchill and Iacobucci, 2005).

The interview format was semi-structured insofar that interviewees were asked a short set of pre-determined questions designed to uncover the course elements that students would develop knowledge of during their studies, while also allowing interviewees to contribute additional ideas outside of the structured questions. The comparatively low-level of abstraction of the knowledge construct in measuring 'hard' practical things rather than 'soft' abstract ideas accounts for the fact that, after four interviews (two with course administrators and two with course directors) lasting around 30 minutes each, no new data were obtained and therefore no further research was undertaken. Section C3.2.4 provides a specific debate as to how the pool of items generated from the data collection was refined and tested to form the knowledge scale.

C2.6.3 Data collection methods for the field research

After evaluating the alternative methods of data collection (listed in Section C2.6.2), and given that the study: (1) is rooted in the positivist paradigm (Section C1.4); (2) aims to investigate the impact of value change over time on its functional relationships by testing a research model and a set of related hypotheses (Section C1.3); and (3) employs structural equation modelling as the chosen analytical technique (Section C4.5.2), quantitative methods were used to collect data in the main field research; specifically, a survey in the form of a self-completion questionnaire offered the most suitable method.

The survey method is the most common form of data collection in marketing research and its merits and demerits have been widely debated (e.g., Malhotra and Birks, 2003; Saunders *et al.*, 2003; Ritchie and Lewis, 2003). The advantages relevant to the present study are briefly summarised below:

- The questionnaire was easy to administer and its subsequent coding, analysis and interpretation of data were relatively straightforward (Malhotra and Birks, 2003);
- The data could be collected from a larger sample at a very low cost compared to other methods (Frankfort-Nachmias and Nachmias, 1996);
- The fixed-response questions limited answers to the stated alternatives, and therefore the variability in responses associated with qualitative methods was greatly reduced (Malhotra and Birks, 2003);
- The high level of anonymity enabled respondents to answer potentially sensitive questions, for example about their emotions, with complete confidentiality (Frankfort-Nachmias and Nachmias, 1996);
- In terms of ethical considerations, the method enabled respondents the choice whether to participate or not, and therefore information was provided at respondents' own free will (Ritchie and Lewis, 2003).

Despite the above advantages, certain disadvantages of the survey method are noted, in particular the possibility of measurement error and response bias (Frankfort-Nachmias and Nachmias, 1996; Churchill and Iacobucci, 2005. See Section C4.4 for a full discussion relating to error minimisation). These biases were minimised by adopting a rigorous approach to scale development (Section C3.2) and questionnaire design (see Section C3.3 for a full discussion regarding the research instrument) as well as pre-testing prior to the final administration. Finally, the low response rates often reported for surveys in comparison to other methods (e.g.,

personal interviews) was overcome through the mainly face-to-face administration (see the following Section C2.6.3.1), while the use of an incentive and employment of the Tailored Design Method (Dillman, 2000) also helped to improve response.

C2.6.3.1 Mode of survey administration

A variety of survey administration methods are available to the researcher, such as mail, face-to-face, telephone, fax, computer assisted (CAPI or CATI), email and internet-based (Malhotra and Birks, 2003). Given that data were collected in two phases from two samples at three time points each (see Section C2.5), and in view of the prevailing temporal conditions at different time points, a combination of administration methods was employed as summarised in Table C2.4 below.

Table C2.4 Mode of survey administration

Time point	Cohort 1 and Cohort 2
Time 1: October	Face-to-face group administration
Time 2: March	Face-to-face group administration
Time 3: October	Web-based questionnaire

The principal method of administration at T¹ and T² for both Cohorts was face-to-face, in which questionnaires were personally administered by the researcher to the panel as a group at the beginning of a core module teaching session. The sample group’s availability on campus on a daily basis to attend lectures provided the rationale for this decision. The beginning of the session was chosen in preference to the mid-point or end of the session in order to mitigate any possible persuasion effects that lecture content/style may have had on responses. The small number of students who did not attend the class was encouraged via email to collect a copy of the questionnaire from the Course Administrator and return their completed responses to the School Office.

The main benefit of the face-to-face administration was the opportunity it afforded the researcher to clarify the purpose of the research and answer any questions about it in person, thus reducing the incidence of incomplete questionnaires (Sekaran, 2003) and minimising response error (Section C4.4). The classroom environment provided a natural, non-contrived study setting and helped to minimise the extent of researcher interference (Section C2.4). Lastly, the high financial costs of materials and postage associated with a mail administration were negated.

At T³, with the cessation of formal lectures and students no longer on campus, an alternative method of administration was required. In line with good practice (Saunders *et al.*, 2003), respondents were sent a pre-survey email informing them that a questionnaire would be sent to them in a few days' time. The subsequent email contained a hyperlink to a web-based questionnaire (hosted by SurveyMonkey, www.surveymonkey.com). The web-based questionnaire was identical in terms of structure and content to the paper-based version. Apart from its ease of use for respondents (Saunders *et al.*, 2003), a key advantage of the web administration was that responses could be downloaded into an Excel database and then directly copied into SPSS, which not only saved a great deal of time and effort inputting raw data by hand but also removed the risk of office processing measurement error (Bryman and Bell, 2003; and see Section C4.4.1).

The high level of security built in to the University email system was considered to mitigate a potential disadvantage of email administration in terms of respondents' concern for issues of confidentiality or unauthorised internet fraud (Bryman and Bell, 2003). Furthermore, respondents' familiarity with the study as a result of their participation at T¹ and T² considerably reduced the possibility that the email inviting their participation at T³ could be viewed as junk mail or nuisance mail (Dillman, 2000). Finally, as with mail surveys there is no control over whether or not the intended recipient or another individual completes the web questionnaire, but given the highly individual nature of the questions relating to personal experiences and feelings, it is reasonable to conclude that only the intended recipient would be able (or willing) to respond.

C2.6.3.2 Communication method

Both the paper-based and web-based questionnaires were administered through a structured-undisguised communication method, which is the most commonly used method in marketing research (Churchill and Iacobucci, 2005).

In terms of standardisation (Saunders *et al.*, 2003) the questionnaire adopted a highly structured approach whereby the questions followed a strict sequence with permitted responses being predefined using a 7-point scale system (Section C3.2 discusses measurements).

There was no reason to disguise the purpose of the research (Churchill and Iacobucci, 2005) and in fact it was believed that stating this would encourage accurate and reliable answers, thus respondents were informed of the purpose and legitimacy of the research at the outset. Transparency was demonstrated in

accordance with good practice (Dillman, 2000; Richie and Lewis, 2003) in two ways: (1) the face-to-face administration of the questionnaire at T¹ and T² allowed the author to explain the purpose of the research in person; (2) a cover letter carrying the Kingston University logo to reinforce the importance and credibility of the study was integrated into the front page of both the paper and web-based versions, which explained:

- The purpose of the study and the importance of respondents' replies in contributing to its success;
- The names and contact details for both the researcher and the Head of School of Marketing in the event that respondents wished to raise questions or concerns regarding the research;
- The time-frame of the research (i.e., responses being requested on three occasions over a one-year period), and the length of time it would take to complete each questionnaire;
- The confidential nature of the research and assuring respondents of their complete anonymity. Student ID numbers (and not their names) were inserted in the questionnaire in order to track responses over time and to delete non-respondents, but these would not be used to identify individual respondents;
- The incentive for completing the questionnaire in the form of entry to a prize draw as a 'sign of good faith' in seeking respondents' cooperation. In consultation with the author's supervisory team, it was decided that an iPod was an appropriate prize on the basis that its inherent desirability among the respondents' generation would motivate, but at the same time its actual monetary value was too low to cause response bias. To enter the draw, respondents were asked to insert their name (not their student ID number) on a Prize Draw Entry Slip and return this separately to the questionnaire; in this way, Prize Draw Entry Slips could not be matched to completed questionnaires.

CHAPTER C3: RESEARCH METHODOLOGY (Part 2)

C3.1 INTRODUCTION

This chapter discusses issues of research design depicted by the shaded cells in Figure C3.1. The measures and measurements employed in the study, including the operational definition and conceptualisation of the research constructs, are initially discussed followed by the design of the research instrument.

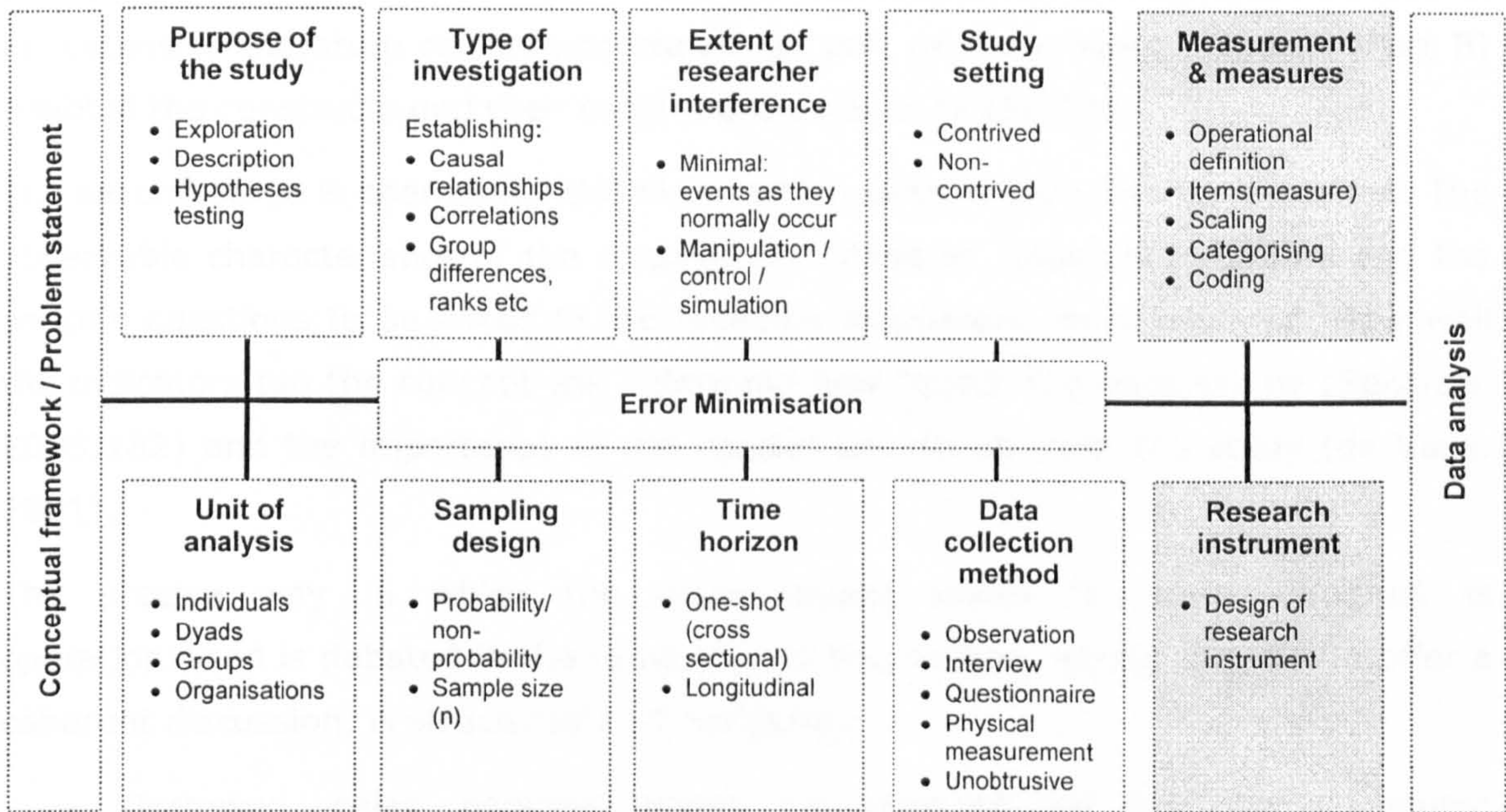


Figure C3.1 The research design framework for Section C3

Source: Sekaran, U. (2003), *Research Methods for Business - A Skills Building Approach*, 4th Edition, p.118, New York: John Wiley and Sons

C3.2 MEASURES AND MEASUREMENTS

This section begins with a discussion of the operational definition of the research constructs and goes on to discuss how the measurements for each construct are operationalised. The section concludes with a debate as to the conceptualisation of the research constructs as either formative or reflective latent variables.

C3.2.1 Operational definition of the research constructs

Research in business and the social sciences involves making observations that tap into abstract concepts that are not directly quantifiable or measurable. Variables or constructs that represent abstract concepts are known as unobservable or latent (Bagozzi, 1994a). In the present study, all of the constructs are latent variables

(LVs), namely consumer value conceptualised as *get* and *give*; terminal and instrumental values; service quality; knowledge; emotions; satisfaction and intention.

The process of clarifying and translating LVs into observable measures is known as operationalisation (de Vaus, 2001; Sekaran, 2003), which involves clarifying and defining the concept in two stages. Firstly, nominal or conceptual definition involves specifying the broad meaning of the concept (Frankfort-Nachmias and Nachmias, 1996). The author's prior research undertaken as part of her MA and MSc studies (completed 2002 and 2005 respectively, and also see Ledden *et al.*, 2007) as well as an extensive literature review undertaken as part of the present research (Part B) enabled the constructs and their constituent parts to be clarified.

The second stage is operational definition, which enables the LV to be measured. The observable characteristics of the concept are linked to empirical indicators and the specific questions to be asked in the research instrument are articulated. How well the indicators tap the concept will determine how "good" the data will be (Sekaran, 2003:182) and the importance of the conclusions drawn from the study (de Vaus, 2001).

The precise way in which the measurement scales for each construct is operationalised is debated in the remainder of this section, which, in order to offer a coherent discussion, is structured in three parts:

- Borrowed scales: personal values, i.e. terminal and instrumental values; satisfaction; intention; emotions (Section C3.2.2);
- Scales developed in the author's previous research: consumer value, i.e. *get* and *give*; service quality (Section C3.2.3);
- New scale developed especially for the present study: knowledge (Section C3.2.4).

C3.2.2 Borrowed scales

The borrowed scales used in the research are: personal values, i.e. terminal and instrumental values; satisfaction; intention; emotions. Care must be taken when borrowing scales from other studies to avoid discrepancies occurring in their psychometric properties. The borrowed scales in this research were examined according to the framework suggested by Engelland *et al.* (2001), which is depicted in Figure C3.4 and briefly summarised below in relation to the present research.

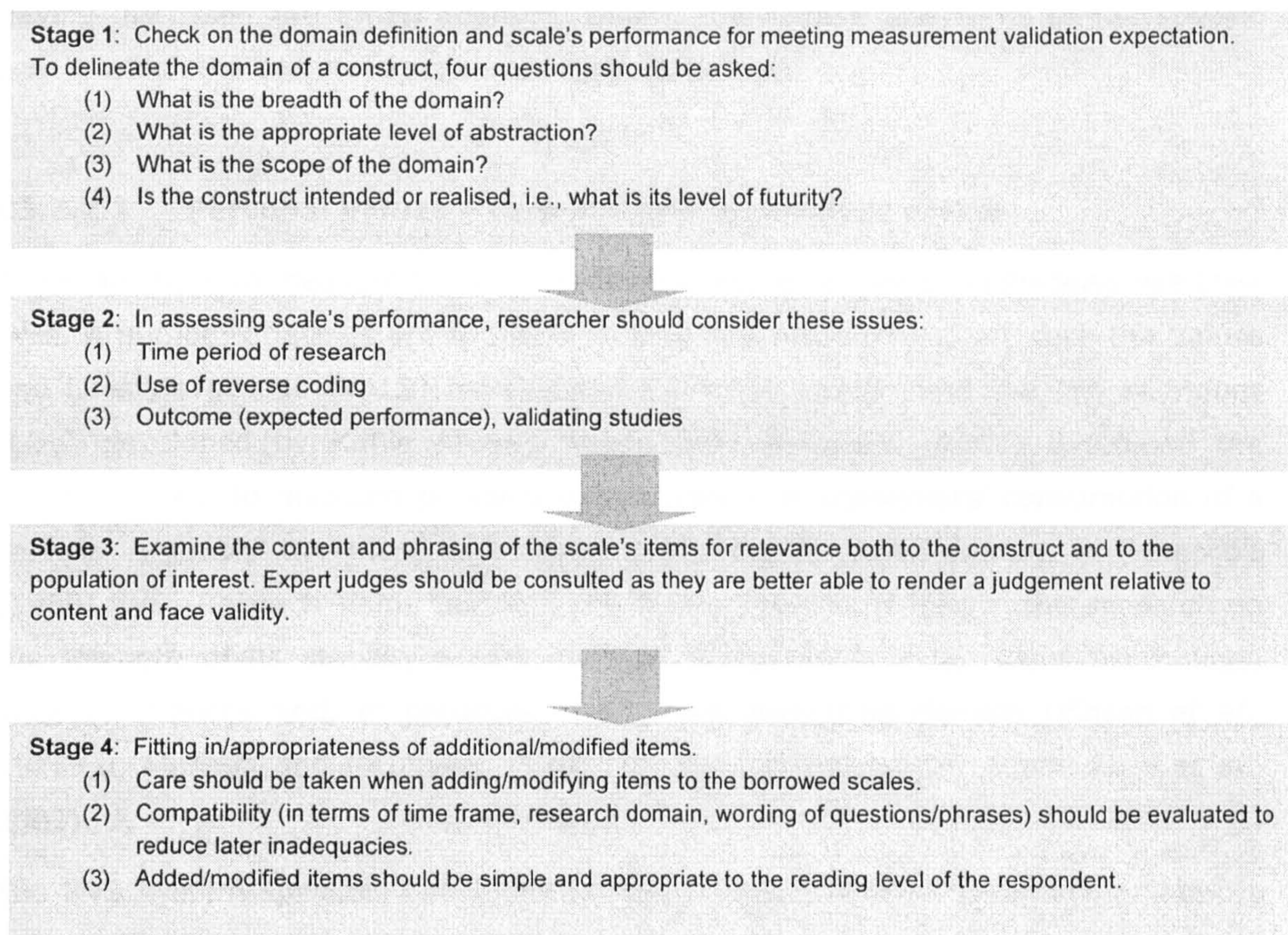


Figure C3.2 Framework for selecting and adapting scales

Source: Engelland, B. T., Alford, B. L. and Taylor, R. D. (2001): Cautions and precautions on the use of 'borrowed' scales in marketing research, in: T. A. Suter (editor), *Marketing advances in pedagogy, process and philosophy: Proceedings of the annual meeting of the society for marketing advances*, pp. 152-153, New Orleans, LA, November 6-10

Stage 1 took the form of a thorough review of the consumer value and related literature, which provided a firm foundation for the specification of the domain of the concepts underlying the research constructs. All of the borrowed scales were employed in recent peer-reviewed academic journal articles, therefore confidence can be gained as to their currency in representing current thinking in the domain (Stage 2). Even so, the psychometric properties and measurement accuracy of the scales were reassessed in the present research (see Chapters D1, D2 and D3). The content and phrasing of the items (Stage 3) were tested in the pre-pilot stage (see Section C3.3), which resulted in only minimal change to the wording of a small number of individual questions. Scale modifications, where appropriate, were made during the exploratory stage of the study, paying due care and attention to ensuring their compatibility with the existing scales (Stage 4). A pilot study was conducted (see Section C.4) to assess the adequacy of the modifications, which again resulted in only minimal changes.

Having discussed the broad approach taken, the debate now turns to the specific way in which the borrowed scales are operationalised.

C3.2.2.1 Personal values – terminal and instrument values

The scale aims to measure the personally-held values by which individuals live their lives. A number of scales are available to measure personal values, such the Values and Lifestyle groups (VALS) developed by Mitchell (1983) and the List of Values (LOV) developed by Kahle (1989). Lages and Fernandes (2004) developed the SERPVAL scale to measure personal values salient in consumers' consumption of a service. Arguably the most well-known and robustly-tested system is Rokeach's (1968) RVS (Rokeach Value Survey), which was operationalised in this research on the strength of its stability across multiple disciplines such as social psychology, decision sciences and, in particular, within the marketing domain (Vinson *et al.*, 1977a,b; Munson and McIntrye, 1979; Munson and McQuarrie, 1988; Allen *et al.*, 2002).

The RVS system specifies two types of values that provide a blueprint for how to behave in life, guiding choices and helping to resolve conflicts: (1) instrumental values associate with modes of conduct or ways of behaviour, such as whether an individual is ambitious, responsible, honest, etc., (2) terminal values associate with an individual's desired end-states of existence or goals in life, such as freedom, security, etc.

Though originally measured as a rank-order scale, the Likert-type scale provides an appropriate alternative (Munson and McIntrye, 1979). The modified scale was validated in previous research (Ledden *et al.*, 2007) and contains 10 items to measure terminal values on a 7-point interval scale anchored in "7=extremely important" and "1=extremely unimportant", and 13 items measuring instrumental values on a 7-point interval scale anchored in "7=extremely like me" and "1=extremely unlike me".

C3.2.2.2 Satisfaction

Research in marketing and the wider social sciences has treated the satisfaction construct variously, i.e. both uni- and multi-dimensionally. Examples of research that employs the latter conceptualisation include studies of patients' satisfaction with health care services (Etter and Perneger, 1997), employee job satisfaction (Stedham *et al.*, 2002) and purchase satisfaction (Francis and Dickey, 1984). At the same time, research in the b2b value domain has similarly treated satisfaction as a

composite of multiple dimensions, for example as a combination of economic and non-economic satisfaction with relationship value in the case of Geyskens *et al.*, (1999), however research in the b2c value widely conceptualises satisfaction as a uni-dimensional construct (e.g., Cronin *et al.*, 2000; Hackman *et al.*, 2006; Gallarza and Saura, 2006; Williams and Soutar, 2009). Consequently, the satisfaction construct in the present study is measured as a uni-dimensional construct.

Based on Halstead *et al.*'s (1994) study that investigated satisfaction with an education provider, the satisfaction scale in the present research is measured as respondents' overall assessment of satisfaction with their educational experience. The scale was contextualised and its psychometric properties confirmed in the author's previous related research (Ledden *et al.*, 2007). Four items were measured on a 7-point Likert scale anchored in "7=very strongly agree" and "1=very strongly disagree".

C3.2.2.3 Intention to recommend

This scale reflects respondents' propensity to offer positive word of mouth recommendation of both the course studied and the institution. The scale was a modified version of that used by Cronin *et al.* (1997) in their examination of the role of perceived value on purchase intentions. Three items were measured on a 7-point Likert scale anchored in "1=very strongly disagree" and "7=very strongly agree".

C3.2.2.4 Emotions

The scale aims to measure respondents' prevailing emotional feelings at the three data collection time points. There are a number of well-known scales to measure emotions, which mainly derive from theories of psychology and seminal work by Izard (1977) and Plutchik (1980), e.g. the PAD scale (Mehrabian and Russell, 1974), the PANAS scale (Watson *et al.*, 1988), Batra and Holbrook's (1990) typology of affective responses to advertising, and Richins' (1997) CES (Consumption Emotions Set) scale. The latter was adopted in this study on the strength of: (1) its particular relevance to measuring emotions that emanate from a consumption experience as opposed to more general emotional responses to a particular environmental context or stimulus, such as in the case of Mehrabian and Russell's (1974) PAD scale; (2) its conciseness and thus its ease of use in studies where several other variables are being investigated (Richins, 1997); and (3) its application in marketing research (e.g., Ruth *et al.*, 2002). Minor modifications were made to reflect the context of the

present research and the resultant 13-item scale was measured on a 7-point Likert scale anchored in “7=very strongly agree” and “1=very strongly disagree”.

C3.2.3 Scales developed in the author’s previous research

The scales for service quality and consumer value (i.e., *give* and *get*) were developed and validated in the author’s prior research, the former scale in her MA research (conducted in 2002) and the latter in both her MA and MSc research (the MSc conducted 2005) as well as in Ledden *et al.* (2007); each is discussed in turn.

C3.2.3.1 Consumer value – *get* and *give*

Consumer value is measured as respondents’ perceptions of the received benefits (*get*) of their educational provision and the sacrifices (*give*) made to obtain them.

As indicated in Section C3.2.3, the *get* and *give* scales were originally developed for the specific research population in prior related research and their psychometric properties have been repeatedly tested and confirmed. The scales for the dimensions of *get* are based on Sheth *et al.*’s (1991a,b) consumption values as operationalised by LeBlanc and Nguyen (1999) in their examination of educational consumer value. The scales for the dimensions of *give* are based on those employed by Cronin *et al.* (1997) in their study of value in the context of service industries. Both sets of scales were modified in the author’s previous related research in accordance with the framework proposed by Engelland *et al.* (2001) (see Section C3.2.2 for details). Briefly, qualitative research in the form of seven one-to-one depth interviews was conducted by the author among a representative sample of postgraduate students using a series of semi-structured open-ended questions to probe their study experiences. Analysis of the data that emerged from the interviews enabled the wording of the scales to be refined and contextualised. The modified scales were incorporated into the questionnaire, which was piloted among a sample of 30 postgraduate students. The pilot study resulted in a small number of revisions that were incorporated into the final questionnaire. Subsequently, rigorous testing to confirm the psychometric properties of the scales was conducted, which resulted in the scales described below:

***Get* comprises the following sub-dimensions:**

- Functional value (3 items) relates to students’ expectations that their degree will gain them employment or career advancement;

- Social value (3 items) represents benefits derived through the beliefs of referent others;
- Epistemic value (4 items) is particularly relevant to the educational context, in which the primary benefit is the acquisition of knowledge;
- Emotional value (3 items) accounts for students' sense of gladness and self-achievement in taking their course;
- Conditional value (2 items) represents the benefits of facilities provided in the specific educational environment;
- Image value (5 items) accounts for benefits derived from studying at a high-status institution.

***Give* comprises the following sub-dimensions:**

- Money (2 items: monetary sacrifice) in terms of the financial costs such as course fees, accommodation costs, textbooks, etc.;
- Time (3 items: non-monetary sacrifice) representing forfeits such as students' loss of leisure time, socialising with friends or family, etc;
- Effort (3 items: non-monetary sacrifice) representing the endeavour required to successfully progress through the course.

While the author acknowledges debate regarding the minimum number of items that are appropriate for multiple item scales (Hair *et al.*, 2006), she points out that the scales that employ only two or three items result from scale purification conducted in the above-discussed prior related research; accordingly, though the original scales for the functional, social, emotional and conditional dimensions of *get* and the money, time and effort dimensions of *give* contained between four and six items each, those indicators that failed to meet conditions of reliability, validity and multi-collinearity were removed, resulting in the reduced scales described above.

In total, 20 items for *get* and 8 items for *give* were measured on a 7-point Likert scale anchored in "7=very strongly agree" and "1=very strongly disagree".

C3.2.3.2 Service quality

The service quality scale aims to measure respondents' perceptions of the overall quality of their educational experience and is based on Parasuraman *et al.*'s (1988) SERVQUAL instrument. Despite the long and ongoing debate that surrounds the shortcomings of the SERVQUAL instrument (e.g., Buttle, 1996; Cuthbert, 1996a,b; Cook, 1997), marketing literature evidences many examples of its replication across

a diverse range of contexts and in the educational domain (Pariseau and McDaniel, 1997; Engelland *et al.*, 2000; Arambewela and Hall, 2006; Stodnick and Rogers, 2008) in which its reliability and validity has been repeatedly re-affirmed. Accordingly, the author considers this to represent an appropriate scale with which to measure the construct of service quality. Further support can be found in a conceptually similar study by Cronin *et al.* (1997), who examined the relationships between quality, sacrifice, value and purchase intentions.

The original SERVQUAL scale comprises two parallel sets of statements that measure respondents' perceptions (P) of a service category and their expectations (E) of a specific provider. The scores of the differences between the two sets of responses are used to calculate an overall assessment of service quality, i.e. $P - E = \text{Service Quality}$. Peter *et al.* (1993) pose serious questions as to the analytical properties of using difference scores, therefore their direct comparison measure which relies on the use of a single set of statements ("Overall, how close did [*the service*] come to your expectations?") was employed here.

Some of the original 22 items in the SERVQUAL scale were modified and the scale expanded to reflect the context of the study, resulting in a total of 25 items measured on a 7-point interval scale anchored in "7=very much better than expected" and "1=very much poorer than expected".

C3.2.4 New scale developed especially for the present study

The knowledge construct aims to measure respondents' level of familiarity with their degree course (i.e., the object of consumption) prevailing at the three data collection time points. As outlined in Section C2.6.2, a thorough review of the literature in the domain revealed no appropriate existing scale that could be borrowed or modified, and moreover the high level of specificity required to measure knowledge in the particular research context meant that it would be necessary to construct a new scale (Srinivasan and Ratchford, 1991). In so doing, the framework suggested by Churchill (1979) was considered to provide an appropriate methodology due to its seminal influence in developing measures for marketing constructs across a variety of subject-specific areas. The key steps in the framework are discussed in relation to the knowledge construct as follows:

1. The domain of the construct was specified through a review of the extant value literature and the related literature on consumer decision making and information processing. In the context of the present study, the domain

covered the practical elements of the course such the curriculum, library facilities, assessment regulations, etc.;

2. A sample of 19 items to reflect the domain was generated through data collected in interviews with expert informants (i.e., academic and administrative staff with expertise and experience in course design and management), who were asked to express their views regarding the practical elements of course provision that students would accumulate knowledge of while studying their degree (see Section C2.6.3);
3. At the pre-test stage, face validity of the scale was verified through an expert panel comprising of a convenience sample of eight doctoral students studying at Kingston Business School (Hardesty and Bearden, 2004). The judges were asked to rate the appropriateness of scale items as 'clearly representative', 'somewhat representative', or 'not representative' (Lichtenstein *et al.*, 1990). Only items that were classified as 'clearly representative' by at least six of the eight judges were retained, which resulted in the removal of six items from the initial pool (Section D2.4);
4. Further testing in pilot stage of the questionnaire design (Section C3.3) resulted in only minor modifications to the wording of the scale;
5. Measurement accuracy of the scale was assessed through multicollinearity analysis (see Chapter D3).

The resultant 13-item scale was measured on a 7-point Likert scale anchored in "7=very strongly agree" and "1=very strongly disagree".

C3.2.5 Conceptualisation of the research constructs

Before closing the discussion in this chapter, the author refers to the debate in the literature regarding the potential effect that misspecification of the conceptualisation of latent variables (LVs) might have had in theory development and testing. More specifically, the debate revolves around issues related to the conceptualisation of LVs as either reflective or formative (Diamantopoulos, 1999; Diamantopoulos and Winklhofer, 2001). Since all of the constructs in this research take the form of LVs, clarification on the conceptualisation of such constructs is clearly salient:

- Reflective latent variables or (RLVs) or molecular according to Bagozzi (1994a) are where the indicators are influenced/affected by the underlying LV. By far the most commonly adopted approach in marketing (Diamantopoulos, 1999), the key feature of RLVs is that "...a change in the latent variable will be

reflected in a change in all indicators” (Diamantopoulos, 1999:445). The implication here is that there is a one-to-one correspondence between the LV and its indicators, i.e. the indicators are seen as empirical surrogates for a LV. The underlying assumption is that the LV exists, rather than being constructed, and is measured by its indicators or by other lower/first order factors/LVs. Such LVs have their origins in the classical domain-sampling model (Nunnally and Bernstein, 1994) that assumes that the indicators are entirely or partially intercorrelated because of their underlying common LV. It consequently follows that a comparison of the loadings ($\lambda_1 - \lambda_4$) would verify the relative importance of each indicator (i.e., X_1 to X_4) in reflecting the overall LV. In addition, error is associated with the individual indicators (in this example X_1 to X_4) rather than the construct as a whole. An RLV is illustrated pictorially in Figure C3.3.

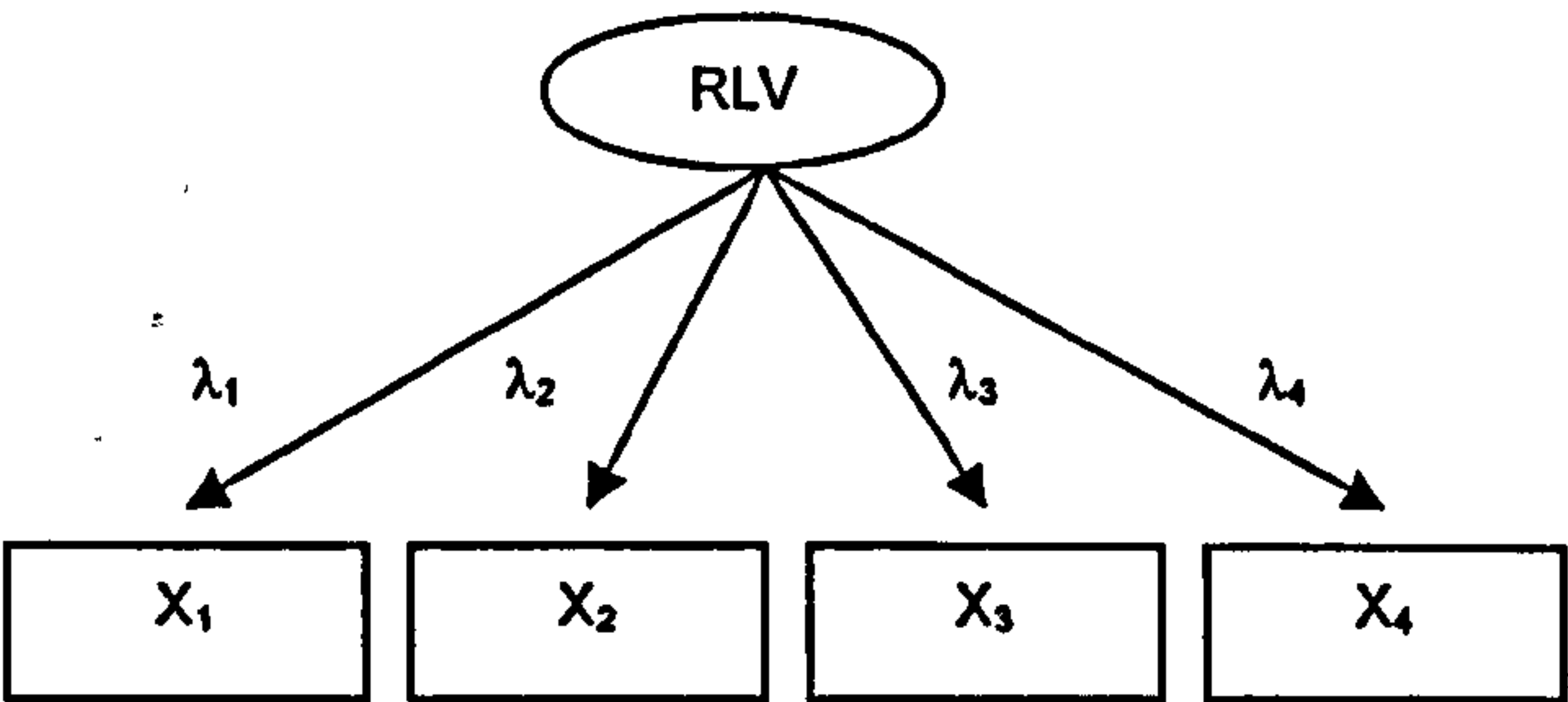


Figure C3.3 Illustration of a reflective latent variable (RLV)

- Formative latent variables (FLVs) or molar according to Bagozzi (1994a) represent variables whose indicators are viewed as causing rather than being caused by the underlying LV. Diamantopoulos (1999:446) states that in FLVs, “...a change in the latent variable is not necessarily accompanied by a change in all its indicators; rather if any one of the indicators changes, then the latent variable would also change.” In other words, FLVs represent emergent constructs that are formed from a set of indicators or lower/first order factors. Unlike RLVs, therefore, there is no theoretical reason to examine interdependencies (i.e., correlations) among the indicators. Thus, since the indicators are not correlated but occur independently, it is their relative weights ($\gamma_1 - \gamma_4$) that are used to construct the FLV and these indicate the relative importance of each indicator (i.e., X_1 to X_4). Unlike RLVs error is at the construct rather than the individual item level. Accordingly, FLVs do not conform to the classical test theory of factor analysis models that treat indicators as effects of a construct (Bollen and Lennox, 1991). An illustrative example is provided in Figure C3.4.

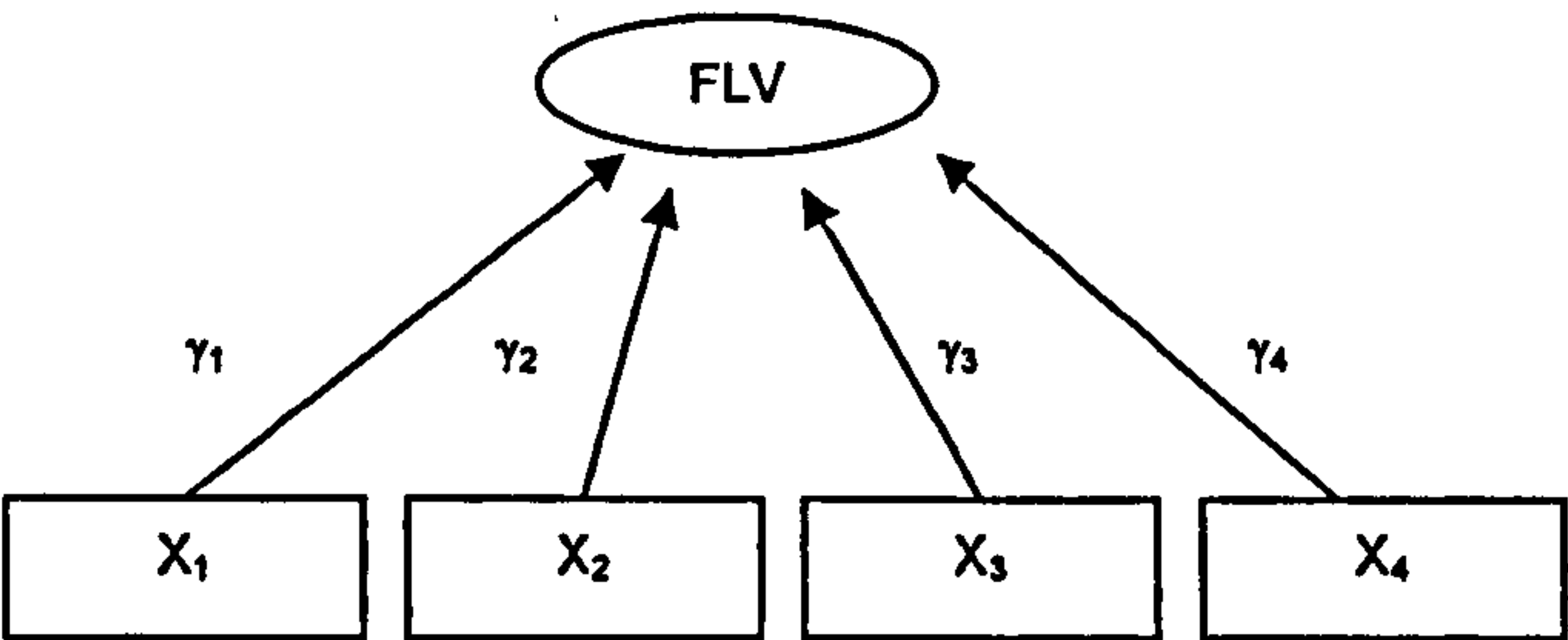


Figure C3.4 Illustration of a formative latent variable (FLV)

In summary, in reflective LVs the indicators are *effected by* the underlying LV, while, conversely, formative LVs are *caused by* their indicators. Bollen and Lennox (1991) distinguish between the term ‘scale’ to describe a reflective measure and an ‘index’ to describe a formative measure, and the authors point to the confusion in the literature caused by both terms being used interchangeably. In the present work, the term scale is used in a general sense to mean a set of items that measure a LV.

The constructs employed in the present research were a combination of reflective and formative latent variables, which were determined according to the guidelines offered by Law and Wong (1999), Jarvis *et al.* (2003) and MacKenzie *et al.* (2005).

- Service quality is a higher order FLV of its five dimensions, i.e. tangibles, assurance, responsiveness, reliability, empathy, which in turn are also conceptualised as FLVs;
- *Get* is conceptualised as a higher order FLV of its six dimensions, i.e. functional, emotional, epistemic, social, conditional, and image value, which themselves are conceptualised as first order RLVs.
- *Give* is conceptualised as a higher order FLV of its three dimensions, i.e. money (monetary sacrifice), and time and effort (both non-monetary sacrifice), all of which are conceptualised as first order FLVs;
- Terminal values, instrumental values, knowledge, and emotions are all conceptualised as FLVs;
- Satisfaction and intention are both conceptualised as RLVs;

C3.3 RESEARCH INSTRUMENT

The design of the research instrument used in the main field research followed accepted good practice outlined by Oppenheim (1992), Malhotra and Birks (2003), Bradburn *et al.* (2004) and Dillman (2000) in his Tailored Design Method. The debate in this section maps against the set of interrelated decisions illustrated in

Figure C3.5, which, although depicted sequentially, should be considered as a guide or checklist.

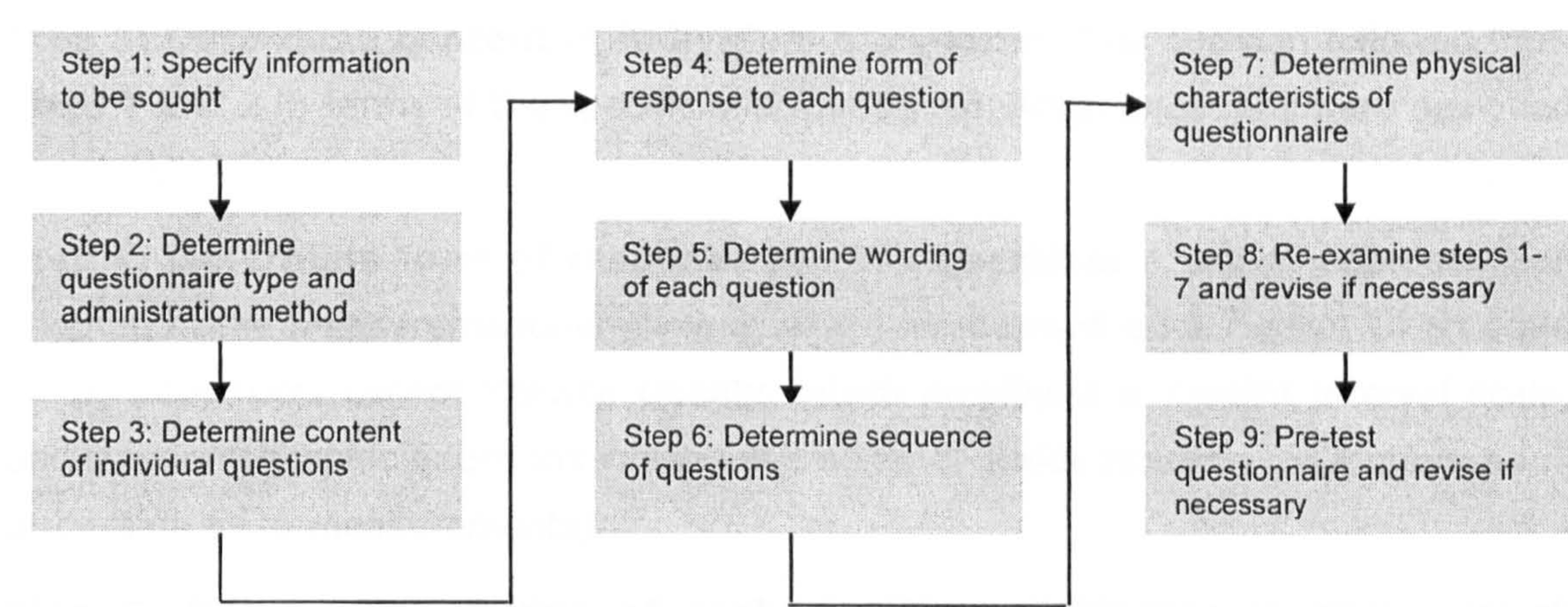


Figure C3.5 Procedure for developing a questionnaire

Source: Churchill, G.A. Jr. and Iacobucci, D. (2005), *Marketing research: methodological foundations*, 9th edition, p.234, TX: Harcourt College Publishers

Step 1: Specify information to be sought: The study’s conceptual framework (Chapter C1) determined the precise information to be obtained. Given the longitudinal nature of the study (Section C2.5) and its central focus on investigating value change over time, the same information was sought at each data collection point with the exception of the following:

- **Personal values:** This construct is conceptualised as comprising an enduring set of values that guide individuals through their lives, thus they are stable and not subject to change (Rokeach, 1968). Consequently questions relating to personal values were included only once in the initial questionnaire administered at T¹;
- **Service quality:** At T¹ students had not consumed any significant part of their educational provision except briefly during Induction, thus perceptions of service quality were unformed. Consequently information on service quality perceptions was collected only at T² and T³.
- **Demographics:** Information on age, gender and nationality was recorded at T¹ alongside respondents’ student ID numbers; thus, only student ID numbers were required at T² and T³ in order that responses from the same individual could be tracked over time;

Step 2: Determine questionnaire type and administration method: As discussed in detail in Section C2.6, a structured-undisguised questionnaire was administered face-to-face (T^1 and T^2) and via the internet (T^3).

Step 3: Determine content of individual questions: This decision followed from Steps 1 and 2 in terms of the specific information individual questions were designed to extract.

Step 4: Determine form of response to each question: A unified approach was adopted in the measurements employed, which were based on a 7-point Likert scale for all constructs except Service Quality, which employed a 7-point interval scale, and the demographic questions which used nominal scales (Section C3.2 offers a full discussion as to measurements).

Step 5: Determine wording of each question: Validation in prior research ensured the appropriateness of the wording in the consumer value, personal values and satisfaction scales. The questions in the remaining scales were worded and phrased in such a way to be clearly understood by respondents. In line with good practice (Oppenheim, 1992; Dillman, 2000; Bradburn *et al.*, 2004) jargon and leading, double barrelled, biased or ambiguous questions were avoided.

Given the longitudinal nature of the study, the wording of the completion instructions and the grammatical tense of the questions was necessarily related to the temporality of each data collection point; for example, respondents at T^1 and T^2 were instructed to answer the emotions and knowledge questions according to how they felt/what they knew about the course "at this point in time", while the completion instructions and question wording in the T^3 questionnaire were amended to the past tense to reflect the completion of the course. The specific wording of the questionnaires employed at T^1 , T^2 and T^3 can be found in the Appendix.

Step 6: Determine sequence of questions: Questions were grouped and sequenced in such a way to make it easier/more comfortable for respondents to complete the questionnaire. The questions that were easiest to answer were located at the beginning of the questionnaire (i.e., demographic information, personal values and characteristics at T^1 and service quality perceptions at T^2 and T^3). Once respondents had 'settled in' to the task, questions requiring more reflection relating to the core construct of value and its outcomes followed. Table C3.1 below shows the location of the questions in the research instrument.

Table C3.1 Location of the items in the questionnaire

Sections/Sub-sections	Construct	Questions Time 1	Questions Times 2 & 3
Opening page	Demographics	Age; Gender; Nationality	NA
1: You as a person (Time 1 only)	Terminal values Instrumental values	1 – 10 11 - 23	NA
1: Your expectations (Times 2 & 3 only)	Service quality	NA	1 – 25
2: Your thoughts about your course: Your course in relation to your career The content of your course Your course in relation to other people The course in relation to your own feelings Other factors connected with your course The sacrifices you made to take your course What you think about KBS How happy are you with your experiences?	Functional value Epistemic value Social value Emotional value Conditional value Monetary / Non-monetary Image Satisfaction Intention	24 – 26 27 – 30 31 – 33 34 – 36 37 – 38 39 – 46 47 – 51 52 – 55 56 – 58	26 – 28 29 – 32 33 – 35 36 – 38 39 – 40 41 – 48 49 – 53 54 – 57 58 – 60
3: Your familiarity with your course	Knowledge	59 – 72	61 – 74
4: Your feelings	Emotions	73 – 86	75 – 88

Step 7: Determine physical characteristics of questionnaire: Researchers have written extensively of the impact of questionnaire layout and appearance on the accuracy of replies, ease of response, and response rates (e.g., Bradburn *et al.*, 2004). Oppenheim (1992) recommends that a conservative but pleasant appearance should be aimed for, while the layout is of paramount importance, thus the physical version of the questionnaire (at T¹ and T²) employed a clear and uncluttered design laid out in sections, whereby each section represented a construct. The questionnaire was professionally printed in booklet form and displayed the Kingston University logo to reinforce the study’s credibility. The cover letter was integrated into the front page and employed techniques that are known to increase response rates (Oppenheim, 1992; Dillman, 2000) (see Section C2.6.4.2 for full details).

Step 8: Re-examine steps 1–7 and revise if necessary: Once an initial draft was constructed, the author conducted a thorough scrutiny and re-evaluation of the questionnaire in terms of question content, wording, structure and design. In the pre-pilot stage, an initial impression was sought from academic colleagues who possessed both familiarity with the research context and expertise in questionnaire design (Saunders *et al.*, 2003). As a result, small revisions were made prior to a full pilot, as described in the following step.

Step 9: Pre-test questionnaire and revise if necessary: There is consensus in the literature that pretesting (or piloting) the questionnaire is a vital element in questionnaire development (e.g., Bryman and Bell, 2003; Malhotra and Birks, 2003; Saunders *et al.*, 2003; Sekaran, 2003; Bradburn *et al.*, 2004). Churchill and

Iacobucci (2005:255) emphasise this point further, stating that the researcher who avoids a pretest is "...either naive or a fool. The pretest is the most inexpensive insurance the researcher can buy to ensure the success of the questionnaire and the research project".

The purpose of piloting is to ensure that the information obtained from the questionnaire meets the researcher's needs (Aaker *et al.*, 1998) and, given the inherent ambiguity of language, to assess whether the language used conveys the same meaning to respondents that it does to the researcher (Bradburn *et al.*, 2004). Thus, piloting addresses two main issues, i.e. (1) respondents' understanding of the questionnaire and individual questions, and (2) the questionnaire's physical characteristics in terms of layout and design. Accordingly, the questionnaire was pretested among a sample of 50 doctoral students who were asked to comment on the scope and range of the scales. In addition academics were invited to critically review the questionnaire. This exercise resulted in only minimal change to the wording on a small number of individual questions.

CHAPTER C4: RESEARCH METHODOLOGY (Part 3)

C4.1 INTRODUCTION

The final chapter in Part C discusses issues of research design depicted by the shaded cells in Figure C4.1. The focus falls firstly on the unit of analysis followed by sampling design and error minimisation. A brief debate regarding the data analysis technique employed in the study follows and the chapter concludes with a summary of the methods used in the present research.

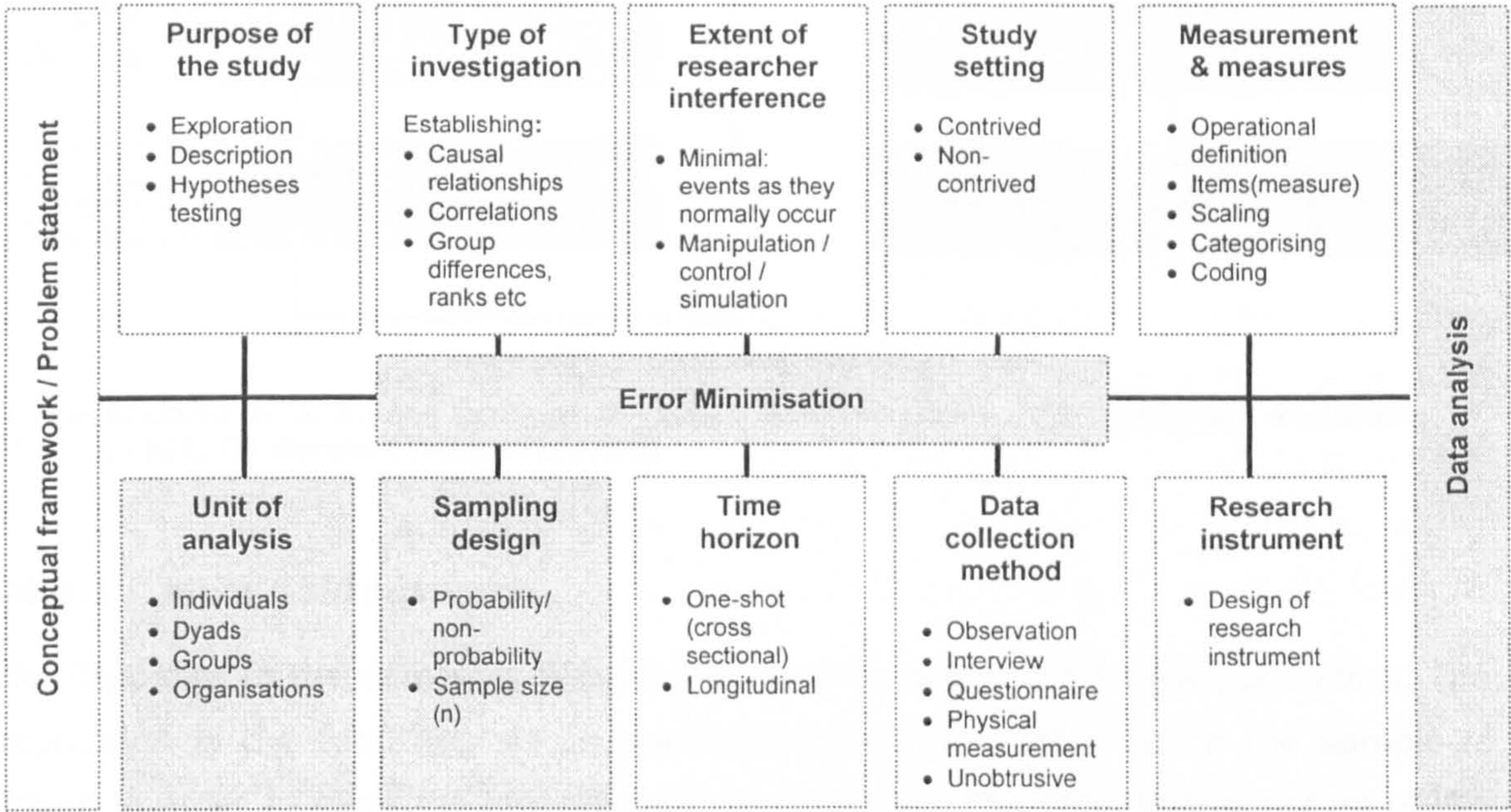


Figure C4.1 The research design framework for Chapter C4

Source: Sekaran, U. (2003), *Research Methods for Business - A Skills Building Approach*, 4th edition, p.118, New York: John Wiley and Sons

C4.2 UNIT OF ANALYSIS

The unit of analysis refers to the level of aggregation of the data collected in the research (Sekaran, 2003). The researcher’s decision regarding the appropriate unit of analysis is driven by the nature of the research problem and the issue under investigation. Units of analysis may include individuals, dyads, groups, organisations or even cultures. Since the concept of consumer value is constituted by the personal perceptions of the benefits and sacrifices that attach to consumers’ purchase and/or consumption decisions (see Part B), and given that the aim of the research is to investigate these perceptions over time, the unit of analysis in the present study is the individual.

C4.3 SAMPLING DESIGN

Sampling decisions relate to the identification of a segment or subset of the population that is selected for research (Bryman and Bell, 2003). Churchill and Iacobucci (2005) identify six key sampling decisions as depicted in Figure C4.2, each of which is debated in relation to the main field research and the sampling decisions taken in the exploratory qualitative research.

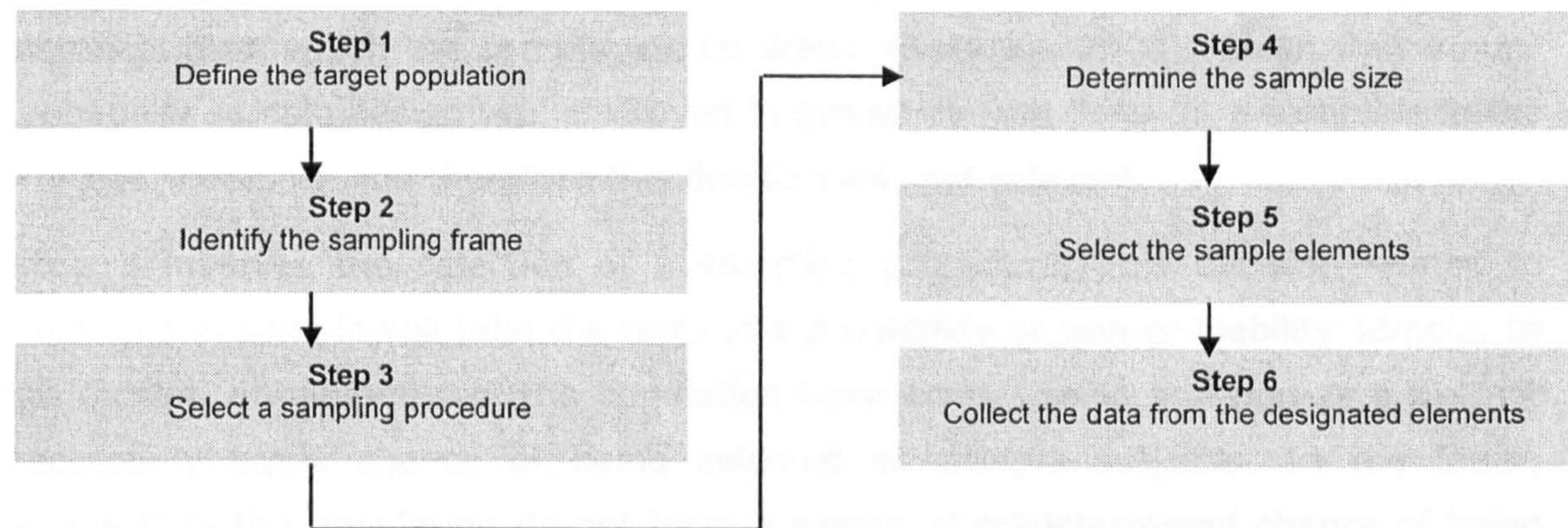


Figure C4.2 Sampling design process

Source: Churchill, G. A. Jr., and Iacobucci, D. (2005), *Marketing research: methodological foundations*, 9th edition, p. 323, TX: Harcourt College Publishers

C4.3.1 Main field research

The first step in the sampling design process is to define the target population. The population is the total pool of all potential respondents from which the sample is drawn in order to meet the objectives of the research. The longitudinal nature of the study (see Section C2.5) and the attendant need to closely control and monitor the process of data collection over an extended period of time informed the decision to set the study in the researcher’s place of employment; thus the research is conducted within the higher education context. An additional rationale for this decision was the researcher’s experience and knowledge of the domain and consequently her ability to interpret the results of the study and formulate conclusions. With the foregoing debate in mind, the study focuses on perceptions of value held by consumers of education, i.e. students, and specifically postgraduate students since they are considered to represent an engaged group of consumers with a high level of involvement in the decision-making process relating to the selection and purchase of a chosen course of study. Furthermore, the decision was taken to focus on full-time students because of their high level of accessibility due to their regular attendance on campus. For the purpose of this research, therefore, the target population was defined as follows:

- **Element:** Individual full-time postgraduate students;
- **Sampling unit:** A University business school;
- **Extent:** Based in the UK;
- **Time:** Between October 2006 and September 2008 (see Section C2.5 for a discussion and rationale of the time frame of the research).

Step 2 requires the identification of a sampling frame, which is a list of population elements from which the sample will be drawn (Sekaran, 2003). Given that a non-probability sample design was employed in this study (see Step 3), a sampling frame was not necessary and therefore this decision was not relevant.

Step 3 involves the selection of a sampling procedure. This decision relates to whether the sample will take the form of a probability or non-probability sample. In the former, all elements of the population have some known and non-zero but not necessarily equal chance of being selected as sample subjects. In the latter, elements of the population do not have a known or predetermined chance of being selected, and instead are chosen through the personal judgement of the researcher.

Figure C4.3 depicts a classification of sampling techniques, the advantages and disadvantages of which are well discussed (e.g., Churchill and Iacobucci, 2005; Bryman and Bell, 2003; Malhotra and Birks, 2003; Saunders *et al.*, 2003; Sekaran, 2003).

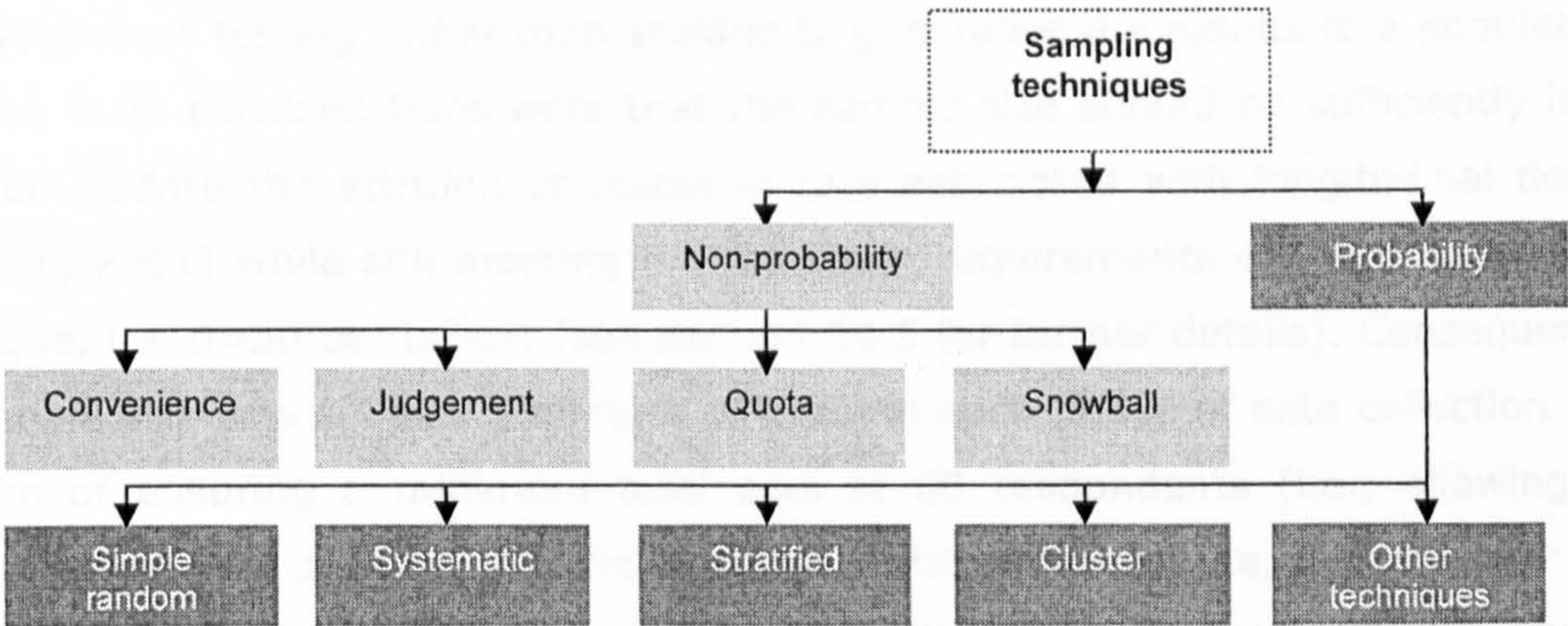


Figure C4.3 Classification of sampling techniques

Source: Malhotra, N.K. and Birks, D.F. (2003), *Marketing research: an applied approach*, 2nd European edition, p.363, Harlow: Prentice Hall

Given that the present research focuses on extending theory through hypothesis testing rather than seeking to generalise the results to a population, a probability sample design was not considered essential; consequently, a non-probability judgement sampling technique was employed. Furthermore, in order to simplify the data collection process and reduce the inherent complexity in tracking respondents

in longitudinal studies, the decision was taken to select a group of students studying the same master's degree programme. One year was considered a sufficient period of time over which to study value change, and therefore the degree was chosen from the range of full-time one-year MA and MSc programmes offered at Kingston Business School (see Steps 4 and 5 for a discussion on the selection of the specific degree).

Since the data were collected in two phases over two consecutive years (see Section C2.5), this resulted in two sample groups studying on the same degree, but in different years. The decision to focus on students studying the same degree course was considered to avoid the risk of possible confounding effects that might arise between respondents enrolled on different courses.

In **Step 4** the sample size is determined, which is the number of elements that must be studied in order to obtain sufficiently accurate and reliable answers within the resource constraints of the study. A number of factors will influence sample size, specifically: (1) the degree of accuracy required; (2) the requirement to generalise the results; (3) the proposed analytical technique; (4) the nature of the population of interest; (5) the method of data collection; (6) whether there is a need to examine sub-samples (Churchill and Iacobucci, 2005; Bryman and Bell, 2003; Malhotra and Birks, 2003; Saunders *et al.*, 2003; Sekaran, 2003).

As mentioned in relation to Step 3, the present research focuses on extending theory and hypotheses testing rather than seeking to generalise the results to a population, thus the main considerations were that the sample size should be sufficiently large to accommodate the attrition of response rate associated with longitudinal design (de Vaus, 2001) while still meeting the minimum requirements of the data analysis technique, i.e. $n=30$ per cohort (see Section C4.5 for further details). Consequently, the sample size was set at a minimum of $n=60$ in each phase of data collection with the aim of ensuring a minimum total pool of 60 respondents (i.e., allowing for attrition at the rate of 50%). On the strength of the above debate, the one-year full-time MA in Marketing with an annual intake of around 70 students was the chosen programme of study. In order to contextualise the discussion presented in Chapter E1, Appendix A offers a synopsis of the structure of the course.

Step 5 involves the selection of the sample elements. According to the considerations and requirements discussed in the previous steps, the sample elements were the individual students that comprised the 2006-7 and 2007-8 cohorts of the MA in Marketing. Finally, in **Step 6**, data were collected from the designated elements through implementation of the sample design according to the above-debated decisions (data collection is extensively discussed in Section C2.6).

C4.3.2 Exploratory qualitative research

In the exploratory stage of the research, the sampling decision involved a purposive sample of expert informants to inform the development of the scale to measure the knowledge construct. In accordance with the sampling techniques noted in the previous section, a judgement sample comprising four members of the Kingston Business School staff (two course administrators and two course directors) was chosen by the researcher on the basis of their expertise in postgraduate course management and administration (Section C2.6.2). Four respondents provided an appropriate sample size to enable sufficient data to be collected. Subsequently, an expert panel comprising a convenience sample of eight doctoral students studying at Kingston Business School was convened to determine the face validity of the scale (Hardesty and Bearden, 2004) (Section C3.2.4).

C4.4 ERROR MINIMISATION

Discussion now turns to the quality of information obtained in the research with regard to error and bias and ways of minimising these. Error is inherent in information gathering and measurement taken from a sample, the sources of which are widely discussed in the literature (e.g., de Vaus, 2001; Bryman and Bell, 2003; Malhotra and Birks, 2003; Saunders *et al.*, 2003).

Error can be broadly categorised into systematic (constant) error and random error. Systematic or constant error affects the measurement of a variable in a constant way, in that the observed score is affected by stable factors in the same way every time the measurement is made. Random error arises from transient factors such as changes or differences among respondents or in the situations being measured (Churchill and Iacobucci, 2005; Malhotra and Birks, 2003). The true score model depicted in Equation C4.1 is a mathematical model that provides a framework for understanding the accuracy of measurement, taking into account systematic and random error.

$$X_o = X_T + X_s + X_R$$

Where X_o = the observed score or measurement
 X_T = the true score of the characteristic
 X_s = systematic error
 X_R = random error
Thus, total error = $(X_s + X_R)$

Equation C4.1 True Score Model

Source: Malhotra, N.K. and Birks, D.F. (2003), *Marketing research: an applied approach*, 2nd European edition, p. 312, Harlow: Prentice Hall

In order to present a coherent discussion of the related issues, the remainder of this section is debated in relation to McDaniel and Gates’s (2002) useful classification of errors as depicted in Figure C4.4. Accordingly systematic error is discussed in C4.4.1 (measurement error) and C4.4.2 (sample design error) while random error is discussed in C4.4.3.

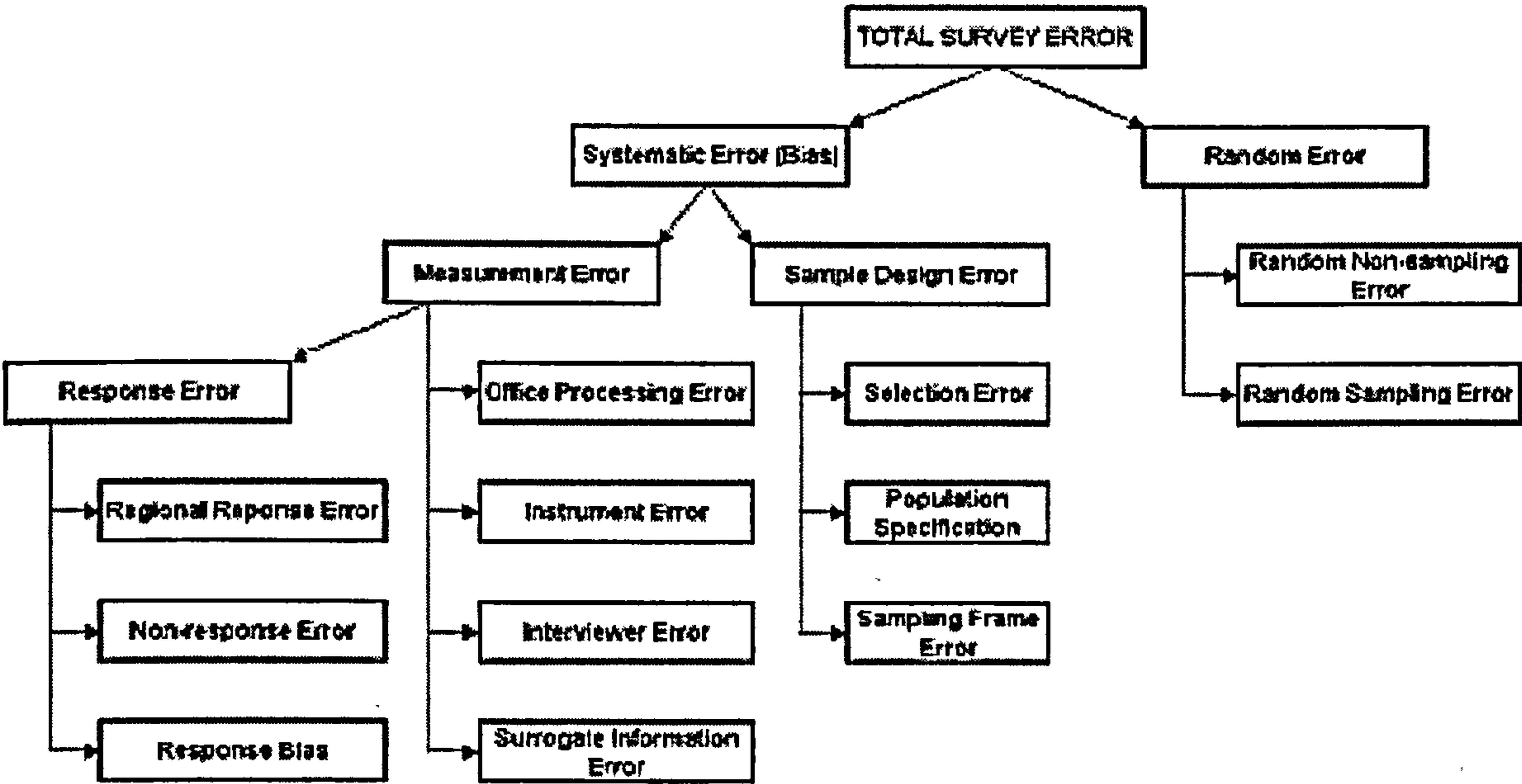


Figure C4.4 Types of survey errors

Source: McDaniel, C., Jr. and Gates, R. (2002), *Marketing research: impact of the internet*, 5th edition, p.165, New York: West Publishing

C4.4.1 Systematic measurement error

A measurement reflects some characteristic of a variable as a number; thus a measurement is not the true value of that characteristic, rather it is an observation of it. Measurement error, then, can occur due to a number of factors that result from the observed measurement of a variable being different from the true score (Malhotra and Birks, 2003):

- **Response errors** mainly arise from respondents who give inaccurate answers or fail to answer some of the questions, either intentionally or unintentionally. Responses to difficult or embarrassing questions may become biased; similarly, respondents may become bored or fatigued or have difficulty remembering the information required (Malhotra and Birks, 2003). Steps were taken to reduce such errors through a rigorous approach to the design of the questionnaire in accordance with good practice to maximise readability and response. A pilot before the questionnaire’s final administration confirmed its clarity in terms of format and question structure

(Section C3.3). In addition, the cover letter confirmed the survey's legitimacy and importance and assured respondents of their anonymity (Section C2.6.3.2);

- **Non-response error** occurs when some elements of the sample do not respond, either to individual items or to the survey itself (Churchill and Iacobucci, 2005). The personal face-to-face administration of the questionnaire at T¹ and T² and follow-up communications and a web-based questionnaire at T³ (see Section C2.6.3.1) served to improve response rate. Moreover, respondents were assured of the importance of their responses (Section C2.6.3.2) in both written and verbal completion instructions, and thus non-response error was minimal;
- **Office processing error** occurs when the researcher makes mistakes in editing, coding, inputting, tabulating or analysing the data (Churchill and Iacobucci, 2005). The data in this study were exclusively handled by the author, who paid due care and attention when processing the data. Moreover, random checks on the data entry were conducted by fellow doctoral students, which provided further confidence as to inputting accuracy. Data collected from the web-based administration at T³ enabled responses to be downloaded directly into SPSS, thereby removing the possibility of input errors at this juncture (Section C2.6.3.1). The selection of the appropriate analytical technique (Section C4.5.2) also ensured that such errors were minimised;
- **Instrument error** (also known as questionnaire bias) occurs as a result of problems with the research instrument, for example unclear instructions, confusing terms, irrelevant questions or biased phrases (McDaniel and Gates, 2002). As already discussed in Section C3.3, the rigorous design and testing of the questionnaire was considered to minimise this type of error;
- **Interviewer error** occurs when inaccurate responses are obtained from respondents due to mistakes on the part of the interviewer when asking questions or recording answers (Malhotra and Birks, 2003). Given that: (a) data in the exploratory stage of the research were collected by the researcher herself, who had a high level of familiarity with both the research process and the concepts being investigated, and (b) the data collection in the field research took the form of a self-completion questionnaire, interviewer error was not considered to be a cause for concern;
- **Surrogate information error** takes place when there is a divergence between the information needed to answer the research problem and the

information actually acquired by the researcher (McDaniel and Gates, 2002). An extensive review of the literature and the verification of conceptual definitions in the author's previous research ensured the clear definition of the research problem, and thus this type of error was eliminated.

C4.4.2 Systematic sample design error

This type of error arises from errors in the sampling process, specifically errors in determining the population, the selection of the sample frame and the selection of the sample itself (McDaniel and Gates, 2002; Malhotra and Birks, 2003). Though sampling errors are inevitable in empirical research, efforts to minimise these were made through careful consideration and selection of appropriate techniques at each stage of the sampling process.

- **Population specification error** arises when the population from which the sample is chosen is incorrectly or inappropriately specified. Due to consideration in determining the population of interest (Section C4.3.1) ensured that this was not a source of concern;
- **Sampling frame error** takes place when a sample is drawn from an inaccurate or inappropriate sampling frame (Churchill and Iacobucci, 2005). A sample frame was not employed in the present study (Section C4.3.1) and therefore this type of error was not of concern;
- **Selection error** arises when sampling procedures are incomplete, inappropriate or implemented improperly (McDaniel and Gates, 2002). The systematic approach to sampling outlined in Section C4.3 mitigated such error.

C4.4.3 Random error

As discussed earlier in this section, random error is not constant and arises from transient factors such as changes or differences among respondents or in the situations being measured. Thus, random error affects the observed value in different ways each time measurement is made.

- **Random sampling error** occurs when the chosen sample does not accurately represent the population of interest and can be defined as "...the variation between the true mean value for the population and the true mean value for the original sample" (Malhotra and Birks, 2003:74). Such errors

decrease as sample size increases (Churchill and Iacobucci, 2005), however as described in Section C4.3.1 the sample size was necessarily limited;

- **Random non-sampling error** accounts for the non-systematic error arising from factors other than sampling, affecting the respondents or the situations being measured; for example, respondents' mood or frame of mind may affect their propensity to answer truthfully, and clearly such error is beyond the researcher's control.

C4.5 DATA ANALYSIS

The final part in this chapter focuses on issues related to the analysis of the data collected for the present research; specifically, the response rate and missing cases are discussed in Section C4.5.1, while the data analysis technique employed in the study is discussed in Section C4.5.2.

C4.5.1 Missing cases and response rate

Before analysis can be carried out, consideration must be given to the potential impact of missing cases on the quality of the data and whether the response rate is adequate for analysis (Churchill and Iacobucci, 2005). Turning firstly to missing cases, accepting the personal and idiosyncratic nature of value perceptions, and given the study's central aim in investigating value change over time, only fully completed questionnaires (i.e., those with no missing values) submitted at all three time points (i.e., the same respondent at T^1 , T^2 and T^3) were included for analysis on the basis that the imputation of missing values may result in error; thus, 14 questionnaires – 6 in C^1 and 8 in C^2 – were removed from the final data set on the basis of incomplete information. This decision took into account the fact that the sample size was determined on the basis of meeting the minimum requirement for data analysis, thus the primary consideration was to aim for a high level of data quality and integrity rather than a high level of response. Consequently, given that only fully completed questionnaires were included, missing case analysis was not undertaken.

Turning attention to issues of non-response and attrition, while non-response *within* times (i.e., missing responses to one or more items within a questionnaire) is discussed above, the issue of non-response *between* times (i.e., the attrition of respondents who did not complete the questionnaire at all three time points) and the nature and reasons of the attrition together with the overall response rate are

discussed in the remainder of this section. Firstly, the response rate is summarised in Table C4.1, which indicates that the initial pool of potential respondents was 70 and 84 for C¹ and C² respectively, while the total number of usable responses was 34 for C¹ and 45 for C². These figures reflect an overall response rate of 49% for C¹ and 54% for C². The total number of responses for each of the cohorts met the minimum requirement for analysis by the chosen analytical technique (see following Section C4.5.2).

Table C4.1 Summary of response rate

	Cohort 1	Cohort 2
Total pool of potential respondents	70	84
Responses at T ¹ only	62	78
Responses at T ² only	59	64
Total number of responses at T ¹ and T ²	56	61
Overall number of complete responses at T ¹ , T ² & T ³	34	45

In terms of the nature and reasons for the attrition of response, the initial non-response at T¹ and the drop in response between T¹ and T² is relatively low for both cohorts and is mainly accounted for by those students who did not attend the teaching session at which the questionnaire was administered; thus it could be argued that those who did respond were students who were more engaged with the course. The attrition rate between T² and T³ – specifically representing those respondents who completed the questionnaire at both Times 1 and 2 but who failed to complete at T³ – is 39% and 26% for C¹ and C² respectively (i.e., 22 respondents in C¹ and 16 in C²). There are two reasons for the attrition at T³: (1) data were not collected from 18 students at T³ (11 in C¹ and 7 in C², i.e. approximately or just under half of the non-respondents in each cohort) because of their failure to pass the mid-course exams; (2) the remainder of non-respondents were those who either did not receive the email communication (see Section C2.6.3.1 for related discussion) or simply chose not to respond.

The decision to exclude those who failed the course at Stage 1 from the data collection reflected an ethical decision that it would be unfair and inappropriate to survey opinion from students who, it could be reasonably expected, would be upset and disappointed at being unsuccessful on the course. Clearly, the implication of this decision is that the data collected reflects only the perceptions of those who successfully completed the course, and consequently perceptions of value are expected to be influenced accordingly. The possibility of non-response bias in terms of those who were excluded from the data collection and those remaining students who were surveyed but who did not respond is therefore acknowledged.

In summary, though subject attrition may or may not affect research results (Goodman and Blum, 1996) it is generally accepted that attrition in longitudinal research poses potential concerns for researchers if those who did not respond differ in an important way from those who did (Malhotra and Birks, 2003). Though the author took steps to ensure that the data collected represented only completed responses from the same students at all three time points (thereby ensuring high integrity of the data), at the same time it was not possible to isolate the potential confounding effects arising from non-respondents who were not included in the final data sets; moreover the perceptions of those who remained in the study are framed by their successful completion of the course, and thus both conditions serve as limitations of the research (see Section A1.6).

C4.5.2 Data analysis technique

Structural equation modelling (SEM) is based upon the development of a set of causal relationships between variables that are supported by, or grounded in, theory (Hair *et al.*, 1998), as is the case in this research. According to Bagozzi (1994a), because of its emphasis on integrating theory with method and participants' observations, SEM's approach can be broadly characterised in philosophical terms as theoretical empiricism, which finds its ideological roots within scientific realism and is thus located within the positivist paradigm (Section C1.4 provides a short discussion of the researcher's philosophical stance). In consideration of both of these factors, SEM has been chosen as an appropriate analytical tool with which to test the research model.

SEM allows the simultaneous investigation of the relationships between multiple latent variables, thereby enabling a holistic investigation of complex phenomena. Accordingly, SEM does not share the limitations of other multivariate techniques such as regression or factor analysis that can examine only a single relationship at a time (Hair *et al.*, 1998). An additional attraction of SEM is that it enables a transition to be made between exploratory and confirmatory analysis; thus, unlike exploratory analysis in which relationships can only be estimated in a general sense, SEM allows a hypothesised relationship or set of relationships that are founded in theory to be confirmed.

Covariance-based SEM using programmes such as LISREL and AMOS is founded on the assumption that the latent variables are reflective in nature. Attempts to model formative indicators in such analysis can lead to identification problems and undermine the validity of the results (Chin, 1998a). An alternative solution is to use

the partial least squares (PLS) approach, which has the ability to incorporate both formative and reflective indicators (Diamantopolous, 1999). Consequently, as the research model in this study includes both reflective and formative latent variables (see Section C3.2.5) the PLS approach to SEM was adopted. Additional benefits of PLS over covariance-based approaches are that:

- It imposes minimal constraints on the measurement scales used, being able to handle both metric and categorical scales;
- It can handle sample sizes as small as $n=30$ (Chin, 1998b);
- It makes no assumption of normality on the distribution of the data, but instead uses an iterative resampling algorithm (jackknifing and bootstrapping) in which a series of ordinary least squares analyses generally converge to a stable set of weight estimates.

Consequently, PLS provides the researcher with greater flexibility in specifying the measurement of variables and avoids two of the main problems associated with covariance-based SEM, i.e. inadmissible solutions and factor indeterminacy (Chin, 1998b).

According to the methods recommended by Barclay *et al.* (1995) and Hulland (1999), a two-stage approach to analysis has been adopted here:

- Stage 1 assesses the accuracy of the measurement model by testing reliability (Chapter D1) and validity (Chapter D2) of the RLVs and multicollinearity in the FLVs (Chapter D3). Reliability was examined through internal consistency using Fornell and Larcker's (1981) method which assesses the loadings of each indicator and the composite reliability (CR) of the scale. Convergent validity was tested through Fornell and Larcker's (1981) test of average variance extracted (AVE), and discriminant validity was tested by assessing the square root of the construct's AVE. Multicollinearity was assessed by regression analysis by examining VIF values and variance proportions;
- Stage 2 assesses the research model, including testing of higher order structures and testing significance of the pathways between constructs (Chapter D4).

Statistical significance of loadings, weights and pathway coefficients in Stage 1 and Stage 2 of the analysis was assessed after bootstrapping analysis (see Chin, 1998b, for a discussion concerning the preference of bootstrapping over jackknifing) with estimates based on 500 samples (Mathieson *et al.*, 2001). Using Student t-value

tables with $n-1$ degrees of freedom (where n is the number of samples) resulted in one-tail critical values of 0.05, 0.01 and 0.001 and levels of significance at 1.65, 2.33 and 3.09 respectively.

A detailed discussion of the data analysis is presented in Part D. Finally, it is noted that though the competing models strategy is considered more robust than the confirmatory model strategy (Hair *et al.*, 1998), testing one or more competing models on two samples over three points in time and the related additional analytical complexity was considered to be a detraction from the study's focal aim, i.e. testing the temporal stability of the functional relationships between value and its antecedents and outcomes.

C4.6 SUMMARY

The issues and considerations debated here and in Chapters C2 and C3 are considered to demonstrate that a systematic decision-making process founded on widely accepted good practice has underpinned the research methodology, resulting in a thorough and coherent plan of action by which to achieve the aim and objectives of the research. Following from this, Part D goes on to offer a detailed discussion of the analysis of the data collected for this research.

PART D: DATA ANALYSIS

This part of the thesis focuses on the analysis of the data collected. As reported in Section C4.5.2, a two-stage approach to analysis has been adopted according to the methods recommended by Barclay *et al.* (1995) and Hulland (1999). The important first stage concerns testing the accuracy of the research measures (Fornell and Larcker, 1981a; Barclay *et al.*, 1995; Hulland, 1999; Mathieson *et al.*, 2001)

Conventional tests for reliability and validity (specifically, internal reliability and convergent and discriminant validity) are only relevant to RLVs (see Section C3.2.5 regarding the conceptualisation of the constructs). Consequently, and in accordance with the debate advanced by Lee and Hooley (2005), the first two chapters in this part focus on testing the measurement quality and psychometric properties of the RLVs:

- **Chapter D1** assesses the reliability of the RLVs.
- **Chapter D2** assesses the validity of the RLVs.

In the case of FLVs, the above tests are not appropriate because their indicators are uncorrelated, instead being exogenously indicated rather than explained by the LV they measure (Diamantopoulos and Winklhofer, 2001). Accordingly, measurement accuracy of the FLVs is determined by assessing multicollinearity (Mathieson *et al.*, 2001; Diamantopolous *et al.*, 2008), which is discussed in a single chapter:

- **Chapter D3** tests for multicollinearity of the FLVs.

The second stage of analysis comprises an assessment of the structural model (i.e., the research model), which is presented in the final chapter in Part D:

- **Chapter D4** tests the structural model.

CHAPTER D1: ASSESSING RELIABILITY OF THE RLVs

D1.1 INTRODUCTION

Reliability relates to the stability and consistency of a scale's ability to produce consistent results if repeated measurements are taken over time (Malhotra and Birks, 2003; Sekaran, 2003). A measure may be reliable but not valid (Burns and Bush, 2005), however according to Malhotra and Birks (2003:316) "reliability is a necessary, but not sufficient, condition of validity". With this in mind, although reliability and validity are discussed in separate chapters they should be read in conjunction. The various approaches to examine reliability are discussed in the following sections.

D1.2 INTER-OBSERVER CONSISTENCY

Inter-observer consistency or scorer reliability is required when analysis involves the subjective scorings of more than one researcher or expert judge, for example when classifying observational data (Bryman and Bell, 2003). Given that data in this study were obtained through a structured questionnaire comprising closed-ended items for which meaning was allocated *a priori* to specific constructs, this method was not relevant.

D1.3 ALTERNATIVE FORM RELIABILITY

In the alternative form method, reliability is tested by comparing responses to two equivalent scales at two different points in time (Saunders *et al.*, 2003). Problems with this method of assessing reliability include the time cost involved in constructing exactly similar alternative scales; moreover, if the alternative forms exhibit the same means, variances and inter-correlations, they may not be equivalent in terms of content and therefore low correlations between the forms may be the result of either an unreliable scale or a non-equivalent form (Malhotra and Birks, 2003). Given the longitudinal nature of this research and the associated time constraints, this method was not deemed to be appropriate.

D1.4 TEST-RETEST RELIABILITY

In test-retest reliability, consistency is measured through a correlation coefficient which tests the similarity of an individual's responses to identical sets of scale items

administered under as near equivalent conditions as possible at two points in time, normally within a recommended time frame of two to four weeks (Churchill and Iacobucci, 2002; Malhotra and Birks, 2003). High correlation between the results indicates a high level of reliability.

A number of problems with test-retest reliability are noted, for example Churchill (1979) questions its usefulness because respondents tend to reply to a second administration in much the same way as they did in the first; thus, responses at the two times might still correlate well, even if the construct was poorly conceptualised in the first instance. Malhotra and Birks (2003) further note that results may be affected by temporal sensitivity (i.e., the longer the length of the interval between testing, the less reliable the test-retest results) and the possibility that either the construct being measured or respondents' reactions to/perceptions of it may change between measurements. On the strength of this debate, test-retest reliability was not undertaken.

D1.5 INTERNAL RELIABILITY

Internal reliability or internal consistency investigates the homogeneity of the items in the scale, or how well the items "hang together as a set" (Sekaran, 2003:205). The underlying principle is that if the scale items are measuring the same construct, they should be highly intercorrelated (Hair *et al.*, 2006). The following are the four main methods for assessing internal reliability:

D1.5.1 Split-half reliability

Scale items are separated into two equal parts, either at random or on the basis of odd and even numbered items; reliability is indicated if the results of the two halves are highly correlated. A shortcoming of this method is that the results are dependent on how the items are split (DeVellis, 2003; Malhotra and Birks, 2003). DeVellis (2003) further states that tests for split-half reliability can be problematic because sources of error other than those affecting the value of the construct itself can affect the results. In view of these limitations, split-half reliability was not undertaken in the present research.

D1.5.2 Cronbach's coefficient alpha (α)

Devised by Lee Cronbach in 1951, this technique overcomes the difficulties arising from the split-half method by calculating the average of all possible split-half

coefficients. The test coefficient ranges from 0 (i.e., no reliability) to 1 (i.e., perfect reliability), and the benchmark value for assessing internal consistency varies between authors. Nunnally (1978) recommends 0.5 as the cut-off value, while Malhotra and Birks (2003) suggest a minimum of 0.6. Hair *et al.* (2006) state that the generally agree lower limit is 0.7, decreasing to 0.6 in exploratory research. Bryman and Bell (2003) posit that 0.8 is a typical rule of thumb, but acknowledge that 0.7 is acceptable. Furthermore, Lee and Hooley (2005) and Hair *et al.* (2006) caution that as Cronbach's α has a positive relationship to the number of items in the scale (i.e., α increases as the number of items increase), the threshold should be raised to a more rigorous level when the number of items is 10 or above.

A shortcoming of Cronbach's α is that it tests only the inter-item correlations and does not account for the item-to-construct correlations; consequently, Cronbach's α was not considered to offer the most complete method of testing internal reliability and was not adopted in the present research.

D1.5.3 Confirmatory factor analysis (CFA)

CFA requires the researcher to specify *a priori* the factors on which each variable will load (Hair *et al.*, 2006), thus its function is to confirm (or reject) predetermined structures. Consequently it offers the researcher a tool with which to validate measurement scales by testing how well the specification of the factors matches the data. Dabholkar *et al.* (1996) suggest two indices to confirm measurement reliability for scales with three or more items: (1) the goodness of fit (GFI) index with a benchmark value of 0.9, which indicates the reliability of the scale, and (2) the item regression loading values with at least a 0.05 level of significance, which indicate the strength of the association between items and the latent construct.

In the present research CFA was not conducted in view of the small sample size; moreover, PLSGraph provides an equivalent measure in the form of composite reliability, which is the method adopted in this study and is discussed as follows.

D1.5.4 Composite reliability

According to Chin (1998b) and Hulland (1999), Fornell and Larcker's (1981a) method of composite reliability (also termed internal consistency) is more robust than Cronbach's α because, unlike the latter which presumes that each scale item contributes equally to the overall measure, Fornell and Larcker's (1981a) method measures the strength of the link/association between a construct and the items

representing it through their loadings. Thus, the composite reliability measure is not influenced by the number of items in the scale. The rules of thumb generally adopted by researchers (e.g., Barclay *et al.*, 1995; Hulland, 1999) are that reliability is confirmed when two conditions are met:

1. The loading of each indicator is greater than 0.7 (implying that more than 50% of variance is shared between the construct and its measure than error variance) and is statistically significant.
2. The scale composite reliability (CR) value is greater than 0.7.

Fornell and Larcker’s (1981a) method was considered to offer the most comprehensive test for reliability of the RLVs in the present research, i.e., the six get dimensions, satisfaction and intention. Tests were conducted separately for C¹ and C² at each of T¹, T² and T³.

Table D1.1 demonstrates that loadings for a very small number of indicators (shown in bold) are marginally below the 0.7 benchmark. When deciding whether to retain or remove these, the author referred to Barclay *et al.* (1995) and Hulland (1999), who discuss the commonness of low loadings for standard or new scales in causal modeling, which may be the result of an item being poorly worded, inappropriately included, or improperly transferred across contexts. The former authors also report evidence of researchers employing lower benchmarks, particularly in exploratory research. Both sets of authors recommend that care should be taken when considering how to deal with such indicators, advocating that a rationale for retaining them should be conjectured against sound theoretical and methodological arguments. Hulland (1999) goes further, stating that items below 0.4 or 0.5 should be dropped. With this debate in mind, the author took the decision to retain indicators below 0.7 on the basis that: (1) the values are only very marginally below the benchmark; (2) the items relate to different constructs, cohorts and time points and therefore demonstrate no obvious pattern to suggest poor wording or inappropriate/improper inclusion/transfer of context; (3) scale reliability has been confirmed in the author’s prior related research (Ledden *et al.*, 2007); and (4) CR values for all constructs are considerably in excess of the 0.7 benchmark, indicating overall robust scale composite reliability. Consequently, all scale items were retained with the single exception of epistemic value, whereby a single item (EPV2) that loaded on a value well below the 0.7 benchmark for C¹T¹ was eliminated.

From the foregoing debate it can be concluded that all RLVs across both cohorts and time points exhibit considerable reliability, with loadings being above or very close to 0.7. All loadings are highly significant at 0.001, with the exception of three that are

significant at 0.01 (see Table D1.1 for details), while, as noted above, CR values strongly exceed the 0.7 benchmark for all constructs.

Table D1.1 Reliability results

	TIME 1		TIME 2		TIME 3	
	Cohort 1	Cohort 2	Cohort 1	Cohort 2	Cohort 1	Cohort 2
	Final loadings (T-statistic)	Final loadings (T-statistic)	Final loadings (T-statistic)	Final loadings (T-statistic)	Final loadings (T-statistic)	Final loadings (T-statistic)
Functional	CR = 0.867	CR = 0.885	CR = 0.921	CR = 0.916	CR = 0.909	CR = 0.896
FV1	0.735 (3.75) ^c	0.858 (22.40) ^c	0.804 (9.53) ^c	0.912 (38.83) ^c	0.754 (7.72) ^c	0.832 (9.21) ^c
FV2	0.865 (6.73) ^c	0.874 (22.66) ^c	0.929 (53.12) ^c	0.879 (18.64) ^c	0.920 (36.06) ^c	0.857 (26.05) ^c
FV3	0.874 (8.51) ^c	0.809 (12.80) ^c	0.937 (53.56) ^c	0.867 (15.18) ^c	0.947 (89.50) ^c	0.894 (12.23) ^c
Epistemic	CR = 0.878	CR = 0.868	CR = 0.911	CR = 0.902	CR = 0.869	CR = 0.899
EPV1	0.777 (4.72) ^c	0.662 (5.52) ^c	0.815 (6.69) ^c	0.881 (26.53) ^c	0.824 (14.15) ^c	0.830 (13.55) ^c
EPV2	☒	0.809 (12.50) ^c	0.830 (13.01) ^c	0.894 (23.31) ^c	0.744 (8.84) ^c	0.808 (14.16) ^c
EPV3	0.846 (7.88) ^c	0.921 (38.13) ^c	0.907 (29.24) ^c	0.883 (15.88) ^c	0.875 (25.35) ^c	0.911 (50.58) ^c
EPV4	0.894 (6.55) ^c	0.749 (9.47) ^c	0.838 (20.70) ^c	0.667 (6.03) ^c	0.709 (7.13) ^c	0.795 (9.92) ^c
Social	CR = 0.888	CR = 0.821	CR = 0.890	CR = 0.925	CR = 0.879	CR = 0.888
SV1	0.903 (21.32) ^c	0.720 (8.56) ^c	0.866 (15.05) ^c	0.945 (58.83) ^c	0.876 (13.95) ^c	0.917 (18.04) ^c
SV2	0.938 (30.43) ^c	0.868 (25.89) ^c	0.913 (35.67) ^c	0.958 (96.98) ^c	0.901 (24.06) ^c	0.903 (14.88) ^c
SV3	0.698 (4.30) ^c	0.739 (9.41) ^c	0.781 (5.74) ^c	0.780 (5.41) ^c	0.740 (6.798) ^c	0.717 (8.11) ^c
Emotional	CR = 0.915	CR = 0.933	CR = 0.936	CR = 0.955	CR = 0.957	CR = 0.956
EMV1	0.857 (20.35) ^c	0.891 (27.61) ^c	0.887 (28.43) ^c	0.937 (60.20) ^c	0.888 (28.04) ^c	0.900 (23.33) ^c
EMV2	0.902 (24.47) ^c	0.929 (32.17) ^c	0.913 (25.12) ^c	0.938 (31.95) ^c	0.960 (49.01) ^c	0.960 (53.29) ^c
EMV3	0.894 (31.75) ^c	0.903 (17.93) ^c	0.931 (42.27) ^c	0.936 (48.58) ^c	0.966 (78.93) ^c	0.953 (68.06) ^c
Conditional	CR = 0.838	CR = 0.833	CR = 0.846	CR = 0.869	CR = 0.826	CR = 0.922
CV1	0.883 (5.43) ^c	0.906 (49.54) ^c	0.881 (4.94) ^c	0.881 (16.72) ^c	0.871 (11.51) ^c	0.923 (29.12) ^c
CV2	0.815 (3.86) ^c	0.872 (20.88) ^c	0.831 (4.46) ^c	0.872 (13.34) ^c	0.806 (4.08) ^c	0.925 (43.71) ^c
Image	CR = 0.872	CR = 0.925	CR = 0.974	CR = 0.930	CR = 0.941	CR = 0.953
IMG1	0.798 (2.87) ^b	0.838 (12.23) ^c	0.962 (19.18) ^c	0.888 (25.86) ^c	0.953 (53.47) ^c	0.890 (17.46) ^c
IMG2	0.715 (2.24) ^b	0.799 (10.49) ^c	0.960 (15.86) ^c	0.850 (12.82) ^c	0.630 (2.59) ^b	0.908 (18.68) ^c
IMG3	0.784 (6.31) ^c	0.887 (29.15) ^c	0.931 (13.55) ^c	0.846 (11.01) ^c	0.965 (63.57) ^c	0.938 (34.07) ^c
IMG4	0.641 (3.75) ^c	0.828 (21.90) ^c	0.898 (8.09) ^c	0.794 (8.08) ^c	0.915 (36.25) ^c	0.842 (16.47) ^c
IMG5	0.850 (12.31) ^c	0.860 (19.04) ^c	0.943 (13.37) ^c	0.881 (18.18) ^c	0.869 (17.52) ^c	0.902 (24.94) ^c
Satisfaction	CR = 0.900	CR = 0.938	CR = 0.947	CR = 0.964	CR = 0.938	CR = 0.941
SF1	0.847 (12.50) ^c	0.890 (29.08) ^c	0.919 (27.98) ^c	0.947 (64.42) ^c	0.919 (41.70) ^c	0.926 (38.96) ^c
SF2	0.723 (4.85) ^c	0.902 (47.65) ^c	0.924 (45.02) ^c	0.936 (36.81) ^c	0.875 (15.99) ^c	0.905 (38.01) ^c
SF3	0.912 (29.93) ^c	0.884 (18.66) ^c	0.902 (35.99) ^c	0.930 (50.83) ^c	0.934 (48.83) ^c	0.917 (29.06) ^c
SF4	0.838 (17.71) ^c	0.879 (23.00) ^c	0.873 (21.19) ^c	0.916 (34.80) ^c	0.828 (14.01) ^c	0.825 (9.14) ^c
Intention	CR = 0.912	CR = 0.925	CR = 0.900	CR = 0.957	CR = 0.917	CR = 0.914
INT1	0.919 (41.86) ^c	0.897 (37.36) ^c	0.903 (30.46) ^c	0.966 (90.33) ^c	0.925 (38.78) ^c	0.912 (35.62) ^c
INT2	0.851 (11.47) ^c	0.910 (18.76) ^c	0.814 (5.98) ^c	0.960 (60.95) ^c	0.799 (5.71) ^c	0.910 (11.60) ^c
INT3	0.872 (11.94) ^c	0.78 (9.16) ^c	0.876 (15.06) ^c	0.890 (15.93) ^c	0.941 (49.08) ^c	0.825 (8.62) ^c

CR = Composite reliability ☒ = item removed
T-statistics are significant as follows: ^a = *p*<0.05; ^b = *p*<0.01; ^c = *p*<0.001

CHAPTER D2: ASSESSING VALIDITY OF THE RLVs

D2.1 INTRODUCTION

Validity is the test of a scale's ability to capture the concept that it is intended to measure and not something else (Sekaran, 2003). Thus, validity is concerned with how well the characteristics of the phenomenon of interest are represented by the scale (Malhotra and Birks, 2003). There are four main types of validity, i.e. criterion validity (comprising concurrent and predictive validity); content validity; face validity; and construct validity (comprising nomological, convergent, and discriminant validity) (Bryman and Bell, 2003; DeVellis, 2003; Sekaran, 2003; Hardesty and Bearden, 2004). Each of these is discussed in turn alongside relevant test results (where appropriate) in the remainder of this chapter.

D2.2 CRITERION VALIDITY

Criterion-related validity is established when a measure performs in line with expectations that are set against a specified criterion, i.e. another selected variable that is meaningful. For example, a scale to measure brand attitude could be assessed against a criterion variable in the form of brand loyalty. Depending on the time frame of the data collection, criterion validity can be divided into concurrent and predictive validity. The former is assessed when the scale data and criterion data are collected simultaneously and the results compared. In the latter, scale data are collected at one point in time and the results are used to predict the criterion data collected at a later point, e.g. brand attitude to forecast brand loyalty (Malhotra and Birks, 2003). Formal tests for criterion validity were not carried out, however the fact that the scales used in the present research (with the exception of knowledge and emotions) have been successfully applied in prior related research is considered to provide evidence of their powers of predictive validity.

D2.3 CONTENT VALIDITY

Content validity seeks to establish the extent to which the scale items offer a proper representative sample of the theoretical content of the construct being measured, i.e. how well the items tap into the full domain of the construct (Malhotra and Birks, 2003; Hardesty and Bearden, 2004). Hardesty and Bearden (2004) point out that content validity is often confused with face validity, where the latter is a related but conceptually distinct form of validity that is discussed in the following Section D2.4.

According to Churchill and Iacobucci (2005), content validity is difficult to guarantee as its assessment is partly a matter of the researcher's subjective interpretation of the domain of the phenomenon being measured. Thus, the key to meaningful content validity lies in the processes undertaken to develop the instrument, which should be robust and systematic. A critical factor in establishing content validity, therefore, is establishing the conceptual definition of the domain of the construct. In the present research, and in line with the recommendations made by, among others, Churchill and Iacobucci (2005), content validity was established through a thorough review of the relevant literature, which enabled definition and operationalisation of the research constructs to be aligned with previous empirical and conceptual research in the field (see the literature review in Part B and the discussion on scale development in Chapter C3).

D2.4 FACE VALIDITY

As mentioned above, face validity is often confused with content validity due to researchers' use of the terms interchangeably (Hardesty and Bearden, 2004). Whereas content validity is concerned with how representative the scale items are of the whole domain of the construct, face validity is defined as "...the extent to which a measure reflects what it is intended to reflect" (Hardesty and Bearden, 2004:99). Face validity is an initial and necessary, but not on its own sufficient, condition for construct validity (see the forthcoming Section D2.5). As with content validity, establishing face validity is somewhat difficult because it involves a subjective assessment of how appropriate the pool of scale items looks in terms of fitting the domain of the construct (Malhotra and Birks, 2003). According to Hardesty and Bearden (2004), the use of expert judges is recommended when assessing face validity in the case of scales that are new or previously unexamined. In the present research, face validity of the scale to measure the knowledge construct (which was specially developed for the research) was determined by a panel of doctoral students. In the process, items that the panel judged as being not representative of the domain were removed (see Section C3.2.4 for a full debate).

D2.5 CONSTRUCT VALIDITY

Construct validity assesses whether the measures actually determine the theoretical concept of the construct that they are designed to measure, and not something else (Hair *et al.*, 2006). According to Churchill and Iacobucci (2002:294), construct validity in marketing research "...lies at the very heart of scientific and pragmatic

progress”, since properly capturing the essence of unobservable constructs is central to explaining marketing behaviour. A discussion of the three types of construct validity, i.e. nomological, convergent and discriminant, continues below. Before moving on, it should be remembered that, as previously noted, FLVs contain uncorrelated Indicators and thus tests for convergent and discriminant validity are not meaningful and are relevant only to RLVs (Bagozzi, 1994b; Diamantopoulos, 1999).

D2.5.1 Nomological validity

Nomological validity is concerned with the extent to which the correlations between constructs make theoretical sense, i.e. how a scale is correlated with different but related concepts within the theoretical framework. Given that the theoretical model in the present research was grounded in a thorough review of the related literature (Part B and Chapter C1) and also draws upon prior related research (i.e., the author’s prior MA and MSc studies as well as Ledden *et al.*, 2007), nomological validity was considered to be confirmed.

D2.5.2 Convergent validity

Convergent validity assesses the degree to which two or more measures of the same construct share variation, in other words, the extent to which items correlate positively with other items in the same scale. Two methods are available to assess convergent validity, the first of which is Fornell and Larcker’s (1981a) test of average variance extracted (AVE) in which a benchmark value of 0.5 is employed (i.e., 50% or more of the variance of the indicators is accounted for, or shared by, other indicators). Table D2.1 demonstrates that AVE values for all RLVs for both cohorts across all time points exceeded the 0.5 benchmark and thus convergent validity was confirmed.

A second method of assessing convergent validity is exploratory factor analysis, which offers the researcher a tool to determine the number of factors needed to best represent the data. PLSGraph provides an equivalent method through examination of the theta matrix, which was the method adopted in the current research. The principle is that a construct’s indicators should load higher with the intended construct than with the other constructs in the model. The results are displayed in Appendix E (Tables D2.4 to D2.8), and demonstrate that, for both cohorts at all time points, the cross loadings for construct scale items (shown in bold) are considerably larger for their own construct than for other constructs, thus convergent validity was

re-confirmed for all the RLVs in the research model. Table D2.2 is included below as an illustrative example.

D2.5.3 Discriminant validity

Discriminant validity tests that a measure does not correlate too highly with another measure(s) from which it is supposed to differ. Thus, an indication of adequate discriminant validity is that a construct shares more variance with its own measures than it does with other constructs in the model, i.e. the scale demonstrates a lack of correlation with other constructs. This is tested by assessing the square root of the construct’s AVE, which should be considerably greater than its bivariate correlation with the other constructs in the model.

Discriminant validity was tested for all the RLVs in the research model. The results displayed in Appendix E (Tables D2.9 to D2.13), demonstrate that in all but one case the square root of AVE (displayed in the shaded off-diagonal cells) is considerably greater than the bivariate correlations. The single case for concern is satisfaction for C¹T¹ (see Table D2.3 below, which is included as an illustrative example for interpretation) whereby the square root of AVE is marginally below the correlation for intention. The author suggests that the likely reason for this discrepancy is the high significant relationship between satisfaction and intention, a condition which precludes a high extent of discriminant validity; indeed, looking at the results, a pattern can be observed whereby the bivariate correlations for Intention tend to be larger in relation to satisfaction than for the other constructs. Despite this debate, taken overall it can be concluded that discriminant validity is satisfactory.

Table D2.1 Results for convergent validity (AVE) for both cohorts at all times

	TIME 1		TIME 2		TIME 3	
	Cohort 1	Cohort 2	Cohort 1	Cohort 2	Cohort 1	Cohort 2
Construct	AVE	AVE	AVE	AVE	AVE	AVE
Functional	0.686	0.719	0.795	0.785	0.722	0.742
Epistemic	0.706	0.625	0.719	0.700	0.625	0.690
Social	0.728	0.616	0.731	0.806	0.709	0.733
Emotional	0.782	0.824	0.829	0.875	0.882	0.878
Conditional	0.722	0.791	0.733	0.768	0.704	0.855
Image	0.578	0.711	0.882	0.726	0.766	0.803
Satisfaction	0.695	0.790	0.818	0.869	0.792	0.800
Intention	0.776	0.751	0.750	0.882	0.788	0.780

Table D2.2 Results for convergent validity (cross-loadings) C¹ T¹

	Conditional	Epistemic	Emotional	Functional	Image	Intention	Social	Satisfaction
CV1_1	0.626	0.580	0.286	0.532	0.308	0.101	0.245	0.095
CV2_1	0.978	0.173	0.272	0.309	0.415	0.362	0.185	0.351
EMV1_1	0.273	0.327	0.838	0.368	0.610	0.542	0.541	0.456
EMV2_1	0.096	0.224	0.898	0.228	0.553	0.572	0.507	0.397
EMV3_1	0.392	0.193	0.916	0.251	0.631	0.661	0.389	0.550
EPV1_1	0.145	0.724	0.188	0.326	0.277	0.045	0.149	0.149
EPV3_1	0.348	0.745	0.237	0.294	0.236	0.235	0.266	0.187
EPV4_1	0.297	0.804	0.350	0.469	0.402	0.351	0.471	0.309
FV1_1	-0.024	-0.038	0.021	0.473	0.246	0.235	0.328	-0.014
FV2_1	0.379	0.435	0.295	0.987	0.532	0.256	0.467	0.190
FV3_1	0.250	0.191	0.261	0.687	0.470	0.175	0.376	0.048
IMG1_1	0.372	0.480	0.423	0.598	0.763	0.374	0.450	0.403
IMG2_1	0.520	0.392	0.369	0.494	0.681	0.313	0.336	0.387
IMG3_1	0.301	0.275	0.594	0.519	0.804	0.601	0.486	0.471
IMG4_1	0.044	0.002	0.533	0.186	0.687	0.529	0.379	0.392
IMG5_1	0.418	0.191	0.647	0.322	0.856	0.502	0.445	0.412
INT1_1	0.285	0.339	0.567	0.195	0.426	0.919	0.287	0.863
INT2_1	0.173	0.150	0.583	0.171	0.548	0.852	0.271	0.679
INT3_1	0.457	0.193	0.651	0.312	0.702	0.872	0.491	0.641
SF1_1	0.339	0.292	0.431	-0.016	0.477	0.647	0.212	0.859
SF2_1	0.296	0.375	0.278	0.126	0.391	0.557	0.022	0.750
SF3_1	0.294	0.327	0.606	0.235	0.525	0.856	0.318	0.898
SF4_1	0.171	0.237	0.444	0.249	0.417	0.707	0.250	0.820
SV1_1	0.182	0.323	0.468	0.396	0.448	0.225	0.852	0.129
SV2_1	0.225	0.294	0.573	0.376	0.493	0.375	0.926	0.257
SV3_1	0.142	0.192	0.298	0.451	0.462	0.337	0.758	0.211

Table D2.3 Results for discriminant validity for C¹ T¹

	Functional	Epistemic	Social	Emotional	Conditional	Image	Satisfaction	Intention
Functional	0.828							
Epistemic	0.373	0.840						
Social	0.462	0.380	0.8563					
Emotional	0.281	0.319	0.567	0.884				
Conditional	0.377	0.496	0.271	0.317	0.849			
Image	0.551	0.400	0.545	0.667	0.446	0.760		
Satisfaction	0.121	0.294	0.239	0.537	0.236	0.540	0.834	
Intention	0.263	0.273	0.361	0.668	0.256	0.601	0.842	0.880

CHAPTER D3: ASSESSING MULTICOLLINEARITY OF THE FLVs

D3.1 INTRODUCTION

As already noted, conventional tests for internal reliability and convergent and discriminant validity are not appropriate for formative measures because their indicators are uncorrelated, instead being exogenously indicated rather than explained by the LV they measure (Diamantopoulos and Winklhofer, 2001). Indeed, Bagozzi (1994a:333) warns that "...reliability in the internal consistency sense and construct validity in terms of convergent and discriminant validity are not meaningful when indexes are formed as a linear sum of measurements"; consequently, alternative methods of measurement accuracy must be utilised.

According to Diamantopoulos and Winklhofer (2001) indicator collinearity is a key issue in ensuring the quality of the measures. Excessive collinearity between a construct's indicators will make it difficult to identify the distinct influence of individual indicators on the LV, and therefore high multicollinearity is problematic. Further, Mathieson *et al.* (2001) state that high collinearity among items can lead to unstable model estimates, and consequently the authors recommend testing for multicollinearity prior to running PLS analysis.

D3.2 COLLINEARITY TESTING AND RESULTS

In consideration of the above debate, multicollinearity analysis was conducted separately for both data sets at each of the three time points for all of the FLVs in the research model, i.e. terminal values; instrumental values; knowledge; emotions; the five dimensions of service quality (i.e., assurance; empathy; reliability; responsiveness; tangibles); and the *give* dimension (i.e., money; time; effort). The analysis involved regressing the indicators of each LV against an appropriate dependent variable, in this case satisfaction, then examining collinearity diagnostics against the following benchmark values:

1. The tolerance value is the amount of variance in the selected independent variable that is not explained by the other independent variables; conversely, the variance inflation factor (VIF) is measured as the inverse of tolerance; thus, a high degree of multicollinearity is indicated by lower tolerance values and higher VIF values. A common cut-off threshold is a tolerance value of 0.10 which corresponds to a VIF value of 10, and the latter is adopted here (Hair *et al.*, 2006; Diamantopolous *et al.*, 2008);

2. The condition index, which represents the collinearity of the combination of variables in the data set, is examined in conjunction with the variance proportion matrix, which shows the proportion of variance for each variable that is assigned to each condition index. The two-step procedure first involves identifying condition indices above a threshold value of 30, and then identifying variables with variance proportions above 0.9. Collinearity is indicated when two or more variances are above the 0.9 threshold (Hair et al., 1998).

Given that the results of the multicollinearity testing occupy 29 sides, with the exception of four illustrative examples of interpretation (Tables D3.2 to D3.5 below) they are presented in Appendix F (Tables D3.6 to D3.115). Table D3.1 provides a summary of the results, from which it can be seen that evidence of multicollinearity was found in three scales:

- Emotions: Initial VIF values exceeded the threshold for C^1T^3 , even though variance proportions were below 0.9 (see example Tables D3.2 and D3.3);
- Knowledge: Initial VIF values exceeded the threshold for C^1T^3 , although variance proportions were below 0.9;
- Effort: Although initial VIF values did not exceed the threshold, variance proportions for two variables were above 0.9 for C^1T^3 .

In all of the above cases, examination of the bivariate correlation matrix resulted in the removal of indicators that exhibited the highest correlation values, starting with those with the strongest significance levels. Following purification, three indicators were removed from the knowledge scale, two from the emotions scale and one from the non-monetary sacrifice scale (see Table D3.1 for details of which were removed).

In the case of the remaining scales, VIF values were within the threshold. In cases where condition indices exceeded 30, no two variables were associated with variance proportions above 0.9; thus, no further evidence of multicollinearity was found and all scale indicators were retained.

Table D3.1 Summary of collinearity test results

Construct	Cohort 1	Cohort 2
Instrumental values	NC	NC
Terminal values	NC	NC
Knowledge	T ¹ & T ² – NC; T ³ – scale items 6, 7 & 10 removed	NC
Emotions	T ¹ & T ² – NC; T ³ – scale items 1 & 3 removed	NC
SQ – Assurance	NC	NC
SQ – Empathy	NC	NC
SQ – Reliability	NC	NC
SQ – Responsiveness	NC	NC
SQ – Tangibles	NC	NC
Give – Money	NC	NC
Give – Time	NC	NC
Give – Effort	T ¹ & T ² – NC; T ³ – scale item 5 removed	NC

Key: NC = No collinearity

Table D3.2 Emotions – Collinearity analysis, C¹ T³. Initial solution

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.746	1.345		-.555	.586		
	emo1_3	-.165	.190	-.361	-.865	.398	.058	17.173
	emo2_3	.294	.152	.618	1.936	.068	.099	10.063
	emo3_3	-.098	.249	-.174	-.395	.697	.052	19.144
	emo4_3	.299	.188	.442	1.589	.129	.131	7.653
	emo5_3	-.061	.152	-.097	-.399	.694	.171	5.846
	emo6_3	.087	.183	.122	.472	.643	.151	6.608
	emo7_3	.206	.140	.395	1.473	.157	.141	7.106
	emo8_3	.108	.122	.167	.888	.386	.285	3.506
	emo9_3	-.323	.292	-.391	-1.104	.283	.081	12.383
	emo10_3	.346	.255	.423	1.359	.190	.104	9.581
	emo11_3	-.115	.168	-.186	-.684	.502	.136	7.335
	emo12_3	-.136	.188	-.203	-.720	.480	.127	7.868
	emo13_3	.337	.196	.392	1.718	.102	.195	5.133
	emo14_3	.558	.228	.583	2.443	.024	.178	5.629

a. Dependent Variable: SF1_3

Table D3.3 Emotions – Collinearity diagnostics, C¹ T³. Initial solution

Collinearity Diagnostics																		
Model		Eigen value	Condition Index	Variance Proportions														
				(Constant)	emo 1 3	emo 2 3	emo 3 3	emo 4 3	emo 5 3	emo 6 3	emo 7 3	emo 8 3	emo 9 3	emo 10 3	emo 11 3	emo 12 3	emo 13 3	emo 14 3
1	1	13.388	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.874	3.914	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	3	.279	6.931	.00	.00	.01	.00	.00	.06	.00	.02	.06	.00	.00	.00	.00	.00	.00
	4	.144	9.659	.00	.02	.02	.00	.00	.00	.00	.07	.02	.00	.00	.03	.00	.00	.00
	5	.126	10.318	.00	.00	.00	.00	.00	.08	.00	.00	.23	.00	.00	.00	.00	.02	.00
	6	.065	14.403	.00	.00	.00	.01	.00	.01	.02	.12	.04	.00	.00	.13	.00	.00	.00
	7	.038	18.689	.00	.00	.03	.03	.00	.00	.01	.00	.00	.01	.00	.02	.09	.04	.00
	8	.030	21.076	.00	.04	.11	.06	.02	.31	.00	.02	.02	.00	.00	.00	.00	.09	.01
	9	.022	24.946	.00	.14	.05	.11	.04	.14	.08	.00	.05	.00	.00	.06	.01	.00	.00
	10	.015	30.126	.05	.10	.44	.01	.02	.03	.01	.00	.03	.00	.01	.01	.07	.04	.02
	11	.008	41.668	.01	.01	.02	.08	.09	.05	.39	.05	.34	.02	.01	.29	.03	.07	.09
	12	.006	47.472	.03	.05	.16	.03	.01	.16	.03	.06	.00	.03	.21	.05	.00	.25	.13
	13	.003	63.629	.43	.15	.15	.00	.55	.01	.00	.18	.20	.01	.17	.00	.01	.07	.00
	14	.002	77.650	.15	.39	.00	.66	.25	.11	.20	.50	.01	.28	.01	.38	.13	.40	.22
	15	.001	103.237	.33	.10	.01	.00	.02	.04	.26	.00	.00	.64	.60	.00	.66	.02	.53

a. Dependent Variable: SF1_3

Table D3.4 Emotions – Collinearity analysis, C¹ T³. Final solution

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1.635	1.155		-1.415	.172		
	emo2_3	.129	.089	.271	1.439	.165	.284	3.517
	emo4_3	.403	.153	.597	2.640	.015	.197	5.080
	emo5_3	-.087	.132	-.140	-.660	.517	.224	4.467
	emo6_3	.147	.163	.207	.901	.378	.190	5.274
	emo7_3	.235	.101	.452	2.339	.029	.270	3.708
	emo8_3	.112	.121	.174	.928	.364	.287	3.485
	emo9_3	-.397	.254	-.481	-1.563	.133	.106	9.413
	emo10_3	.435	.245	.532	1.777	.090	.112	8.925
	emo11_3	-.135	.138	-.220	-.980	.338	.199	5.023
	emo12_3	-.228	.168	-.342	-1.364	.187	.160	6.265
	emo13_3	.311	.151	.363	2.057	.052	.324	3.090
	emo14_3	.609	.218	.637	2.790	.011	.193	5.180

a. Dependent Variable: SF1_3

Table D3.5 Emotions – Collinearity diagnostics, C¹ T³. Final solution

Collinearity Diagnostics																
Model		Eigenvalue	Condition Index	Variance Proportions												
				(Constant)	emo 2 3	emo 4 3	emo 5 3	emo 6 3	emo 7 3	emo 8 3	emo 9 3	emo 10 3	emo 11 3	emo 12 3	emo 13 3	emo 14 3
1	1	11.719	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.655	4.228	.00	.01	.00	.02	.00	.01	.01	.00	.00	.00	.00	.00	.00
	3	.259	6.727	.00	.02	.00	.06	.00	.06	.06	.00	.00	.01	.00	.00	.00
	4	.120	9.871	.00	.00	.00	.14	.00	.03	.23	.00	.00	.00	.00	.02	.00
	5	.100	10.832	.00	.40	.00	.00	.00	.07	.00	.00	.00	.05	.00	.01	.00
	6	.061	13.860	.00	.00	.01	.07	.03	.26	.06	.00	.00	.18	.00	.00	.00
	7	.036	17.963	.00	.03	.00	.09	.00	.00	.02	.01	.00	.03	.12	.12	.01
	8	.019	24.537	.02	.13	.12	.20	.02	.06	.02	.00	.00	.02	.11	.19	.01
	9	.011	32.902	.00	.02	.00	.05	.50	.15	.23	.01	.00	.55	.03	.29	.02
	10	.007	39.822	.18	.00	.11	.11	.04	.27	.04	.01	.13	.10	.02	.08	.10
	11	.006	45.067	.01	.19	.56	.15	.06	.07	.06	.18	.04	.01	.00	.15	.10
	12	.004	56.086	.59	.00	.17	.05	.03	.01	.27	.04	.23	.05	.00	.11	.14
	13	.001	90.319	.20	.19	.02	.05	.29	.02	.00	.75	.60	.00	.72	.02	.61

a. Dependent Variable: SF1_3

CHAPTER D4: TESTING THE STRUCTURAL MODEL

D4.1 INTRODUCTION

Having established the quality of the measurement model, this section goes on to make an assessment of the research model. Before proceeding to test the hypothesised functional relationships, the proposed higher order structures (summarised in Table D4.1) are tested (see Section C3.3 for a full debate of the conceptualisation of the structures).

Table D4.1 Summary of second and first order factors

Second order factors	First order factors
Service quality	Assurance; Empathy; Reliability; Responsiveness; Tangibles
Get	Functional; Emotional; Epistemic; Social; Conditional; Image
Give	Money; Time; Effort

D4.2 TESTING SECOND ORDER STRUCTURES

Unlike covariance-based SEM methodology in which a clearly defined approach to testing second order structures is provided (i.e., confirmatory factor analysis), the situation with PLS is less clear. According to Wynne Chin (2009) (the author of the PLS Graph 3.0 software program used in this study) in the FAQ section of his website, the method of repeated manifest variables is an acceptable approach to second order testing. Chin says: “if the number of indicators for each of your two constructs is approximately equal, you can use the method of repeated manifest variables...essentially, your overall factor that represents the two first order constructs is created by using all the indicators used for the first two order constructs”. The suitability of this method is confirmed in a recent paper by Wetzels *et al.* (2009).

An illustrative example is provided in Figure D4.1, which depicts a higher order RLV that comprises two first order RLVS, each operationalised through three indicators. Unlike covariance-based SEM, PLS requires that indicators are assigned to the higher order construct, irrespective of whether a FLV or RLV. In the repeated manifest variables method, the first order factors are also assigned to the higher order construct; thus, in example offered, the higher order RLV is operationalised as a composite of X_1 to X_6 , which are the indicators of the two first order RLVS. The structure is supported if the regression coefficients λ_1 and λ_2 are statistically significant.

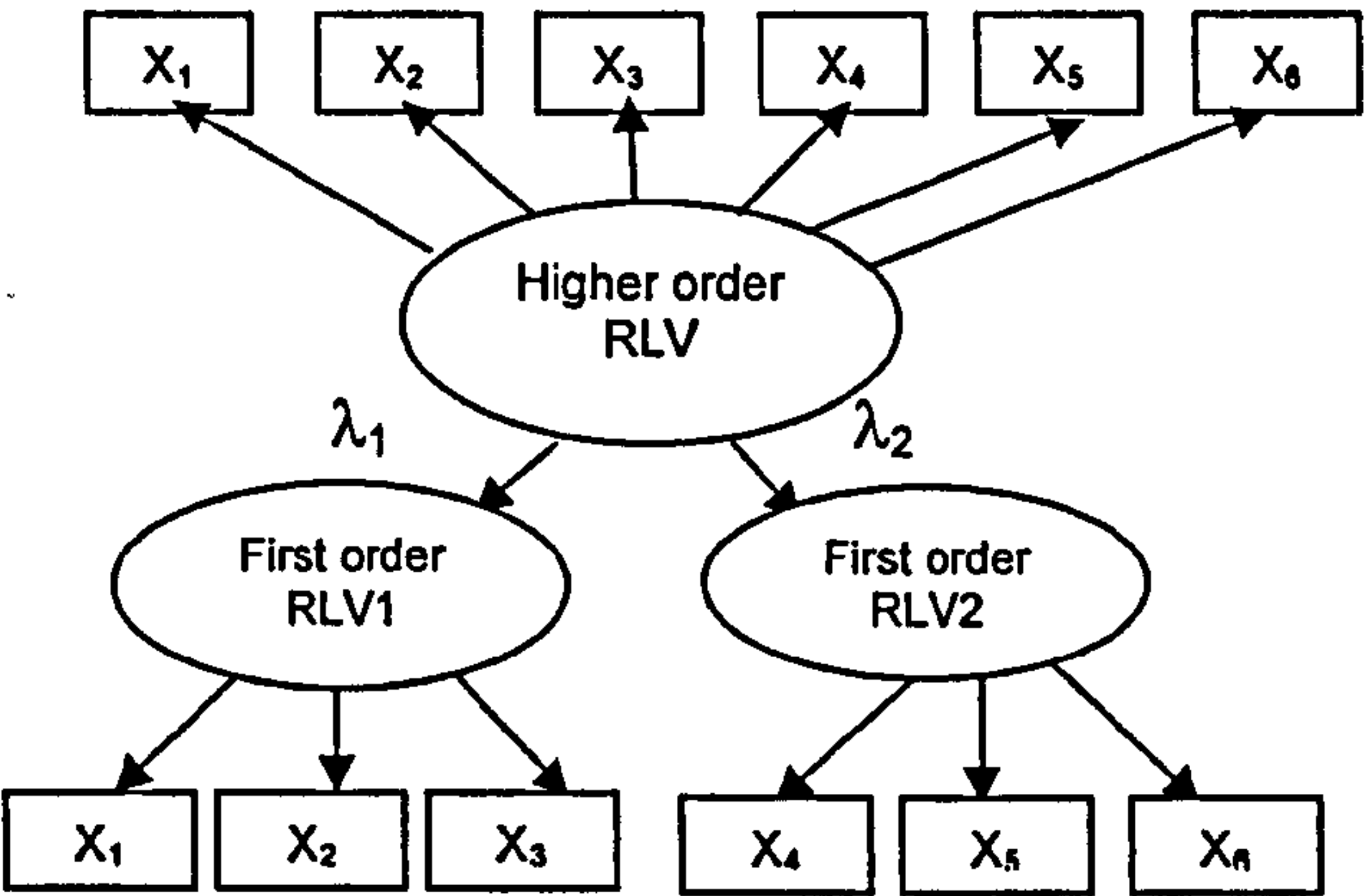


Figure D4.1 Testing higher order structures using repeated measures

The structure of each of the higher order factors in the research model is discussed in turn. The reader is reminded that, as reported in Section D4.5.3, the critical values reported throughout this section are 0.05, 0.01 and 0.001 and levels of significance at 1.65, 2.33 and 3.09 respectively.

D4.2.1 Service quality

Table D4.2 demonstrates that coefficients for all five dimensions of service quality for C¹ and C² at T² and T³ are significant, thus confirming its hypothesised structure.

Table D4.2 Second order structure of SQ

	TIME 2		TIME 3	
	Cohort 1	Cohort 2	Cohort 1	Cohort 2
SERVICE QUALITY	Coefficient (T-statistic)	Coefficient (T-statistic)	Coefficient (T-statistic)	Coefficient (T-statistic)
Assurance	0.308 (9.50) ^c	0.332 (8.49) ^c	0.323 (6.27) ^c	0.296 (9.48) ^c
Empathy	0.274 (6.71) ^c	0.230 (7.22) ^c	0.268 (5.43) ^c	0.189 (6.01) ^c
Reliability	0.245 (6.15) ^c	0.208 (5.53) ^c	0.178 (4.15) ^c	0.206 (8.45) ^c
Responsiveness	0.196 (5.08) ^c	0.272 (7.01) ^c	0.221 (4.16) ^c	0.265 (6.61) ^c
Tangibles	0.074 (1.92) ^b	0.116 (2.61) ^c	0.105 (3.09) ^c	0.139 (5.68) ^c

T-statistics are significant as follows: ^a = *p*<0.05; ^b = *p*<0.01; ^c = *p*<0.001

D4.2.2 Get

Table D4.3 shows that with the exception of image for C¹T² (shown in bold) all coefficients are significant, mainly at the highest level of significance (31 of 36 coefficients). Given the overall robustness of the structure across cohorts and time points, and conceptual and empirical support in extant literature for the dimensions underlying *get* (see literature review in Part B), the image dimension is retained.

Table D4.3 Second order structure of get

	TIME 1		TIME 2		TIME 3	
	Cohort 1	Cohort 2	Cohort 1	Cohort 2	Cohort 1	Cohort 2
GET	Coefficient (T-statistic)	Coefficient (T-statistic)	Coefficient (T-statistic)	Coefficient (T-statistic)	Coefficient (T-statistic)	Coefficient (T-statistic)
Functional	0.145 (2.13) ^b	0.191 (8.36) ^c	0.214 (6.79) ^c	0.194 (9.91) ^c	0.198 (8.90) ^c	0.138 (3.39) ^c
Epistemic	0.185 (2.45) ^c	0.215 (9.35) ^c	0.286 (7.00) ^c	0.251 (10.96) ^c	0.231 (7.52) ^c	0.272 (7.92) ^c
Social	0.204 (3.78) ^c	0.146 (7.74) ^c	0.213 (7.60) ^c	0.222 (11.22) ^c	0.175 (4.32) ^c	0.173 (7.15) ^c
Emotional	0.275 (3.62) ^c	0.229 (8.67) ^c	0.248 (6.38) ^c	0.236 (7.81) ^c	0.261 (8.37) ^c	0.268 (10.38) ^c
Conditional	0.118 (2.25) ^b	0.120 (6.94) ^c	0.075 (2.13) ^b	0.092 (5.81) ^c	0.088 (2.68) ^c	0.138 (6.81) ^c
Image	0.390 (6.96) ^c	0.327 (8.26) ^c	0.229 (1.50)	0.246 (8.11) ^c	0.318 (6.90) ^c	0.305 (5.38) ^c

T-statistics are significant as follows: ^a = $p<0.05$; ^b = $p<0.01$; ^c = $p<0.001$

D4.2.3 Give

Table D4.4 demonstrates that, while time and effort (i.e., the non-monetary dimensions) of *give* are highly significant for both cohorts at all times, money (i.e., the monetary dimension) is significant only for C²T² (non-significant statistics shown in bold). Consequently, the hypothesised structure of the *give* construct can not be confirmed.

Table D4.4 Second order structure of give – initial solution

	TIME 1		TIME 2		TIME 3	
	Cohort 1	Cohort 2	Cohort 1	Cohort 2	Cohort 1	Cohort 2
NON-MONEY GIVE	Coefficient (T-statistic)	Coefficient (T-statistic)	Coefficient (T-statistic)	Coefficient (T-statistic)	Coefficient (T-statistic)	Coefficient (T-statistic)
Money	0.205 (1.24)	-0.063 (0.69)	0.070 (0.61)	0.230 (2.20) ^b	0.056 (0.43)	0.104 (1.18)
Time	0.464 (4.24) ^c	0.716 (9.63) ^c	0.631 (7.82) ^c	0.598 (6.47) ^c	0.582 (7.52) ^c	0.730 (8.31) ^c
Effort	0.601 (6.23) ^c	0.388 (5.02) ^c	0.446 (5.39) ^c	0.370 (4.93) ^c	0.573 (7.06) ^c	0.364 (3.82) ^c

T-statistics are significant as follows: ^a = $p<0.05$; ^b = $p<0.01$; ^c = $p<0.001$

The above finding is surprising in view of extant conceptual and empirical support for *give* as a composite of monetary and non-monetary sacrifices. The author posits that this discrepancy may be because in the present research context monetary considerations are static – that is, the course fees, monies paid for textbooks and accommodation fees are mainly known well in advance of the start of the course and therefore are considered as sunk costs, while non-financial sacrifices such as time for other interests and the effort expended in study and course work are ongoing; thus, *give* is not perceived as a bundle of sacrifices, but rather as an initial concrete ‘hard’ financial forfeit and then separately as a set of continuing ‘soft’ forfeits.

An alternative explanation is that students’ fees are commonly paid by their parents or others (e.g., funding bodies, bursaries etc.), thus if the monetary sacrifice is not personally felt, only the non-monetary aspects of sacrifice are salient. This concurs

with Gallarza and Saura (2006) who explain the non-significance of monetary cost in students’ perceptions of tourism value on the basis that their holidays are paid for by parents (Section B3.2).

As a consequence of the above debate, empirically-derived insights led to the re-conceptualisation of *give* as two distinct constructs: (1) monetary *give* as a single order factor representing purely financial sacrifice measured by two items, and (2) non-monetary *give* as a higher order factor of two dimensions, i.e. time (representing loss of time for recreation/socialising, measured by 3 items), and effort (representing the personal endeavour required in meeting the demands of the course, measured by 3 items).

All pathways linking the re-conceptualised non-monetary dimensions to their underlying factor are found to be highly significant at 0.01, thus non-monetary *give* is confirmed as a higher order of time and effort (see Table D4.5). The reader is asked to note that, for the sake of clarity in the remaining debate, the monetary construct is hereafter referred to as ‘money’, while the non-monetary construct (i.e., comprising time and effort) is referred to as ‘*give*’.

Table D4.5 Second order structure of give – reconceptualised solution

	TIME 1		TIME 2		TIME 3	
	Cohort 1	Cohort 2	Cohort 1	Cohort 2	Cohort 1	Cohort 2
NON-MONEY GIVE	Coefficient (T-statistic)	Coefficient (T-statistic)	Coefficient (T-statistic)	Coefficient (T-statistic)	Coefficient (T-statistic)	Coefficient (T-statistic)
Time	0.504 (5.16) ^c	0.723 (10.09) ^c	0.645 (5.33) ^c	0.687 (8.92) ^c	0.602 (9.25) ^c	0.727 (8.80) ^c
Effort	0.682 (7.93) ^c	0.426 (5.46) ^c	0.465 (7.44) ^c	0.414 (5.03) ^c	0.474 (7.95) ^c	0.394 (4.68) ^c

T-statistics are significant as follows: ^a = $p < 0.05$; ^b = $p < 0.01$; ^c = $p < 0.001$

D4.3 TESTING THE STRUCTURAL MODEL

Having obtained stable solutions for the higher order structures, this section goes on to test the overall fit of the research model. As discussed in Section C4.5.2, the adopted analytical method is PLS. In terms of model fit, PLS makes no assumptions about the distribution of the data and therefore traditional parametric-based approaches cannot be employed. Instead, Chin (1998a) recommends the use of non-parametric measures such as R^2 for dependent LVs and resampling procedures such as jackknife and bootstrapping when testing the significance of the estimates. This means that, unlike covariance-based methodologies, PLS does not provide a single goodness of fit metric for the entire model, and instead the procedure adopted in this study followed the guidelines proposed by Chin (1998b) and Barclay *et al.* (1995):

- Statistical significance of pathway coefficients is assessed after bootstrapping analysis with estimates based on 500 samples (see Section C4.5.2);
- R^2 values are interpreted in the same way as the method employed in traditional multiple regression analysis and indicate the amount of variance in the dependent constructs that is explained by the independent constructs.

In order to test the moderating impact of knowledge and emotions a modified version of the approach proposed by Sharma *et al.* (1981) is employed. Briefly, three structural models are constructed: one without the proposed moderation effects (i.e., knowledge and emotions impact directly only on *get*, *give* and money) which acts simply as a reference point (Model A), one that introduces direct effects of the moderators on satisfaction (Model B), and one that, in addition to the direct effects on satisfaction, includes all the interaction terms of the moderators (Model C). The behaviour of the significance of the determinant terms is assessed against the following three criteria (explained in terms of knowledge but applied also to emotions):

1. If Model C is not significantly different from Model B (i.e., the coefficients of the interaction terms are zero while the coefficients of the main effects are different from zero) then it is concluded that knowledge is not a moderator but simply a determinant.
2. If Model C is significantly different from Model B (i.e., the regression coefficient for knowledge is zero but the corresponding coefficient of the interaction terms are not equal to zero) it is concluded that knowledge is a pure moderator.
3. Finally, if Model B and Model C are different from each other (i.e., the regression coefficients of the main effects and the interaction terms are not all zero) it is concluded that knowledge is a quasi-moderator.

Given that data are collected for two cohorts at three time points (i.e., six sets of data), a total of 18 structural models are tested. The approach taken in the analysis is to first compare between Models A, B and C across both cohorts and all time points against the above criteria. Thereafter, the results of the adopted model are first examined in relation to each cohort (intra-cohort) and then compared between cohorts (inter-cohort); thus the remaining discussion is structured as follows:

- The results from Models A, B and C for both cohorts and all time points are presented in Section D4.3.1, where the discussion focuses on the overall performance of the models and the rationale for adopting a preferred model

(NB: significant pathways in Tables D4.7 to D4.12 are indicated by shaded cells in order to make comparison between models easier).

- Sections D4.3.2 and D4.3.3 go on to discuss the results for the preferred model in relation to Cohort 1 and Cohort 2 respectively.
- Section D4.3.4 integrates and compares results for Cohort 1 and Cohort 2.

D4.3.1 Results of the model testing

An initial inspection of Tables D4.7 to D4.12 reveals that, in Model C, none of the pathways linking the interaction terms and satisfaction are significant. This leads to the rejection of Model C, and consequently the remaining debate focuses on Models A and B, starting firstly with an examination of the significance of the pathways. In terms of the pathways that are common to both models (i.e., 16 pathways at T₁ and 19 at each of T² and T³ – a total of 54 overall) the results reveal almost identical patterns, whereby the same pathways are significant at the same time points for both models, with the following exceptions:

- Give→satisfaction is significant only in Model A for C¹T¹, and Model B for C²T³;
- Get→satisfaction is significant for both cohorts at all time points except in Model B for C¹T³ where it is not significant;

The additional pathways specified in Model B are significant as follows:

- Knowledge→satisfaction is significant only for C¹T¹ and C²T²;
- Emotions→satisfaction is significant for C¹ and C² at all times except C¹T².

The R² values of the dependent constructs are identical in Models A and B for both cohorts with the exception of satisfaction, whereby the amount of variation explained in Model A increases in Model B. As can be seen in Table D4.6 below, at T¹ the increase is considerable at 25% and 22% for C¹ and C² respectively. At T² the increase for C¹ at 1% is notably smaller than for C² at 12%, while at T³ the increase for both cohorts is 4%.

Table D4.6 Comparison of R² values of the satisfaction construct

	TIME 1		TIME 2		TIME 3	
	Model A	Model B	Model A	Model B	Model A	Model B
Cohort 1	0.539	0.787 (+25%)	0.768	0.776 (+1%)	0.895	0.935 (+4%)
Cohort 2	0.587	0.814 (+23%)	0.722	0.846 (+12%)	0.827	0.878 (+4%)

Note: Percentage increase between the previous time point shown in brackets

In consideration of the above evidence, Model B offers a more comprehensive solution on the basis that it provides: (a) greater insight into the role that emotions plays in affecting the consumption experience, and (b) more sensitivity in explaining the impact of the independent constructs on satisfaction. Hence, Model B is adopted as the final model in this research. Please note that, from this point forward, the following constructs are abbreviated (mainly in the tables of results, but also within the text when this enhances readability) as follows: SQ=service quality; TV=terminal values; IV=instrumental values; Know=knowledge; Emo=emotions; SF=satisfaction.

Table D4.7 Model testing results for C¹ T¹

Model A			Model B			Model C		
Structural pathways	Coefficient (T-statistic)		Structural pathways	Coefficient (T-statistic)		Structural pathways	Coefficient (T-statistic)	
TV → Money	0.029	(0.17)	TV → Money	0.030	(0.16)	TV → Money	0.029	(0.17)
TV → Get	-0.109	(0.46)	TV → Get	-0.115	(0.50)	TV → Get	-0.109	(0.50)
TV → Give	-0.051	(0.23)	TV → Give	-0.056	(0.22)	TV → Give	-0.051	(0.23)
IV → Money	-0.377	(1.66) ^a	IV → Money	-0.380	(1.78) ^a	IV → Money	-0.377	(1.64)
IV → Get	0.172	(0.90)	IV → Get	0.170	(0.82)	IV → Get	0.172	(0.88)
IV → Give	0.276	(1.22)	IV → Give	0.280	(1.10)	IV → Give	0.276	(1.14)
Know → Money	-0.018	(0.07)	Know → Money	-0.020	(0.07)	Know → Money	-0.018	(0.07)
Know → Get	0.355	(1.53)	Know → Get	0.360	(1.49)	Know → Get	0.355	(1.56)
Know → Give	0.005	(0.02)	Know → Give	0.010	(0.02)	Know → Give	0.005	(0.02)
Emo → Money	-0.036	(0.12)	Emo → Money	-0.041	(0.11)	Emo → Money	-0.036	(0.11)
Emo → Get	0.270	(1.16)	Emo → Get	0.270	(1.26)	Emo → Get	0.270	(1.20)
Emo → Give	0.110	(0.47)	Emo → Give	0.112	(0.50)	Emo → Give	0.110	(0.48)
Money → SF	-0.035	(0.38)	Money → SF	-0.040	(0.42)	Money → SF	-0.011	(0.06)
Get → SF	0.924	(7.19) ^c	Get → SF	0.390	(2.68) ^b	Get → SF	0.303	(1.27)
Give → SF	0.451	(2.64) ^b	Give → SF	0.164	(1.32)	Give → SF	0.122	(0.46)
SF → Intention	0.841	(23.55) ^c	SF → Intention	0.840	(20.94) ^c	SF → Intention	0.841	(21.86) ^c
			Know → SF	0.170	(1.67) ^a	Know → SF	0.248	(1.25)
			Emo → SF	0.560	(5.02) ^c	Emo → SF	0.541	(2.90) ^b
						Money_Know → SF	-0.007	(0.03)
						Money_Emo → SF	-0.071	(0.25)
						Get_Know → SF	0.126	(0.24)
						Get_Emo → SF	0.106	(0.21)
						Give_Know → SF	-0.008	(0.02)
						Give_Emo → SF	0.051	(0.11)
Goodness of fit	R ²		Goodness of fit	R ²		Goodness of fit	R ²	
Money	0.116		Money	0.116		Money	0.116	
Get	0.383		Get	0.383		Get	0.383	
Give	0.072		Give	0.072		Give	0.072	
SF	0.539		SF	0.787		SF	0.801	
Intention	0.708		Intention	0.708		Intention	0.708	

T-statistics are significant as follows: ^a = $p < 0.05$; ^b = $p < 0.01$; ^c = $p < 0.001$

Table D4.8 Model testing results for C¹ T²

Model A			Model B			Model C		
Structural pathways	Coefficient (T-statistic)		Structural pathways	Coefficient (T-statistic)		Structural pathways	Coefficient (T-statistic)	
SQ→Money	-0.116	(0.47)	SQ→Money	-0.116	(0.47)	SQ→Money	-0.116	(0.47)
SQ→Get	0.484	(4.49) ^c	SQ→Get	0.484	(4.72) ^c	SQ→Get	0.484	(4.72) ^c
SQ→Give	0.330	(1.48)	SQ→Give	0.330	(1.56)	SQ→Give	0.330	(1.56)
TV → Money	0.338	(1.48)	TV → Money	0.338	(1.57)	TV → Money	0.338	(1.57)
TV → Get	-0.197	(2.63) ^b	TV → Get	-0.197	(2.78) ^b	TV → Get	-0.197	(2.78) ^b
TV → Give	-0.273	(1.25)	TV → Give	-0.273	(1.28)	TV → Give	-0.273	(1.28)
IV → Money	-0.557	(3.01) ^b	IV → Money	-0.557	(3.05) ^b	IV → Money	-0.557	(3.05) ^b
IV → Get	0.070	(0.60)	IV → Get	0.070	(0.60)	IV → Get	0.070	(0.60)
IV → Give	0.243	(0.98)	IV → Give	0.243	(1.01)	IV → Give	0.243	(1.01)
Know → Money	-0.036	(0.17)	Know → Money	-0.036	(0.15)	Know → Money	-0.036	(0.15)
Know → Get	0.237	(2.37) ^b	Know → Get	0.237	(2.45) ^b	Know → Get	0.237	(2.45) ^b
Know→ Give	0.301	(1.65) ^a	Know→ Give	0.301	(1.69) ^a	Know→ Give	0.301	(1.65) ^a
Emo→ Money	-0.101	(0.44)	Emo→ Money	-0.101	(0.41)	Emo→ Money	-0.101	(0.41)
Emo → Get	0.209	(2.24) ^b	Emo → Get	0.209	(2.44) ^b	Emo → Get	0.209	(2.44) ^b
Emo → Give	0.037	(0.20)	Emo → Give	0.037	(0.21)	Emo → Give	0.037	(0.21)
Money → SF	-0.100	(1.06)	Money → SF	-0.091	(1.00)	Money → SF	-0.106	(0.62)
Get → SF	0.986	(5.81) ^c	Get → SF	0.825	(2.86) ^b	Get → SF	0.982	(2.24) ^b
Give → SF	0.154	(1.31)	Give → SF	0.139	(1.21)	Give → SF	0.080	(0.43)
SF→ Intention	0.817	(13.91) ^c	SF→ Intention	0.817	(13.59) ^c	SF→ Intention	0.817	(13.59) ^c
			Know→ SF	0.116	(0.63)	Know→ SF	0.094	(0.37)
			Emo→ SF	0.061	(0.45)	Emo→ SF	0.064	(0.32)
						Money_Know→SF	-0.020	(0.07)
						Money_Emo→SF	-0.024	(0.09)
						Get_Know→SF	0.053	(0.17)
						Get_Emo→SF	-0.048	(0.14)
						Give_Know→SF	-0.007	(0.03)
						Give_Emo→SF	0.199	(0.86)
Goodness of fit	R ²		Goodness of fit	R ²		Goodness of fit	R ²	
Money	0.351		Money	0.351		Money	0.351	
Get	0.892		Get	0.892		Get	0.892	
Give	0.356		Give	0.356		Give	0.356	
SF	0.768		SF	0.776		SF	0.816	
Intention	0.667		Intention	0.667		Intention	0.667	

T-statistics are significant as follows: ^a = *p*<0.05; ^b = *p*<0.01; ^c = *p*<0.001

Table D4.9 Model testing results for C¹ T³

Model A			Model B			Model C		
Structural pathways	Coefficient (T-statistic)		Structural pathways	Coefficient (T-statistic)		Structural pathways	Coefficient (T-statistic)	
SQ→Money	-0.217	(0.61)	SQ→Money	-0.217	(0.63)	SQ→Money	-0.217	(0.61)
SQ→Get	0.409	(4.02) ^c	SQ→Get	0.409	(4.05) ^c	SQ→Get	0.409	(4.02) ^c
SQ→Give	0.630	(3.33) ^c	SQ→Give	0.630	(3.03) ^b	SQ→Give	0.630	(3.33) ^c
TV → Money	0.058	(0.28)	TV → Money	0.058	(0.29)	TV → Money	0.058	(0.28)
TV → Get	-0.196	(3.65) ^c	TV → Get	-0.196	(3.30) ^c	TV → Get	-0.196	(3.65) ^c
TV → Give	-0.404	(3.27) ^c	TV → Give	-0.404	(3.39) ^c	TV → Give	-0.404	(3.27) ^c
IV → Money	-0.414	(2.63) ^b	IV → Money	-0.414	(2.73) ^b	IV → Money	-0.414	(2.63) ^b
IV → Get	0.029	(0.50)	IV → Get	0.029	(0.49)	IV → Get	0.029	(0.50)
IV → Give	0.257	(1.74) ^a	IV → Give	0.257	(1.71) ^a	IV → Give	0.257	(1.74) ^a
Know → Money	-0.084	(0.33)	Know → Money	-0.084	(0.31)	Know → Money	-0.084	(0.33)
Know → Get	0.115	(1.25)	Know → Get	0.115	(1.15)	Know → Get	0.115	(1.25)
Know→ Give	0.019	(0.13)	Know→ Give	0.019	(0.13)	Know→ Give	0.019	(0.13)
Emo→ Money	-0.314	(1.37)	Emo→ Money	-0.314	(1.50)	Emo→ Money	-0.314	(1.37)
Emo → Get	0.408	(4.55) ^c	Emo → Get	0.408	(4.45) ^c	Emo → Get	0.408	(4.55) ^c
Emo → Give	0.373	(2.87) ^b	Emo → Give	0.373	(2.87) ^b	Emo → Give	0.373	(2.87) ^b
Money → SF	-0.039	(0.45)	Money → SF	-0.006	(0.09)	Money → SF	-0.049	(0.07)
Get → SF	1.047	(6.78) ^c	Get → SF	0.381	(1.44)	Get → SF	0.233	(0.26)
Give → SF	0.153	(1.38)	Give → SF	0.052	(0.47)	Give → SF	0.095	(0.26)
SF→ Intention	0.751	(8.81) ^c	SF→ Intention	0.751	(9.00) ^c	SF→ Intention	0.751	(8.81) ^c
			Know→ SF	0.135	(0.93)	Know→ SF	0.067	(0.12)
			Emo→ SF	0.478	(2.96) ^b	Emo→ SF	0.509	(0.87)
						Money_Know→SF	-0.091	(0.09)
						Money_Emo→SF	-0.050	(0.07)
						Get_Know→SF	0.011	(0.01)
						Get_Emo→SF	0.122	(0.07)
						Give_Know→SF	-0.196	(0.11)
						Give_Emo→SF	0.043	(0.02)
Goodness of fit	R ²		Goodness of fit	R ²		Goodness of fit	R ²	
Money	0.447		Money	0.447		Money	0.447	
Get	0.947		Get	0.947		Get	0.947	
Give	0.820		Give	0.820		Give	0.820	
SF	0.895		SF	0.935		SF	0.954	
Intention	0.564		Intention	0.564		Intention	0.564	

T-statistics are significant as follows: ^a = *p*<0.05; ^b = *p*<0.01; ^c = *p*<0.001

Table D4.10 Model testing results for C² T¹

Model A			Model B			Model C		
Structural pathways	Coefficient (T-statistic)		Structural pathways	Coefficient (T-statistic)		Structural pathways	Coefficient (T-statistic)	
TV → Money	0.320	(2.30) ^b	TV → Money	0.371	(2.23) ^b	TV → Money	0.320	(2.12) ^a
TV → Get	-0.003	(0.06)	TV → Get	-0.620	(0.05)	TV → Get	-0.003	(0.05)
TV → Give	-0.603	(4.49) ^c	TV → Give	-0.210	(4.60) ^c	TV → Give	-0.603	(4.55) ^c
IV → Money	-0.012	(1.96) ^a	IV → Money	-0.320	(1.80) ^b	IV → Money	-0.371	(1.73) ^a
IV → Get	0.135	(7.23) ^c	IV → Get	0.003	(7.47) ^c	IV → Get	0.620	(7.35) ^c
IV → Give	0.285	(1.61)	IV → Give	0.603	(1.62)	IV → Give	0.210	(1.60)
Know → Money	-0.012	(0.06)	Know → Money	-0.012	(0.06)	Know → Money	-0.012	(0.06)
Know → Get	0.135	(1.38)	Know → Get	0.135	(1.46)	Know → Get	0.135	(1.41)
Know → Give	0.285	(1.65) ^a	Know → Give	0.285	(1.65) ^a	Know → Give	0.285	(1.50)
Emo → Money	-0.310	(1.70) ^a	Emo → Money	-0.310	(1.71) ^a	Emo → Money	-0.310	(1.71) ^a
Emo → Get	0.312	(4.01) ^c	Emo → Get	0.312	(3.79) ^c	Emo → Get	0.312	(3.70) ^c
Emo → Give	0.269	(1.29)	Emo → Give	0.269	(1.24)	Emo → Give	0.269	(1.28)
Money → SF	-0.117	(1.00)	Money → SF	-0.009	(0.10)	Money → SF	-0.216	(1.80) ^a
Get → SF	0.768	(10.35) ^c	Get → SF	0.247	(2.14) ^b	Get → SF	0.223	(1.67) ^a
Give → SF	0.148	(1.20)	Give → SF	0.034	(0.29)	Give → SF	0.025	(0.16)
SF → Intention	0.739	(10.20) ^c	SF → Intention	0.739	(9.95) ^c	SF → Intention	0.739	(9.92) ^c
			Know → SF	0.108	(0.87)	Know → SF	0.092	(0.70)
			Emo → SF	0.638	(5.17) ^c	Emo → SF	0.541	(2.98) ^b
						Money_Know → SF	-0.053	(0.34)
						Money_Emo → SF	-0.276	(1.18)
						Get_Know → SF	0.058	(0.34)
						Get_Emo → SF	0.203	(1.04)
						Give_Know → SF	-0.145	(0.89)
						Give_Emo → SF	0.078	(0.28)
Goodness of fit	R ²		Goodness of fit	R ²		Goodness of fit	R ²	
Money	0.347		Money	0.347		Money	0.347	
Get	0.800		Get	0.800		Get	0.800	
Give	0.598		Give	0.598		Give	0.598	
SF	0.587		SF	0.814		SF	0.874	
Intention	0.546		Intention	0.546		Intention	0.546	

T-statistics are significant as follows: ^a = *p*<0.05; ^b = *p*<0.01; ^c = *p*<0.001

Table D4.11 Model testing results for C² T²

Model A			Model B			Model C		
Structural pathways	Coefficient (T-statistic)		Structural pathways	Coefficient (T-statistic)		Structural pathways	Coefficient (T-statistic)	
SQ→Money	-0.026	(0.11)	SQ→Money	-0.026	(0.12)	SQ→Money	-0.026	(0.11)
SQ→Get	0.166	(2.02) ^a	SQ→Get	0.166	(1.94) ^a	SQ→Get	0.166	(1.97) ^a
SQ→Give	0.200	(1.12)	SQ→Give	0.200	(1.14)	SQ→Give	0.200	(1.13)
TV → Money	0.219	(1.02)	TV → Money	0.219	(0.98)	TV → Money	0.219	(1.02)
TV → Get	-0.126	(1.67) ^a	TV → Get	-0.126	(1.67) ^a	TV → Get	-0.126	(1.65) ^a
TV → Give	-0.408	(2.00) ^a	TV → Give	-0.408	(1.84) ^a	TV → Give	-0.408	(2.01) ^a
IV → Money	-0.343	(2.22) ^a	IV → Money	-0.343	(2.19) ^a	IV → Money	-0.343	(2.09) ^a
IV → Get	0.296	(3.96) ^c	IV → Get	0.296	(4.12) ^c	IV → Get	0.296	(3.89) ^c
IV → Give	0.006	(0.04)	IV → Give	0.006	(0.03)	IV → Give	0.006	(0.03)
Know → Money	-0.013	(0.08)	Know → Money	-0.013	(0.08)	Know → Money	-0.013	(0.08)
Know → Get	0.167	(2.09) ^a	Know → Get	0.167	(1.86) ^a	Know → Get	0.167	(2.06) ^a
Know→ Give	0.051	(0.24)	Know→ Give	0.051	(0.24)	Know→ Give	0.051	(0.24)
Emo→ Money	-0.011	(0.05)	Emo→ Money	-0.011	(0.06)	Emo→ Money	-0.011	(0.05)
Emo → Get	0.410	(4.30) ^c	Emo → Get	0.410	(4.34) ^c	Emo → Get	0.410	(4.13) ^c
Emo → Give	0.099	(0.56)	Emo → Give	0.099	(0.58)	Emo → Give	0.099	(0.52)
Money → SF	-0.007	(0.09)	Money → SF	-0.057	(0.93)	Money → SF	-0.079	(0.74)
Get → SF	0.780	(6.52) ^c	Get → SF	0.282	(1.77) ^a	Get → SF	0.267	(1.31)
Give → SF	0.019	(0.17)	Give → SF	0.065	(0.77)	Give → SF	0.041	(0.30)
SF→ Intention	0.840	(13.90) ^c	SF→ Intention	0.840	(13.34) ^c	SF→ Intention	0.840	(13.19) ^c
			Know→ SF	0.230	(2.46) ^b	Know→ SF	0.208	(1.99) ^a
			Emo→ SF	0.532	(4.59) ^c	Emo→ SF	0.531	(2.92) ^b
						Money_Know→SF	-0.045	(0.18)
						Money_Emo→SF	-0.060	(0.21)
						Get_Know→SF	0.032	(0.14)
						Get_Emo→SF	0.086	(0.38)
						Give_Know→SF	-0.196	(1.09)
						Give_Emo→SF	0.171	(0.89)
Goodness of fit	R ²		Goodness of fit	R ²		Goodness of fit	R ²	
Money	0.256		Money	0.256		Money	0.256	
Get	0.852		Get	0.852		Get	0.852	
Give	0.375		Give	0.375		Give	0.375	
SF	0.722		SF	0.846		SF	0.864	
Intention	0.705		Intention	0.705		Intention	0.705	

T-statistics are significant as follows: ^a = *p*<0.05; ^b = *p*<0.01; ^c = *p*<0.001

Table D4.12 Model testing results for C² T³

Model A			Model B			Model C		
Structural pathways	Coefficient (T-statistic)		Structural pathways	Coefficient (T-statistic)		Structural pathways	Coefficient (T-statistic)	
SQ→Money	-0.155	(0.56)	SQ→Money	-0.155	(0.58)	SQ→Money	-0.155	(0.62)
SQ→Get	0.520	(4.82) ^c	SQ→Get	0.520	(4.91) ^c	SQ→Get	0.520	(4.90) ^c
SQ→Give	0.363	(1.78) ^a	SQ→Give	0.363	(1.69) ^a	SQ→Give	0.363	(1.74) ^a
TV → Money	0.502	(3.32) ^c	TV → Money	0.502	(3.21) ^c	TV → Money	0.502	(3.18) ^c
TV → Get	-0.023	(0.39)	TV → Get	-0.023	(0.41)	TV → Get	-0.023	(0.40)
TV → Give	-0.131	(0.95)	TV → Give	-0.131	(0.89)	TV → Give	-0.131	(0.93)
IV → Money	-0.324	(2.08) ^a	IV → Money	-0.324	(2.01) ^a	IV → Money	-0.324	(1.99) ^a
IV → Get	0.104	(2.15) ^a	IV → Get	0.104	(2.12) ^a	IV → Get	0.104	(2.13) ^a
IV → Give	0.553	(4.39) ^c	IV → Give	0.553	(4.38) ^c	IV → Give	0.553	(4.54) ^c
Know → Money	-0.200	(1.33)	Know → Money	-0.200	(1.40)	Know → Money	-0.200	(1.32)
Know → Get	0.149	(2.22) ^a	Know → Get	0.149	(2.27) ^a	Know → Get	0.149	(2.27) ^a
Know→ Give	0.002	(0.01)	Know→ Give	0.002	(0.01)	Know→ Give	0.002	(0.01)
Emo→ Money	-0.232	(0.77)	Emo→ Money	-0.232	(0.83)	Emo→ Money	-0.232	(0.90)
Emo → Get	0.333	(2.93) ^b	Emo → Get	0.333	(3.03) ^b	Emo → Get	0.333	(3.13) ^c
Emo → Give	0.092	(0.44)	Emo → Give	0.092	(0.45)	Emo → Give	0.092	(0.44)
Money → SF	-0.005	(0.07)	Money → SF	-0.005	(0.07)	Money → SF	-0.014	(0.15)
Get → SF	0.807	(5.48) ^c	Get → SF	0.350	(2.04) ^a	Get → SF	0.360	(1.62)
Give → SF	0.077	(1.07)	Give → SF	0.119	(1.75) ^a	Give → SF	0.066	(0.54)
SF→ Intention	0.866	(20.49) ^c	SF→ Intention	0.866	(21.19) ^c	SF→ Intention	0.866	(21.15) ^c
			Know→ SF	0.077	(1.09)	Know→ SF	0.060	(0.53)
			Emo→ SF	0.428	(3.34)	Emo→ SF	0.407	(2.26) ^b
						Money_Know→SF	-0.093	(0.88)
						Money_Emo→SF	-0.042	(0.27)
						Get_Know→SF	0.089	(0.71)
						Get_Emo→SF	0.132	(0.68)
						Give_Know→SF	-0.071	(0.51)
						Give_Emo→SF	0.079	(0.39)
Goodness of fit	R ²		Goodness of fit	R ²		Goodness of fit	R ²	
Money	0.369		Money	0.369		Money	0.369	
Get	0.897		Get	0.897		Get	0.897	
Give	0.479		Give	0.479		Give	0.479	
SF	0.827		SF	0.878		SF	0.892	
Intention	0.749		Intention	0.749		Intention	0.749	

T-statistics are significant as follows: ^a = $p < 0.05$; ^b = $p < 0.01$; ^c = $p < 0.001$

D4.3.2 Results for Cohort 1

The debate now turns to the results of the adopted model for Cohort 1, which are summarised below in Table D4.13. Significant pathways are indicated by a tick (✓).

Table D4.13 Summary of significant pathways for C¹

Structural pathways	TIME 1	TIME 2	TIME 3
SQ → Money	NA		
→ Get	NA	✓	✓
→ Give	NA		✓
TV → Money	✓		
→ Get		✓	✓
→ Give			✓
IV → Money		✓	✓
→ Get			
→ Give			✓
Know → Money			
→ Get		✓	
→ Give		✓	
Emo → Money			
→ Get		✓	✓
→ Give			✓
Money → SF			
Get → SF	✓	✓	
Give → SF			
Know → SF	✓		
Emo → SF	✓		✓
SF → Intention	✓	✓	✓

Note: NA=pathway not applicable ✓=significant pathway

First the focus is on the impact of the hypothesised determinants of the value dimensions (first five blocks in Table D4.13).

- SQ has a significant relationship with *get* at T² and T³, and with *give* only at T³; however, the SQ→money relationship is not significant at any time point;
- TV is a significant determinant of money only at T¹, *get* at T² and T³, and *give* at T³ only;
- In the case of IV, the pattern of the relationship with money is the opposite of TV, i.e. it is significant at T² and T³ but not at T¹. The IV→get relationship is not significant at any time, and the IV→give relationship is significant only at T³;
- Knowledge does not significantly impact on money at any time point. The knowledge→get and knowledge→give relationships are significant at T² only;

- Emotions→get is significant at T^2 and T^3 but not at T^1 , while emotions→give is significant only at T^2 . As with knowledge, emotions does not significantly impact on money at any time point.

Turning to the hypothesised determinants of satisfaction (sixth block in Table D4.13):

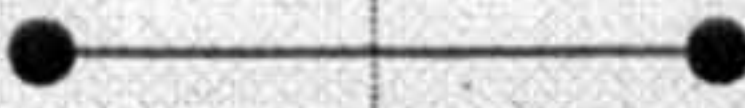


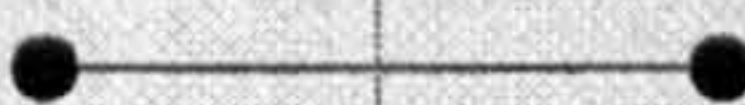

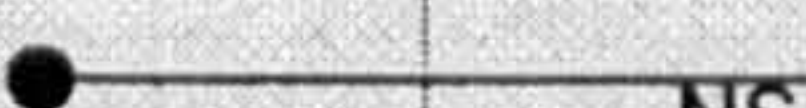
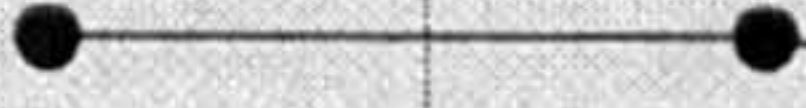
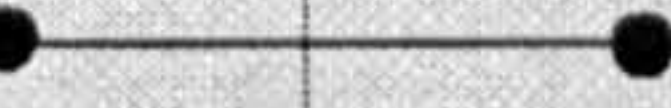
- Neither of the sacrifice constructs (i.e., money and *give*) exhibits a significant relationship with SF. The get→SF relationship is significant at T^1 and T^2 but not at T^3 ;
- The knowledge→SF relationship is significant at T^1 only;
- The emotions→SF relationship is significant at T^1 and T^3 but not at T^2 .

Lastly, the satisfaction to intention relationship is highly significant at all time points (final row in Table D4.13).

The discussion turns next to a comparison of the pattern of pathway coefficients over time, whereby the differences in the magnitude of the pathways are presented graphically in Table D4.14:

- The impact of TV on *get* decreases in magnitude between T^2 and T^3 (i.e., the coefficient at T^2 is significantly higher than the coefficient at T^3);
- For the remaining pathways, the coefficients are not significantly different from each other, thus the relationships are stable between time points.

Table D4.14 Comparison of pathway coefficients for C^1

Structural pathways	T-statistic	Pattern of comparison		
		Time 1	Time 2	Time 3
SQ → Get: $T^2 - T^3$	0.52	NA		
TV → Get: $T^2 - T^3$	4.49	NS		
IV → Money: $T^2 - T^3$	0.59	NS		
Emo → Get: $T^2 - T^3$	1.59	NS		
Get → SF: $T^1 - T^2$	1.13			NS
Emo → SF: $T^1 - T^3$	0.41		NS	
SF → Intention: $T^1 - T^2$ SF → Intention: $T^2 - T^3$	0.36 0.66			

Note: NA = pathway not applicable NS = non significant pathway
For df=66, T-values significant at: 0.05=1.67; 0.01=2.39; 0.001=3.23

The final part of this section turns to a discussion of the R^2 values as summarised in Table D4.15, which includes a graphic representation of the pattern of change. At T^1 the amount of variance explained in money and *give* is very low at approximately 1% and 7% respectively. For the *get* dimension, the figure is much higher at almost 40%, while the explained variations for satisfaction and intention are notably higher at nearly 79% and 71% respectively. Looking at how these values change over time reveals the following differences:

- Turning firstly to money it can be seen that there is a notable increase between T^1 and T^2 , while the increase slows down from T^2 to T^3 . Although in percentage terms there are successive increases, none of the differences are significant;
- There are also successive increases between times in the case of *get*; where the increase from T^1 to T^2 is particularly large and significant, while the increase from T^2 to T^3 is smaller and not significant;
- In the case of *give*, the increase between T^1 and T^2 is notable but not significant, while the increase at T^3 is higher and significant;
- The explained variation for satisfaction is high throughout. There is a very marginal and non-significant decrease at T^2 , while the marked increase in explained variance at T^3 is significant;
- Intention is the only construct associated with a decreasing pattern between successive times. Here, the explained variation is robust at nearly 71% at T^1 , declines slightly at T^2 , and decreases by a further 10% at T^3 ; none of the differences are significant.

Table D4.15 Comparison of R^2 values for C^1

Construct	TIME 1	TIME 2		TIME 3		Pattern of comparison		
	R^2	R^2	T-statistic	R^2	T-statistic	Time 1	Time 2	Time 3
Money	0.116	0.351 (+24%)	1.29	0.447 (+10%)	0.50			
Get	0.383	0.892 (+51%)	4.15	0.947 (+6%)	1.46			
Give	0.072	0.356 (+28%)	1.63	0.820 (+46%)	3.21			
SF	0.787	0.776 (-1%)	0.11	0.935 (+16%)	2.61			
Intention	0.708	0.667 (-4%)	0.31	0.564 (-10%)	0.68			

Note: Percentage increase between the previous time point shown in brackets
For $df=34$, T-statistics significant at: 0.05=2.04; 0.01=2.74; 0.001=3.62

of the possible relationships are significant, specifically knowledge → get at T^2 and T^3 → knowledge → give at T^2 .

D4.3.3 Results for Cohort 2

The debate turns now to the results of the adopted model for Cohort 2, as summarised below in Table D4.16 in which significant pathways are indicated, as before, by a tick (✓). First, the focus is on the hypothesised determinants of the value components (first five blocks in Table D4.16):

Table D4.16 Summary of significant pathways for C²

Structural pathways	TIME 1	TIME 2	TIME 3
SQ → Money	NA		
→ Get	NA	✓	✓
→ Give	NA		✓
TV → Money	✓		✓
→ Get		✓	
→ Give	✓	✓	
IV → Money	✓	✓	✓
→ Get	✓	✓	✓
→ Give			✓
Know → Money			
→ Get		✓	✓
→ Give	✓		
Emo → Money	✓		
→ Get	✓	✓	✓
→ Give			
Money → SF			
Get → SF	✓	✓	✓
Give → SF			✓
Know → SF		✓	
Emo → SF	✓	✓	✓
SF → Intention	✓	✓	✓

Note: NA=pathway not applicable ✓=significant pathway

- SQ has a significant relationship with *get* at T² and T³, and with *give* only at T³, while the SQ→money relationship is not significant at any time point;
- TV is a significant determinant of money at T¹ and T³. The TV→get relationship is significant at T² but not at T¹ or T³, while the TV→give relationship is significant at T¹ and T² but not at T³;
- IV appears to have an overall stronger impact than TV, whereby IV→money and IV→get are significant at all time points, and IV→give is significant at T³;
- Knowledge is a weak determinant of the value dimensions i.e., only three out of nine possible relationships are significant, specifically knowledge→ get at T² and T³ and knowledge→give at T¹;

- Emotions has a stronger impact than knowledge (i.e., four out of nine possible relationships), where it has a significant impact on money at T^1 , and on *get* at all time points. The emotions→give relationship, however, is not significant at any time point;

Attention turns next to the hypothesised determinants of satisfaction (sixth block in Table D4.16):

- Of the two sacrifice dimensions (i.e., money and *give*), only the give→SF relationships is significant at T^3 . The get→SF relationship, however, is significant at all three time points;
- Knowledge is a weak determinant of SF, having a significant impact only at T^2 ;
- Emotions is a strong determinant of SF at all three time points.

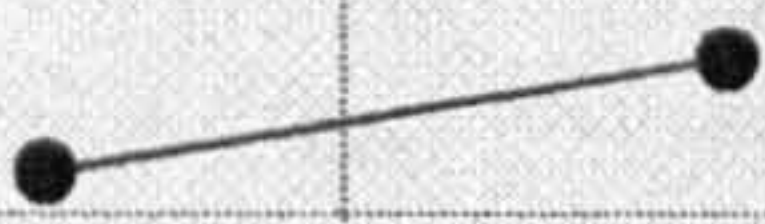
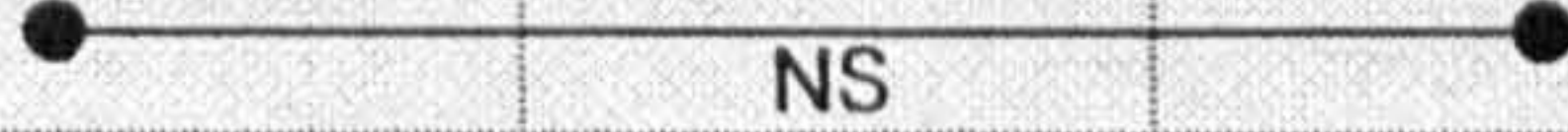
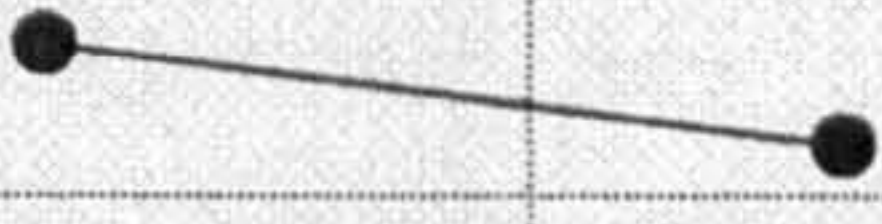

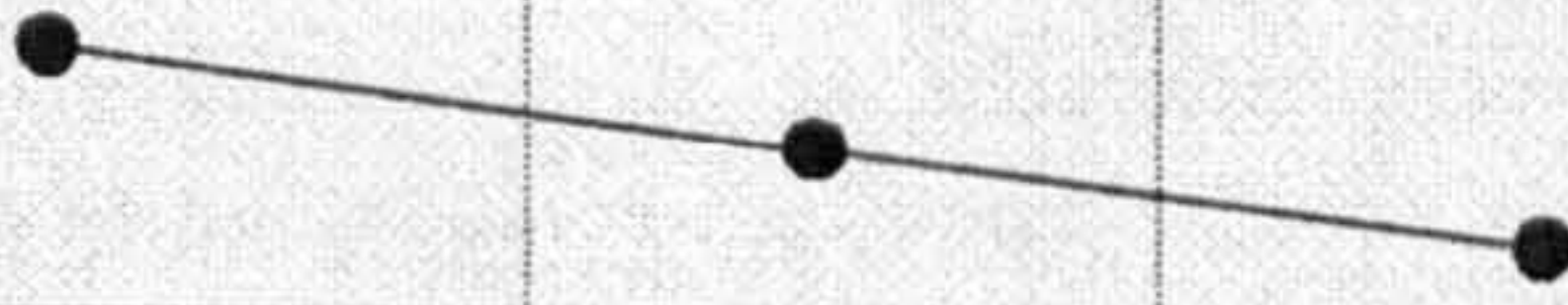
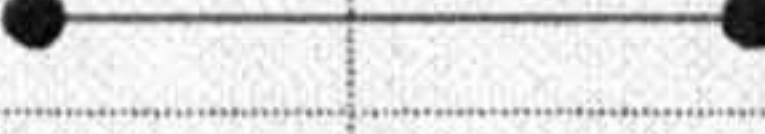




Lastly the satisfaction to intention pathway (final row in Table D4.16) is highly significant at all time points.

The discussion moves next to a comparison of the pattern of pathway coefficients over time; as before, the differences in the magnitude of the pathways are presented graphically (see Table D4.17):

- The impact of SQ on *get* increases in magnitude between T^2 and T^3 , i.e. the coefficient at T^3 is significantly higher than the comparable coefficient at T^2 ;
- The TV →money relationship is U-shaped, where there is an increase in magnitude between T^1 and T^3 though, at the intervening time point, the relationship is non-significant, i.e. the coefficient at T^3 is significantly higher than at T^1 ; the coefficient at T^2 is not significant;
- The impact of TV on *give* decreases in strength between T^2 and T^3 , i.e. the coefficient at T^2 is significantly higher than the coefficient at T^3 ;
- The IV→get relationship follows a linear decreasing pattern, i.e. the T^1 coefficient is significantly higher than the corresponding T^2 coefficient, which is itself significantly higher than the coefficient for T^3 ;
- The know→get coefficients at T^2 and T^3 are not significantly different from each other, therefore the impact of know on *get* is stable at both times.

For the remaining pathways, the coefficients are not significantly different from each other and therefore the relationships are stable over the three time points. i.e., IV→money; emotions→get; get→satisfaction; emotions→satisfaction; satisfaction→intention.

Table D4.17 Comparison of pathway coefficients for C²

Structural pathways	T-statistic	Pattern of comparison		
		Time 1	Time 2	Time 3
SQ → Get: T ² – T ³	2.63	NA		
TV → Money: T ¹ – T ³	3.83		NS	
TV → Give: T ¹ – T ²	4.05			NS
IV → Money: T ¹ – T ² IV → Money: T ² – T ³	0.11 0.09			
IV → Get: T ¹ – T ² IV → Get: T ² – T ³	2.96 2.23			
Know → Get: T ² – T ³	0.18	NS		
Emo → Get: T ¹ – T ² Emo → Get: T ² – T ³	0.78 0.54			
Get → SF: T ¹ – T ² Get → SF: T ² – T ³	0.18 0.30			
Emo → SF: T ¹ – T ² Emo → SF: T ² – T ³	0.66 0.62			
SF → Intention: T ¹ – T ² SF → Intention: T ² – T ³	1.04 0.35			

Note: NA=pathway not applicable NS=non significant pathway
For df=88, T-values significant at: 0.5=1.66; 0.01=2.37; 0.001=3.20

In the final part of the discussion of results for Cohort 2, attention turns to the R² values as summarised in Table D4.18, which includes a graphic representation of the pattern of change. The table demonstrates that the adopted model provides considerable explanatory power at T¹. Turning firstly to the value dimensions, the explained variation in money and *give* is notable at approximately 35% and 60% respectively, while for *get* the figure rises dramatically to 80%. In the case of satisfaction, the explained variation is extremely high at 81%. Lastly, the amount of the variance explained in intention is strong at 55%.

In terms of how these values change over time, only the sacrifice dimensions (i.e., money and *give*) exhibit a pattern in which there is a decrease in the explained variation between T¹ and T² followed by an increase between T² and T³. With the exception of intention where the increase between T¹ and T² is marked at 16%, the remaining constructs are associated with small, successive increases in the region of 3% to 5% between T¹ and T² and again between T² and T³; none of the differences for any of the constructs, however, are significant.

Table D4.18 Comparison of R² values for C²

Construct	TIME 1	TIME 2		TIME 3		Pattern of comparison		
	R ²	R ²	T-statistic	R ²	T-statistic	Time 1	Time 2	Time 3
Money	0.347	0.256 (-9%)	0.55	0.369 (+11%)	0.68	●	●	●
Get	0.800	0.852 (+5%)	0.76	0.897 (+5%)	0.89	●	●	●
Give	0.598	0.375 (-22%)	1.45	0.479 (+11%)	0.64	●	●	●
SF	0.814	0.846 (+3%)	0.47	0.878 (+3%)	0.57	●	●	●
Intention	0.546	0.705 (+16%)	1.25	0.749 (+4%)	0.43	●	●	●

Note: Percentage increase between the previous time point shown in brackets
For df=45, T-statistics significant at: 0.05=2.01; 0.01=2.69; 0.001=3.52

D4.3.4 Comparison of results for Cohort 1 and Cohort 2

The final part of this chapter integrates the results for C¹ and C² and compares the findings. Table D4.20 reveals four patterns of behaviour among the pathways, which are colour coded as shown below to assist readability.

Pattern 1 Pathways not significant for C¹ but significant for C².

15 pathways are not significant for C¹ but are significant for C².

Pattern 2 Pathways significant for C¹ but not for C².

Pattern 1 is reversed, i.e. five pathways are significant for C¹ but not significant for C².

Pattern 3 Similar pathways for both cohorts at the same time points.

40 pathways demonstrated similar patterns for both cohorts at the same time points, of which 22 are not significant and 18 are significant. Pathway coefficients of the 18 significant pathways (indicated by bold ticks in Table D4.20) are examined in order to ascertain whether there are significant differences between the cohorts (T-statistics are shown in Table D4.20; significant values are shown in bold). Five pathways are significantly different whereby, as indicated in Table D4.19, a tick indicates a significantly higher coefficient.

Table D4.19 Significant differences between pathway coefficients

Pathway	Time point	Cohort 1	Cohort 2
SQ→get	2	✓	
TV→get	2		✓
Emo→get	2		✓
Get→SF	2	✓	
IV→give	3		✓

Pattern 4

Pathways identical for both cohorts across all time points.

Five relationships demonstrate identical patterns for both cohorts across all time points, i.e. SQ→money; SQ→get; know→money; money→SF; SF→intention, a total of 13 pathways overall. Of these, 8 are not significant (know→money and money→SF at T¹; SQ→money, know→money, and money→SF at T²; SQ→money, know→money and money→SF at T³. The five significant pathways are: SF→intention at T¹; SQ→get and SF→intention at T²; and SQ→get and SF→intention T³.

Table D4.20 Comparison of results for C¹ and C²

Structural pathways	TIME 1			TIME 2			TIME 3		
	Cohort 1	Cohort 2	T-statistic	Cohort 1	Cohort 2	T-statistic	Cohort 1	Cohort 2	T-statistic
SQ→Money	-	-	-	NS	NS	-	NS	NS	-
SQ→Get	-	-	-	✓	✓	2.77	✓	✓	0.88
SQ→Give	-	-	-	NS	NS	-	✓	✓	1.05
TV→ Money	✓	✓	1.52	NS	NS	-	NS	✓	-
TV→ Get	NS	NS	-	✓	✓	3.76	✓	NS	-
TV→ Give	NS	✓	-	NS	✓	-	✓	NS	-
IV → Money	NS	✓	-	✓	✓	1.02	✓	✓	0.47
IV→ Get	NS	✓	-	NS	✓	-	NS	✓	-
IV→ Give	NS	NS	-	NS	NS	-	✓	✓	1.70
Know→ Money	NS	NS	-	NS	NS	-	NS	NS	-
Know→ Get	NS	NS	-	✓	✓	0.65	NS	✓	-
Know→ Give	NS	✓	-	✓	NS	-	NS	NS	-
Emo→ Money	NS	✓	-	NS	NS	-	NS	NS	-
Emo→ Get	NS	✓	-	✓	✓	1.79	✓	✓	0.62
Emo→ Give	NS	NS	-	NS	NS	-	✓	NS	-
Money →SF	NS	NS	-	NS	NS	-	NS	NS	-
Get → SF	✓	✓	0.90	✓	✓	1.91	NS	✓	-
Give → SF	NS	NS	-	NS	NS	-	NS	✓	-
Know→SF	✓	NS	-	NS	✓	-	NS	NS	-
Emo→ SF	✓	✓	0.59	NS	✓	-	✓	✓	0.27
SF→ Intention	✓	✓	1.44	✓	✓	0.32	✓	✓	1.43

Note: NS=non significant pathway; ✓=significant pathway;
For df=77, T-statistics significant at: 0.05=1.66; 0.01=2.37; 0.001=3.20

D4.3.5 Summary

Testing the proposed higher order structure of the *get* and *give* components of value resulted in partitioning the *give* component into two distinct elements that represent monetary costs and sacrifices in terms of time and effort (correspondingly termed money and *give*). This resulted in re-conceptualisation of the value construct as

originally presented in Section C1.3.1 and necessitated related modifications in the subsequent hypotheses associated with the *give* component of value.

Following testing of nested models the author adopts Model B which depicts knowledge and emotions as direct determinants of the components of value (revised as indicated above) and satisfaction rather than as moderators of the value to satisfaction relationship. The R^2 values of the adopted model demonstrate considerable explanatory powers (especially at Time 3) thus providing confidence in the assessment of the hypothesised functional relationships.

Examination of the temporal stability of the significance of the hypothesised pathways across three points in time and the relative strength (both between cohorts at a point in time and between times for each cohort) of the implied relationships revealed considerable variations. These are debated in detail in the next chapter of this thesis.

PART E: DISCUSSION AND CONCLUSIONS

The final part of the thesis comprises a single chapter, Chapter E1, which starts by reminding the reader of the research aim and objectives. Attention turns next to the research hypotheses, which are discussed in relation to extant literature. The chapter concludes by discussing the theoretical and managerial contributions of the research and finally offers proposed directions for future research.

CHAPTER E1: DISCUSSION AND CONCLUSIONS

E1.1 INTRODUCTION

Before moving on to discuss the findings of the research, the reader is first briefly reminded of the need for the study and its aim and objectives. The discussion in Section A1.2 established the central position of value in marketing and legitimised its primacy as a topic for research. The literature review in Part B revealed a growing body of research that conceptualises value as a multi-dimensional construct comprising *give* and *get* components, which has begun to enable value's considerable complexity to be unravelled. At the same time, however, researchers have fallen short of converging on a unified conceptualisation of the dimensions of the *give* and *get* components (see Section B2.3), and in addition there are conflicting results regarding value's functional relationships (Sections B3.2 and B3.3). Moreover, although the temporal nature of value is commonly accepted (Section A1.3.4 and throughout the literature review), a particular omission in extant research is empirical evidence of the dynamic nature of the value construct in the b2c domain, specifically how changes in value perceptions over time affect its nomologically-related functional relationships. Consequently, a need for research emerged, which was to gain understanding of how changes in value perceptions over time affect its functional relationships. In response to this need, the aim of this study was to empirically examine the temporal stability of the functional relationships between value and its antecedents and outcomes (Section C1.2).

In order to achieve the research aim, four objectives were identified. Objective 1 was to construct a theoretically-grounded conceptual framework that would enable investigation of the structure of value together with its antecedent and outcome relationships. Grounded in literature, a conceptual framework was advanced in Chapter C1 in which service quality, personal values, knowledge and emotions were hypothesised as determinants of value, while satisfaction was hypothesised as an outcome of value. Value's relationship with intentions was proposed to be indirect via satisfaction. Two temporal constructs, knowledge and emotions, were proposed to moderate the value to satisfaction relationship.

Objective 2 was to derive appropriate conceptualisations and operationalisations of the focal constructs. With Zeithaml's (1988) definition as a starting point, value was conceptualised as comprising *give* and *get* components, which are higher order factors of their respective dimensions. Personal values was conceptualised according to Rokeach (1968) as terminal and instrumental values. Service quality was conceptualised following Parasuraman *et al.*'s (1988) SERVQUAL model.

Conceptualisation of the satisfaction, intentions, knowledge and emotions constructs was grounded in literature, and the operationalisation of these and the aforementioned constructs was explained and rationalised in Section C3.2

After consideration of the alternatives, data collection was implemented according to the discussion in Section C2.6.3.1. A questionnaire was administered to consumers of postgraduate education studying at a London business school for a one-year master’s degree (Section C4.3.1). Two cohorts of respondents, the second to cross-validate the structural model, were surveyed through a longitudinal design on perceptions of their educational experience at three points in time, which were chosen to reflect key stages of consumption (Section C2.5). The resultant data were analysed using the PLS approach to structural equation modelling, as reported in Part D. Consequently, objective 3 was fulfilled.

The fourth and final objective provides the focus for this, the final chapter, in which the results of the analysis are discussed in relation to extant literature. As reported in Section A1.3.4, however, the opportunity to place results within literature is limited due to the lack of prior research that investigates the temporal stability of the functional relationships between value and its antecedents and outcomes. The chapter concludes by providing a discussion of the theoretical and managerial contributions of the research and proposed directions for future research.

E1.2 DISCUSSION OF THE RESEARCH HYPOTHESES

This section discusses the testing of the hypothesised relationships between constructs in the research model. The reader is first reminded of the discussion presented in Section D4.2.3 in which the structure of *give* as a higher order factor of its three dimensions (i.e., money, time and effort) was not supported, resulting in the re-conceptualisation of *give* as two distinct constructs: (1) money, a single factor representing purely financial sacrifice, and (2) *give*, a higher order factor comprising two dimensions (i.e., time and effort) representing non-monetary sacrifices. Thus, from this point forward discussion of the hypotheses relating to the *give* construct reflects the new name of the re-conceptualised construct (i.e., *give*=non-monetary sacrifice) while additional hypotheses are added to reflect the re-conceptualised money construct.

Table E1.1 provides a summary of the significance of the pathways over the three time points. Each block of the table (separated by the solid horizontal lines) represents a related group of hypotheses. Significant pathways in the table are identified by a tick, while those that exhibit the same pattern of significance (i.e.,

that are significant for both cohorts at the same time point/s) are shaded for ease of reference. In the case of the latter pathways, an additional column indicates whether there is a significant difference in the strength of the pathways between cohorts.

Table E1.1 Summary of significance of pathways

	TIME 1			TIME 2			TIME 3			Hypo
Structural pathways	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff	
SQ→Get	-	-	-	✓	✓	yes	✓	✓	no	H1 _A
SQ→Give	-	-	-	NS	NS	-	✓	✓	no	H1 _B
SQ→Money	-	-	-	NS	NS	-	NS	NS	-	H1 _C
TV→ Get	NS	NS	-	✓	✓	yes	✓	NS	-	H2 _A
TV→ Give	NS	✓	-	NS	✓	-	✓	NS	-	H2 _B
TV→ Money	✓	✓	no	NS	NS	-	NS	✓	-	H2 _C
IV→ Get	NS	✓	-	NS	✓	-	NS	✓	-	H3 _A
IV→ Give	NS	NS	-	NS	NS	-	✓	✓	yes	H3 _B
IV → Money	NS	✓	-	✓	✓	no	✓	✓	no	H3 _C
Know→ Get	NS	NS	-	✓	✓	no	NS	✓	-	H4 _A
Know→ Give	NS	✓	-	✓	NS	-	NS	NS	-	H4 _B
Know→ Money	NS	NS	-	NS	NS	-	NS	NS	-	H4 _C
Emo→ Get	NS	✓	-	✓	✓	yes	✓	✓	no	H5 _A
Emo→ Give	NS	NS	-	NS	NS	-	✓	NS	-	H5 _B
Emo→ Money	NS	✓	-	NS	NS	-	NS	NS	-	H5 _C
Get → SF	✓	✓	no	✓	✓	yes	NS	✓	-	H6 _A
Give → SF	NS	NS	-	NS	NS	-	NS	✓	-	H6 _B
Money →SF	NS	NS	-	NS	NS	-	NS	NS	-	H6 _C
SF→ Intention	✓	✓	no	✓	✓	no	✓	✓	no	H7
Know→SF	✓	NS	-	NS	✓	-	NS	NS	-	§
Emo→ SF	✓	✓	no	NS	✓	-	✓	✓	no	§

Note: ✓ = significant pathway; Sig. diff = whether significant difference between cohorts
§ = additional pathway not hypothesised

Given that multiple pathways are tested for two samples at three points in time, and moreover both intra-cohort (i.e., within each individual cohort) and inter-cohort (i.e., between the two cohorts) results are examined, the discussion is inherently complex. In order to ease the flow of discussion and ensure clarity, therefore, the following structure is adopted:

- Each block of hypotheses is discussed in a separate section. The appropriate extract from Table E1.1 is first presented, then discussion focuses on the significance of the pathways for each of the relevant hypotheses in turn.
- Next, for each hypothesis the temporal impact of the significance of the pathways both intra-cohort and inter-cohort is discussed. The pattern of the behaviour of the relationships (i.e., the strength of the relationships at each

point in time) is compared within and between cohorts. For the inter-cohort comparison, it is important to note that this can only be made when pathways are significant across two or more time points, for example in the case of the service quality→get relationship as demonstrated by Table E1.2.

- It should be noted that the rejection of Model C (see debate in Section D4.3.1) leads to the rejection of Hypotheses 8_A, 8_B, 9_A and 9_B, which explains their lack of representation both in Table E1.1 and in the ensuing discussion. The pathways that emerged from the model testing and which were not included in the research hypotheses are very briefly discussed at the end of this section.

E1.2.1 Service quality and value

Discussion turns firstly to the hypothesised relationship between service quality (SQ) and the three components of value, i.e. money, *get* and *give*. The reader is reminded that, according to the discussion in Section C1.3.3 (and see Table C1.1), H1_A and H1_B are not tested at T¹.

Table E1.2 Impact of service quality on value

Structural pathways	TIME 1			TIME 2			TIME 3		
	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff
SQ→Get	-	-	-	✓	✓	yes	✓	✓	no
SQ→Give	-	-	-	NS	NS	-	✓	✓	no
SQ→Money	-	-	-	NS	NS	-	NS	NS	-



Note: ✓ = significant pathway; Sig. diff = whether significant difference between cohorts

H1_A = There is a significant positive relationship between service quality and get

Turning firstly to H1_A, Table E1.2 demonstrates that SQ is a significant determinant of *get* for both cohorts at T² and T³, and consequently the impact of SQ on *get* over time is established. The finding is consistent with the literature as discussed in Section B3.2, which finds SQ to be a significant determinant of value (e.g., Bolton and Drew, 1991; Oh, 1999; Choi *et al.*, 2004; Hsu, 2008). In terms of inter-cohort differences, there is a significant difference in the strength of the relationship between the cohorts at T², while at T³ the strength of the relationship is the equivalent for both cohorts. In terms of intra-cohort effects, Table E1.3 (below) reveals that the pattern of behaviour for C¹ is flat, i.e. the strength of the relationship is stable across the two time points. For C² there is a different picture, in that the impact of SQ on *get* increases at T³. Consequently, although the nature of

the relationship between SQ and *get* is significant over time, there are differences in terms of the patterns of the strength of the significance between the two cohorts.

Table E1.3 Service quality→get pattern of comparison

Structural pathways	Cohort	Pattern of comparison		
		Time 1	Time 2	Time 3
SQ → Get	1	-		
	2	-		

The above finding can be explained by the idiosyncratic way in which value perceptions are formed (Zeithaml, 1988; Bolton and Drew, 1991; Brady and Robertson, 1999), even when there is a high degree of comparability between groups of consumers. The author suggests that the special nature and characteristics of services, in particular variability and inseparability (Zeithaml and Bitner, 2000), further explain the variations in the differing pattern of results between cohorts. The former accounts for the difficulties in standardising SQ, resulting in differences in the student experience over successive years – hence, the significant difference in the strength of the relationship between the C¹ and C² at T² (it should be remembered that the two cohorts studied in consecutive years – see Section C2.5).

The inseparability of service delivery suggests that the extent to which the student collaborates in the co-delivery of his/her education also has an effect on the strength of the relationship. This is particularly germane when considering that, at T³, the dominant consumption experience relates to the dissertation stage of the degree when the educational provision is delivered one-to-one via the student’s personal academic supervisor, and therefore takes place on a collaborative and individualistic basis. Conversely, teaching in the first half of the course (i.e., at T²) takes place entirely in the classroom at a cohort-level, and thus is more impersonal and involves less individual collaboration. Accordingly, perceptions of SQ at T³ are associated with the personal tuition provided by the student’s academic supervisor and resonate more strongly than at T², when SQ perceptions of collective institutional experiences are more generic and impersonal in nature and therefore weaker. Taken together with the idiosyncratic nature of value judgments, this logic provides an explanation for why perceptions of SQ increased at T³ for C² but remained stable for C¹.

Collectively, the above results provide support for H1_A, and moreover the variations in the strength of the relationship both between and among cohorts indicate that changes in the relationship take place over time.

H1_B = There is a significant negative relationship between service quality and give.

In terms of H1_B, Table E1.2 reveals that SQ for both cohorts is not significant at T₂ but becomes so at T₃, and furthermore that the strength of the relationship is equivalent for both cohorts. Consequently, the behaviour of the relationship for both cohorts is identical. However, contrary to expectations the pathway coefficients are positive, thus the hypothesised negative relationship is not supported.

A similar logic to that advanced in relation to H1_A provides a possible explanation for the impact of SQ only at T³, insofar that SQ perceptions at the end of the course are dominated by the service delivered through the one-to-one supervision provided by students' academic supervisors. Remembering that *give* relates to time and effort expended, equity theory helps explain why the SQ→*give* relationship is positive. Equity theory in behavioural psychology refers to an individual's evaluation of what is fair, right or deserved in terms of costs expended in relation to rewards received (Adams, 1965); thus, in the marketing sense, consumers are disposed to think they have been treated fairly if their outcome-input ratio is comparable to that of the service provider (Yang and Peterson, 2004). Consequently, students attempt to achieve reciprocal levels of input (i.e., *give*) to that provided by their supervisor (i.e., SQ); thus, as SQ increases, students' sense of sacrifice is perceived as equitable.

Collectively, there is support for a significant relationship between SQ and *give*, while the significance of the pathway only at T³ demonstrates variations in the effect of SQ on *give* over time. Moreover, the results indicate that the sign of the relationship depends on the nature and form of the consumer's interaction with the service provider and the extent to which the consumer judges his/her sacrifice to be commensurate with the level of SQ delivered.

H1_C = There is a significant negative relationship between service quality and money.

Table E1.2 demonstrates that the SQ to money relationship was not significant for either cohort at any time point. A possible explanation is that perceptions of monetary sacrifice are absent when students' parents or others (e.g., funding bodies, scholarship awards, bursaries, etc.) pick up the financial costs of consumption (Gallarza and Saura, 2006), which, according to anecdotal evidence, is largely the case for the sample groups in this study. Moreover, the course fees and living expenses are known and accounted for well in advance of starting the course and thus are considered as sunk costs.

Given that monetary considerations are inherently part of the value judgment, however, the above finding initially appears to partially contradict the empirical evidence discussed in Section B3.2 of the link between quality and value. However, this author contends that it provides further evidence for the differential behaviour of the *give* and *get* components with their structural relationships (Whittaker *et al.*, 2007; Ledden *et al.*, 2007; Gipp *et al.*, 2008; Ledden and Kalafatis, 2009). Moreover, it emphasises the need for researchers to differentiate between types of *give* (i.e., monetary and non-monetary). This oversight serves as a common limitation of the uni-dimensional stream of research (Section B2.2) which focuses on the concept of value as an overall evaluation, and moreover limits multi-dimensional studies that include only a financial measure of sacrifice (e.g., Sweeney & Soutar, 2001; Wang *et al.*, 2004; Beldona *et al.*, 2006). In conclusion, H1_C is not supported.

E1.2.2 Terminal values and value

The reader is first briefly reminded that terminal values (TV) relate to an individual’s desired end states of existence, i.e. what they want out of life. Table E1.4 shows that a strong/consistent pattern of results for the TV relationships cannot be determined, with only 9 of 18 pathways being significant. To enable the discussion to flow more easily, therefore, the TV→give and TV→money hypotheses are discussed together.

The discussion draws on the related study by Ledden *et al.* (2007), though it must be noted that the results of that and the present research are different. This is suggested to be due to differences in the composition of the samples in the two studies, i.e. the previously published study comprised a single sample of UK-based MBA students with directly comparable cultural backgrounds and thus relatively homogenous values structures, while the sample groups in the present study comprise mainly students with diverse international backgrounds and thus heterogeneous values structures.

Table E1.4 Impact of terminal values on value

Structural pathways	TIME 1			TIME 2			TIME 3		
	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff
TV→ Get	NS	NS	-	✓	✓	yes	✓	NS	-
TV→ Give	NS	✓	-	NS	✓	-	✓	NS	-
TV→ Money	✓	✓	no	NS	NS	-	NS	✓	-

Note: ✓ = significant pathway; Sig. diff = whether significant difference between cohorts

H2_A = There is a significant relationship between terminal values and get.




Table E1.4 demonstrates that only three of the six TV→get pathways are significant, i.e. C¹ and C² at T² and C¹ at T³; furthermore, there are significant differences in the strength of the pathways between the cohorts at T². The fact that the MA in Marketing degree is a conversion course provides a possible explanation for the significant effect at T². At T¹, students start the course with no knowledge of marketing but with the aim of developing such knowledge in order to realise their ambition of pursuing a marketing career (i.e., *get*), which will help them to achieve the life they desire to live (i.e., terminal values). When the taught element of the programme concludes at T², students have accumulated all of the formal marketing knowledge they need to enable them to function as future managers; consequently they feel one step closer to realising their career ambitions and their desired end-states of existence. Thus, their terminal values influence the perceived benefits of taking the course, hence the significant relationship between TV and *get* at T². At T³ the emphasis of the dissertation stage is on developing research skills, and while these support the general marketing skills, not all students make the association until after they have graduated. This is implicitly supported by the difference in the significance of the relationship at T³, and the decline in the strength of this relationship at T³ for C¹ (see Table E1.5). Overall, H2_A is considered to be partially supported and is broadly in line with results reported in Ledden *et al.* (2007).

H2_B = There is a significant relationship between terminal values and give.**H2_C = There is a significant relationship between terminal values and money.**

Turning to the TV→give pathways, three are significant, i.e., C² at T¹, C² at T², and C¹ at T³. With regard to the TV to money pathways, once again three are significant, namely C¹ and C² at T¹ (there are no significant differences between the pathways), and for C² at T³.

The above patterns are too diffused to enable meaningful conclusions to be drawn; however, it should be noted that in Ledden *et al.* (2007), TV was found to be a significant determinant of *give*. The difference in results is considered to be due to the fact that, in the latter study, the *give* component represented a higher order construct comprising monetary and non-monetary considerations. The related cells in Table E1.5 are presented for completeness purposes only.

Table E1.5 Terminal values pattern of comparison

Structural pathways	Cohort	Pattern of comparison		
		Time 1	Time 2	Time 3
TV → Get	1	NS		
TV → Give	2			NS
TV → Money	2		NS	

E1.2.3 Instrumental values and value

Once again the reader is briefly reminded that instrumental values (IV) associate with an individual’s personal characteristics and modes of conduct. In other words, instrumental values reflect the way that people see themselves and how they behave in life, and consequently instrumental values influence how people behave in the pursuit of their terminal values.

Table E1.6 Impact of instrumental values on value

Structural pathways	TIME 1			TIME 2			TIME 3		
	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff
IV→ Get	NS	✓	-	NS	✓	-	NS	✓	-
IV→ Give	NS	NS	-	NS	NS	--	✓	✓	yes
IV → Money	NS	✓	-	✓	✓	no	✓	✓	no

Note: ✓ = significant pathway; Sig. diff = whether significant difference between cohorts

H3_A = There is a significant relationship between instrumental values and get.

As can be seen from Table E1.6, this pathway is supported across all time points for C² only. The differing results between the two cohorts and the fact that the IV→get relationship is significant in Ledden *et al.* (2007) once again is considered to demonstrate the idiosyncratic nature of value formation, even between relatively similar groups. For C², Table E1.7 demonstrates a decreasing pattern in the strength of this relationship over time. This implies that, given the accepted stability of IV, the same level and intensity of behaviour results in diminishing levels of perceptions of received benefits. Collectively the results provide partial support for H3_A.

H3_B = There is a significant relationship between instrumental values and give.

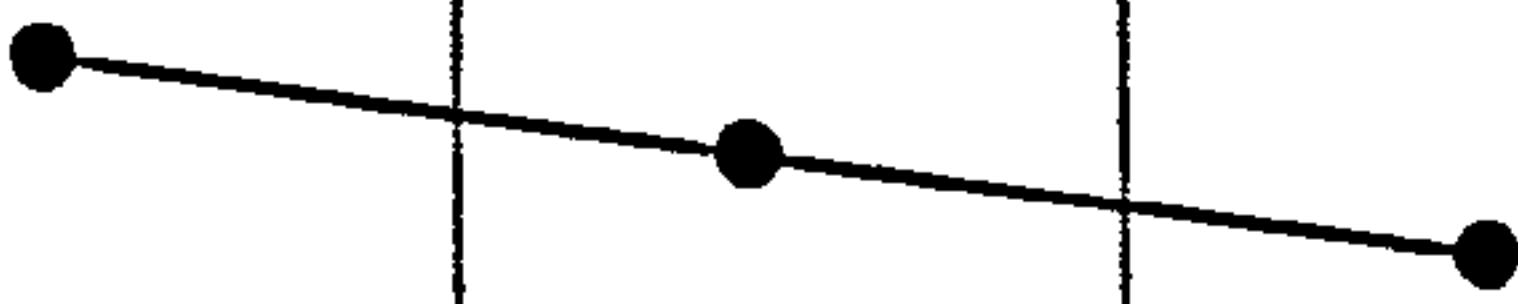

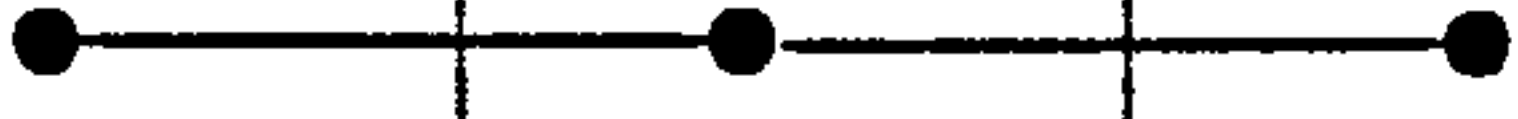
From Table E1.6 it can be seen that this pathway is significant for both cohorts, but only at T³, at which point the strength of the relationship is significantly different

between the two cohorts. Accepting that IV relates to an individual’s characteristics and behaviours, it is suggested that the lack of significant relationships at T¹ and T² is explained by a similar logic advanced in relation to H1_A (albeit this hypothesis relates to *get*). At T¹ and T² the *give* component is mainly defined by the demands of the taught elements and group work that collectively constrain it. On the other hand, students have more individual control over their sacrifice at T³ during the dissertation stage. Consequently, there is support for H3_B, but only at T³.

H3_C = There is a significant relationship between instrumental values and money.

With five of the six pathways being significant, the results in Table E1.6 provide considerable support for this hypothesis across cohorts and time. Furthermore, there are no inter- or intra-cohort differences in the strength of the pathways. The reader is reminded of debate advanced in relation to H1_C whereby students’ financial costs are known in advanced and paid for largely by others. The significance of this pathway is posited to represent students’ IV in acknowledging the financial help received by others, i.e. they behave in a way that reflects their desire not to let down those who materially help them. In conclusion, there is strong support for H3_C and when compared to the corresponding non-significant relationship in Ledden *et al.* (2007), this confirms the differential behaviour of the dimensions of the *give* component.

Table E1.7 Instrumental values pattern of comparison

Structural pathways	Cohort	Pattern of comparison		
		Time 1	Time 2	Time 3
IV → Get	2			
IV → Money	1	NS		
	2			

NS = not significant

E1.2.4 Knowledge and value

The discussion in this section concerns the hypotheses relating to the impact of knowledge on the three value components.

Table E1.8 Impact of knowledge on value

Structural pathways	TIME 1			TIME 2			TIME 3		
	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff
Know→ Get	NS	NS	-	✓	✓	no	NS	✓	-
Know→ Give	NS	✓	-	✓	NS	-	NS	NS	-
Know→ Money	NS	NS	-	NS	NS	-	NS	NS	-

Note: ✓ = significant pathway; Sig. diff = whether significant difference between cohort

H4_A = There is a significant positive relationship between knowledge and get.

Table E1.8 demonstrates that the pattern of significance of the knowledge→get pathway changes over the three time points, i.e. at T¹ the relationship is not significant for either cohort and then becomes significant for both at T². At T³ the relationship is not significant for C¹ but is significant for C². There is no significant difference between the cohorts at T², thus the magnitude of the relationship is equivalent for both. Overall three of the six pathways are significant, which suggests that a significant relationship between knowledge and *get* exists. This finding is consistent with literature that posits knowledge, conceptualised as a cognitively-derived construct resulting from consumption or use, to be an influencer of value perceptions (Woodruff; 1997; Goodwin and Ball, 1999; Woodall, 2003).

Accepting that knowledge accumulates as a result of consumption or use, at the beginning of the course students have not yet consumed any substantial part of it, and though *a priori* information is available to students through the website or brochure, actual knowledge derived from personal, in-use experience is absent; hence, the non-significant relationship at T¹. This proposition is implicit in Woodruff’s (1997) value hierarchy model, whereby consumers start learning about a product as the use situation develops; in turn, consumers’ learning-in-use informs the formation of their ongoing value judgments, which leads to a reassessment of value over time.


This logic also explains why the knowledge→get relationship becomes significant at T², when, halfway through the course, students’ individually accumulated knowledge assists them in forming judgments about the received benefits of the course. Career planning sessions and practitioner guest lectures delivered in the first half of the course also contribute to students’ knowledge about the course in terms of its expected outcomes and career prospects, and accordingly students’ perceptions of what they are getting out of the course are enhanced by the knowledge they have gained at this point in time.

At T³ the picture is less clear, given the differing results between cohorts. Three possible explanations emerge: firstly, at the end of the course knowledge about the

course is considered redundant because, now the course is over, students have no more ‘use’ for the knowledge they have accumulated about course regulations, library facilities, progression regulations etc.; consequently, knowledge does not contribute to the overall evaluation of benefits received and hence the relationship is not significant. On the other hand, at the end of the course knowledge might be so embedded in memory that everything students have learned about the course is taken for granted and serves no useful purpose in informing the value judgment; again, the relationship is not significant. Taking the last proposition but this time reversing the logic, a third possibility is that the embedded knowledge provides a ‘comfort blanket’ that enhances students’ perceptions of what they have received, and therefore the more they know about the course the clearer they are about its benefits; in this scenario, knowledge has a significant effect on *get*.

For C^2 that exhibits a significant relationship at both T^2 and T^3 , Table E1.9 shows that the strength of the knowledge→get association remains stable over time.

Table E1.9 Know→get pattern of comparison

Structural pathways	Cohort	Pattern of comparison		
		Time 1	Time 2	Time 3
Know → Get	2	NS		

Collectively, the knowledge→get relationship for both cohorts at T^2 provides sufficient evidence of a significant relationship between the two constructs, however there is evidence to suggest that the effects are transient and are not stable over time. In conclusion, the findings offer partial support for $H4_A$.

$H4_B$ = There is a significant positive relationship between knowledge and give.

Table E1.8 demonstrates that of the six pathways, only two are significant, and moreover the pattern of effects varies over time. At T^1 the pathway is not significant for C^1 but is significant for C^2 . This effect is reversed at T^2 when the pathway is significant for C^1 but not for C^2 . At T^3 the results converge when the pathway is not significant for either cohort. Overall, the findings point to a very weak association between knowledge and *give*.

Accepting the debate advanced in relation to $H4_A$ in which the significant effect of knowledge on *get* is confirmed by literature, then clearly a correspondingly significant effect of knowledge on *give* should be evident, since *give* and *get* are

components of the same overall construct. This inconsistency is explained again by the fact that, collectively, literature discusses the concept of value as a higher abstraction, though emerging empirical evidence points to the differential effects of the *give* and *get* components on its functional relationships (Whittaker *et al.*, 2007; Ledden *et al.*, 2007; Gipp *et al.*, 2008; Ledden and Kalafatis, 2009).

A proposed explanation for the lack of a consistent significant relationship between knowledge and *give* is that students consider the sacrifices they are required to make in terms time and effort as sunk costs, because the time required to study a master’s degree and the effort required to cope with the demands of such a course are accepted as inevitable and an inherent part of the ‘deal’ when studying for a higher level degree; therefore as knowledge about the course accumulates in-use, it does not affect their evaluation of *give* because this judgement is already set in mind. In other words, students are prepared to make the requisite sacrifices regardless of how much they learn about the course during its consumption. In light of this discussion, overall the author concludes that H4_B is not supported.

H4_C = There is a significant positive relationship between knowledge and money.

Table E1.8 indicates that the knowledge→money relationship is not significant for either cohort at any time point, and consequently the pattern is consistent over time. The explanation for this finding follows the same argument advanced in relation to H1_C insofar that students’ financial sacrifice is not personally felt and/or is considered as an unrecoverable sunk cost, and consequently it does not influence perceptions. In conclusion, the results do not provide support for H4_C.

E1.2.5 Emotions and value

The discussion in this section concerns the hypotheses relating to the impact of emotions on the three value components.

Table E1.10 Impact of emotions on value

Structural pathways	TIME 1			TIME 2			TIME 3		
	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff
Emo→ Get	NS	✓	-	✓	✓	yes	✓	✓	no
Emo→ Give	NS	NS	-	NS	NS	-	✓	NS	-
Emo→ Money	NS	✓	-	NS	NS	-	NS	NS	-

Note: ✓ = significant pathway; Sig. diff = whether significant difference between cohort






H5_A = There is a significant positive relationship between emotions and get.

Reference to Table E1.10 demonstrates that, of the six emotions→get pathways, only one is not significant, i.e. at T¹ for C¹, therefore overall there is confirmation of the significant impact of emotions on *get* over time. This finding is consistent with well-documented literature as to the effects of emotions on consumer decision-making (e.g., Holbrook and Hirschman, 1982; Holbrook, 1994; Bagozzi *et al.*, 1999; Bickart and Schwarz, 2001; Chen and Dubinsky, 2003) and provides evidence of the particular impact that prevailing emotional states have on value formation, something that has not previously been examined. As for differences between the cohorts, there is a significant difference in the strength of the relationship at T², however at T³ the strength of the relationship is equivalent for both cohorts.

Given the lack of extant literature, an explanation for the difference in the magnitude of the relationship between cohorts must necessarily be speculative in nature, though the domain of the research contextualises the logic of the debate. The author suggests that cohort effects (Bryman and Bell, 2003) provides a possible explanation for the inter-cohort differences. Students are allocated to groups in Induction (they have no choice regarding group members) and thereafter group work characterises the first half of the course. Group work is usually highly emotionally-charged, as students must work harmoniously to submit group assessments, regardless of their personal likes and dislikes and cultural differences. In the second stage of the course, however, students work individually on their dissertations and therefore the effects of the group dynamics are not as strong, which explains why the pattern of significance converges at T³. Since the dynamics of a cohort are defined by the group work and vary from year to year, this provides an explanation both for why the relationship is significant for one cohort but not the other at T¹, and the difference in the strength of the inter-cohort relationship at T².

Turning to the intra-cohort results, Table E1.11 shows that the strength of the emotions→get association remains stable over time for C¹ between T² and T³ and for C² over all three time points. Collectively, the results provide strong support for H5_A.

Table E1.11 Emotions→ get pattern of comparison

Structural pathways	Cohort	Pattern of comparison		
		Time 1	Time 2	Time 3
Emo→ Get	1	NS		
	2			

NS = not significant

H5_B = There is a significant positive relationship between emotions and give.

Reference to Table E1.10 shows that, with the exception of a single pathway for C¹ at T³, emotions has no significant impact on *give*. In view that the literature is silent on the matter, as with H4_A the proposed explanation is conjectured on the basis of contextual understanding. The author suggests that once the course is underway, students quickly calculate how much time and effort needs to be sacrificed in order to meet the demands of the course. As explained in relation to H4_B, students perceive these sacrifices as a bundle of sunk costs that are known and accepted in advance of the consumption experience. Consequently, they have to allocate the same amount of time and effort in meeting the demands of the course regardless of their prevailing emotional states; in other words, if they have to force themselves to study when they are feeling frustrated, lonely or depressed, their sacrifice (i.e., time and effort) will not be any the lesser if they are feeling happy, excited or contented; thus, the lack of a significant relationship between emotions and *give*. According to this discussion, overall the author concludes that H5_B is not supported.

H5_C = There is a significant positive relationship between emotions and money.

Table E1.10 shows that with the exception of a single pathway for C² at T¹, emotions has no significant impact on money. The explanation for the overall non-significance of the pathway is the same as offered in relation to H1_C, i.e. that because perceptions of monetary sacrifice are absent when students’ parents or others pick up the financial costs of consumption, they do not resonate when value perceptions are formulated, thus accounting for the lack of a significant relationship between emotions and money. In view of this result, H5_C is not supported.

E1.2.6 Value and its outcomes

Attention focuses next on the proposed relationships between the three value components and satisfaction and discusses each of the related hypotheses in turn.

Table E1.12 Impact of value on satisfaction

Structural pathways	TIME 1			TIME 2			TIME 3		
	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff
Get → SF	✓	✓	no	✓	✓	yes	NS	✓	-
Give → SF	NS	NS	-	NS	NS	-	NS	✓	-
Money →SF	NS	NS	-	NS	NS	-	NS	NS	-

Note: ✓ = significant pathway; Sig. diff = whether significant difference between cohorts

H6_A = There is a significant positive relationship between *get* and satisfaction.

Table E1.12 demonstrates that the relationship between *get* and satisfaction is significant for 5 of the 6 pathways, i.e. for both cohorts at T¹ and T², and at T³ only for C². Reference to Table D4.9 in Chapter D4 reveals that the *get*→satisfaction coefficient for C₁ at T₃ is above the value generally associated with a significant relationship while the t-statistic is only slightly below the 5% level of significance, suggesting that the failure of the pathway to meet appropriate criteria for significance is relatively marginal. Despite this single disparity, the impact of *get* on satisfaction demonstrates considerable stability over time. This finding is consistent with the body of literature that finds value, whether conceptualised uni-dimensionally as an overall concept or multi-dimensionally as a composite of multiple dimensions, to be a significant determinant of satisfaction (e.g., Cronin *et al.*, 2000; Jones *et al.*, 2006; Overby and Lee, 2006; Carpenter, 2008; and see debate in Section B3.3).

A possible explanation for the lack of a significant relationship for C₁ at T₃ is the level of students' performance on the course, e.g. the degree classification obtained. Given that *get* represents the benefits obtained through studying the course, it follows that if a student's performance does not result in the desired level of achievement, their sense of satisfaction will be reduced or even obviated. Data on students' performance were not collected and thus the debate on this point is necessarily limited to conjecture.

In terms of inter-cohort effects, though the strength of the relationship is equivalent for both cohorts at T¹, there is a significant difference in the strength of the relationship between the cohorts at T². The idiosyncratic way in which value perceptions are formed and the debate advanced above regarding academic performance on the course provides an explanation for this variation.

Looking now at intra-cohort effects, Table E1.13 below demonstrates that the pattern of behaviour over time for both cohorts is linear, i.e. the strength of the relationship does not change across T¹ and T² for C¹, or across all three time points for C². This finding indicates that the effect of *get* on satisfaction over time is stable.

Table E1.13 *Get*→ satisfaction pattern of comparison

Structural pathways	Cohort	Pattern of comparison		
		Time 1	Time 2	Time 3
Get → SF	1	●————●	●	NS
	2	●————●	●————●	●

NS = not significant

Collectively the results indicate that *get* is an important determinant of satisfaction over time, and with the exception of a single pathway, the pattern of the *get*→satisfaction relationship across cohorts and across time is identical. Furthermore, although there is a variation in the strength of the relationship between cohorts at T^2 , at the same time the temporality of the magnitude of the relationship within cohorts remains constant. In light of these findings, $H6_A$ is supported.

$H6_B$ = There is a significant negative relationship between *give* and satisfaction.

The pattern of the significance of the relationships between *give* and satisfaction (Table E1.12) is the reverse of the pattern for *get*→satisfaction, i.e. 5 of the 6 pathways are not significant, while there is a significant impact at T_3 only for C_2 . Given wide agreement in the literature of the negative impact of sacrifice on satisfaction (e.g., Thaler, 1985; Zeithaml, 1988; Gale, 1994), this finding is clearly contrary to expectations. Moreover, while there is considerable empirical evidence of the link between value and satisfaction within the uni- and multi-dimensional research streams (for example, McDougall and Levesque, 2000; Yang and Peterson, 2004; Jones *et al.*, 2006; and see debate in Section B3.3), an omission of these studies is that none treat sacrifice as a separate construct. Consequently the differential impact of *get* and *give* on satisfaction does not emerge, suggesting that the main effects are accounted for by the *get* component.

Although related research in the contexts of b2c charity donation (Gipp *et al.*, 2008) and education (Ledden *et al.*, 2007) found a significant relationship between *give* and satisfaction, a limitation of the findings is that *give* is treated in both studies as a composite of monetary and non-monetary sacrifices; thus the magnitude of the individual *give* elements is confounded. In addition, the research population in Ledden *et al.* (2007) was part-time MBA students, and therefore it is likely that course-specific effects account for differing results. Consequently, the explanation for the non-significant relationship between *give* and satisfaction returns once more to the idea that students consider their time and effort sacrifices to be sunk costs and therefore they do not influence their feelings of satisfaction. Leading from the above discussion, it is concluded that $H6_B$ is not supported.

$H6_C$ = There is a significant negative relationship between money and satisfaction.

In terms of the above hypothesis, Table E1.12 reveals a consistent pattern over time in which the effect of money on satisfaction is not significant for either cohort at any

time point. As discussed above in relation to H6_B, this finding is contrary to expectations in view of the accepted negative effect of financial sacrifice on satisfaction. Moreover, as already noted, and accepting the previously discussed caveat, this finding runs counter to the results of the author’s related research (Ledden *et al.*, 2007; Gipp *et al.*, 2008).

The proposed explanation for this finding follows similar lines for that advanced in relation to H1_C, i.e. that, in the present context, students’ financial sacrifice is not personally felt because parents or others carry the monetary costs of studying the degree. Moreover, since the costs take place well before the start of the course they are considered as unrecoverable sunk costs and thus they do not influence perceptions. In conclusion, the results do not provide support for H6_C.

H7 = There is a significant positive relationship between satisfaction and intention.

Although not a focal aspect of this research, discussion focuses next on the single hypothesis relating to value’s outcome variables.

Table E1.14 Impact of satisfaction on intention







Structural pathways	TIME 1			TIME 2			TIME 3		
	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff
SF→ Intention	✓	✓	no	✓	✓	no	✓	✓	no

Note: ✓ = significant pathway; Sig. diff = whether significant difference between cohorts

Table E1.14 below demonstrates that the satisfaction→intention pathway is significant for both cohorts across all three time points and thus exhibits considerable stability over time. This finding is consistent with related literature that supports a significant relationship between satisfaction and behavioural intentions, whereby value impacts on intention only through satisfaction (e.g., Cronin *et al.*, 1997; Oh, 1999; Hackman *et al.*, 2006 Gallarza and Saura, 2006). Table E1.14 also demonstrates that there are no significant differences between the cohorts, indicating that the strength of the relationship is equivalent for both.

Furthermore, Table E1.15 below shows that the magnitude of the relationship intra-cohort remains the same over time for both cohorts. Taken collectively, the results provide considerable evidence of a significant and stable relationship between satisfaction and intention over time, and therefore H7 is unequivocally supported.

Table E1.15 Satisfaction→ intention pattern of comparison

Structural pathways	Cohort	Pattern of comparison		
		Time 1	Time 2	Time 3
SF→ Intention	1			
	2			

E1.2.7 Knowledge, emotions and satisfaction







Finally, though not included among the research hypotheses, testing for the moderating effects of knowledge and emotions revealed existence of direct effects on satisfaction as presented in Tables E1.16 and E1.17. No discussion is provided given that these findings fall outside the focal interest of the study, but very briefly, the pattern related to knowledge is inconclusive, while emotions is a significant determinant of satisfaction for both cohorts and across time.

Table E1.16 Impact of knowledge and emotions on satisfaction

Structural pathways	TIME 1			TIME 2			TIME 3		
	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff	Cohort 1	Cohort 2	Sig. diff
Know→SF	✓	NS	-	NS	✓	-	NS	NS	-
Emo→ SF	✓	✓	no	NS	✓	-	✓	✓	no

Note: ✓ = significant pathway; Sig. diff = whether significant difference between cohorts

Table E1.17 Emotions→satisfaction pattern of comparison

Structural pathways	Cohort	Pattern of comparison		
		Time 1	Time 2	Time 3
Emo→ SF	1			
	2			

NS = not significant

E1.3 OVERALL CONCLUSIONS

A summary of the results is presented in Table E1.18, from which it can be seen that of the 19 originally hypothesised relationships (taking into consideration the re-conceptualised *give* component), 10 are supported, 7 are not supported and, for two, the pattern is too diffused to draw a meaningful conclusion. All hypothesised determinants (i.e., SQ, TV, IV, knowledge and emotions) of the *get* component of

value are found to be significant. For the *give* component, two (i.e., SQ and IV) are significant, while for money only IV is a significant determinant. Comparisons between the two cohorts (i.e., inter-cohort differences) reveal the existence of a number of significant differences in the relative strength of corresponding relationships (denoted as §). Finally, in terms of the focal interest of this study, there is substantial evidence of the temporal nature of the functional relationships of the value components. Four of the hypothesised relationships (i.e., H1_B, H2_A, H3_B and H4_A) are supported at a single time point, while a number of significant intra-cohort differences (denoted as ¥) are identified. Overall the findings confirm a long-held but hitherto empirically unsupported claim in the literature that value is temporal and dynamic (Parasuraman, 1997; Woodruff, 1997; Patterson and Spreng, 1997; Chen and Dubinsky, 2003; Woodall, 2003; Khalifa, 2004; Smith and Colgate, 2007); specifically, they provide empirical support for the proposition that value perceptions at different stages of the consumption experience affect its functional relationships differently over time.

Table E1.18 Summary of hypothesis testing

Hypotheses	Conclusions
H1 _A Service quality→Get	Supported. Inter- [§] and intra- [¥] cohort differences
H1 _B Service quality→Give	Supported only at T ³
H1 _C Service quality→Money	Not supported
H2 _A Terminal values→Get	Supported mainly at T ² . Inter- [§] and intra- [¥] cohort differences
H2 _B Terminal values→Give	Too diffused to enable meaningful conclusions to be drawn
H2 _C Terminal values→Money	Too diffused to enable meaningful conclusions to be drawn
H3 _A Instrumental values→Get	Supported only for C ² . Intra- [¥] cohort differences
H3 _B Instrumental values→Give	Supported only at T ³ . Inter- [§] cohort differences
H3 _C Instrumental values→Money	Supported
H4 _A Knowledge→Get	Supported mainly at T ²
H4 _B Knowledge→Give	Not supported
H4 _C Knowledge→Money	Not supported
H5 _A Emotions→Get	Supported; Inter- [§] -cohort differences
H5 _B Emotions→Give	Not supported
H5 _C Emotions→Money	Not supported
H6 _A Get→Satisfaction	Supported; Inter- [§] -cohort differences
H6 _B Give→Satisfaction	Not supported
H6 _C Money→Satisfaction	Not supported
H7 Satisfaction→Intention	Supported

Note: Unless otherwise specified supported (or not supported) indicates support (or lack of support) for the relationship for both cohorts across all three time points.

E1.4 THEORETICAL CONTRIBUTIONS OF THE RESEARCH

In order to examine the temporal stability of functional relationships between value and its antecedents and outcomes a theoretically grounded model is developed and tested. The model reflects current developments in the conceptualisation of the consumer perceived value construct and incorporates empirically supported antecedents and outcomes of value. The proposed model is tested on two samples (cohorts) at three points in time within an educational domain, and as such the research represents the first longitudinal study of its kind. The explanatory powers of the proposed model are confirmed across times and for both samples. Examination of the behaviour of the hypothesised functional relationships reveals a number of patterns that have not as yet been reported in extant literature; hence this research is considered to make a number of important theoretical contributions to the subject matter:

1. The idiosyncratic (i.e., inter-cohort differences) nature of value and its functional relationship with its antecedents and consequences is demonstrated. Consequently, the need to account for contextual specificities, both of domain and population, is indicated.
2. Taking into consideration the above comment, the adopted multi-dimensional conceptualisation of the *give* and *get* components is empirically confirmed. In addition, the need to consider the location of monetary sacrifice within the *give* component is highlighted.
3. There is compelling evidence of the differential behaviour of the *give* and *get* components of value. This leads to the recommendation that, in order to avoid confounding effects, future studies should treat *give* and *get* as separate constructs rather than modelling value as a higher order construct.
4. Following from above, the study provides evidence of the dominance of the *get* component of value in the formation of satisfaction.
5. Overall, the temporal nature of those functional relationships that are found to be significant is confirmed. Specifically:
 - a. There is a time lag before some determinants (i.e., SQ, TV, IV and knowledge) have a significant impact on the formation of value. This implies that, when investigating aspects of value, the stage of the consumption experience should guide researchers' decisions regarding choice of antecedents.

- b. Related to the above, there is tentative evidence to suggest that as consumption progresses, value is formed by a larger number of factors/determinants. Therefore, the level of complexity of the research framework must reflect the stage in consumption.
- c. For the *get* component of value, significant variations in the strength of its functional relationships over time (i.e., intra-cohort differences) are found to exist. Consequently, in order to avoid confounding effects, researchers must ensure the temporal comparability of consumption amongst participants (i.e., respondents should be at similar stage of their consumption experience).

E1.5 MANAGERIAL GUIDELINES

The theoretical contributions discussed above provide the foundation for a set of guidelines that will assist marketing managers in understanding both the nature and drivers of consumer value and its importance in determining satisfaction and related behavioural intentions. Given that value is inherently contextual and situational, the guidelines are offered as broad suggestions for marketing and managerial practice rather than as a set of normative rules for specific strategies or activities, and, where particularly relevant, specific recommendations are offered for the educational context.

First and most fundamentally, the results of this study provide substantial evidence that the multi-dimensional perspective of value is vital to unlocking its considerable complexity; specifically, that the concept of value is better understood as a comparison of multiple cognitive and affective benefits in relation to multiple sacrifices in the form of both money and physic costs. The basic implication of this on managerial practice is that organisations are ill-advised to think of value as a simplistic measure of 'value for money', as this provides only a very limited basis on which to create marketing strategies to communicate and deliver value to customers.

Leading from the above, this study has identified the differential nature and strengths of the *get* and *give* components of value at different stages in the consumption experience. The implication for managerial practice is that *give* and *get* must be treated separately, i.e. there is a need to understand the drivers of each, and the role that both play in forming satisfaction. The dominance of *get* in value's structural relationships plainly points to the need for managers to identify which benefits provide value to customers through every stage of the consumption

situation in order to communicate a clear differential advantage in the marketplace. In terms of *give*, the situation is less clear-cut, since evidence provided by this study points to sacrifice as highly context-specific. In particular, managers in high-involvement services should establish when monetary sacrifice is considered as a sunk cost that does not influence value perceptions, and in this case communication strategies should focus on the benefits of the product instead of attempting to minimise costs. In the educational context, communication strategies should emphasise the benefits of undertaking a course of study in terms of both functional (i.e., assisting career development) and epistemic (i.e., acquiring new knowledge) gains as well as the related social and personal emotional benefits.

The idiosyncratic nature of value indicates that consumers' value perceptions are likely to differ, in both strength and importance, for the same product delivered at different times to different groups of consumers, even when consumer segments are comparatively homogenous. The point is that managers cannot afford to assume that value perceptions for the same product will be held identically and consistently by all consumers at all times. This reinforces the importance of market orientation and segmentation in underpinning an organisation's marketing strategy and consequently the need for managers to continually update marketing intelligence gathering in relation to customer and market trends and preferences, and to focus marketing research efforts on gathering comprehensive data on existing and potential customers.

Leading from the above, there is a clear need for managers to account for personal influences on value perceptions, especially based on the evidence that consumers' consumption goals (i.e., *get*) and the sacrifices needed to achieve them (i.e., *give*) are guided both by their life-goals and the behaviours that are directed at achieving these. There are two main managerial implications of this. Firstly, from the evidence provided by this study, it seems likely that cultural and national differences influence consumer value, and thus a need emerges for global organisations to consider dissimilar cultural values systems when devising integrated communications strategies for identical offerings. This is particularly relevant in the education domain, given the increasing numbers of international students seeking to study in the UK; thus, understanding the personal values systems and consumption goals of students from different cultures is crucial to understanding how their perceptions of educational value are formed.

Secondly, communicating an organisation's offer from the perspective of how it can assist consumers in achieving their preferred end states of existence offers marketing managers a powerful positioning tool. In the education context,

communications should highlight the role that a master's degree can play in terms of enabling career goals and thus life-goals to be achieved, for example by featuring profiles of past students in marketing materials and encouraging successful alumni to participate in events and networking functions.

Service quality is without doubt an important driver of perceptions of value, however the strength of quality perceptions are likely to vary, both between different consumers (i.e., when the same service is delivered for different people at different times), and for the same consumer within a single consumption experience (i.e., when the delivery of the service takes place over an extended period). There are several implications of this for managerial practice. Firstly, though variability is inherent in service delivery, it is clear that those organisations that are able to maintain consistent levels of service quality will be more successful in stabilising consumers' value perceptions over time. Moreover, high-involvement service industries in which the consumer collaborates closely with the provider in the production of the service (e.g., as in education) will inevitably engender variable value perceptions. In this respect, organisations must ensure that contact staff are provided with appropriate training and support to ensure that a high level of service quality is maintained throughout prolonged consumer interactions.

Following from the above, the present study's examination of value at key points in the consumption experience points to the importance of trigger events in the service encounter in shaping quality-value perceptions. Though these events are context specific, they provide evidence to support the suggestion that organisations should identify and monitor (for example, using critical incident technique) the more important touch points in the service delivery and devise fail-safe procedures (e.g., through services blueprinting) to mitigate service failures that might lead to unfavourable value perceptions. In terms of the education context, managers must understand the key points in the delivery of the educational experience at which perceptions of service quality have a particular influence on perceptions of educational value. As an example, the provision of sufficient resources that offer students support through their studies, such as dedicated staff to show students how to develop both personal and life skills as well as study skills, will contribute to overall perceptions of higher service quality.

Lastly, the cognitive and affective influences on value perceptions should not be overlooked by managers. In terms of the former, while consumer learning about a product assists in the formation of value perceptions, its effects do not become important until consumption has progressed to a point at which the knowledge gained is meaningful. For complex service products, therefore, marketing managers

should provide consumers with timely, useful and pertinent product information that will enhance their value perceptions. With regard to affective influences on value formation, evidence regarding the important role of emotions throughout the duration of the consumption experience is compelling. From a managerial perspective, there is a clear need to create marketing tools that ensure consumers' emotional responses to the offering are favourable at all times.

E1.6 SUGGESTIONS FOR FURTHER RESEARCH

Despite the merits of the research and the contributions that it makes to marketing knowledge and management, this study contains certain limitations (see Section A1.6) which, taken together with insights from the conclusions, offer opportunities for further research that are presented below in no particular order.

First, the evident impact of instrumental and terminal values suggest that future research should fully account for cultural and national influences on consumers' perceptions of value. Second, the boundary conditions of the results must be confirmed across different types of services and market environments. In this respect, future research should explicitly incorporate domain specificities and characteristics, for example the impact of critical incidents during service delivery. Leading from the this, the third suggestion relates to testing the stability of the patterns of relationships between value and its antecedents and outcomes with a larger sample. Fourth, the time frame of investigations into the temporal aspects of value should be extended beyond the use/consumption experience itself to include pre- and post- (including disposal) purchase perceptions.

Fifth, this study focused on the temporal behaviour of the functional relationships between value and its antecedents and outcomes, however the more general question of temporal stability of value perceptions *per se* and any changes therein needs to be investigated via latent growth models.

Finally, while positivistic methodologies enable knowledge of the consumer value construct to be gained at the level of the general nature and behaviour of the construct within its nomological network (i.e., consumer value at the aggregate level) at the same time such methodologies are limited in terms of their suitability for investigating the idiosyncrasies of value at an individual level. Consequently, research within the interpretivist paradigm offers researchers an opportunity to investigate the construct at the level of meaning it holds for individual consumers. As an example in the present research context, interpretivist research could focus on uncovering how individual students construe their perceptions of educational value

and the way that these are modified over the duration of their study experience, for example in response to critical incidents. Such methods would enable concurrent investigation into the impact that students’ particular cultural backgrounds have on value formation, i.e. in order to better understand how culturally derived personal values influence educational consumption value.

APPENDICES

- **APPENDIX A:** Synopsis of the structure of MA in Marketing course
- **APPENDIX B:** Questionnaire at Time 1
- **APPENDIX C:** Questionnaire at Time 2
- **APPENDIX D:** Questionnaire at Time 3
- **APPENDIX E:** Convergent and discriminant validity
- **APPENDIX F:** Collinearity analysis

APPENDIX A

Synopsis of the structure of MA In Marketing course

Marketing MA

Marketing with English MA

Choose this course

Designed for graduates of any discipline, this course will launch your career in marketing by teaching you the latest in marketing theory and practice. It will prepare you for a variety of careers in marketing management, such as brand management, product development, retailing, services marketing, business-to-business marketing and not-for-profit marketing. It will also prepare you for a career in specialist marketing areas, such as market research, advertising, public relations and direct marketing.

Marketing

You will study eight core modules, plus an extra module of your choice, which address the latest issues in marketing theory and practice. You will learn about the operational management decisions that form the basis of the marketing plan from an international perspective. You will look at how marketing strategy places marketing management decisions and marketing plans within the broader framework of the organisation's corporate structure, industry and business environment. You will examine the principles and theory of investment behaviour and their relevance to marketing decisions. You will also focus on the collection, analysis and use of marketing data for marketing decisions, as well as the behaviours of buyers. In addition you will be introduced to advertising, sales promotions and public relations, and the importance of an integrated communications campaign.

Marketing with English

Based on the MA in Marketing and designed specifically for international students, this course enables you to study marketing at masters level in addition to developing your practical and applied English language skills in preparation for a career in marketing. It also explores aspects of UK and international social and business cultures and practices.

You will study six marketing modules that address the latest issues in marketing theory and practice, together with two English language modules and a module in career planning. The Research Methods module will prepare you for your dissertation, in which you can focus on a specific area of marketing or business-related English, enabling you to tailor your MA to your interests and career aspirations.

Assessment

Examinations, individual and group-based assignments, presentations, time-constrained work and case studies, dissertation

Modules

Core modules

- Global Marketing Management
- Marketing Strategy
- Marketing Communications
- Buyer Behaviour
- Market Research
- Survey Analysis
- Planning Your Career in Marketing and Communications
- Research Methods and Dissertation

Marketing MA

- Marketing Finance

Marketing with English MA

- Academic English for Business 1&2

Option modules (choose 1)


- Business-to-Business Marketing
- Corporate Social Responsibility
- Internet Marketing
- Retail Strategy and Marketing
- Services Marketing
- Strategic Brand Management

Special features

- The study group ethos of the course encourages students to stay in touch, providing a strong networking and support structure after the course has ended.
- Our marketing masters programmes are in the top rank* of marketing courses in the country (*www.careerdynamo.com).
- Kingston Business School is recognised by the foremost professional marketing bodies in the UK:
 - The Chartered Institute of Marketing as an accredited study centre for the provision of Continuing Professional Development
 - The Institute of Direct Marketing
 - The Market Research Society
- The Faculty of Business and Law is offering six bursaries to international students on our full-time masters programmes. For details contact mmgf@kingston.ac.uk or see the course webpage.

Research areas

Research carried out on this course includes an examination of market orientation in developing countries, a study of international advertising standardisation, and an examination of the interplay between brand image and country of origin. To find out more about research within the Business School, see page 6 or visit www.kingston.ac.uk/businessresearch

Duration FT: 1 yr	Location Kingston Hill campus	 Want to know more? www.kingston.ac.uk/pgmarketing www.kingston.ac.uk/pgmarketingenglish
Attendance FT: 5 days per week	Apply See page 61	
Entry requirements Marketing MA: Good honours degree, or equivalent, in any subject. International students must have an IELTS score of 7.0 or equivalent. Marketing with English MA: Good honours degree, or equivalent, in any subject. International students must have an IELTS score of 6.0 or equivalent.	Contact Postgraduate admissions team T: +44 (0)20 8417 5441 F: +44 (0)20 8417 5026 E: businesspgenquiry@kingston.ac.uk	

APPENDIX B

Questionnaire at Time 1

A Study of Educational Value

Your help needed, please!

As a postgraduate student at Kingston Business School, your views are important to us. Therefore, you are invited to participate in a study that aims to investigate how perceptions of educational value change over time. In particular, the research relates to your experience of studying at Kingston Business School, and your feelings associated with the experience.

Because the research focuses on how the passage of time affects people's attitudes, with your permission we will be surveying your study experiences on different occasions over the coming year. This means that you will be asked to complete separate questionnaires, one on each occasion. The questionnaire should only take around 10 minutes to complete each time.

Confidential and anonymous

To enable responses to be attributed to the same respondent each time (which is an important aspect of the research) you will be asked to insert your student ID number on the questionnaire. This is necessary to ensure that responses obtained from respondents at each point in time can be compared. You can be assured of complete anonymity because respondents will not be identified by name. Your responses will remain completely confidential.

Thank you for co-operating

As a thank you for your co-operation and contribution, completed questionnaires will be entered into a prize draw for the chance to win an iPod – one on each survey occasion. To enter the draw, just complete a Prize Draw Entry Slip and return this separately from the questionnaire in order to preserve your anonymity.

Finally, if you have any questions about the questionnaire or the research, you are welcome to contact the Head of School of Marketing, Professor Wendy Lomax. Thank you in advance for your time, trouble and, above all, support.

VERY IMPORTANT!

**DON'T FORGET TO INSERT YOUR STUDENT ID
NUMBER HERE**

.....

.....

Respondents will not be identified by name, and your responses will remain entirely confidential. Thank you very much for your co-operation.

You are:

Female _____

$45 + \underline{\quad}$

--

SECTION 1: YOU AS A PERSON

This section relates to the personal values that you, as an individual, uphold in your everyday life.

Please indicate the extent to which you feel that the following are important to you, as a person, by circling the appropriate number.

	IMPORTANT			Neither important nor unimportant	UNIMPORTANT		
	Extremely	Quite	Slightly		Slightly	Quite	Extremely
1. An exciting life (i.e. a stimulating, active life)	7	6	5	4	3	2	1
2. A world at peace (i.e. free of war and conflict)	7	6	5	4	3	2	1
3. Equality (i.e. brotherhood, equal opportunity for all)	7	6	5	4	3	2	1
4. Family security (i.e. taking care of loved-ones)	7	6	5	4	3	2	1
5. Happiness (i.e. being content)	7	6	5	4	3	2	1
6. National security (i.e. protection from attack)	7	6	5	4	3	2	1
7. Pleasure (i.e. an enjoyable, leisurely life)	7	6	5	4	3	2	1
8. Self-respect (i.e. self esteem)	7	6	5	4	3	2	1
9. Social recognition (i.e. respect, admiration)	7	6	5	4	3	2	1
10. Wisdom (i.e. a mature understanding of life)	7	6	5	4	3	2	1

Please indicate the extent to which you feel that the following characteristics describe you, as a person, by circling the appropriate number.

	Extremely like me	Mostly like me	Fairly like me	Neither like me nor unlike me	Fairly unlike me	Mostly unlike me	Extremely unlike me
11. Ambitious (i.e. hard working, aspiring)	7	6	5	4	3	2	1
12. Broad minded (i.e. open minded)	7	6	5	4	3	2	1
13. Capable (i.e. competent, effective)	7	6	5	4	3	2	1
14. Cheerful (i.e. light-hearted, joyful)	7	6	5	4	3	2	1
15. Helpful (i.e. working for the welfare of others)	7	6	5	4	3	2	1
16. Honest (i.e. sincere, truthful)	7	6	5	4	3	2	1
17. Imaginative (i.e. daring, creative)	7	6	5	4	3	2	1
18. Independent (i.e. self-reliant, self-sufficient)	7	6	5	4	3	2	1
19. Loving (i.e. affectionate, tender)	7	6	5	4	3	2	1
20. Obedient (i.e. dutiful, respectful)	7	6	5	4	3	2	1
21. Polite (i.e. courteous, well-mannered)	7	6	5	4	3	2	1
22. Responsible (i.e. dependable, reliable)	7	6	5	4	3	2	1
23. Self-controlled (i.e. restrained, self-disciplined)	7	6	5	4	3	2	1

SECTION 2: YOU AND YOUR COURSE

This section is concerned with your thoughts about the course that you are taking at Kingston Business School.

Please indicate your level of agreement with each statement by circling the appropriate number.

	Very strongly agree	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Very strongly disagree
Your course in relation to your career							
24. My degree will allow me to earn a good salary	7	6	5	4	3	2	1
25. My degree will allow me to achieve my career goals	7	6	5	4	3	2	1
26. My degree will lead to promotion in my future job	7	6	5	4	3	2	1
The content of your course							
27. The content of the course will keep me interested	7	6	5	4	3	2	1
28. I will learn new things from the course	7	6	5	4	3	2	1
29. The course content will contribute to the high value of my education	7	6	5	4	3	2	1
30. The academic guidance I will receive from my lecturers will enhance the value of my degree	7	6	5	4	3	2	1
Your course in relation to other people							
31. People who are important to me think that taking this course is a good thing to do	7	6	5	4	3	2	1
32. People who influence what I do think that taking this course is a good idea	7	6	5	4	3	2	1
33. When I have finished my degree, my future employer will see me in a good light	7	6	5	4	3	2	1
The course in relation to your own feelings							
34. I feel proud that I've been accepted on this course	7	6	5	4	3	2	1
35. Being accepted on this course has boosted my self confidence	7	6	5	4	3	2	1
36. Being accepted on this course has given me a sense of self-achievement	7	6	5	4	3	2	1
Other factors connected with your course							
37. The support materials supplied to me on my course (e.g. study packs, text books) will help my learning	7	6	5	4	3	2	1
38. The Kingston Hill campus and its facilities will contribute to the value of my course	7	6	5	4	3	2	1

	Very strongly agree	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Very strongly disagree
The sacrifices you made to take your course							
39. I will have to give up some other interests of mine in order to do my course	7	6	5	4	3	2	1
40. My studies will reduce the time I spend with my family	7	6	5	4	3	2	1
41. My studies will reduce the time I spend with my friends	7	6	5	4	3	2	1
42. I will have to work hard to successfully complete this course	7	6	5	4	3	2	1
43. Getting through the course work will require a lot of effort on my part	7	6	5	4	3	2	1
44. The journey to the campus from where I'm living at the moment is a difficult one	7	6	5	4	3	2	1
45. The course fee represents a considerable amount of money	7	6	5	4	3	2	1
46. Aside from the course fee, doing this course will involve considerable additional expense	7	6	5	4	3	2	1
What you think about Kingston Business School (KBS)							
47. KBS's reputation influences the value of my degree	7	6	5	4	3	2	1
48. The image projected by KBS has an influence on the value of my degree	7	6	5	4	3	2	1
49. I believe that employers would have positive things to say about KBS	7	6	5	4	3	2	1
50. I have heard positive things about KBS	7	6	5	4	3	2	1
51. I believe that KBS has a good reputation	7	6	5	4	3	2	1
How happy are you with your experience so far?							
52. All things considered, so far I am satisfied with my course	7	6	5	4	3	2	1
53. Overall, so far I am satisfied with my educational experience at KBS	7	6	5	4	3	2	1
54. My decision to do this course has been a wise one	7	6	5	4	3	2	1
55. If I had to do it again, I would still choose my course	7	6	5	4	3	2	1
56. I would be willing to recommend my course to people like myself	7	6	5	4	3	2	1
57. I would be willing to recommend my course to anyone	7	6	5	4	3	2	1
58. I would be willing to recommend KBS to anyone considering a postgraduate business degree	7	6	5	4	3	2	1

SECTION 3 : YOUR FAMILIARITY WITH YOUR COURSE

This section deals with how much you know about your course at this point in time.

Please indicate your level of agreement with the statement shown in *italics* in relation to each of the following items, by circling the appropriate number.

“At this point in time, I consider myself to be very knowledgeable about...”

	Very strongly agree	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Very strongly disagree
59. The course timetable (e.g. when and where classes take place)	7	6	5	4	3	2	1
60. The course curriculum (e.g. what subjects you will be taught)	7	6	5	4	3	2	1
61. The academic requirements (e.g. what is expected of you in terms of your performance on the course)	7	6	5	4	3	2	1
62. The course assessments (e.g. how your work will be assessed in terms of assignments, exams etc.)	7	6	5	4	3	2	1
63. The course regulations (e.g. how you will progress through the course)	7	6	5	4	3	2	1
64. The administrative arrangements (e.g. how to hand in course work, how to find information you need)	7	6	5	4	3	2	1
65. The Learning Resources Centre (e.g. how to use the Library's resources)	7	6	5	4	3	2	1
66. The course teaching team (e.g. who your lecturers are, where they are located, how to contact them)	7	6	5	4	3	2	1
67. The IT facilities (e.g. the location of the computer labs, Blackboard)	7	6	5	4	3	2	1
68. The Kingston Hill campus (e.g. how to find your way around the campus, car parking)	7	6	5	4	3	2	1
69. The catering facilities (e.g. the student bar and cafes, where to find what you want to eat / drink)	7	6	5	4	3	2	1
70. The social and recreational facilities (e.g. sports activities, where to meet other students)	7	6	5	4	3	2	1
71. The pastoral care facilities (e.g. where to go if you have a problem you need to discuss)	7	6	5	4	3	2	1

Based on what you know about the course overall at this point in time, please indicate your level of agreement with the following statement by circling the appropriate number.

	Very strongly agree	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Very strongly disagree
72. Overall, so far I know a lot about my course	7	6	5	4	3	2	1

SECTION 4 : YOUR FEELINGS

This section relates to the emotions that you are feeling at this point in time.

Please indicate your level of agreement with the statement shown in *italics* in relation to each of the following emotions, by circling the appropriate number.

<i>“Now that I have started the course, I feel ...”</i>	Very strongly agree	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Very strongly disagree
73. Frustrated (i.e. angry, irritated)	7	6	5	4	3	2	1
74. Nervous (i.e. worried, tense)	7	6	5	4	3	2	1
75. Depressed (i.e. sad, miserable, stressed)	7	6	5	4	3	2	1
76. Happy (i.e. pleased, joyful, relieved)	7	6	5	4	3	2	1
77. Embarrassed (i.e. ashamed, humiliated)	7	6	5	4	3	2	1
78. Calm (i.e. peaceful, settled)	7	6	5	4	3	2	1
79. Lonely (i.e. homesick)	7	6	5	4	3	2	1
80. Envious (i.e. jealous)	7	6	5	4	3	2	1
81. Contented (i.e. fulfilled, proud)	7	6	5	4	3	2	1
82. Optimistic (i.e. encouraged, hopeful)	7	6	5	4	3	2	1
83. Scared (i.e. afraid, insecure)	7	6	5	4	3	2	1
84. Excited (i.e. thrilled, enthusiastic, eager)	7	6	5	4	3	2	1
85. Surprised (i.e. amazed, astonished)	7	6	5	4	3	2	1

Thinking about your feelings overall at this point in time, please indicate your level of agreement with the following statement by circling the appropriate number.

	Very strongly agree	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Very strongly disagree
86. Overall, so far I have had a pleasant experience on the course	7	6	5	4	3	2	1

Thank you for completing this questionnaire.
Please hand it back to your lecturer together with your prize draw slip.

APPENDIX C

Questionnaire at Time 2

A Study of Educational Value: 1st Follow-up Questionnaire

Your help needed again, please!

Hopefully you will remember taking part in a survey last October about your initial experience of studying at Kingston Business School. This follow-up questionnaire is part of the same research project, which aims to investigate how the passage of time affects people's perceptions of educational value. As before, it should only take around 10 minutes to complete.

Confidential and anonymous

To enable responses to be attributed to the same respondent each time – a crucial aspect of the research – you are asked to insert your student KU number on the questionnaire. This is necessary to ensure that responses obtained at each point in time can be compared. You can be assured of complete anonymity because you will never be identified by name. Your responses will remain completely confidential.

Thank you for co-operating

As a thank you for your co-operation and contribution, completed questionnaires will be entered into a prize draw for the chance to **win an iPod**. To enter the draw, just complete a Prize Draw Entry Slip and return this separately from the questionnaire in order to preserve your anonymity.

Finally, if you have any questions about the research, you are welcome to contact the Head of School of Marketing, Professor Wendy Lomax. Thank you in advance for your time, trouble and, above all, support for this important research – your contribution is very highly valued.

VERY IMPORTANT!

DON'T FORGET TO INSERT YOUR KU ID NUMBER HERE

.....

Kingston University London

SECTION 1: YOUR EXPECTATIONS

Think back to the time when you started your course. Using the scale below, please circle the number that best represents how closely your expectations have been met since that time, with regard to each of the items specified.

(NB: Unless specifically indicated otherwise, references to “staff” means staff in general).

	BETTER THAN EXPECTED			Just as I expected	WORSE THAN EXPECTED		
	A great deal	Much	Slightly		Slightly	Much	A great deal
1. Up to date equipment and facilities	7	6	5	4	3	2	1
2. Visually appealing campus	7	6	5	4	3	2	1
3. The convenience of the location	7	6	5	4	3	2	1
4. The expertise of the lecturing staff	7	6	5	4	3	2	1
5. The expertise of the supporting staff (e.g. Library, Admin, Technical)	7	6	5	4	3	2	1
6. The ability of the staff to keep promises	7	6	5	4	3	2	1
7. The assurance that any problems you may have will be resolved	7	6	5	4	3	2	1
8. The dependability of the staff	7	6	5	4	3	2	1
9. Classes happening when they are supposed to	7	6	5	4	3	2	1
10. Accurate record keeping	7	6	5	4	3	2	1
11. The amount of information available to you	7	6	5	4	3	2	1
12. The promptness of staff attention	7	6	5	4	3	2	1
13. The helpfulness of the staff	7	6	5	4	3	2	1
14. The trustworthiness of the staff	7	6	5	4	3	2	1
15. The confidentiality of your dealings with the staff	7	6	5	4	3	2	1
16. The politeness of the staff	7	6	5	4	3	2	1
17. How well the staff are supported by the University to do their jobs well	7	6	5	4	3	2	1
18. The credibility of the staff	7	6	5	4	3	2	1
19. How well the staff understand your needs	7	6	5	4	3	2	1
20. The individual attention you receive	7	6	5	4	3	2	1
21. The accessibility of the facilities	7	6	5	4	3	2	1
22. The convenience of the operating hours	7	6	5	4	3	2	1
23. The time that staff have to deal with your questions or problems	7	6	5	4	3	2	1
24. The approachability of the staff	7	6	5	4	3	2	1
25. The willingness of the staff to provide help or guidance with problems	7	6	5	4	3	2	1

SECTION 2: YOU AND YOUR COURSE

This section is concerned with your thoughts about the course that you are taking at Kingston Business School.

Please indicate your level of agreement with each statement by circling the appropriate number.

	Very strongly agree	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Very strongly disagree
Your course in relation to your career							
26. My degree will allow me to earn a good salary	7	6	5	4	3	2	1
27. My degree will allow me to achieve my career goals	7	6	5	4	3	2	1
28. My degree will lead to promotion in my future job	7	6	5	4	3	2	1
The content of your course							
29. The content of the course keeps me interested	7	6	5	4	3	2	1
30. I learn new things from the course	7	6	5	4	3	2	1
31. The course content contributes to the high value of my education	7	6	5	4	3	2	1
32. The academic guidance I receive from my lecturers enhances the value of my degree	7	6	5	4	3	2	1
Your course in relation to other people							
33. People who are important to me think that taking this course is a good thing to do	7	6	5	4	3	2	1
34. People who influence what I do think that taking this course is a good idea	7	6	5	4	3	2	1
35. When I have finished my degree, my future employer will see me in a good light	7	6	5	4	3	2	1
The course in relation to your own feelings							
36. I feel proud that I'm taking this course	7	6	5	4	3	2	1
37. Taking this course has boosted my self confidence	7	6	5	4	3	2	1
38. Taking this course has given me a sense of self-achievement	7	6	5	4	3	2	1
Other factors connected with your course							
39. The support materials supplied to me on my course (e.g. study packs, text books) helps my learning	7	6	5	4	3	2	1
40. The Kingston Hill campus and its facilities contribute to the value of my course	7	6	5	4	3	2	1

	Very strongly agree	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Very strongly disagree
The sacrifices you made to take your course							
41. I have had to give up some other interests of mine in order to do my course	7	6	5	4	3	2	1
42. My studies have reduced the time I spend with my family	7	6	5	4	3	2	1
43. My studies have reduced the time I spend with my friends	7	6	5	4	3	2	1
44. I will have to work hard to successfully complete this course	7	6	5	4	3	2	1
45. Getting through the course work requires a lot of effort on my part	7	6	5	4	3	2	1
46. The journey to the campus from where I'm living at the moment is a difficult one	7	6	5	4	3	2	1
47. The course fee represents a considerable amount of money	7	6	5	4	3	2	1
48. Aside from the course fee, doing this course has involved considerable additional expense	7	6	5	4	3	2	1

What you think about Kingston Business School (KBS)

49. KBS's reputation influences the value of my degree	7	6	5	4	3	2	1
50. The image projected by KBS has an influence on the value of my degree	7	6	5	4	3	2	1
51. I believe that employers would have positive things to say about KBS	7	6	5	4	3	2	1
52. I have heard positive things about KBS	7	6	5	4	3	2	1
53. I believe that KBS has a good reputation	7	6	5	4	3	2	1

How happy are you with your experience so far?

54. All things considered, so far I am satisfied with my course	7	6	5	4	3	2	1
55. Overall, so far I am satisfied with my educational experience at KBS	7	6	5	4	3	2	1
56. My decision to do this course has been a wise one	7	6	5	4	3	2	1
57. If I had to do it again, I would still choose my course	7	6	5	4	3	2	1
58. I would be willing to recommend my course to people like myself	7	6	5	4	3	2	1
59. I would be willing to recommend my course to anyone	7	6	5	4	3	2	1
60. I would be willing to recommend KBS to anyone considering a postgraduate business degree	7	6	5	4	3	2	1

SECTION 3 : YOUR FAMILIARITY WITH YOUR COURSE

This section deals with how much you know about your course at this point in time.

Please indicate your level of agreement with the statement shown below in *italics* in relation to each of the following items, by circling the appropriate number.

“Now that I have been on my course for several months, I consider myself to be very knowledgeable about ...”

	Very strongly agree	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Very strongly disagree
61. The course timetable (e.g. when and where classes take place)	7	6	5	4	3	2	1
62. The course curriculum (e.g. what subjects you are being taught)	7	6	5	4	3	2	1
63. The academic requirements (e.g. what is expected of you in terms of your performance on the course)	7	6	5	4	3	2	1
64. The course assessments (e.g. how your work is assessed in terms of assignments, exams etc.)	7	6	5	4	3	2	1
65. The course regulations (e.g. how you progress through each stage of the course)	7	6	5	4	3	2	1
66. The administrative arrangements (e.g. how to hand in course work, how to find information you need)	7	6	5	4	3	2	1
67. The Learning Resources Centre (e.g. how to use the Library's resources)	7	6	5	4	3	2	1
68. The course teaching team (e.g. who your lecturers are, where they are located, how to contact them)	7	6	5	4	3	2	1
69. The IT facilities (e.g. the location of the computer labs, Blackboard)	7	6	5	4	3	2	1
70. The Kingston Hill campus (e.g. how to find your way around the campus, car parking)	7	6	5	4	3	2	1
71. The catering facilities (e.g. the student bar and cafes, where to find what you want to eat / drink)	7	6	5	4	3	2	1
72. The social and recreational facilities (e.g. sports activities, where to meet other students)	7	6	5	4	3	2	1
73. The pastoral care facilities (e.g. where to go if you have a problem you need to discuss)	7	6	5	4	3	2	1

Based on what you know about the course overall at this point in time, please indicate your level of agreement with the following statement by circling the appropriate number.

	Very strongly agree	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Very strongly disagree
74. Overall, so far I know a lot about my course	7	6	5	4	3	2	1

SECTION 4 : YOUR FEELINGS

This section relates to the emotions that you are feeling at this point in time.

Please indicate your level of agreement with the statement shown in *italics* in relation to each of the following emotions, by circling the appropriate number.

“Now that I have been on my course for several months, currently I’m feeling ...”

	Very strongly agree	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Very strongly disagree
75. Frustrated (i.e. angry, irritated)	7	6	5	4	3	2	1
76. Nervous (i.e. worried, tense)	7	6	5	4	3	2	1
77. Depressed (i.e. sad, miserable, stressed)	7	6	5	4	3	2	1
78. Happy (i.e. pleased, joyful, relieved)	7	6	5	4	3	2	1
79. Embarrassed (i.e. ashamed, humiliated)	7	6	5	4	3	2	1
80. Calm (i.e. peaceful, settled)	7	6	5	4	3	2	1
81. Lonely (i.e. homesick)	7	6	5	4	3	2	1
82. Envious (i.e. jealous)	7	6	5	4	3	2	1
83. Contented (i.e. fulfilled, proud)	7	6	5	4	3	2	1
84. Optimistic (i.e. encouraged, hopeful)	7	6	5	4	3	2	1
85. Scared (i.e. afraid, insecure)	7	6	5	4	3	2	1
86. Excited (i.e. thrilled, enthusiastic, eager)	7	6	5	4	3	2	1
87. Surprised (i.e. amazed, astonished)	7	6	5	4	3	2	1

Thinking about your feelings overall at this point in time, please indicate your level of agreement with the following statement by circling the appropriate number.

	Very strongly agree	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Very strongly disagree
88. Overall, so far I have had a pleasant experience on the course	7	6	5	4	3	2	1

Thank you for completing this questionnaire.

Please hand it back to your lecturer or return to Christopher in Room 304 together with your prize draw slip.

APPENDIX D

Questionnaire at Time 3

A Study of Educational Value

1. A Study of Educational Value: the Final Questionnaire

Thank you for visiting this survey, the last in our two-year study into educational value. As before, it should only take you around 10 minutes to complete.

The methodology requires that responses are attributed to the same respondent each time – a vitally important aspect of the research – so this is why you are asked to insert your Kingston ID number (or name, if you can't remember your ID) on the questionnaire; without it, your responses can't be used in the analysis. Individual respondents will never be identified by name, so your responses will remain completely confidential.

Your contribution to this research is highly valued by me and Wendy Lomax, the Head of School of Marketing. As a thank you, completed questionnaires will be entered into a prize draw for the chance to win an iPod Nano. The winner will be drawn after 30th November 2008.

Finally, my sincerest congratulations on achieving your MA, and all best wishes for your future career.

Lesley Ledden
Senior Lecturer in Marketing, Kingston Business School

A Study of Educational Value

2. Your Kingston ID number

* Please enter your Kingston ID (or name, if you can't remember your ID) here.
Remember that, without this, your responses cannot be used in the analysis.

A Study of Educational Value

3. Your expectations

Think back to the time when you started your course. Using the scale below, please check the box that best represents how closely your expectations were met over the duration of the course, with regard to each of the items specified. (NB: Unless indicated otherwise, references to "staff" means staff in general).

	A great deal better than expected	Much better than expected	Slightly better than expected	Just as I expected	Slightly worse than expected	Much worse than expected	A great deal worse than expected
Up to date equipment and facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visually appealing campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The convenience of the location	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The expertise of the lecturing staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The expertise of the supporting staff (e.g. Library, Admin, Technical)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The ability of the staff to keep promises	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The assurance that any problems you had would be resolved	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The dependability of the staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Classes happening when they were supposed to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accurate record keeping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The amount of information available to you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The promptness of staff attention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

A Study of Educational Value

4. Your expectations - continued

This is the concluding section about how closely your expectations were met during the course.

	A great deal better than expected	Much better than expected	Slightly better than expected	Just as I expected	Slightly worse than expected	Much worse than expected	A great deal worse than expected
The helpfulness of the staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The trustworthiness of the staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The confidentiality of your dealings with the staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The politeness of the staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well the staff were supported by the University to do their jobs well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The credibility of the staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well the staff understood your needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The individual attention you received	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The accessibility of the facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The convenience of the operating hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The time that staff had to deal with your questions or problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The approachability of the staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The willingness of the staff to provide help or guidance with problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

A Study of Educational Value

5. You and your course

This section is concerned with your thoughts about the course that you have just finished at Kingston. Please indicate your level of agreement with each statement by circling the appropriate number.

	Very strongly agree	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree	Very strongly disagree
My degree will allow me to earn a good salary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My degree will allow me to achieve my career goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My degree will lead to promotion in my future job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The content of the course kept me interested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I learnt new things from the course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The course content contributed to the high value of my education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The academic guidance I received from my lecturers enhanced the value of my degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who are important to me thought that taking this course was a good thing to do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who influence what I do thought that taking this course was a good idea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now that I have finished my degree, my future employer will see me in a good light	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel proud that I took this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

A Study of Educational Value

6. Your and your course - continued

This is the concluding section concerning your thoughts about the course. (You're now well over half-way through the questionnaire!)

	Very strongly agree	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree	Very strongly disagree
Taking this course has boosted my self confidence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taking this course has given me a sense of self-achievement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The support materials supplied to me on my course (e.g. study packs, text books) helped my learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Kingston Hill campus and its facilities contributed to the value of my course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had to give up some other interests of mine in order to do my course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My studies reduced the time I was able to spend with my family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My studies reduced the time I was able to spend with my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had to work hard to successfully complete this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting through the course work required a lot of effort on my part	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The journey to the campus from where I was living at the time was a difficult one	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The course fees paid represented a considerable amount of money	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aside from the course fees, doing this course involved considerable additional expense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

A Study of Educational Value

7. Your thoughts about Kingston Business School

Having completed your course, what do you think about Kingston Business School (KBS)? Please indicate your level of agreement with each statement by checking the appropriate box. (Only two more sections to go after this!)

	Very strongly agree	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree	Very strongly disagree
KBS's reputation influences the value of my degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The image projected by KBS has an influence on the value of my degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe that employers would have positive things to say about KBS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have heard positive things about KBS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe that KBS has a good reputation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
All things considered, I am satisfied with my course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall, I feel satisfied with my educational experience at KBS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My decision to do this course was a wise one	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I had to do it again, I would still choose my course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be willing to recommend my course to people like myself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be willing to recommend my course to anyone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would recommend KBS to anyone considering a PG business degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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8. Your familiarity with your course

This section deals with how much you know about your course, now that it is over. Please indicate your level of agreement with the statement shown below in relation to each of the following items, by checking the appropriate box.

	Very strongly agree	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree	Very strongly disagree
"Now the course is over, I consider myself very knowledgeable about . . ."							
The course timetable (when/where classes took place)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The course curriculum (the subjects you studied)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The academic requirements (how you were expected to perform on the course)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The course assessments (how your exams and assignments were assessed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The course regulations (how you progressed through the course)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The administrative arrangements (how to hand in course work, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Learning Resources Centre (the Library)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The course teaching team (who your lecturers were and how to contact them)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The IT facilities (how to use the computer labs and Blackboard etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Kingston Hill campus (finding your way around)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The catering facilities (the student bar and cafes etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The social and recreational facilities (sports & leisure activities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The pastoral care facilities (where to go if you had a problem to discuss)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall, I now consider that I know a lot about my course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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9. Your feelings

This is the last section in the questionnaire!

This section relates to the emotions that you are feeling at this point in time. Please indicate your level of agreement with the statement shown below in relation to each of the following emotions, by circling the appropriate number.

“Now the course is over, currently I’m feeling . . .”

	Very strongly agree	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree	Very strongly disagree
Frustrated (angry, irritated)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nervous (worried, tense)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Depressed (sad, miserable, stressed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Happy (pleased, joyful, relieved)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Embarrassed (ashamed, humiliated)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calm (peaceful, settled)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lonely (homesick)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Envious (jealous)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contented (fulfilled, proud)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Optimistic (encouraged, hopeful)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scared (afraid, insecure)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Excited (thrilled, enthusiastic, eager)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surprised (amazed, astonished)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall, I had a pleasant experience on the course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX E: CONVERGENT AND DISCRIMINANT VALIDITY

Table D2.4 Convergent validity (cross loadings) Cohort1, Time 2

	Conditional	Epistemic	Emotional	Functional	Image	Intention	Social	Satisfaction
CV1_2	0.907	0.446	0.338	0.298	0.073	0.495	0.247	0.366
CV2_2	0.796	0.176	0.310	0.368	0.041	0.230	0.377	0.254
EMV1_2	0.316	0.738	0.891	0.603	0.304	0.665	0.792	0.708
EMV2_2	0.333	0.578	0.902	0.618	0.266	0.434	0.704	0.550
EMV3_2	0.383	0.654	0.937	0.598	0.219	0.516	0.678	0.712
EPV1_2	0.315	0.825	0.610	0.557	0.098	0.576	0.593	0.597
EPV2_2	0.294	0.823	0.614	0.544	0.142	0.524	0.588	0.501
EPV3_2	0.190	0.909	0.681	0.605	0.339	0.639	0.688	0.659
EPV4_2	0.524	0.833	0.565	0.570	0.436	0.653	0.602	0.622
FV1_2	0.068	0.306	0.345	0.774	0.260	0.314	0.534	0.276
FV2_2	0.432	0.723	0.694	0.936	0.363	0.659	0.748	0.672
FV3_2	0.373	0.628	0.625	0.945	0.316	0.673	0.738	0.659
IMG1_2	0.046	0.369	0.277	0.349	0.963	0.404	0.400	0.230
IMG2_2	0.153	0.316	0.326	0.355	0.958	0.356	0.416	0.228
IMG3_2	0.040	0.300	0.250	0.358	0.943	0.457	0.336	0.296
IMG4_2	0.140	0.236	0.212	0.231	0.885	0.387	0.260	0.146
IMG5_2	0.089	0.204	0.279	0.347	0.939	0.394	0.430	0.214
INT1_2	0.296	0.696	0.606	0.620	0.339	0.903	0.672	0.832
INT2_2	0.552	0.526	0.390	0.435	0.352	0.814	0.531	0.497
INT3_2	0.392	0.594	0.522	0.633	0.431	0.880	0.580	0.725
SF1_2	0.300	0.621	0.576	0.569	0.247	0.747	0.552	0.921
SF2_2	0.310	0.643	0.705	0.594	0.270	0.719	0.586	0.925
SF3_2	0.477	0.692	0.731	0.667	0.212	0.753	0.684	0.900
SF4_2	0.247	0.597	0.627	0.542	0.166	0.737	0.598	0.872
SV1_2	0.300	0.718	0.725	0.589	0.407	0.635	0.872	0.598
SV2_2	0.216	0.669	0.750	0.694	0.416	0.629	0.914	0.613
SV3_2	0.398	0.466	0.556	0.722	0.169	0.505	0.773	0.501

Table D2.5 Convergent validity (cross loadings) Cohort1, Time 3

	Conditional	Epistemic	Emotional	Functional	Image	Intention	Social	Satisfaction
CV1_3	0.845	0.319	0.281	0.492	0.544	0.503	0.260	0.440
CV2_3	0.834	0.267	0.434	0.242	0.374	0.283	0.177	0.427
EMV1_3	0.429	0.706	0.902	0.551	0.346	0.527	0.600	0.695
EMV2_3	0.364	0.728	0.952	0.598	0.359	0.597	0.797	0.597
EMV3_3	0.394	0.681	0.961	0.556	0.368	0.548	0.759	0.647
EPV1_3	.0042	0.851	0.620	0.419	0.221	0.454	0.606	0.619
EPV2_3	0.118	0.763	0.604	0.291	0.281	0.466	0.502	0.479
EPV3_3	0.565	0.859	0.679	0.426	0.290	0.617	0.662	0.608
EPV4_3	0.525	0.676	0.454	0.384	0.298	0.315	0.317	0.415
FV1_3	0.341	0.267	0.378	0.669	0.303	0.139	0.497	0.174
FV2_3	0.383	0.302	0.500	0.941	0.686	0.401	0.589	0.533
FV3_3	0.437	0.597	0.647	0.968	0.587	0.616	0.747	0.688
IMG1_3	0.605	0.219	0.324	0.632	0.953	0.487	0.399	0.513
IMG2_3	0.515	0.526	0.525	0.371	0.610	0.306	0.344	0.414
IMG3_3	0.512	0.314	0.357	0.571	0.968	0.501	0.391	0.550
IMG4_3	0.364	0.254	0.216	0.568	0.925	0.478	0.376	0.519
IMG5_3	0.401	0.197	0.280	0.644	0.875	0.520	0.480	0.435
INT1_3	0.460	0.555	0.609	0.652	0.510	0.925	0.711	0.747
INT2_3	0.294	0.454	0.372	0.119	0.168	0.791	0.395	0.498
INT3_3	0.469	0.568	0.562	0.503	0.645	0.941	0.606	0.717
SF1_3	0.637	0.704	0.612	0.702	0.583	0.653	0.622	0.914
SF2_3	0.573	0.707	0.716	0.516	0.556	0.582	0.595	0.869
SF3_3	0.329	0.622	0.655	0.460	0.360	0.699	0.542	0.940
SF4_3	0.310	0.393	0.485	0.509	0.507	0.734	0.508	0.835
SV1_3	0.318	0.703	0.725	0.655	0.437	0.657	0.929	0.676
SV2_3	0.083	0.540	0.677	0.604	0.308	0.649	0.913	0.547
SV3_3	0.315	0.398	0.470	0.583	0.493	0.170	0.625	0.222

Table D2.6 Convergent validity (cross loadings) Cohort2, Time 1

	Conditional	Epistemic	Emotional	Functional	Image	Intention	Social	Satisfaction
CV1_1	0.870	0.652	0.573	0.533	0.507	0.491	0.554	0.297
CV2_1	0.908	0.470	0.519	0.424	0.485	0.549	0.486	0.350
EMV1_1	0.536	0.481	0.885	0.633	0.492	0.598	0.593	0.471
EMV2_1	0.581	0.414	0.928	0.520	0.608	0.686	0.652	0.506
EMV3_1	0.545	0.482	0.909	0.549	0.629	0.625	0.663	0.539
EPV1_1	0.257	0.721	0.184	0.431	0.375	0.298	0.419	0.388
EPV2_1	0.661	0.812	0.355	0.513	0.417	0.350	0.498	0.366
EPV3_1	0.585	0.922	0.522	0.734	0.467	0.542	0.574	0.518
EPV4_1	0.464	0.683	0.571	0.523	0.445	0.493	0.466	0.271
FV1_1	0.512	0.650	0.558	0.858	0.447	0.492	0.435	0.422
FV2_1	0.399	0.614	0.490	0.911	0.430	0.477	0.501	0.526
FV3_1	0.476	0.533	0.574	0.763	0.344	0.460	0.638	0.307
IMG1_1	0.401	0.386	0.498	0.334	0.850	0.452	0.422	0.495
IMG2_1	0.347	0.306	0.528	0.402	0.809	0.472	0.358	0.436
IMG3_1	0.466	0.412	0.655	0.491	0.886	0.631	0.549	0.526
IMG4_1	0.617	0.606	0.515	0.407	0.821	0.575	0.609	0.522
IMG5_1	0.494	0.526	0.483	0.404	0.848	0.499	0.381	0.427
INT1_1	0.524	0.445	0.657	0.544	0.559	0.897	0.583	0.806
INT2_1	0.531	0.444	0.630	0.448	0.555	0.910	0.570	0.572
INT3_1	0.469	0.523	0.512	0.436	0.522	0.788	0.470	0.452
SF1_1	0.199	0.399	0.368	0.345	0.389	0.622	0.406	0.894
SF2_1	0.445	0.583	0.558	0.505	0.566	0.706	0.614	0.899
SF3_1	0.342	0.345	0.552	0.454	0.480	0.663	0.470	0.886
SF4_1	0.308	0.465	0.503	0.509	0.607	0.630	0.468	0.876
SV1_1	0.315	0.469	0.238	0.352	0.303	0.374	0.559	0.166
SV2_1	0.560	0.604	0.513	0.366	0.448	0.485	0.746	0.279
SV3_1	0.461	0.453	0.674	0.566	0.486	0.549	0.891	0.595

Table D2.7 Convergent validity (cross loadings) Cohort2, Time 2

	Conditional	Epistemic	Emotional	Functional	Image	Intention	Social	Satisfaction
CV1_2	0.812	0.418	0.498	0.331	0.446	0.274	0.323	0.272
CV2_2	0.928	0.281	0.482	0.286	0.545	0.478	0.332	0.424
EMV1_2	0.604	0.651	0.941	0.688	0.514	0.577	0.722	0.727
EMV2_2	0.469	0.621	0.932	0.638	0.451	0.409	0.622	0.570
EMV3_2	0.462	0.556	0.933	0.642	0.434	0.462	0.559	0.618
EPV1_2	0.416	0.881	0.616	0.650	0.297	0.410	0.575	0.583
EPV2_2	0.146	0.904	0.525	0.655	0.236	0.478	0.698	0.651
EPV3_2	0.451	0.878	0.591	0.562	0.434	0.542	0.627	0.596
EPV4_2	0.269	0.661	0.450	0.547	0.437	0.469	0.576	0.502
FV1_2	0.276	0.660	0.614	0.916	0.353	0.429	0.726	0.587
FV2_2	0.305	0.675	0.679	0.892	0.316	0.376	0.584	0.595
FV3_2	0.347	0.572	0.564	0.846	0.318	0.350	0.492	0.418
IMG1_2	0.580	0.426	0.618	0.435	0.878	0.595	0.484	0.425
IMG2_2	0.411	0.360	0.462	0.302	0.830	0.506	0.429	0.364
IMG3_2	0.432	0.445	0.322	0.341	0.839	0.464	0.421	0.352
IMG4_2	0.523	0.158	0.323	0.164	0.818	0.491	0.197	0.362
IMG5_2	0.490	0.357	0.392	0.325	0.896	0.605	0.373	0.451
INT1_2	0.459	0.618	0.580	0.522	0.616	0.966	0.633	0.855
INT2_2	0.425	0.582	0.550	0.498	0.627	0.960	0.540	0.814
INT3_2	0.382	0.369	0.314	0.170	0.520	0.889	0.419	0.678
SF1_2	0.376	0.692	0.650	0.613	0.499	0.793	0.694	0.947
SF2_2	0.377	0.650	0.652	0.587	0.421	0.793	0.722	0.936
SF3_2	0.456	0.649	0.691	0.574	0.484	0.798	0.632	0.929
SF4_2	0.329	0.620	0.575	0.512	0.311	0.743	0.619	0.918
SV1_2	0.311	0.690	0.559	0.577	0.340	0.513	0.942	0.673
SV2_2	0.353	0.681	0.637	0.580	0.377	0.538	0.955	0.673
SV3_2	0.342	0.627	0.655	0.716	0.509	0.489	0.786	0.578

Table D2.8 Convergent validity (cross loadings) Cohort2, Time 3

	Conditional	Epistemic	Emotional	Functional	Image	Intention	Social	Satisfaction
CV1_3	0.928	0.495	0.605	0.288	0.435	0.409	0.529	0.500
CV2_3	0.922	0.426	0.597	0.322	0.442	0.417	0.591	0.481
EMV1_3	0.552	0.798	0.917	0.508	0.401	0.555	0.596	0.774
EMV2_3	0.686	0.666	0.948	0.434	0.476	0.482	0.662	0.580
EMV3_3	0.603	0.747	0.943	0.411	0.453	0.581	0.544	0.633
EPV1_3	0.398	0.814	0.658	0.357	0.316	0.608	0.475	0.691
EPV2_3	0.226	0.821	0.637	0.238	0.045	0.486	0.284	0.559
EPV3_3	0.534	0.900	0.736	0.380	0.339	0.506	0.501	0.642
EPV4_3	0.477	0.785	0.606	0.311	0.325	0.493	0.418	0.624
FV1_3	0.274	0.131	0.263	0.758	0.337	0.228	0.406	0.137
FV2_3	0.382	0.365	0.470	0.905	0.372	0.412	0.392	0.428
FV3_3	0.173	0.400	0.437	0.882	0.358	0.346	0.441	0.333
IMG1_3	0.334	0.246	0.403	0.478	0.875	0.465	0.290	0.334
IMG2_3	0.418	0.227	0.361	0.396	0.890	0.457	0.372	0.319
IMG3_3	0.414	0.285	0.463	0.396	0.943	0.622	0.331	0.522
IMG4_3	0.495	0.284	0.403	0.302	0.848	0.501	0.569	0.427
IMG5_3	0.446	0.350	0.449	0.318	0.917	0.562	0.340	0.506
INT1_3	0.422	0.629	0.527	0.277	0.504	0.912	0.332	0.886
INT2_3	0.423	0.516	0.488	0.475	0.465	0.910	0.341	0.749
INT3_3	0.327	0.525	0.529	0.358	0.634	0.825	0.320	0.620
SF1_3	0.510	0.768	0.733	0.400	0.498	0.750	0.457	0.929
SF2_3	0.411	0.693	0.669	0.299	0.572	0.804	0.376	0.909
SF3_3	0.460	0.606	0.584	0.364	0.357	0.764	0.402	0.915
SF4_3	0.521	0.651	0.578	0.364	0.298	0.775	0.421	0.821
SV1_3	0.593	0.481	0.543	0.258	0.317	0.351	0.940	0.428
SV2_3	0.558	0.440	0.526	0.260	0.311	0.285	0.932	0.401
SV3_3	0.379	0.384	0.579	0.746	0.477	0.321	0.664	0.350

Table D2.9 Discriminant validity for Cohort 1, Time 2

	Functional	Epistemic	Social	Emotional	Conditional	Image	Satisfaction	Intention
Functional	0.891							
Epistemic	0.655	0.847						
Social	0.773	0.727	0.854					
Emotional	0.653	0.724	0.797	0.910				
Conditional	0.367	0.377	0.359	0.378	0.856			
Image	0.351	0.309	0.393	0.291	0.080	0.939		
Satisfaction	0.638	0.704	0.670	0.724	0.367	0.238	0.904	
Intention	0.647	0.708	0.692	0.595	0.435	0.424	0.817	0.866

Table D2.10 Discriminant validity for Cohort 1, Time 3

	Functional	Epistemic	Social	Emotional	Conditional	Image	Satisfaction	Intention
Functional	0.849							
Epistemic	0.465	0.790						
Social	0.733	0.650	0.842					
Emotional	0.595	0.748	0.755	0.939				
Conditional	0.454	0.385	0.278	0.412	0.839			
Image	0.621	0.353	0.488	0.393	0.562	0.875		
Satisfaction	0.572	0.679	0.591	0.687	0.524	0.567	0.889	
Intention	0.473	0.595	0.605	0.594	0.479	0.529	0.749	0.887

Table D2.11 Discriminant validity for Cohort 2, Time 1

	Functional	Epistemic	Social	Emotional	Conditional	Image	Satisfaction	Intention
Functional	0.847							
Epistemic	0.712	0.790						
Social	0.535	0.659	0.784					
Emotional	0.640	0.538	0.581	0.907				
Conditional	0.556	0.656	0.576	0.616	0.889			
Image	0.483	0.545	0.515	0.635	0.561	0.843		
Satisfaction	0.496	0.492	0.412	0.560	0.364	0.576	0.888	
Intention	0.562	0.544	0.584	0.701	0.582	0.629	0.739	0.866

Table D2.12 Discriminant validity for Cohort 2, Time 2

	Functional	Epistemic	Social	Emotional	Conditional	Image	Satisfaction	Intention
Functional	0.886							
Epistemic	0.719	0.836						
Social	0.680	0.740	0.897					
Emotional	0.699	0.657	0.680	0.935				
Conditional	0.356	0.410	0.373	0.557	0.876			
Image	0.381	0.431	0.459	0.509	0.563	0.852		
Satisfaction	0.606	0.700	0.716	0.686	0.396	0.461	0.932	
Intention	0.436	0.569	0.571	0.519	0.427	0.627	0.839	0.939

Table D2.13 Discriminant validity for Cohort 2, Time 3

	Functional	Epistemic	Social	Emotional	Conditional	Image	Satisfaction	Intention
Functional	0.861							
Epistemic	0.364	0.830						
Social	0.438	0.512	0.856					
Emotional	0.459	0.786	0.627	0.937				
Conditional	0.322	0.508	0.606	0.656	0.924			
Image	0.420	0.320	0.407	0.469	0.472	0.896		
Satisfaction	0.363	0.760	0.458	0.705	0.532	0.470	0.894	
Intention	0.391	0.630	0.366	0.575	0.446	0.584	0.865	0.883

APPENDIX F: COLLINEARITY ANALYSIS

Table D3.6 Terminal values – Collinearity analysis, Cohort 1, Time 1

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.717	3.046		.564	.578		
	TV1	.084	.231	.077	.364	.719	.638	1.567
	TV2	.094	.177	.127	.530	.601	.487	2.055
	TV3	.123	.225	.132	.549	.588	.490	2.041
	TV4	-.511	.202	-.695	-2.527	.019	.372	2.687
	TV5	.311	.488	.163	.636	.531	.429	2.329
	TV6	.198	.174	.261	1.128	.271	.526	1.902
	TV7	-.181	.285	-.152	-.633	.533	.491	2.037
	TV8	.123	.261	.103	.470	.643	.582	1.720
	TV9	.191	.197	.261	.968	.343	.388	2.578
	TV10	.190	.227	.217	.837	.411	.420	2.380

a. Dependent Variable: SF1_1

Table D3.7 Terminal values – Collinearity diagnostics, Cohort 1, Time 1

Collinearity Diagnostics														
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions										
				(Constant)	TV1	TV2	TV3	TV4	TV5	TV6	TV7	TV8	TV9	TV10
1	1	10.850	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.048	15.007	.00	.02	.02	.00	.03	.00	.05	.00	.00	.07	.01
	3	.027	19.958	.00	.05	.04	.06	.01	.00	.23	.01	.00	.01	.01
	4	.028	20.274	.00	.01	.22	.01	.00	.00	.07	.00	.04	.07	.01
	5	.019	23.738	.00	.08	.00	.10	.07	.00	.01	.01	.00	.14	.08
	6	.009	34.719	.00	.09	.03	.08	.04	.00	.09	.15	.03	.16	.25
	7	.006	41.368	.00	.01	.61	.28	.27	.01	.02	.07	.13	.00	.01
	8	.006	42.974	.01	.17	.00	.01	.44	.00	.18	.07	.12	.19	.28
	9	.004	55.123	.00	.20	.00	.22	.00	.03	.24	.33	.46	.34	.20
	10	.003	60.050	.28	.30	.01	.13	.12	.09	.01	.24	.02	.01	.01
	11	.001	107.572	.71	.07	.06	.11	.01	.86	.11	.11	.18	.01	.14

a. Dependent Variable: SF1_1

Table D3.8 Instrumental values – Collinearity analysis, Cohort 1, Time 1

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.453	2.354		1.892	.073		
	IV11	.334	.239	.419	1.396	.178	.340	2.945
	IV12	-.182	.159	-.269	-1.143	.267	.550	1.817
	IV13	.028	.307	.023	.090	.929	.472	2.120
	IV14	.076	.234	.092	.326	.748	.384	2.607
	IV15	.083	.195	.108	.427	.674	.479	2.090
	IV16	.076	.288	.082	.264	.794	.318	3.143
	IV17	-.212	.165	-.292	-1.285	.214	.590	1.694
	IV18	.184	.157	.244	1.176	.253	.708	1.412
	IV19	-.324	.228	-.364	-1.419	.171	.466	2.148
	IV20	.257	.214	.331	1.201	.244	.401	2.492
	IV21	.391	.253	.415	1.547	.138	.425	2.351
	IV22	-.344	.241	-.351	-1.425	.170	.504	1.982
	IV23	-.207	.242	-.269	-.859	.401	.311	3.212

a. Dependent Variable: SF1_1

Table D3.9 Instrumental values – Collinearity diagnostics, Cohort 1, Time 1

Collinearity Diagnostics ^a																	
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions													
				(Constant)	IV11	IV12	IV13	IV14	IV15	IV16	IV17	IV18	IV19	IV20	IV21	IV22	IV23
1	1	13.756	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.051	16.374	.00	.00	.07	.00	.00	.01	.00	.07	.08	.00	.02	.01	.00	.04
	3	.048	16.869	.00	.02	.05	.00	.02	.02	.00	.00	.17	.00	.00	.01	.01	.00
	4	.034	20.055	.00	.00	.14	.00	.00	.02	.03	.24	.00	.00	.00	.00	.02	.01
	5	.021	25.317	.00	.01	.05	.00	.03	.14	.03	.05	.00	.04	.09	.00	.01	.08
	6	.017	28.295	.00	.02	.13	.01	.00	.26	.03	.06	.03	.11	.03	.00	.00	.06
	7	.016	29.692	.00	.00	.17	.01	.09	.13	.02	.08	.01	.05	.13	.03	.01	.05
	8	.014	31.090	.00	.28	.01	.00	.10	.00	.01	.00	.00	.02	.17	.02	.03	.00
	9	.012	33.867	.01	.03	.07	.01	.06	.00	.00	.31	.32	.03	.11	.14	.04	.00
	10	.010	36.318	.04	.00	.02	.26	.00	.00	.00	.03	.07	.10	.04	.08	.00	.03
	11	.008	41.340	.02	.00	.06	.03	.29	.09	.03	.02	.06	.06	.00	.01	.40	.03
	12	.005	52.200	.07	.21	.00	.05	.06	.23	.02	.00	.08	.38	.05	.46	.05	.00
	13	.004	58.550	.17	.14	.02	.09	.02	.05	.29	.14	.14	.11	.02	.02	.16	.35
	14	.002	92.678	.68	.29	.21	.54	.31	.04	.54	.00	.03	.09	.35	.22	.26	.34

a. Dependent Variable: SF1_1

Table D3.10 Knowledge – Collinearity analysis, Cohort 1, Time 1

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.554	1.325		2.682	.015		
	know1_1	-.050	.129	-.082	-.383	.706	.574	1.742
	know2_1	-.300	.258	-.340	-1.161	.260	.304	3.294
	know3_1	.583	.229	.823	2.546	.020	.250	4.001
	know4_1	-.709	.248	-1.030	-2.861	.010	.201	4.971
	know5_1	.278	.235	.353	1.184	.251	.294	3.407
	know6_1	.361	.214	.480	1.691	.107	.324	3.090
	know7_1	.111	.216	.156	.512	.615	.282	3.547
	know8_1	.263	.186	.386	1.413	.174	.349	2.867
	know9_1	-.020	.179	-.033	-.114	.910	.319	3.138
	know10_1	.363	.199	.614	1.824	.084	.230	4.344
	know11_1	-.484	.219	-.795	-2.213	.039	.202	4.941
	know12_1	-.126	.163	-.195	-.774	.448	.411	2.435
	know13_1	.282	.163	.411	1.730	.100	.462	2.164
	know14_1	-.196	.192	-.240	-1.020	.321	.473	2.116

a. Dependent Variable: SF1_1

Table D3.11 Knowledge – Collinearity diagnostics, Cohort 1, Time 1

Collinearity Diagnostics ^a																	
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions													
				(Constant)	know 1 1	know 2 1	know 3 1	know 4 1	know 5 1	know 6 1	know 7 1	know 8 1	know 9 1	know 10 1	know 11 1	know 12 1	know 13 1
1	1	14.511	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.115	11.228	.00	.03	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.17	.05
	3	.098	12.147	.00	.01	.00	.00	.00	.00	.00	.00	.00	.01	.07	.03	.00	.07
	4	.068	14.848	.00	.11	.00	.01	.00	.00	.00	.02	.02	.06	.01	.00	.11	.00
	5	.060	15.535	.00	.07	.01	.01	.03	.00	.02	.01	.00	.00	.02	.00	.06	.11
	6	.034	20.525	.01	.27	.01	.03	.00	.00	.01	.01	.01	.17	.01	.00	.00	.01
	7	.022	25.734	.13	.00	.02	.00	.03	.00	.00	.01	.09	.04	.01	.14	.08	.11
	8	.018	28.073	.01	.05	.01	.02	.04	.08	.10	.05	.13	.00	.05	.12	.00	.01
	9	.018	28.321	.05	.10	.01	.02	.00	.02	.06	.01	.02	.00	.00	.02	.05	.07
	10	.017	29.516	.03	.00	.06	.14	.09	.01	.02	.03	.01	.07	.16	.02	.17	.03
	11	.013	33.138	.00	.08	.01	.01	.06	.20	.23	.01	.12	.15	.01	.00	.03	.05
	12	.010	37.979	.08	.11	.00	.04	.00	.09	.04	.29	.51	.04	.01	.01	.12	.13
	13	.010	38.602	.00	.06	.04	.13	.01	.07	.04	.31	.01	.21	.19	.12	.08	.11
	14	.004	61.977	.13	.00	.07	.25	.70	.51	.04	.14	.07	.20	.37	.33	.01	.17
	15	.003	65.105	.56	.11	.76	.34	.04	.01	.43	.12	.00	.05	.11	.21	.12	.06

a. Dependent Variable: SF1_1

Table D3.12 Knowledge – Collinearity analysis, Cohort 1, Time 2

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.869	1.331		2.155	.044		
	know1_2	-.394	.291	-.450	-1.353	.192	.214	4.675
	know2_2	.274	.312	.358	.877	.392	.142	7.033
	know3_2	.213	.225	.282	.948	.355	.268	3.729
	know4_2	.087	.235	.122	.369	.716	.217	4.598
	know5_2	.068	.264	.087	.257	.800	.209	4.788
	know6_2	-.132	.287	-.144	-.459	.652	.242	4.133
	know7_2	-.336	.278	-.403	-1.208	.242	.213	4.687
	know8_2	.334	.354	.365	.942	.358	.157	6.356
	know9_2	.008	.276	.009	.030	.976	.261	3.833
	know10_2	-.019	.312	-.027	-.061	.952	.117	8.561
	know11_2	.299	.228	.480	1.313	.205	.178	5.632
	know12_2	-.202	.166	-.321	-1.218	.238	.342	2.926
	know13_2	-.005	.116	-.007	-.046	.964	.901	1.110
	know14_2	.190	.253	.195	.750	.463	.349	2.868

a. Dependent Variable: SF1_2

Table D3.13 Knowledge – Collinearity diagnostics, Cohort 1, Time 2

Collinearity Diagnostics																		
				Variance Proportions														
				(Constant)	know 1 2	know 2 2	know 3 2	know 4 2	know 5 2	know 6 2	know 7 2	know 8 2	know 9 2	know 10 2	know 11 2	know 12 2	know 13 2	know 14 2
1	1	14.709	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.085	13.135	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.61	.00
	3	.061	15.542	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.28	.00	.00
	4	.047	17.721	.00	.00	.00	.02	.03	.02	.00	.00	.00	.00	.01	.04	.00	.03	.02
	5	.027	23.318	.06	.00	.00	.00	.09	.01	.00	.00	.00	.01	.00	.02	.07	.10	.05
	6	.018	28.462	.00	.01	.00	.06	.01	.01	.06	.01	.03	.06	.03	.02	.03	.05	.00
	7	.013	33.613	.28	.02	.02	.08	.08	.00	.01	.01	.02	.01	.01	.01	.00	.13	.04
	8	.009	41.285	.02	.09	.01	.04	.11	.25	.01	.10	.00	.02	.02	.08	.06	.00	.04
	9	.007	44.937	.13	.00	.01	.57	.02	.11	.00	.05	.03	.06	.00	.14	.00	.01	.00
	10	.005	52.835	.06	.10	.23	.06	.00	.00	.42	.00	.01	.09	.00	.00	.14	.01	.01
	11	.005	54.066	.02	.00	.06	.08	.19	.05	.10	.01	.00	.13	.02	.40	.17	.01	.34
	12	.004	57.445	.03	.06	.01	.03	.04	.00	.01	.84	.07	.30	.01	.00	.13	.00	.08
	13	.004	62.221	.10	.00	.08	.01	.07	.30	.10	.14	.06	.00	.28	.23	.00	.00	.27
	14	.003	70.751	.26	.69	.31	.00	.24	.21	.00	.00	.06	.05	.03	.00	.06	.04	.14
	15	.002	87.145	.03	.02	.27	.03	.10	.02	.29	.02	.72	.26	.58	.04	.06	.00	.00

a. Dependent Variable: SF1_2

Table D3.14 Knowledge – Collinearity analysis, Cohort 1, Time 3. Initial solution

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.221	1.570		.778	.446		
	know1_3	.533	.189	.539	2.827	.011	.413	2.418
	know2_3	-.052	.167	-.078	-.313	.758	.242	4.128
	know3_3	.629	.325	.622	1.933	.068	.145	6.899
	know4_3	-.628	.220	-.792	-2.857	.010	.196	5.112
	know5_3	.262	.368	.312	.711	.486	.078	12.859
	know6_3	-.576	.420	-.796	-1.372	.186	.045	22.387
	know7_3	-.090	.356	-.123	-.252	.804	.063	15.755
	know8_3	.130	.193	.181	.673	.509	.206	4.845
	know9_3	.482	.558	.605	.864	.399	.031	32.678
	know10_3	-.526	.375	-.677	-1.405	.176	.065	15.483
	know11_3	.464	.360	.747	1.290	.212	.045	22.344
	know12_3	-.501	.196	-1.152	-2.560	.019	.074	13.491
	know13_3	.345	.144	.786	2.395	.027	.139	7.176
	know14_3	.241	.339	.225	.710	.486	.149	6.705

a. Dependent Variable: SF1_3

Table D3.15 Knowledge – Collinearity diagnostics, Cohort 1, Time 3. **Initial solution**

Collinearity Diagnostics ^a																		
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions														
				(Constant)	know 1 3	know 2 3	know 3 3	know 4 3	know 5 3	know 6 3	know 7 3	know 8 3	know 9 3	know 10 3	know 11 3	know 12 3	know 13 3	know 14 3
1	1	14.651	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.182	8.970	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.04	.00
	3	.044	18.186	.00	.01	.01	.00	.01	.00	.00	.01	.01	.00	.00	.00	.02	.17	.00
	4	.037	19.964	.00	.02	.04	.00	.03	.00	.00	.00	.02	.00	.00	.00	.06	.06	.00
	5	.025	24.033	.02	.07	.12	.00	.00	.00	.01	.00	.00	.00	.00	.00	.01	.00	.00
	6	.020	27.274	.00	.00	.07	.00	.00	.00	.01	.00	.08	.00	.02	.03	.04	.00	.00
	7	.011	37.185	.08	.10	.00	.02	.07	.02	.00	.00	.08	.00	.00	.00	.08	.10	.01
	8	.009	40.174	.02	.00	.01	.02	.13	.03	.00	.01	.17	.02	.01	.00	.05	.05	.01
	9	.007	44.756	.02	.05	.03	.01	.08	.05	.03	.00	.08	.00	.02	.00	.00	.01	.10
	10	.004	59.034	.02	.41	.13	.08	.08	.10	.00	.01	.18	.00	.00	.04	.19	.12	.00
	11	.004	63.399	.01	.03	.01	.14	.02	.10	.00	.17	.21	.00	.04	.01	.01	.18	.05
	12	.003	72.805	.09	.03	.16	.00	.03	.00	.09	.14	.01	.01	.04	.24	.07	.00	.07
	13	.002	88.636	.38	.09	.09	.17	.03	.00	.04	.08	.00	.04	.24	.01	.00	.19	.21
	14	.001	117.739	.35	.18	.00	.42	.45	.05	.37	.00	.14	.04	.36	.02	.44	.06	.05
	15	.000	193.654	.01	.01	.31	.14	.07	.64	.46	.56	.04	.88	.27	.64	.04	.01	.48

a. Dependent Variable: SF1_3

Table D3.16 Knowledge – Collinearity analysis, Cohort 1, Time 3. **Final solution**

Coefficients ^a								
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	1.807	1.634	1.106	.281			
	know1_3	.541	.203	.546	.2669	.420	2.379	
	know2_3	-.009	.156	-.014	-.060	.323	3.094	
	know3_3	.254	.282	.251	.898	.228	4.431	
	know4_3	-.546	.208	-.688	-2.620	.255	3.921	
	know5_3	-.111	.289	-.132	-.383	.148	6.760	
	know8_3	.051	.196	.071	.259	.233	4.290	
	know9_3	.832	.317	1.044	2.622	.111	9.008	
	know11_3	-.222	.194	-.358	-1.143	.179	5.572	
	know12_3	-.526	.178	-1.211	-2.949	.104	9.579	
	know13_3	.440	.138	1.003	3.182	.177	5.649	
	know14_3	-.071	.281	-.066	-.252	.256	3.912	

a. Dependent Variable: SF1_3

Table D3.17 Knowledge – Collinearity diagnostics, Cohort 1, Time 3. **Final solution**

Collinearity Diagnostics ^a															
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions											
				(Constant)	know 1 3	know 2 3	know 3 3	know 4 3	know 5 3	know 6 3	know 7 3	know 8 3	know 9 3	know 10 3	know 11 3
1	1	11.678	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.182	8.014	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.06
	3	.038	17.575	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.11	.33
	4	.034	18.456	.00	.02	.13	.00	.01	.00	.04	.02	.02	.01	.01	.00
	5	.022	23.016	.03	.12	.20	.00	.00	.00	.02	.00	.01	.00	.02	.00
	6	.014	29.365	.00	.00	.01	.01	.02	.00	.22	.00	.34	.05	.00	.00
	7	.010	33.530	.10	.09	.00	.02	.13	.04	.03	.00	.01	.13	.22	.04
	8	.008	38.058	.01	.00	.03	.10	.12	.15	.07	.10	.04	.03	.00	.01
	9	.006	44.193	.03	.03	.01	.04	.14	.12	.11	.02	.00	.03	.00	.31
	10	.004	52.944	.03	.35	.21	.20	.12	.10	.29	.00	.19	.28	.07	.00
	11	.002	80.569	.45	.02	.40	.12	.25	.41	.21	.18	.00	.18	.24	.61
	12	.002	83.754	.35	.37	.01	.51	.16	.18	.01	.68	.39	.15	.05	.02

a. Dependent Variable: SF1_3

Table D3.18 Emotions – Collinearity analysis, Cohort 1, Time 1

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.546	1.478		1.046	.309		
emo1_1	-.078	.159	-.135	-.492	.628	.293	3.414
emo2_1	-.016	.129	-.035	-.127	.900	.298	3.358
emo3_1	-.019	.141	-.036	-.133	.895	.297	3.364
emo4_1	.148	.237	.194	.626	.539	.231	4.328
emo5_1	-.059	.184	-.089	-.320	.753	.283	3.527
emo6_1	.011	.179	.016	.060	.953	.322	3.107
emo7_1	.038	.099	.073	.381	.708	.605	1.653
emo8_1	.058	.191	.086	.304	.764	.276	3.628
emo9_1	.024	.176	.030	.137	.892	.450	2.223
emo10_1	.007	.240	.008	.029	.977	.258	3.877
emo11_1	.078	.143	.151	.544	.593	.287	3.485
emo12_1	.328	.207	.437	1.581	.130	.289	3.456
emo13_1	.031	.177	.037	.176	.862	.505	1.978
emo14_1	.228	.208	.230	1.094	.288	.502	1.993

a. Dependent Variable: SF1_1

Table D3.19 Emotions – Collinearity diagnostics, Cohort 1, Time 1

Collinearity Diagnostics^a

Model	Dimension	Eigen value	Condition Index	Variance Proportions														
				(Constant)	emo 1_1	emo 2_1	emo 3_1	emo 4_1	emo 5_1	emo 6_1	emo 7_1	emo 8_1	emo 9_1	emo 10_1	emo 11_1	emo 12_1	emo 13_1	emo 14_1
1	1	13.73	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.502	5.231	.00	.02	.00	.01	.00	.02	.01	.01	.01	.00	.00	.00	.00	.00	.00
	3	.215	7.989	.00	.01	.03	.00	.00	.06	.00	.06	.03	.00	.00	.05	.00	.00	.00
	4	.165	9.125	.00	.02	.00	.04	.00	.00	.00	.34	.05	.00	.00	.00	.00	.00	.00
	5	.101	11.658	.00	.07	.01	.15	.00	.02	.04	.19	.01	.01	.00	.01	.00	.02	.00
	6	.067	14.308	.00	.03	.08	.03	.00	.00	.02	.03	.08	.00	.01	.00	.00	.24	.00
	7	.064	14.691	.00	.04	.00	.04	.00	.33	.02	.02	.31	.02	.00	.01	.00	.00	.00
	8	.041	18.312	.00	.19	.01	.01	.02	.02	.01	.12	.00	.13	.01	.00	.08	.09	.01
	9	.034	20.094	.00	.40	.02	.12	.00	.12	.01	.03	.06	.05	.00	.32	.01	.02	.01
	10	.029	21.889	.00	.00	.12	.37	.00	.12	.24	.03	.01	.10	.03	.01	.02	.00	.01
	11	.017	28.250	.04	.05	.12	.00	.01	.09	.16	.00	.02	.03	.02	.20	.12	.29	.10
	12	.014	31.638	.01	.04	.35	.14	.05	.00	.04	.02	.01	.07	.06	.26	.00	.19	.27
	13	.011	34.636	.10	.11	.20	.01	.28	.09	.21	.01	.00	.02	.11	.04	.09	.05	.01
	14	.005	50.401	.21	.02	.03	.02	.57	.12	.21	.00	.27	.55	.14	.02	.15	.01	.24
	15	.004	62.212	.65	.01	.03	.05	.06	.01	.04	.15	.13	.02	.63	.07	.53	.09	.35

a. Dependent Variable: SF1_1

Table D3.20 Emotions – Collinearity analysis, Cohort 1, Time 2

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.835	1.938		.431	.672		
emo1_2	-.030	.188	-.051	-.162	.873	.245	4.084
emo2_2	.183	.132	.352	1.383	.183	.380	2.634
emo3_2	-.038	.141	-.074	-.267	.792	.319	3.135
emo4_2	.029	.308	.030	.093	.927	.235	4.263
emo5_2	.187	.215	.315	.869	.396	.188	5.321
emo6_2	-.204	.232	-.300	-.878	.391	.211	4.735
emo7_2	-.089	.110	-.211	-.805	.431	.358	2.792
emo8_2	.019	.192	.030	.100	.922	.271	3.688
emo9_2	.221	.314	.249	.705	.489	.198	5.058
emo10_2	.047	.360	.048	.130	.898	.182	5.481
emo11_2	-.252	.140	-.481	-1.808	.086	.349	2.867
emo12_2	-.023	.266	-.024	-.086	.932	.323	3.099
emo13_2	.237	.172	.354	1.381	.183	.375	2.666
emo14_2	.543	.263	.529	2.063	.053	.375	2.667

a. Dependent Variable: SF1_2

Table D3.21 Emotions – Collinearity diagnostics, Cohort 1, Time 2

Collinearity Diagnostics																		
Model	Dimension	Eigen value	Condition Index	Variance Proportions														
				(Constant)	emo 1 2	emo 2 2	emo 3 2	emo 4 2	emo 5 2	emo 6 2	emo 7 2	emo 8 2	emo 9 2	emo 10 2	emo 11 2	emo 12 2	emo 13 2	emo 14 2
1	1	13.61	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.576	4.861	.00	.00	.00	.00	.00	.02	.00	.01	.01	.00	.00	.01	.00	.00	.00
	3	.235	7.604	.00	.01	.01	.06	.00	.02	.00	.06	.09	.00	.00	.01	.00	.00	.00
	4	.164	9.096	.00	.02	.00	.05	.00	.06	.01	.19	.00	.00	.00	.05	.00	.01	.00
	5	.131	10.193	.00	.00	.07	.01	.00	.04	.03	.15	.03	.00	.00	.03	.00	.01	.00
	6	.082	12.893	.00	.00	.03	.01	.00	.01	.00	.13	.12	.00	.00	.19	.00	.16	.00
	7	.064	14.638	.00	.00	.04	.03	.00	.10	.02	.00	.20	.00	.00	.25	.00	.14	.00
	8	.046	17.217	.00	.39	.01	.38	.00	.03	.00	.00	.00	.00	.00	.00	.01	.00	.00
	9	.034	19.872	.00	.04	.42	.05	.03	.07	.00	.02	.05	.00	.00	.22	.00	.17	.01
	10	.026	22.901	.00	.00	.04	.08	.00	.35	.22	.00	.22	.03	.00	.01	.03	.00	.05
	11	.013	32.673	.04	.00	.01	.19	.08	.05	.03	.11	.03	.14	.00	.16	.17	.03	.07
	12	.008	40.731	.04	.12	.32	.02	.31	.01	.24	.11	.03	.00	.05	.01	.18	.26	.10
	13	.007	44.697	.14	.02	.01	.01	.11	.05	.14	.09	.19	.15	.00	.03	.58	.16	.06
	14	.004	55.919	.12	.06	.00	.00	.03	.13	.10	.08	.01	.02	.56	.02	.00	.06	.52
	15	.002	76.686	.65	.33	.02	.12	.44	.07	.21	.04	.03	.65	.38	.01	.02	.00	.18

a. Dependent Variable: SF1_2

Table D3.22 SQ (Assurance) – Collinearity analysis, Cohort 1, Time 2

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.538	.717		4.935	.000		
	SQ4_2	.209	.127	.321	1.654	.110	.569	1.757
	SQ5_2	-.185	.150	-.223	-1.228	.230	.654	1.528
	SQ14_2	.054	.169	.071	.320	.751	.433	2.307
	SQ15_2	.195	.210	.257	.928	.362	.280	3.571
	SQ16_2	-.178	.173	-.267	-1.032	.312	.321	3.116
	SQ17_2	-.093	.176	-.116	-.529	.601	.449	2.227
	SQ18_2	.355	.199	.509	1.789	.085	.266	3.765

a. Dependent Variable: SF1_2

Table D3.23 SQ (Assurance) – Collinearity diagnostics, Cohort 1, Time 2

Collinearity Diagnostics											
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions							
				(Constant)	SQ4 2	SQ5 2	SQ14 2	SQ15 2	SQ16 2	SQ17 2	SQ18 2
1	1	7.827	1.000	.00	.00	.00	.00	.00	.00	.00	.00
	2	.044	13.357	.05	.35	.02	.01	.02	.13	.01	.03
	3	.040	13.958	.23	.29	.16	.00	.00	.00	.00	.06
	4	.026	17.449	.16	.10	.23	.06	.04	.01	.29	.06
	5	.023	18.320	.15	.08	.46	.08	.03	.04	.24	.01
	6	.019	20.296	.26	.01	.06	.53	.03	.21	.00	.02
	7	.013	24.983	.05	.00	.05	.08	.28	.03	.43	.52
	8	.009	29.830	.10	.17	.01	.24	.60	.59	.02	.30

a. Dependent Variable: SF1_2

Table D3.24 SQ (Assurance) – Collinearity analysis, Cohort 1, Time 3

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.910	1.062		1.799	.084		
	SQ4_3	.363	.185	.471	1.958	.061	.407	2.455
	SQ5_3	.194	.177	.247	1.100	.281	.467	2.139
	SQ14_3	-.012	.235	-.016	-.051	.960	.238	4.195
	SQ15_3	.294	.209	.370	1.408	.171	.341	2.935
	SQ16_3	-.157	.164	-.269	-.956	.348	.297	3.366
	SQ17_3	.467	.344	.535	1.358	.186	.152	6.588
	SQ18_3	-.414	.278	-.584	-1.489	.149	.153	6.542

a. Dependent Variable: SF1_3

Table D3.25 SQ (Assurance) – Collinearity diagnostics, Cohort 1, Time 3

Collinearity Diagnostics											
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions							
				(Constant)	SQ4_3	SQ5_3	SQ14_3	SQ15_3	SQ16_3	SQ17_3	SQ18_3
1	1	7.843	1.000	.00	.00	.00	.00	.00	.00	.00	.00
	2	.077	10.084	.01	.01	.09	.00	.01	.10	.00	.00
	3	.025	17.828	.17	.10	.00	.00	.07	.00	.00	.10
	4	.019	20.148	.04	.25	.02	.06	.01	.24	.05	.02
	5	.015	23.057	.27	.04	.08	.14	.11	.00	.07	.04
	6	.011	26.763	.01	.18	.36	.03	.38	.51	.00	.00
	7	.007	33.707	.08	.15	.32	.60	.41	.14	.01	.04
	8	.003	52.561	.43	.27	.17	.16	.01	.01	.87	.79

a. Dependent Variable: SF1_3

Table D3.26 SQ (Empathy) – Collinearity analysis, Cohort 1, Time 2

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.242	.566		5.730	.000		
	SQ7_2	-.037	.139	-.050	-.270	.789	.580	1.723
	SQ19_2	.457	.146	.654	3.127	.004	.449	2.230
	SQ20_2	-.127	.142	-.183	-.892	.380	.468	2.135
	SQ22_2	.137	.101	.230	1.347	.188	.673	1.486

a. Dependent Variable: SF1_2

Table D3.27 SQ (Empathy) – Collinearity diagnostics, Cohort 1, Time 2

Collinearity Diagnostics ^a								
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	SQ7_2	SQ19_2	SQ20_2	SQ22_2
1	1	4.873	1.000	.00	.00	.00	.00	.00
	2	.043	10.687	.00	.02	.05	.14	.89
	3	.041	10.922	.63	.04	.08	.13	.10
	4	.022	14.727	.37	.94	.02	.12	.00
	5	.021	15.070	.00	.01	.85	.61	.01

a. Dependent Variable: SF1_2

Table D3.28 SQ (Empathy) – Collinearity analysis, Cohort 1, Time 3

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.267	.640		6.670	.000		
	SQ7_3	.304	.154	.406	1.973	.058	.568	1.761
	SQ19_3	-.159	.258	-.242	-.617	.542	.156	6.413
	SQ20_3	.302	.182	.575	1.662	.107	.200	4.993
	SQ22_3	-.120	.129	-.229	-.932	.359	.396	2.524

a. Dependent Variable: SF1_3

Table D3.29 SQ (Empathy) – Collinearity diagnostics, Cohort 1, Time 3

Collinearity Diagnostics ^a								
Model Dimension		Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	SQ7_3	SQ19_3	SQ20_3	SQ22_3
1	1	4.883	1.000	.00	.00	.00	.00	.00
	2	.064	8.765	.29	.04	.00	.11	.04
	3	.027	13.354	.00	.06	.01	.17	.85
	4	.019	15.975	.53	.87	.01	.06	.01
	5	.007	26.944	.18	.04	.98	.65	.10

a. Dependent Variable: SF1_3

Table D3.30 SQ (Reliability) – Collinearity analysis, Cohort 1, Time 2

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.538	.709		4.993	.000		
	SQ6_2	.013	.164	.018	.079	.937	.513	1.949
	SQ8_2	-.133	.162	-.185	-.823	.418	.516	1.938
	SQ9_2	-.071	.245	-.108	-.288	.775	.186	5.364
	SQ10_2	.377	.279	.525	1.349	.188	.171	5.839
	SQ11_2	.160	.140	.231	1.148	.261	.640	1.564

a. Dependent Variable: SF1_2

Table D3.31 SQ (Reliability) – Collinearity diagnostics, Cohort 1, Time 2

Collinearity Diagnostics ^a									
Model Dimension		Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	SQ6_2	SQ8_2	SQ9_2	SQ10_2	SQ11_2
1	1	5.867	1.000	.00	.00	.00	.00	.00	.00
	2	.046	11.302	.08	.10	.11	.08	.06	.00
	3	.036	12.728	.33	.14	.12	.01	.01	.26
	4	.024	15.490	.57	.05	.00	.02	.01	.70
	5	.020	16.950	.02	.68	.71	.01	.00	.01
	6	.006	31.787	.00	.03	.06	.89	.93	.02

a. Dependent Variable: SF1_2

Table D3.32 SQ (Reliability) – Collinearity analysis, Cohort 1, Time 3

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	5.172	.791		6.538	.000		
	SQ6_3	.368	.185	.481	1.987	.057	.413	2.424
	SQ8_3	.001	.137	.001	.007	.995	.584	1.712
	SQ9_3	-.031	.133	-.043	-.230	.820	.691	1.448
	SQ10_3	-.383	.140	-.510	-2.737	.011	.698	1.432
	SQ11_3	.158	.133	.247	1.187	.245	.561	1.781

a. Dependent Variable: SF1_3

Table D3.33 SQ (Reliability) – Collinearity diagnostics, Cohort 1, Time 3

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	SQ6_3	SQ8_3	SQ9_3	SQ10_3	SQ11_3
1	1	5.883	1.000	.00	.00	.00	.00	.00	.00
	2	.035	12.911	.04	.02	.63	.02	.09	.06
	3	.027	14.683	.24	.04	.01	.05	.04	.60
	4	.025	15.379	.00	.02	.01	.71	.35	.00
	5	.017	18.465	.72	.00	.00	.22	.44	.09
	6	.013	21.548	.00	.93	.36	.00	.07	.24

a. Dependent Variable: SF1_3

Table D3.34 SQ (Responsiveness) – Collinearity analysis, Cohort 1, Time 2

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.596	.674		5.333	.000		
	SQ12_2	-.005	.233	-.006	-.021	.984	.303	3.300
	SQ13_2	-.121	.245	-.162	-.496	.624	.247	4.055
	SQ23_2	.270	.218	.345	1.242	.224	.339	2.950
	SQ25_2	.219	.203	.322	1.082	.288	.297	3.366

a. Dependent Variable: SF1_2

Table D3.35 SQ (Responsiveness) – Collinearity diagnostics, Cohort 1, Time 2

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	SQ12_2	SQ13_2	SQ23_2	SQ25_2
1	1	4.925	1.000	.00	.00	.00	.00	.00
	2	.035	11.853	.85	.00	.01	.02	.10
	3	.020	15.684	.07	.14	.04	.31	.32
	4	.013	19.388	.07	.35	.19	.48	.13
	5	.007	26.199	.01	.51	.76	.19	.45

a. Dependent Variable: SF1_2

Table D3.36 SQ (Responsiveness) – Collinearity analysis, Cohort 1, Time 3

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.403	.626	5.440	.000		
	SQ12_3	.391	.157	.518	.019	.506	1.976
	SQ13_3	-.327	.173	-.533	.070	.273	3.658
	SQ23_3	.265	.169	.323	.128	.515	1.943
	SQ25_3	.175	.169	.278	.310	.302	3.310

a. Dependent Variable: SF1_3

Table D3.37 SQ (Responsiveness) – Collinearity diagnostics, Cohort 1, Time 3

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	SQ12_3	SQ13_3	SQ23_3	SQ25_3
1	1	4.909	1.000	.00	.00	.00	.00	.00
	2	.040	11.047	.49	.01	.08	.00	.12
	3	.023	14.593	.01	.42	.07	.44	.05
	4	.017	16.916	.48	.28	.03	.50	.19
	5	.010	21.680	.02	.29	.82	.06	.64

a. Dependent Variable: SF1_3

Table D3.38 SQ (Tangibles) – Collinearity analysis, Cohort 1, Time 2

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.473	.786	4.418	.000		
	SQ1_2	-.084	.136	-.118	.539	.777	1.287
	SQ2_2	.118	.121	.175	.338	.867	1.153
	SQ3_2	.166	.132	.226	.217	.872	1.147
	SQ21_2	.243	.153	.302	.121	.781	1.280

a. Dependent Variable: SF1_2

Table D3.39 SQ (Tangibles) – Collinearity diagnostics, Cohort 1, Time 2

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	SQ1_2	SQ2_2	SQ3_2	SQ21_2
1	1	4.780	1.000	.00	.00	.00	.00	.00
	2	.099	6.946	.00	.17	.24	.18	.09
	3	.059	9.009	.00	.00	.68	.65	.00
	4	.038	11.181	.08	.83	.03	.02	.43
	5	.024	14.207	.92	.00	.05	.15	.48

a. Dependent Variable: SF1_2

Table D3.40 SQ (Tangibles) – Collinearity analysis, Cohort 1, Time 3

Coefficients ^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.367	.649		6.733	.000		
	SQ1_3	-.360	.139	-.533	-2.595	.015	.497	2.013
	SQ2_3	.114	.115	.177	.987	.332	.655	1.527
	SQ3_3	.185	.095	.365	1.942	.062	.595	1.680
	SQ21_3	.341	.151	.513	2.262	.031	.407	2.458

a. Dependent Variable: SF1_3

Table D3.41 SQ (Tangibles) – Collinearity diagnostics, Cohort 1, Time 3

Collinearity Diagnostics ^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	SQ1_3	SQ2_3	SQ3_3	SQ21_3
1	1	4.798	1.000	.00	.00	.00	.00	.00
	2	.087	7.429	.02	.00	.28	.29	.04
	3	.068	8.382	.03	.07	.13	.48	.07
	4	.034	11.839	.42	.52	.02	.00	.01
	5	.013	19.432	.52	.41	.56	.23	.88

a. Dependent Variable: SF1_3

Table D3.42 Give (Money) – Collinearity analysis, Cohort 1, Time 1

Coefficients ^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.981	.891		7.836	.000		
	MS1_1	-.067	.120	-.106	-.560	.579	.816	1.225
	MS2_1	-.191	.148	-.244	-1.288	.207	.816	1.225

a. Dependent Variable: SF1_1

Table D3.43 Money – Collinearity diagnostics, Cohort 1, Time 1

Collinearity Diagnostics ^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	MS1_1	MS2_1
1	1	2.964	1.000	.00	.00	.00
	2	.023	11.251	.21	.98	.10
	3	.012	15.478	.79	.02	.90

a. Dependent Variable: SF1_1

Table D3.44 Money – Collinearity analysis, Cohort 1, Time 2

Coefficients ^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	7.512	1.001		7.503	.000		
	MS1_2	-.179	.117	-.254	-1.530	.136	.993	1.007
	MS2_2	-.237	.145	-.272	-1.638	.112	.993	1.007

a. Dependent Variable: SF1_2

Table D3.45 Money – Collinearity diagnostics, Cohort 1, Time 2

Collinearity Diagnostics ^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	MS1 2	MS2 2
1	1	2.952	1.000	.00	.01	.00
	2	.036	9.101	.02	.81	.26
	3	.012	15.631	.98	.18	.74

a. Dependent Variable: SF1_2

Table D3.46 Money – Collinearity analysis, Cohort 1, Time 3

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	7.683	.833		9.226	.000		
	MS1_3	-.131	.126	-.185	-1.038	.307	.849	1.178
	MS2_3	-.228	.140	-.291	-1.631	.113	.849	1.178

a. Dependent Variable: SF1_3

Table D3.47 Money – Collinearity diagnostics, Cohort 1, Time 3

Collinearity Diagnostics ^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	MS1 3	MS2 3
1	1	2.960	1.000	.00	.00	.00
	2	.026	10.745	.15	1.00	.17
	3	.015	14.135	.85	.00	.83

a. Dependent Variable: SF1_3

Table D3.48 Time – Collinearity analysis, Cohort 1, Time 1

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.791	.966		4.961	.000		
	Time1_1	.059	.142	.074	.418	.679	.948	1.054
	Time2_1	.267	.152	.486	1.751	.090	.388	2.578
	Time3_1	-.218	.196	-.311	-1.113	.274	.383	2.609

a. Dependent Variable: SF1_1

Table D3.49 Time – Collinearity diagnostics, Cohort 1, Time 1

Collinearity Diagnostics ^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Time1_1	Time2_1	Time3_1
1	1	3.936	1.000	.00	.00	.00	.00
	2	.041	9.741	.06	.22	.21	.03
	3	.014	16.878	.69	.76	.11	.03
	4	.009	21.433	.25	.02	.68	.93

a. Dependent Variable: SF1_1

Table D3.50 Time – Collinearity analysis, Cohort 1, Time 2

Coefficients ^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.464	.915		2.694	.011		
	Time1_2	.466	.180	.542	2.586	.015	.486	2.058
	Time2_2	.322	.129	.417	2.501	.018	.769	1.301
	Time3_2	-.338	.205	-.360	-1.652	.109	.450	2.223

a. Dependent Variable: SF1_2

Table D3.51 Time – Collinearity diagnostics, Cohort 1, Time 2

Collinearity Diagnostics ^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Time1_2	Time2_2	Time3_2
1	1	3.962	1.000	.00	.00	.00	.00
	2	.018	14.666	.00	.17	.84	.05
	3	.013	17.184	.98	.12	.13	.04
	4	.007	24.465	.02	.71	.03	.92

a. Dependent Variable: SF1_2

Table D3.52 Time – Collinearity analysis, Cohort 1, Time 3

Coefficients ^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.005	.812		4.931	.000		
	Time1_3	.397	.210	.530	1.894	.068	.327	3.058
	Time2_3	.172	.145	.235	1.185	.246	.648	1.544
	Time3_3	-.283	.159	-.444	-1.785	.084	.413	2.418

a. Dependent Variable: SF1_3

Table D3.53 Time – Collinearity diagnostics, Cohort 1, Time 3

Collinearity Diagnostics ^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Time1_3	Time2_3	Time3_3
1	1	3.952	1.000	.00	.00	.00	.00
	2	.025	12.494	.28	.03	.14	.31
	3	.016	15.844	.72	.02	.59	.04
	4	.007	23.440	.00	.94	.27	.65

a. Dependent Variable: SF1_3

Table D3.54 Effort – Collinearity analysis, Cohort 1, Time 1

Coefficients ^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	5.297	1.516		3.494	.002		
	Effort4_1	.050	.249	.042	.199	.844	.732	1.367
	Effort5_1	-.007	.190	-.008	-.037	.971	.708	1.413
	Effort6_1	-.050	.066	-.141	-.762	.452	.946	1.057

a. Dependent Variable: SF1_1

Table D3.55 Effort – Collinearity diagnostics, Cohort 1, Time 1

Collinearity Diagnostics ^a							
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Effort4_1	Effort5_1	Effort6_1
1	1	3.723	1.000	.00	.00	.00	.02
	2	.264	3.757	.00	.00	.00	.87
	3	.009	20.621	.29	.07	.92	.09
	4	.005	28.432	.71	.93	.07	.02

a. Dependent Variable: SF1_1

Table D3.56 Effort – Collinearity analysis, Cohort 1, Time 2

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.668	1.248		2.940	.006		
	Effort4_2	.093	.175	.119	.533	.598	.632	1.582
	Effort5_2	.147	.222	.146	.663	.512	.651	1.535
	Effort6_2	.012	.077	.027	.151	.881	.948	1.055

a. Dependent Variable: SF1_2

Table D3.57 Effort – Collinearity diagnostics, Cohort 1, Time 2

Collinearity Diagnostics ^a							
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Effort4_2	Effort5_2	Effort6_2
1	1	3.723	1.000	.00	.00	.00	.02
	2	.257	3.807	.00	.01	.00	.85
	3	.013	16.955	.45	.78	.02	.12
	4	.007	22.778	.55	.21	.97	.01

a. Dependent Variable: SF1_2

Table D3.58 Effort – Collinearity analysis, Cohort 1, Time 3. Initial solution

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.490	1.069		3.264	.003		
	Effort4_3	-1.071	.469	-.988	-2.283	.030	.109	9.143
	Effort5_3	1.485	.497	1.292	2.985	.006	.109	9.148
	Effort6_3	-.142	.049	-.413	-2.880	.007	.997	1.003

a. Dependent Variable: SF1_3

Table D3.59 Effort – Collinearity diagnostics, Cohort 1, Time 3. Initial solution

Collinearity Diagnostics ^a							
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Effort4_3	Effort5_3	Effort6_3
1	1	3.722	1.000	.00	.00	.00	.02
	2	.269	3.717	.00	.00	.00	.97
	3	.008	21.754	.96	.03	.02	.01
	4	.001	73.896	.03	.96	.98	.00

a. Dependent Variable: SF1_3

Table D3.60 Effort – Collinearity analysis, Cohort 1, Time 3. **Final solution**

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.507	1.135	3.969	.000		
	Effort4_3	.251	.174	.231	1.441	.160	1.000
	Effort6_3	-.134	.055	-.388	-2.422	.021	1.000

A: SF1_3

Table D3.61 Effort – Collinearity diagnostics, Cohort 1, Time 3. **Final solution**

Collinearity Diagnostics ^a						
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	Effort4_3	Effort6_3
1	1	2.751	1.000	.00	.00	.04
	2	.242	3.369	.01	.01	.96
	3	.006	20.697	.99	.99	.01

a. SF1_3

Table D3.62 Terminal values – Collinearity analysis, Cohort 2, Time 1

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.476	3.571		1.813	.079		
	TV1	.187	.249	.172	.749	.459	.427	2.340
	TV2	-.012	.212	-.011	-.059	.954	.688	1.453
	TV3	.232	.276	.227	.843	.405	.308	3.245
	TV4	-.670	.346	-.454	-1.935	.061	.408	2.451
	TV5	-.241	.430	-.090	-.559	.580	.869	1.151
	TV6	.367	.297	.257	1.233	.228	.518	1.939
	TV7	.065	.227	.059	.285	.777	.525	1.906
	TV8	.013	.279	.011	.046	.964	.410	2.442
	TV9	-.229	.215	-.272	-1.065	.294	.344	2.906
	TV10	.130	.203	.119	.641	.526	.650	1.537

a. Dependent Variable: SF1_1

Table D3.63 Terminal values – Collinearity diagnostics, Cohort 2, Time 1

Collinearity Diagnostics ^a														
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions										
				(Constant)	TV1	TV2	TV3	TV4	TV5	TV6	TV7	TV8	TV9	TV10
1	1	10.864	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.042	16.021	.00	.02	.03	.01	.01	.00	.01	.02	.00	.14	.02
	3	.025	20.899	.00	.02	.07	.02	.00	.00	.00	.04	.00	.09	.25
	4	.020	23.152	.01	.03	.00	.11	.00	.01	.01	.20	.03	.01	.00
	5	.014	27.517	.00	.28	.08	.00	.00	.00	.03	.04	.02	.11	.25
	6	.012	30.339	.00	.11	.56	.11	.03	.00	.01	.09	.01	.00	.01
	7	.008	37.714	.00	.08	.09	.16	.01	.01	.14	.03	.33	.08	.21
	8	.006	41.556	.01	.08	.02	.01	.08	.03	.21	.05	.40	.09	.17
	9	.005	46.466	.02	.00	.05	.01	.16	.05	.29	.53	.01	.47	.03
	10	.003	63.504	.00	.27	.03	.43	.60	.25	.26	.00	.10	.00	.03
	11	.001	95.251	.95	.11	.07	.14	.12	.64	.05	.00	.10	.00	.04

a. Dependent Variable: SF1_1

Table D3.64 Instrumental values – Collinearity analysis, Cohort 2, Time 1

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.004	1.777		1.690	.101		
	IV11	.105	.213	.092	.490	.627	.413	2.422
	IV12	-.098	.243	-.078	-.404	.689	.388	2.576
	IV13	-.258	.194	-.256	-1.332	.193	.394	2.537
	IV14	-.154	.193	-.156	-.795	.432	.377	2.655
	IV15	.296	.183	.285	1.615	.116	.467	2.139
	IV16	-.203	.219	-.141	-.926	.361	.625	1.599
	IV17	.081	.158	.092	.512	.613	.453	2.206
	IV18	.251	.151	.303	1.657	.108	.436	2.292
	IV19	.335	.235	.257	1.425	.164	.445	2.245
	IV20	-.064	.153	-.076	-.420	.677	.442	2.262
	IV21	-.522	.200	-.448	-2.609	.014	.493	2.028
	IV22	.452	.200	.406	2.264	.031	.453	2.208
	IV23	.183	.163	.208	1.123	.270	.424	2.359

a. Dependent Variable: SF1_1

Table D3.65 Instrumental values – Collinearity diagnostics, Cohort 2, Time 1

Collinearity Diagnostics																	
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions													
				(Constant)	IV11	IV12	IV13	IV14	IV15	IV16	IV17	IV18	IV19	IV20	IV21	IV22	IV23
1	1	13.741	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.055	15.749	.00	.01	.01	.00	.00	.00	.00	.11	.08	.00	.06	.00	.03	.03
	3	.044	17.573	.00	.00	.01	.02	.00	.00	.01	.01	.21	.00	.02	.00	.00	.11
	4	.035	19.895	.00	.00	.01	.06	.00	.03	.00	.16	.02	.00	.20	.01	.00	.00
	5	.028	22.217	.01	.00	.02	.00	.07	.00	.04	.08	.02	.01	.08	.03	.00	.10
	6	.023	24.689	.01	.07	.00	.02	.04	.20	.00	.02	.04	.00	.06	.01	.02	.09
	7	.019	26.851	.05	.08	.00	.06	.16	.00	.03	.00	.01	.00	.03	.08	.00	.00
	8	.013	32.406	.01	.07	.07	.16	.11	.26	.03	.00	.06	.00	.00	.02	.05	.05
	9	.012	33.390	.00	.09	.02	.12	.05	.04	.04	.00	.00	.00	.01	.18	.09	.36
	10	.009	39.442	.01	.01	.01	.06	.02	.14	.07	.08	.08	.04	.00	.24	.47	.01
	11	.007	43.863	.05	.32	.04	.29	.11	.01	.11	.14	.02	.00	.28	.13	.07	.01
	12	.006	47.615	.00	.01	.01	.00	.14	.01	.13	.01	.01	.90	.07	.02	.00	.01
	13	.005	53.739	.01	.00	.56	.03	.09	.19	.33	.33	.38	.03	.00	.01	.22	.04
	14	.003	70.876	.84	.34	.24	.18	.19	.11	.21	.04	.07	.00	.19	.27	.05	.18

a. Dependent Variable: SF1_1

Table D3.66 Knowledge – Collinearity analysis, Cohort 2, Time 1

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.480	1.467		1.009	.321		
	know1_1	-.026	.167	-.034	-.155	.878	.417	2.399
	know2_1	.291	.288	.272	1.007	.322	.268	3.730
	know3_1	.325	.285	.304	1.139	.264	.274	3.646
	know4_1	.045	.245	.044	.183	.856	.342	2.923
	know5_1	.031	.312	.030	.099	.922	.216	4.631
	know6_1	.007	.225	.007	.030	.976	.313	3.197
	know7_1	-.089	.249	-.089	-.355	.725	.313	3.194
	know8_1	-.202	.280	-.193	-.724	.475	.274	3.652
	know9_1	.230	.260	.274	.886	.383	.204	4.891
	know10_1	.185	.259	.204	.715	.480	.240	4.162
	know11_1	-.008	.164	-.010	-.051	.960	.539	1.857
	know12_1	.056	.158	.079	.354	.726	.391	2.554
	know13_1	-.023	.168	-.031	-.140	.890	.396	2.527
	know14_1	-.165	.370	-.096	-.446	.659	.425	2.353

a. Dependent Variable: SF1_1

Table D3.67 Knowledge – Collinearity diagnostics, Cohort 2, Time 1

Collinearity Diagnostics																		
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions														
				(Constant)	know 1 1	know 2 1	know 3 1	know 4 1	know 5 1	know 6 1	know 7 1	know 8 1	know 9 1	know 10 1	know 11 1	know 12 1	know 13 1	know 14 1
1	1	14.595	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.129	10.645	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.15	.10	.00
	3	.064	15.058	.00	.07	.00	.00	.01	.00	.01	.01	.01	.04	.01	.03	.02	.00	.00
	4	.051	17.000	.00	.14	.01	.01	.00	.00	.09	.00	.01	.00	.00	.07	.00	.00	.00
	5	.037	19.866	.00	.11	.00	.02	.08	.01	.00	.00	.00	.00	.02	.20	.01	.01	.00
	6	.027	23.042	.01	.00	.00	.01	.00	.00	.01	.00	.01	.00	.00	.00	.51	.69	.00
	7	.022	25.841	.17	.05	.01	.00	.02	.03	.02	.03	.00	.00	.03	.05	.03	.04	.04
	8	.019	27.374	.01	.11	.00	.04	.02	.03	.14	.10	.00	.00	.02	.27	.00	.00	.01
	9	.014	31.762	.01	.01	.08	.01	.04	.02	.21	.18	.01	.01	.10	.05	.00	.04	.00
	10	.011	36.062	.20	.04	.11	.00	.08	.03	.00	.01	.03	.01	.27	.06	.02	.00	.02
	11	.010	38.678	.00	.04	.03	.24	.07	.01	.00	.17	.07	.28	.00	.03	.02	.01	.00
	12	.007	44.311	.01	.01	.06	.17	.09	.01	.00	.05	.63	.07	.00	.00	.18	.06	.01
	13	.006	48.216	.00	.03	.18	.01	.40	.40	.00	.04	.02	.00	.02	.14	.04	.00	.14
	14	.003	65.255	.56	.14	.12	.09	.17	.41	.04	.01	.06	.04	.01	.05	.00	.01	.59
	15	.003	72.816	.02	.24	.39	.41	.02	.05	.47	.39	.16	.53	.50	.05	.01	.04	.18

a. Dependent Variable: SF1_1

Table D3.68 Knowledge – Collinearity analysis, Cohort 2, Time 2

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.908	1.229		.739	.466		
	know1_2	-.128	.134	-.202	-.960	.345	.297	3.370
	know2_2	.005	.184	.007	.027	.978	.225	4.450
	know3_2	.867	.283	1.043	3.066	.005	.114	8.807
	know4_2	-.145	.205	-.168	-.707	.485	.233	4.291
	know5_2	-.244	.302	-.282	-.808	.425	.108	9.283
	know6_2	-.060	.246	-.069	-.242	.811	.162	6.156
	know7_2	-.307	.183	-.267	-1.681	.103	.522	1.917
	know8_2	.111	.176	.124	.633	.531	.342	2.920
	know9_2	-.020	.169	-.023	-.119	.906	.336	2.979
	know10_2	-.104	.232	-.098	-.447	.658	.273	3.667
	know11_2	.117	.205	.137	.572	.572	.228	4.382
	know12_2	-.241	.164	-.318	-1.468	.153	.280	3.566
	know13_2	.155	.128	.201	1.215	.234	.480	2.082
	know14_2	.621	.294	.438	2.110	.043	.305	3.281

a. Dependent Variable: SF1_2

Table D3.69 Knowledge – Collinearity diagnostics, Cohort 2, Time 2

Collinearity Diagnostics																		
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions														
				(Constant)	know 1 2	know 2 2	know 3 2	know 4 2	know 5 2	know 6 2	know 7 2	know 8 2	know 9 2	know 10 2	know 11 2	know 12 2	know 13 2	know 14 2
1	1	14.526	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.151	9.815	.00	.04	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.10	.00
	3	.068	14.616	.04	.00	.00	.00	.00	.01	.01	.04	.00	.00	.01	.00	.12	.01	.00
	4	.056	16.164	.00	.20	.00	.00	.04	.01	.03	.00	.01	.06	.00	.00	.00	.04	.00
	5	.049	17.155	.00	.13	.05	.01	.13	.00	.00	.00	.00	.01	.00	.00	.00	.06	.00
	6	.040	19.116	.00	.00	.00	.00	.00	.00	.01	.00	.03	.01	.06	.06	.07	.32	.00
	7	.028	22.845	.03	.00	.00	.02	.03	.01	.00	.08	.21	.09	.00	.01	.00	.05	.01
	8	.023	25.346	.02	.01	.12	.04	.00	.01	.00	.01	.00	.08	.00	.05	.28	.22	.01
	9	.016	30.113	.03	.00	.00	.00	.01	.00	.21	.00	.24	.28	.00	.05	.02	.02	.00
	10	.013	33.891	.02	.17	.23	.01	.11	.00	.04	.18	.11	.01	.05	.14	.02	.05	.04
	11	.011	36.669	.00	.14	.16	.01	.05	.01	.01	.34	.13	.19	.08	.08	.31	.00	.01
	12	.007	45.317	.11	.20	.31	.24	.05	.02	.01	.02	.19	.00	.19	.34	.04	.08	.01
	13	.006	51.293	.47	.01	.10	.15	.00	.21	.00	.25	.03	.02	.00	.00	.01	.00	.35
	14	.005	53.721	.04	.00	.00	.01	.05	.58	.10	.06	.00	.09	.15	.14	.06	.01	.36
	15	.003	67.848	.23	.09	.01	.51	.50	.14	.59	.01	.06	.17	.45	.12	.04	.04	.21

a. Dependent Variable: SF1_2

Table D3.70 Knowledge – Collinearity analysis, Cohort 2, Time 3

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.288	2.752		-.104	.918		
	know1_3	-.040	.336	-.037	-.119	.908	.204	4.895
	know2_3	.324	.366	.255	.884	.384	.234	4.278
	know3_3	.053	.291	.049	.184	.855	.270	3.700
	know4_3	.434	.291	.488	1.489	.147	.181	5.515
	know5_3	.127	.290	.123	.439	.664	.249	4.014
	know6_3	-.049	.347	-.034	-.140	.889	.325	3.081
	know7_3	.079	.396	.043	.200	.843	.412	2.426
	know8_3	.036	.466	.021	.076	.940	.249	4.015
	know9_3	.042	.347	.031	.121	.905	.296	3.378
	know10_3	-.171	.532	-.088	-.322	.750	.262	3.824
	know11_3	-.174	.264	-.131	-.662	.513	.499	2.006
	know12_3	-.469	.272	-.619	-1.723	.095	.151	6.623
	know13_3	.145	.180	.192	.807	.426	.343	2.915
	know14_3	.562	.365	.357	1.542	.133	.363	2.756

a. Dependent Variable: SF1_3

Table D3.71 Knowledge – Collinearity diagnostics, Cohort 2, Time 3

Collinearity Diagnostics																		
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions														
				(Constant)	know 1 3	know 2 3	know 3 3	know 4 3	know 5 3	know 6 3	know 7 3	know 8 3	know 9 3	know 10 3	know 11 3	know 12 3	know 13 3	know 14 3
1	1	14.652	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.165	9.424	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.10	.00
	3	.055	16.394	.00	.00	.00	.04	.05	.02	.00	.00	.00	.00	.00	.00	.00	.24	.00
	4	.032	21.333	.01	.03	.01	.01	.01	.03	.00	.01	.00	.01	.00	.00	.17	.08	.00
	5	.026	23.657	.00	.05	.02	.00	.00	.00	.00	.00	.00	.01	.00	.09	.08	.15	.03
	6	.017	29.411	.01	.04	.01	.09	.02	.24	.01	.01	.01	.01	.01	.02	.02	.01	.01
	7	.012	35.274	.02	.00	.02	.01	.09	.03	.06	.00	.00	.00	.01	.28	.01	.08	.12
	8	.011	36.836	.02	.01	.02	.12	.00	.07	.00	.12	.03	.03	.00	.10	.10	.13	.01
	9	.009	40.710	.01	.01	.05	.27	.39	.09	.03	.01	.00	.07	.00	.00	.00	.06	.04
	10	.007	46.882	.02	.00	.01	.00	.01	.09	.45	.02	.04	.13	.00	.19	.01	.02	.05
	11	.005	52.301	.01	.00	.07	.06	.25	.02	.04	.06	.04	.48	.00	.06	.13	.01	.12
	12	.004	63.687	.01	.65	.62	.03	.01	.05	.04	.00	.04	.03	.02	.00	.01	.02	.13
	13	.003	75.859	.18	.18	.08	.11	.01	.01	.21	.01	.30	.05	.18	.22	.14	.01	.36
	14	.002	80.647	.45	.03	.01	.24	.00	.14	.00	.61	.33	.03	.04	.00	.10	.06	.12
	15	.002	90.521	.26	.00	.08	.02	.16	.22	.14	.14	.21	.15	.74	.02	.21	.03	.00

a. Dependent Variable: SF1_3

Table D3.72 Emotions – Collinearity analysis, Cohort 2, Time 1

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.432	1.386		1.033	.310		
	emo1_1	.024	.180	.032	.131	.897	.197	5.066
	emo2_1	.061	.123	.083	.500	.620	.425	2.354
	emo3_1	-.167	.148	-.290	-1.127	.269	.177	5.635
	emo4_1	-.136	.260	-.135	-.525	.604	.177	5.649
	emo5_1	.209	.132	.260	1.581	.124	.435	2.298
	emo6_1	-.009	.125	-.012	-.074	.942	.428	2.346
	emo7_1	-.065	.095	-.101	-.687	.498	.546	1.830
	emo8_1	.113	.122	.132	.926	.362	.582	1.717
	emo9_1	.376	.182	.359	2.070	.047	.392	2.550
	emo10_1	.005	.199	.005	.024	.981	.272	3.682
	emo11_1	-.091	.100	-.149	-.913	.368	.441	2.268
	emo12_1	-.045	.169	-.055	-.267	.791	.280	3.566
	emo13_1	-.065	.124	-.074	-.521	.606	.589	1.699
	emo14_1	.602	.261	.543	2.302	.028	.211	4.731

a. Dependent Variable: SF1_1

Table D3.73 Emotions – Collinearity diagnostics, Cohort 2, Time 1

Collinearity Diagnostics																		
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions														
				(Constant)	emo 1_1	emo 2_1	emo 3_1	emo 4_1	emo 5_1	emo 6_1	emo 7_1	emo 8_1	emo 9_1	emo 10_1	emo 11_1	emo 12_1	emo 13_1	emo 14_1
1	1	13.668	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.573	4.885	.00	.01	.00	.01	.00	.01	.00	.01	.01	.00	.00	.00	.00	.00	.00
	3	.193	8.405	.00	.01	.01	.01	.00	.00	.02	.01	.50	.00	.00	.00	.00	.00	.00
	4	.168	9.013	.00	.00	.00	.01	.00	.20	.00	.19	.00	.00	.00	.05	.00	.00	.00
	5	.122	10.565	.00	.00	.00	.00	.00	.01	.01	.23	.06	.00	.00	.28	.00	.00	.00
	6	.064	14.660	.00	.05	.13	.00	.00	.32	.00	.12	.12	.00	.00	.17	.00	.01	.00
	7	.050	16.526	.00	.00	.00	.06	.01	.05	.23	.09	.10	.00	.01	.02	.00	.20	.02
	8	.048	16.912	.00	.00	.00	.00	.00	.00	.30	.00	.06	.00	.00	.01	.01	.48	.00
	9	.040	18.571	.00	.26	.32	.00	.01	.00	.00	.14	.00	.00	.03	.00	.01	.00	.01
	10	.027	22.346	.00	.11	.10	.44	.00	.28	.03	.00	.07	.04	.01	.00	.10	.01	.01
	11	.015	30.220	.03	.02	.03	.38	.02	.08	.00	.01	.00	.28	.02	.03	.38	.07	.00
	12	.013	32.585	.02	.01	.11	.03	.08	.00	.09	.01	.01	.46	.00	.00	.35	.13	.01
	13	.009	38.837	.12	.10	.23	.03	.00	.03	.02	.12	.05	.01	.57	.26	.07	.02	.13
	14	.006	48.239	.39	.12	.06	.00	.47	.01	.03	.01	.00	.17	.28	.14	.04	.00	.00
	15	.004	61.618	.44	.32	.00	.03	.41	.00	.26	.05	.02	.04	.07	.01	.04	.08	.82

a. Dependent Variable: SF1_1

Table D3.74 Emotions – Collinearity analysis, Cohort 2, Time 2

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.284	1.408		.912	.369		
	emo1_2	-.200	.117	-.214	-1.714	.097	.689	1.452
	emo2_2	.105	.137	.120	.770	.447	.445	2.249
	emo3_2	.048	.170	.052	.282	.780	.313	3.195
	emo4_2	.252	.203	.251	1.244	.223	.263	3.797
	emo5_2	-.064	.123	-.080	-.520	.607	.449	2.229
	emo6_2	.125	.158	.148	.793	.434	.306	3.266
	emo7_2	-.061	.111	-.087	-.551	.585	.432	2.314
	emo8_2	.063	.115	.083	.547	.588	.467	2.141
	emo9_2	.033	.160	.036	.205	.839	.345	2.895
	emo10_2	-.083	.229	-.100	-.362	.720	.140	7.132
	emo11_2	.099	.142	.126	.693	.494	.322	3.108
	emo12_2	-.235	.196	-.275	-1.197	.241	.203	4.924
	emo13_2	.031	.121	.041	.255	.801	.419	2.386
	emo14_2	.572	.185	.651	3.096	.004	.242	4.125

a. Dependent Variable: SF1_2

Table D3.75 Emotions – Collinearity diagnostics, Cohort 2, Time 2

Collinearity Diagnostics																		
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions														
				(Constant)	emo 1_2	emo 2_2	emo 3_2	emo 4_2	emo 5_2	emo 6_2	emo 7_2	emo 8_2	emo 9_2	emo 10_2	emo 11_2	emo 12_2	emo 13_2	emo 14_2
1	1	13.802	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.334	6.425	.00	.00	.00	.01	.00	.06	.00	.02	.04	.00	.00	.00	.00	.01	.00
	3	.192	8.483	.00	.02	.01	.01	.00	.01	.04	.00	.10	.00	.00	.01	.00	.01	.00
	4	.173	8.926	.00	.00	.00	.00	.00	.15	.01	.06	.03	.01	.00	.01	.00	.07	.00
	5	.139	9.963	.00	.00	.00	.00	.00	.00	.05	.08	.21	.00	.00	.03	.00	.02	.00
	6	.117	10.870	.00	.08	.01	.01	.00	.11	.01	.09	.07	.00	.00	.04	.01	.01	.00
	7	.067	14.355	.00	.00	.01	.01	.01	.17	.00	.18	.07	.00	.00	.00	.00	.28	.01
	8	.054	16.029	.00	.09	.11	.01	.00	.12	.09	.02	.00	.10	.01	.05	.00	.00	.01
	9	.040	18.507	.00	.27	.06	.02	.07	.00	.00	.00	.05	.09	.00	.10	.03	.01	.00
	10	.027	22.440	.00	.01	.19	.23	.01	.02	.07	.02	.05	.07	.00	.02	.00	.00	.16
	11	.020	26.413	.04	.35	.04	.11	.04	.00	.00	.02	.07	.15	.01	.04	.23	.01	.05
	12	.013	32.407	.00	.06	.12	.01	.57	.00	.31	.18	.02	.11	.00	.48	.00	.03	.02
	13	.009	38.358	.01	.01	.05	.20	.00	.19	.11	.00	.01	.21	.24	.07	.23	.01	.67
	14	.008	42.449	.02	.01	.37	.02	.15	.07	.16	.32	.28	.07	.67	.03	.34	.02	.05
	15	.005	55.011	.92	.10	.04	.36	.15	.10	.14	.00	.00	.18	.04	.11	.14	.52	.02

a. Dependent Variable: SF1_2

Table D3.76 Emotions – Collinearity analysis, Cohort 2, Time 3

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1.249	1.327		-.941	.354		
	emo1_3	.110	.111	.161	.992	.329	.337	2.964
	emo2_3	-.061	.139	-.081	-.440	.663	.259	3.859
	emo3_3	.138	.161	.179	.858	.398	.204	4.896
	emo4_3	-.219	.216	-.209	-1.012	.320	.207	4.824
	emo5_3	-.115	.161	-.118	-.713	.482	.322	3.110
	emo6_3	.126	.103	.165	1.217	.233	.484	2.067
	emo7_3	.165	.105	.210	1.572	.126	.496	2.016
	emo8_3	-.111	.112	-.152	-.995	.328	.382	2.621
	emo9_3	.131	.206	.132	.638	.528	.206	4.845
	emo10_3	.059	.151	.068	.389	.700	.292	3.420
	emo11_3	.088	.141	.107	.624	.537	.303	3.303
	emo12_3	.242	.152	.279	1.595	.121	.290	3.445
	emo13_3	.053	.095	.072	.560	.580	.545	1.836
	emo14_3	.718	.168	.614	4.280	.000	.432	2.316

a. Dependent Variable: SF1_3

Table D3.77 Emotions – Collinearity diagnostics, Cohort 2, Time 3

Collinearity Diagnostics																		
				Variance Proportions														
					emo 1 3	emo 2 3	emo 3 3	emo 4 3	emo 5 3	emo 6 3	emo 7 3	emo 8 3	emo 9 3	emo 10 3	emo 11 3	emo 12 3	emo 13 3	emo 14 3
Model	Dimension	Eigenvalue	Condition Index	(Constant)	emo 1 3	emo 2 3	emo 3 3	emo 4 3	emo 5 3	emo 6 3	emo 7 3	emo 8 3	emo 9 3	emo 10 3	emo 11 3	emo 12 3	emo 13 3	emo 14 3
1	1	13.020	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.837	3.945	.00	.01	.00	.01	.00	.01	.00	.01	.01	.00	.00	.00	.00	.01	.00
	3	.298	6.606	.00	.01	.02	.00	.00	.15	.00	.01	.08	.00	.00	.01	.00	.02	.00
	4	.226	7.597	.00	.04	.01	.00	.00	.04	.00	.05	.16	.00	.00	.03	.00	.07	.00
	5	.163	8.951	.00	.00	.04	.00	.00	.07	.00	.37	.07	.00	.00	.00	.00	.03	.00
	6	.129	10.043	.00	.27	.00	.00	.00	.02	.00	.01	.12	.00	.00	.11	.00	.04	.00
	7	.088	12.130	.00	.02	.03	.00	.01	.14	.01	.19	.07	.00	.01	.02	.01	.45	.00
	8	.072	13.448	.00	.02	.20	.03	.00	.00	.15	.03	.04	.00	.05	.10	.01	.08	.00
	9	.061	14.587	.00	.09	.03	.45	.01	.01	.15	.00	.03	.00	.00	.06	.01	.00	.00
	10	.044	17.263	.00	.08	.16	.08	.00	.02	.40	.00	.00	.00	.00	.26	.03	.19	.00
	11	.022	24.298	.02	.01	.05	.01	.00	.12	.03	.05	.00	.00	.31	.00	.01	.00	.36
	12	.018	26.749	.00	.18	.08	.05	.01	.06	.00	.11	.14	.05	.06	.10	.80	.00	.01
	13	.010	35.980	.15	.09	.11	.08	.32	.20	.02	.07	.18	.00	.25	.05	.04	.06	.29
	14	.007	41.760	.13	.05	.11	.07	.00	.17	.14	.02	.09	.78	.31	.01	.08	.04	.10
	15	.005	53.356	.70	.12	.15	.21	.65	.00	.09	.08	.01	.16	.01	.25	.02	.01	.24

a. Dependent Variable: SF1_3

Table D3.78 SQ (Assurance) – Collinearity analysis, Cohort 2, Time 2

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.123	1.005		1.117	.271		
	SQ4_2	.042	.157	.048	.264	.793	.549	1.823
	SQ5_2	.217	.151	.223	1.440	.158	.750	1.333
	SQ14_2	-.417	.298	-.366	-1.399	.170	.263	3.796
	SQ15_2	.180	.204	.194	.884	.383	.375	2.665
	SQ16_2	-.164	.189	-.175	-.864	.393	.440	2.273
	SQ17_2	.103	.238	.087	.434	.667	.449	2.225
	SQ18_2	.682	.259	.675	2.631	.012	.274	3.648

a. Dependent Variable: SF1_2

Table D3.79 SQ (Assurance) – Collinearity diagnostics, Cohort 2, Time 2

Collinearity Diagnostics ^a											
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions							
				(Constant)	SQ4_2	SQ5_2	SQ14_2	SQ15_2	SQ16_2	SQ17_2	SQ18_2
1	1	7.809	1.000	.00	.00	.00	.00	.00	.00	.00	.00
	2	.070	10.599	.00	.10	.36	.00	.01	.00	.00	.03
	3	.048	12.776	.02	.14	.18	.00	.08	.14	.02	.00
	4	.024	18.103	.35	.32	.04	.00	.04	.07	.12	.01
	5	.018	21.109	.24	.20	.05	.05	.11	.36	.01	.12
	6	.015	22.849	.00	.23	.00	.12	.31	.26	.17	.10
	7	.011	26.138	.39	.00	.25	.02	.42	.07	.57	.00
	8	.006	36.633	.00	.01	.12	.81	.04	.10	.12	.74

a. Dependent Variable: SF1_2

Table D3.80 SQ (Assurance) – Collinearity analysis, Cohort 2, Time 3

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.542	1.059		1.455	.154		
	SQ4_3	.453	.196	.436	2.315	.026	.474	2.109
	SQ5_3	-.183	.200	-.160	-.915	.366	.547	1.827
	SQ14_3	.302	.248	.264	1.219	.230	.359	2.785
	SQ15_3	.113	.241	.086	.469	.642	.498	2.009
	SQ16_3	.043	.217	.040	.197	.845	.403	2.482
	SQ17_3	.397	.249	.341	1.597	.119	.369	2.712
	SQ18_3	-.370	.314	-.300	-1.181	.245	.261	3.835

a. Dependent Variable: SF1_3

Table D3.81 SQ (Assurance) – Collinearity diagnostics, Cohort 2, Time 3

Collinearity Diagnostics ^a											
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions							
				(Constant)	SQ4_3	SQ5_3	SQ14_3	SQ15_3	SQ16_3	SQ17_3	SQ18_3
1	1	7.821	1.000	.00	.00	.00	.00	.00	.00	.00	.00
	2	.069	10.627	.01	.08	.13	.01	.01	.10	.01	.00
	3	.031	15.814	.12	.32	.17	.00	.00	.02	.00	.06
	4	.024	18.029	.24	.02	.10	.07	.17	.00	.23	.00
	5	.019	20.495	.14	.12	.03	.09	.47	.24	.02	.01
	6	.016	21.838	.05	.07	.01	.32	.04	.17	.42	.03
	7	.013	24.339	.34	.08	.12	.30	.22	.29	.01	.11
	8	.007	34.474	.10	.31	.45	.21	.10	.18	.31	.79

a. Dependent Variable: SF1_3

Table D3.82 SQ (Empathy) – Collinearity analysis, Cohort 2, Time 2

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.072	.921		2.250	.030		
	SQ7_2	.256	.168	.295	1.523	.136	.553	1.808
	SQ19_2	-.061	.189	-.070	-.321	.750	.437	2.287
	SQ20_2	-.032	.192	-.040	-.166	.869	.363	2.751
	SQ22_2	.003	.132	.003	.020	.984	.804	1.244
	SQ24_2	.311	.213	.264	1.464	.151	.640	1.561

a. Dependent Variable: SF1_2

Table D3.83 SQ (Empathy) – Collinearity diagnostics, Cohort 2, Time 2

Collinearity Diagnostics ^a									
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	SQ7 2	SQ19 2	SQ20 2	SQ22 2	SQ24 2
1	1	5.801	1.000	.00	.00	.00	.00	.00	.00
	2	.088	8.103	.03	.00	.05	.14	.24	.00
	3	.045	11.344	.11	.71	.08	.00	.01	.01
	4	.030	13.803	.20	.11	.09	.05	.71	.12
	5	.020	16.980	.01	.16	.70	.67	.04	.09
	6	.015	19.367	.66	.02	.08	.14	.00	.77

a. Dependent Variable: SF1_2

Table D3.84 SQ (Empathy) – Collinearity analysis, Cohort 2, Time 3

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.228	.856		2.604	.013		
	SQ7_3	.222	.158	.231	1.407	.167	.610	1.639
	SQ19_3	.080	.156	.082	.513	.611	.637	1.571
	SQ20_3	.287	.181	.269	1.582	.122	.568	1.760
	SQ22_3	-.159	.154	-.157	-1.030	.309	.709	1.410
	SQ24_3	.237	.184	.231	1.288	.205	.513	1.948

a. Dependent Variable: SF1_3

Table D3.85 SQ (Empathy) – Collinearity diagnostics, Cohort 2, Time 3

Collinearity Diagnostics ^a									
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	SQ7 3	SQ19 3	SQ20 3	SQ22 3	SQ24 3
1	1	5.812	1.000	.00	.00	.00	.00	.00	.00
	2	.073	8.927	.02	.25	.17	.01	.15	.01
	3	.038	12.350	.00	.43	.82	.02	.02	.02
	4	.034	13.134	.32	.08	.01	.49	.05	.07
	5	.024	15.691	.29	.01	.00	.45	.11	.48
	6	.020	17.166	.36	.22	.00	.02	.67	.42

a. Dependent Variable: SF1_3

Table D3.86 SQ (Reliability) – Collinearity analysis, Cohort 2, Time 2

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.255	1.067		2.113	.041		
	SQ6_2	-.127	.154	-.126	-.825	.414	.862	1.160
	SQ8_2	-.064	.205	-.054	-.312	.757	.673	1.486
	SQ9_2	.155	.165	.213	.941	.352	.394	2.537
	SQ10_2	.137	.246	.143	.557	.581	.306	3.271
	SQ11_2	.270	.138	.294	1.962	.057	.897	1.115

a. Dependent Variable: SF1_2

Table D3.87 SQ (Reliability) – Collinearity diagnostics, Cohort 2, Time 2

Collinearity Diagnostics ^a									
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	SQ6_2	SQ8_2	SQ9_2	SQ10_2	SQ11_2
1	1	5.828	1.000	.00	.00	.00	.00	.00	.00
	2	.066	9.391	.02	.14	.00	.22	.03	.07
	3	.051	10.720	.00	.44	.02	.00	.01	.38
	4	.027	14.559	.01	.05	.64	.11	.00	.35
	5	.017	18.722	.81	.13	.07	.09	.12	.20
	6	.011	23.487	.16	.24	.27	.57	.84	.00

a. Dependent Variable: SF1_2

Table D3.88 SQ (Reliability) – Collinearity analysis, Cohort 2, Time 3

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.785	.971		1.839	.074		
	SQ6_3	-.053	.214	-.049	-.247	.806	.463	2.158
	SQ8_3	.376	.280	.302	1.343	.187	.363	2.756
	SQ9_3	-.133	.218	-.123	-.609	.546	.453	2.208
	SQ10_3	.346	.280	.278	1.235	.224	.363	2.753
	SQ11_3	.181	.148	.197	1.222	.229	.709	1.411

a. Dependent Variable: SF1_3

Table D3.89 SQ (Reliability) – Collinearity diagnostics, Cohort 2, Time 3

Collinearity Diagnostics ^a									
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	SQ6_3	SQ8_3	SQ9_3	SQ10_3	SQ11_3
1	1	5.865	1.000	.00	.00	.00	.00	.00	.00
	2	.051	10.724	.00	.23	.03	.09	.05	.03
	3	.037	12.653	.03	.00	.01	.05	.02	.97
	4	.023	15.917	.94	.02	.08	.04	.03	.00
	5	.016	19.407	.01	.27	.27	.51	.19	.00
	6	.008	26.370	.02	.49	.61	.30	.71	.01

a. Dependent Variable: SF1_3

Table D3.90 SQ (Responsiveness) – Collinearity analysis, Cohort 2, Time 2

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.444	.881		1.640	.109		
	SQ12_2	.118	.211	.099	.559	.579	.532	1.878
	SQ13_2	-.238	.167	-.240	-1.424	.162	.593	1.686
	SQ23_2	.093	.170	.087	.547	.588	.669	1.495
	SQ25_2	.604	.191	.552	3.154	.003	.550	1.819

a. Dependent Variable: SF1_2

Table D3.91 SQ (Responsiveness) – Collinearity diagnostics, Cohort 2, Time 2

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	SQ12_2	SQ13_2	SQ23_2	SQ25_2
1	1	4.916	1.000	.00	.00	.00	.00	.00
	2	.034	12.102	.00	.02	.35	.46	.01
	3	.021	15.282	.86	.00	.15	.09	.10
	4	.016	17.267	.00	.01	.15	.43	.87
	5	.013	19.215	.14	.97	.35	.02	.01

a. Dependent Variable: SF1_2

Table D3.92 SQ (Responsiveness) – Collinearity analysis, Cohort 2, Time 3

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.466	.713		2.057	.046		
	SQ12_3	.075	.186	.066	.402	.690	.510	1.959
	SQ13_3	.089	.210	.079	.422	.675	.385	2.597
	SQ23_3	.154	.200	.135	.768	.447	.442	2.262
	SQ25_3	.459	.182	.467	2.515	.016	.394	2.538

a. Dependent Variable: SF1_3

Table D3.93 SQ (Responsiveness) – Collinearity diagnostics, Cohort 2, Time 3

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	SQ12_3	SQ13_3	SQ23_3	SQ25_3
1	1	4.912	1.000	.00	.00	.00	.00	.00
	2	.034	11.973	.78	.00	.01	.02	.18
	3	.021	15.282	.01	.76	.06	.33	.01
	4	.019	16.281	.14	.24	.01	.43	.55
	5	.014	18.859	.07	.00	.92	.21	.26

a. Dependent Variable: SF1_3

Table D3.94 SQ (Tangibles) – Collinearity analysis, Cohort 2, Time 2

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.245	.935		3.470	.001		
	SQ1_2	-.423	.181	-.493	-2.338	.024	.418	2.395
	SQ2_2	.498	.169	.653	2.948	.005	.379	2.638
	SQ3_2	-.130	.150	-.133	-.870	.390	.798	1.252
	SQ21_2	.276	.148	.280	1.863	.070	.825	1.212

a. Dependent Variable: SF1_2

Table D3.95 SQ (Tangibles) – Collinearity diagnostics, Cohort 2, Time 2

Collinearity Diagnostics ^a								
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	SQ1 2	SQ2 2	SQ3 2	SQ21 2
1	1	4.835	1.000	.00	.00	.00	.00	.00
	2	.068	8.427	.03	.09	.09	.37	.01
	3	.062	8.846	.04	.01	.15	.12	.32
	4	.021	15.014	.24	.46	.28	.05	.49
	5	.014	18.538	.69	.44	.48	.46	.18

a. Dependent Variable: SF1_2

Table D3.96 SQ (Tangibles) – Collinearity analysis, Cohort 2, Time 3

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.923	.731		2.630	.012		
	SQ1_3	.176	.133	.188	1.327	.192	.666	1.501
	SQ2_3	-.198	.150	-.194	-1.320	.194	.618	1.619
	SQ3_3	.029	.112	.032	.262	.795	.914	1.095
	SQ25_3	.659	.133	.671	4.970	.000	.732	1.365

a. Dependent Variable: SF1_3

Table D3.97 SQ (Tangibles) – Collinearity diagnostics, Cohort 2, Time 3

Collinearity Diagnostics ^a								
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	SQ1 3	SQ2 3	SQ3 3	SQ25 3
1	1	4.832	1.000	.00	.00	.00	.00	.00
	2	.070	8.301	.00	.03	.05	.74	.11
	3	.041	10.887	.08	.61	.03	.00	.39
	4	.030	12.769	.09	.33	.90	.02	.05
	5	.027	13.372	.83	.03	.02	.23	.43

a. Dependent Variable: SF1_3

Table D3.98 Money – Collinearity analysis, Cohort 2, Time 1

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.016	1.279		4.705	.000		
	MS1_1	.028	.115	.037	.241	.811	.996	1.004
	MS2_1	-.159	.183	-.134	-.872	.388	.996	1.004

a. Dependent Variable: SF1_1

Table D3.99 Money – Collinearity diagnostics, Cohort 2, Time 1

Collinearity Diagnostics ^a						
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	MS1_1	MS2_1
1	1	2.953	1.000	.00	.01	.00
	2	.038	8.863	.03	.90	.13
	3	.009	18.125	.96	.09	.87

a. Dependent Variable: SF1_1

Table D3.100 Money – Collinearity analysis, Cohort 2, Time 2

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.950	.785		6.302	.000		
	MS1_2	.190	.119	.262	1.602	.117	.792	1.263
	MS2_2	-.315	.146	-.353	-2.157	.037	.792	1.263

a. Dependent Variable: SF1_2

Table D3.101 Money – Collinearity diagnostics, Cohort 2, Time 2

Collinearity Diagnostics ^a						
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	MS1_2	MS2_2
1	1	2.940	1.000	.00	.01	.00
	2	.038	8.792	.26	.96	.09
	3	.022	11.473	.73	.03	.91

a. Dependent Variable: SF1_2

Table D3.102 Money – Collinearity analysis, Cohort 2, Time 3

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.842	1.204		3.191	.003		
	MS1_3	.198	.123	.241	1.608	.115	.994	1.006
	MS2_3	.018	.172	.016	.104	.918	.994	1.006

a. Dependent Variable: SF1_3

Table D3.103 Money – Collinearity diagnostics, Cohort 2, Time 3

Collinearity Diagnostics ^a						
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	MS1_3	MS2_3
1	1	2.939	1.000	.00	.01	.00
	2	.047	7.891	.03	.88	.17
	3	.013	14.763	.96	.11	.82

a. Dependent Variable: SF1_3

Table D3.104 Time – Collinearity analysis, Cohort 2, Time 1

Coefficients ^a								
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	5.598	.897		6.239	.000		
	Time1_1	.068	.200	.076	.341	.735	.486	2.058
	Time2_1	-.071	.156	-.100	-.456	.651	.500	1.999
	Time3_1	-.065	.244	-.072	-.265	.792	.329	3.041

a. Dependent Variable: SF1_1

Table D3.105 Time – Collinearity diagnostics, Cohort 2, Time 1

Collinearity Diagnostics ^a							
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Time1_1	Time2_1	Time3_1
1	1	3.943	1.000	.00	.00	.00	.00
	2	.030	11.441	.42	.03	.51	.01
	3	.019	14.465	.58	.43	.19	.05
	4	.008	21.731	.00	.54	.29	.95

a. Dependent Variable: SF1_1

Table D3.106 Time – Collinearity analysis, Cohort 2, Time 2

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	5.801	1.213		4.783	.000		
	Time1_2	-.173	.186	-.160	-.928	.359	.784	1.276
	Time2_2	-.001	.307	-.001	-.003	.998	.256	3.909
	Time3_2	-.100	.353	-.084	-.283	.778	.262	3.816

a. Dependent Variable: SF1_2

Table D3.107 Time – Collinearity diagnostics, Cohort 2, Time 2

Collinearity Diagnostics ^a							
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Time1_2	Time2_2	Time3_2
1	1	3.961	1.000	.00	.00	.00	.00
	2	.020	13.935	.08	.50	.12	.05
	3	.015	16.266	.77	.49	.03	.00
	4	.004	33.029	.15	.00	.85	.95

a. Dependent Variable: SF1_2

Table D3.108 Time – Collinearity analysis, Cohort 2, Time 3

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.241	1.150		1.949	.058		
	Time1_3	.587	.210	.483	2.800	.008	.668	1.498
	Time2_3	-.104	.264	-.101	-.394	.696	.300	3.333
	Time3_3	-.002	.275	-.002	-.007	.995	.335	2.986

a. Dependent Variable: SF1_3

Table D3.109 Time – Collinearity diagnostics, Cohort 2, Time 3

Collinearity Diagnostics ^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Time1_3	Time2_3	Time3_3
1	1	3.960	1.000	.00	.00	.00	.00
	2	.021	13.786	.45	.08	.15	.08
	3	.014	17.110	.44	.88	.00	.06
	4	.006	26.356	.11	.06	.85	.86

a. Dependent Variable: SF1_3

Table D3.110 Effort – Collinearity analysis, Cohort 2, Time 1

Coefficients ^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.293	2.051		1.118	.270		
	Effort4_1	.402	.335	.221	1.201	.237	.648	1.544
	Effort5_1	.076	.317	.043	.238	.813	.677	1.477
	Effort6_1	-.067	.067	-.153	-.998	.324	.934	1.071

a. Dependent Variable: SF1_1

Table D3.111 Effort – Collinearity diagnostics, Cohort 2, Time 1

Collinearity Diagnostics ^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Effort4_1	Effort5_1	Effort6_1
1	1	3.770	1.000	.00	.00	.00	.01
	2	.223	4.116	.00	.00	.00	.89
	3	.004	30.864	.74	.00	.63	.01
	4	.003	35.338	.26	1.00	.37	.09

a. Dependent Variable: SF1_1

Table D3.112 Effort – Collinearity analysis, Cohort 2, Time 2

Coefficients ^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.399	1.309		2.596	.013		
	Effort4_2	-.086	.241	-.066	-.359	.721	.661	1.513
	Effort5_2	.147	.200	.136	.734	.467	.657	1.522
	Effort6_2	.139	.083	.253	1.673	.102	.992	1.008

a. Dependent Variable: SF1_2

Table D3.113 Effort – Collinearity diagnostics, Cohort 2, Time 2

Collinearity Diagnostics ^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Effort4_2	Effort5_2	Effort6_2
1	1	3.784	1.000	.00	.00	.00	.01
	2	.195	4.403	.00	.00	.01	.93
	3	.013	16.957	.52	.01	.73	.06
	4	.008	22.221	.47	.98	.26	.00

a. Dependent Variable: SF1_2

Table D3.114 Effort – Collinearity analysis, Cohort 2, Time 3

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.042	1.250		1.634	.110		
	Effort4_3	.658	.232	.484	2.829	.007	.688	1.454
	Effort5_3	-.154	.186	-.142	-.830	.411	.689	1.451
	Effort6_3	-.038	.083	-.065	-.453	.653	.980	1.020

a. Dependent Variable: SF1_3

Table D3.115 Effort – Collinearity diagnostics, Cohort 2, Time 3

Collinearity Diagnostics ^a								
Model Dimension		Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	Effort4_3	Effort5_3	Effort6_3	
1	1	3.784	1.000	.00	.00	.00	.01	
	2	.191	4.456	.01	.01	.01	.98	
	3	.016	15.171	.45	.02	.78	.00	
	4	.009	20.514	.55	.98	.20	.00	

a. Dependent Variable: SF1_3

REFERENCES

- Aaker, D. A., Kumar, V. and Day, G. S. (1998), *Marketing Research*, 6th edition, New York: John Wiley and Sons.
- Adams, J.S. (1965), "Inequity in social exchange" in L. Berkowitz (Ed.) *Advances in Experimental Social Psychology Volume 2*, 267-297, New York: Academic Press Inc.
- Agarwal, S. and Teas, R.K. (2001), "Perceived value: mediating role of perceived risk", *Journal of Marketing Theory and Practice*, 9(4):1-13
- Ajzen, I. (1991), "The theory of planned behavior", *Organizational Behavior and Human Decision Processes*, 50(2):179-211
- Allen, M.W., Ng, S.K. and Wilson, M. (2002), "A functional approach to instrumental and terminal values and the value-attitude-behaviour system of consumer choice", *European Journal of Marketing*, 36(1/2):111-135
- Arambewela, R. and Hall, J. (2006), "A comparative analysis of international education satisfaction using SERVQUAL", *Journal of Services Research*, 6(2006):141-163
- Arndt, J. (1985), "On making marketing science more scientific: role of orientations, paradigms, metaphors, and puzzle solving", *Journal of Marketing*, 49(3):11-23
- Arnold, M.J. and Reynolds, K.E. (2003), "Hedonic shopping motivations", *Journal of Retailing*, 79(2):77-95
- Babin, B.J., Darden, W.R. and Griffin, M. (1994), "Work and/or fun: measuring hedonic and utilitarian shopping value", *Journal of Consumer Research*, 20(4):644-656
- Babin, B.J. and Attaway, J.S. (2000), "Atmospheric affect as a tool for creating value and gaining share of customer", *Journal of Business Research*, 49(2):91-99
- Bagozzi, R.P. (1975), "Marketing as exchange", *Journal of Marketing*, 39(4):32-39
- Bagozzi, R.P. (1994a), "Structural Equation Models in Marketing Research", in Richard P. Bagozzi (Ed.) *Principles of Marketing Research*, 317-385, Massachusetts; Blackwell
- Bagozzi, R.P. (1994b), "Measurement in marketing research: Basic principles of questionnaire design", in Richard P. Bagozzi (Ed.) *Principles of Marketing Research*, 1-49, Massachusetts; Blackwell
- Bagozzi, R.P., Gopinath, M. and Nyer, P.R. (1999), "The role of emotions in marketing", *Journal of the Academy of Marketing Science*, 27(2):184-206
- Bailey, J.J., Gremler, D.D. and McCollough, M.A., (2001), "The dyadic influence of customer and employee emotions", *Services Marketing Quarterly*, 23(1):1-24
- Baines, P., Fill, C. and Page, K. (2008) *Marketing*, New York: Oxford University Press Inc.
- Baker, S.M., Kleine, S.S. and Bennion, M. (2003), "What do they know? Integrating the core concept of customer value into the undergraduate marketing curriculum and its assessment", *Journal of Marketing Education*, 25(1):79-89
- Barclay, D., Higgins, C. and Thompson, R. (1995), "The partial least squares (PLS) approach to causal modeling: personal computer adoption and use as an illustration", *Technology Studies*, 2(2):285-324
- Batra, R. and Holbrook, M. (1990), "Developing a typology of affective responses to advertising", *Psychology & Marketing*, 7(1):11-25

- Beldona, S., So, S.-I., and Morrison, A. (2006), "Trade-off analysis of perceived value: the case of a travel vacation club", *Journal of Hospitality & Leisure Marketing*, 14(3):65-80.
- Belk, R.W. (2006), "History of qualitative research methods in marketing", in Russell W. Belk (Ed.) *Handbook of qualitative research methods in marketing*, 3-16, Boston, Mass: Edward Elgar Publishing
- Bennett, R. and Gabriel, H. (2000), "Charity affiliation as a determinant of product purchase decisions", *Journal of Product & Brand Management*, 9(4):255-270
- Beverland, M. and Lockshin, L. (2003), "A longitudinal study of customers' desired value change in business-to-business markets", *Industrial Marketing Management*, 32(8):653-666
- Bickart, B. and Schwarz, N. (2001), "Service experiences and satisfaction judgments: the use of affect and beliefs in judgment formation", *Journal of Consumer Psychology*, 11(1):29-41
- Blois, K. (2003), "Using value equations to analyse exchanges", *Marketing Intelligence and Planning*, 21(1):16-22
- Blois, K. (2004), "Analyzing exchanges through the use of value equations", *Journal of Business and Industrial Marketing*, 19(4):250-257
- Bollen, K. and Lennox, R. (1991), "Conventional wisdom on measurement: a structural equation perspective", *Psychological Bulletin*, 110(3):305-314
- Bolton, R.M. and Drew, J.H. (1991), "A multistage model of consumers' assessments of service quality and value", *Journal of Consumer Research*, 17(4):375-384
- Bourdeau, L., Chebat, J.-C. and Couturier, C. (2002), "Internet consumer value of university students: E-mail-vs.-Web users", *Journal of Retailing and Consumer Services*, 9(2):61-69
- Butz, H.E. Jr. and Goodstein, L.D. (1996), "Measuring customer value: Gaining the strategic advantage", *Organizational Dynamics*, 24(3):63-77
- Brady, M.K. and Robertson, C.J. (1999), "An exploratory study of service value in the USA and Ecuador", *International Journal of Service Industry Management*, 10(5):469-486
- Brodie, R.J., Whittome, J.R.M. and Brush, G.J. (2009), "Investigating the service brand: A customer value perspective", *Journal of Business Research*, 62(3):345-355
- Brown, S. (1996), "Art or Science? Fifty Years of Marketing Debate", *Journal of Marketing Management*, 12(4):243-267
- Brown, S. (1999), "Devaluing value: the apophatic ethic and the spirit of postmodern consumption", in M.B. Holbrook (Ed.) *Consumer Value: a framework for analysis and research*, 159-182, New York: Routledge,
- Butcher, K., Sparks, B. and O'Callaghan, F. (2002), "Effect of social influence on repurchase intentions", *Journal of Services Marketing*, 16(6):503-514
- Carpenter, J.M. (2008), "Consumer shopping value, satisfaction and loyalty in discount retailing", *Journal of Retailing and Consumer Services*, 15(5):358-363
- Chan, R.Y.K. and Lau, L.B.Y. (2000), "Antecedents of green purchases: a survey in China", *Journal of Consumer Marketing*, 17(4):338-357
- Chen, Z. and Dubinsky, A.J. (2003), "A Conceptual Model of Perceived Customer Value in E-Commerce: A Preliminary Investigation", *Psychology & Marketing*, 20(4):323-347

- Chin, W.W. (1998a) "Issues and Opinion on Structural Equation Modeling", *MIS Quarterly*, 22(1):vii-xvi
- Chin, W.W. (1998b), "The Partial Least Squares Approach to Structural Equation Modeling", in G.A. Marconlide (Ed.), *Modern Methods for Business Research*, 295-336, London: Lawrence Elbaum Associates
- Chin, W.W. (2009) website: <http://disc-nt.cba.uh.edu/chin/plsfaq/contents.htm> accessed 12th February 2009
- Choi, K.-S., Cho, W.-H., Lee, S., Lee, H. and Kim, C. (2004), "The relationships among quality, value, satisfaction and behavioral intention in health care provider choice: A South Korean study", *Journal of Business Research*, 57(8):913-921
- Churchill, G.A. Jr. (1979), "A paradigm for developing better measures of marketing constructs", *Journal of Marketing Research*, 16(1):64-73
- Churchill, G.A. Jr. and Iacobucci, D. (2005), *Marketing research: methodological foundations*, 9th edition, Texas: Harcourt College Publishers
- Collins English Dictionary* (2008), Glasgow: HarperCollins
- Collis, J. and Hussey, R. (2003), *Business Research: a practical guide for undergraduate and postgraduate students*, Maidenhead: Palgrave Macmillan
- Cook, M.J. (1997), "A student's perspective of service quality in education", *Total Quality Management*, 8(2/3):120-125
- Creswell, J.W. (1998), *Qualitative Inquiry and Research Design: Choosing Among the Five Traditions*, London: Sage
- Cronin, J.J. Jnr., Brady, M.K., Brand, R.R., Hightower, R. Jnr. and Shemwell, D.J. (1997), "A cross-sectional test of the effect and conceptualization of service value", *Journal of Services Marketing*, 11(6):375-391
- Cronin, J. J. Jr., Brady, K. M., and Hult, G. M. T. (2000), "Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environment", *Journal of Retailing*, 76(2):193-218
- Crosby, L., Bitner, M.J. and Gill, J.D. (1990), "Organizational Structure of Values", *Journal of Business Research*, 20(2):123-134
- Cuthbert, P.F. (1996a), "Managing service quality in HE: is SERVQUAL the answer? Part 1", *Managing Service Quality*, 6(2):11-16
- Cuthbert, P.F. (1996b), "Managing service quality in HE: is SERVQUAL the answer? Part 2", *Managing Service Quality*, 6(3):31-35
- Danaher, P.J. and Mattsson, J. (1994), "Customer satisfaction during the service delivery process", *European Journal of Marketing*, 28(5):5-16
- Danaher, P.J. and Mattsson, J. (1998), "A comparison of service delivery processes of different complexity", *International Journal of Service Industry Management*, 9(1):48-63
- Day, E. and Crask, M.R. (2000), "Value assessment: the antecedent of consumer satisfaction", *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behaviour*, 13:52-59
- Denscombe, M. (2003), *The Good Research Guide*, 2nd edition, Maidenhead, PA: Open University Press
- De Ruyter, K., Lemmink, J., Wetzels, M. and Mattson, J. (1997a), "Carry-over effects in the formation of satisfaction: The role of value in a hotel service delivery process", *Advances in Services Marketing and Management*, 6:61-77

- De Ruyter, K., Wetzels, M., Lemmink, J. and Mattson, J. (1997b), "The dynamics of the service delivery process: A value-based approach", *International Journal of Research in Marketing*, 14(3):231-243
- De Vaus, D. A. (2001), *Research Design in Social Research*, London: Sage Publications.
- De Vellis, R.F. (2003), *Scale Development. Theory and Applications*, 2nd edition, Applied Social Research Methods Series, Volume 26, Thousand Oaks, CA: Sage
- Diamantopoulos, A. (1999), "Viewpoint. Export performance measurement: reflective versus formative indicators", *International Marketing Review*, 16(6):444-457
- Diamantopoulos, A. and Winklhofer, H.M. (2001), "Index construction with formative indicators: an alternative to scale development", *Journal of Marketing Research*, 38(2):269-277
- Diamantopoulos, A., Riefler, P. and Roth, K.P. (2008), "Advancing formative measurement models", *Journal of Business Research*, 61(12):1203-1218
- Dillman, D.A., (2000), *Mail and internet surveys: the Tailored Design Method*, 2nd edition, New York: John Wiley & Sons
- Dodds, W.B., Monroe, K.B. and Grewal, D. (1991), "Effects of price, brand and store information on buyers' product evaluations", *Journal of Marketing Research*, 28(3):307-19
- Dubé, L., Bélanger, M.C., and Trudeau, E. (1996), "The role of emotions in health care satisfaction. Positive feelings have the expected effect, but negative ones do not always result in dissatisfaction", *Journal of Healthcare Marketing*, 16(2):45-51
- Dubois, O.-L., Jolibert, A. and Mühlbacher, H. (2007), *Marketing Management: A Value-Creation Process*, Basingstoke, Hampshire: Palgrave Macmillan
- Duman, T. and Mattila, A.S. (2005), "The role of affective factors on perceived cruise vacation value", *Tourism Management*, 26(3):311-323
- Easterby-Smith, M., Thorpe, R. and Lowe, A. (1994), *Management research: An introduction*, London: Sage
- Eggert, A., Ulaga, W., and Schultz, F. (2006), "Value creation in the relationship life cycle: A quasi-longitudinal analysis", *Industrial Marketing Management*, 35(1):20-27
- Eggert, A. and Ulaga, W. (2002), "Customer perceived value: a substitute for satisfaction in business markets?", *Journal of Business and Industrial Marketing*, 17(2/3):107-118
- Engelland, B.T., Workman, L. and Singh, M. (2000), "Ensuring service quality for campus career services: A modified SERVQUAL scale", *Journal of Marketing Education*, 22(3):236-245
- Engelland, B.T., Alford, B.L. and Taylor, R.D. (2001): "Cautions and precautions on the use of 'borrowed' scales in marketing research", in: T. A. Suter (Ed.), *Marketing advances in pedagogy, process and philosophy: Proceedings of the annual meeting of the society for marketing advances*, New Orleans, LA, November 6-10, 152-153
- Etter, J.-F. and Perneger, T.V. (1997), "Validating a satisfaction questionnaire using multiple approaches: a case study", *Social Science & Medicine*, 45(6):879-885
- Fisher, D.M., Kiang, M. and Fisher S.A. (2007), "A value-added approach to selecting the best Master of Business Administration (MBA) Program", *Journal of Education for Business*, 83(2):72-76

- Flint, D.J. and Woodruff, R.B. (2001), "The initiators of changes in customers' desired value", *Industrial Marketing Management*, 30(4):321-337
- Flint D.J., Woodruff, R.B., and Gardial, S.F. (1997), "Customer value change in industrial marketing relationships", *Industrial Marketing Management*, 26(2):163-175
- Flint, D.J., Woodruff, R.B. and Gardial, S.F. (2002), "Exploring the phenomenon of customers' desired value change in a business to business context", *Journal of Marketing*, 66(4):102-117
- Fornell, C. and Larcker, D. (1981a), "Evaluating structural equation models with unobservable variable and measurement error", *Journal of Marketing Research*, 18(1):39-50
- Fornell, C. and Larcker, D. (1981b), "Structural equation models with unobservable variable and measurement error: algebra and statistics", *Journal of Marketing Research*, 18(3):382-388
- Fournier, S. (1998), "Consumers and their brands: developing relationship theory in consumer research", *Journal of Consumer Research*, 24(4):343-373
- Francis, S. and Dickey, L.E. (1984), "Dimensions of satisfaction with purchases of women's dresses: before and after garment care", *International Journal of Consumer Studies*, 8(2):153-168
- Frankfort-Nachmias, C. and Nachmias, D. (1996), *Research methods in the social sciences*, 5th edition, London: Arnold
- Gale, B.T. (1994), *Managing Customer Value: creating quality and service that customers can see*, New York: The Free Press
- Gallarza, M. G. and Saura, I.G. (2006), "Value dimensions, perceived value, satisfaction and loyalty: an investigation of university students' travel behavior", *Tourism Management*, 27(3):437-452
- Gardial, S.F., Clemons, D.S., Woodruff, R.B., "Schumann, D.W. and Burns, M.J. (1994), Comparing consumers' recall of prepurchase and postpurchase product evaluation experiences", *Journal of Consumer Research*, 20(4):548-560
- Geyskens, I., Steenkamp, J.-B.E.M. and Kumar, N. (1999), "A meta-analysis of satisfaction in marketing channel relationships", *Journal of Marketing Research*, 36(2):221-238
- Gipp, N., Kalafatis, S.P. and Ledden, L. (2008), "Perceived value of corporate donations: an empirical investigation", *International Journal of Nonprofit and Voluntary Sector Marketing*, 13(4):327-346
- Goodman, J.S. and Blum, T.C. (1999), "Assessing the non-random sampling effects of subject attrition in longitudinal research", *Journal of Management*, 22(4):627-652
- Goodwin, R. and Ball, B. (1999), "Closing the loop on loyalty", *Marketing Management*, 8(1):24-44
- Grayson, K. (1999), "The dangers and opportunities of playful consumption", in M.B. Holbrook (Ed.) *Consumer Value: a framework for analysis and research*, 105-125, New York: Routledge
- Grewal, D., Monroe, K.B. and Krishan, R. (1998), "The effects of price-comparison advertising on buyers' perceptions of acquisition value and transaction value", *Journal of Marketing*, 62(2):46-69
- Grönroos, C. (1997), "Value-driven relational marketing: from products to resources and competencies", *Journal of Marketing Management*, 13(5):407-419

- Gummesson, E. (2001), "Are current research approaches in marketing leading us astray?", *Marketing Theory*, 1(1):27-48
- Gutman, J. (1982), "A means-end chain model based on consumer categorization processes", *Journal of Marketing*, 46(1):60-72
- Hackman, D., Gundergan, S.P., Wang, P. and Daniel, K. (2006), "A service perspective on modeling intentions of on-line purchasing", *Journal of Services Marketing*, 20(7):459-470
- Hair, J.F. Jnr., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998), *Multivariate data analysis*, 5th edition, New Jersey: Prentice Hall
- Hair, J.F. Jnr., Black, W.C., Babin, B.J., Anderson, R.E. and Tatham, R.L. (2006), *Multivariate data analysis*, 6th edition, New Jersey: Prentice Hall
- Halstead, D., Hartman, D. and Schmidt, S.L. (1994), "Multisource effects on the satisfaction formation process", *Journal of the Academy of Marketing Science*, 22(2):114-29
- Handy, R. (1960), "A need definition of value", *Philosophical Quarterly*, 10(39):156-163
- Hannaford, W., Erffmeyer, R. and Tomkovick, C. (2005), "Assessing the value of an undergraduate marketing technology course: what do educators think?", *Marketing Education Review*, 15(1):67-76.
- Hardesty, D.M. and Bearden, W.O. (2004), "The use of expert judges in scale development. Implications for improving face validity of measures of unobservable constructs", *Journal of Business Research*, 57(2):98-107
- Hart, S.L. (1971), "Axiology – theory of values", *Philosophy and Phenomenological Research*, 32(1):29-41
- Hartman, R.S. (1951), "A logical definition of value", *Journal of Philosophy*, 48(13):413-420
- Hartman, R.S. (1973), "Axiology as a science", *Journal of Human Relations*, 21(1):1-15
- Heinonen, K. (2004), "Reconceptualizing customer perceived value: the value of time and place", *Managing Service Quality*, 14(2/3):202-215
- Heinonen, K. (2006), "Temporal and spatial e-service value", *International Journal of Service Industry Management*, 17(4):380-400
- Heinonen, K. (2007), "Conceptualising online banking service value", *Journal of Financial Services Marketing*, 12(1):39-52
- Heinonen, K. and Strandvik, T. (2008), "Monitoring value-in-use of e-service", *Journal of Service Management*, 20(1):33-51
- Heskett, J.L., Sasser, W.E. Jnr. and Schlesinger, L.A. (1997), *The service profit chain*, New York: The Free Press
- Holbrook, M.N. and Hirschman, E.C. (1982), "The experiential aspects of consumption: consumer fantasies, feelings and fun", *Journal of Consumer Research*, 9(2):132-139
- Holbrook, M.B. (1994), "The Nature of Customer Value: an Axiology of Services in the Consumption Experience", in R.T. Rust and R.L. Oliver (Eds.) *Service Quality: New Directions in Theory and Practice*, 21-71, Thousand Oaks, CA: Sage
- Holbrook, M.B. (1996), "Customer Value – A Framework for Analysis and Research", *Advances in Consumer Research*, 23(1):138-141

- Holbrook, M.B. (1999), "Introduction to consumer value", in M.B. Holbrook (Ed.) *Consumer Value: a framework for analysis and research*, 1-28, New York: Routledge
- Holbrook, M.B. (2005), "Customer value and autoethnography: subjective personal introspection and the meanings of a photograph collection", *Journal of Business Research*, 58(1):45-61
- Houston, F.S. and Gassenheimer, J.B. (1987), "Marketing and exchange", *Journal of Marketing*, 51(4):3-18
- Hsu, S.-H. (2008), "Developing an index for online customer satisfaction: Adaptation of American Customer Satisfaction Index", *Expert Systems with Applications*, 34(4):3033-3042
- Huber, F., Herrmann, A. and Morgan, R.E. (2001), "Gaining competitive advantage through customer value oriented management", *Journal of Consumer Marketing*, 18(1):41-53
- Huber, F., Herrmann, A. and Henneberg, S.C. (2007), "Measuring customer value and satisfaction in services transactions, scale development, validation and cross-cultural comparison", *International Journal of Consumer Studies*, 31(6):554-564
- Hulland, J. (1999), "Use of partial least squares (PLS) in strategic management research: A review of four recent studies", *Strategic Management Journal*, 20(2):195-204
- Hunt, S.D. (1991), *Modern marketing theory: Critical issues in the philosophy of marketing science*, Cincinnati: South-Western Publishing
- Hunt, S.D. (2002), *Foundations of marketing theory: Towards a general theory of marketing*, New York: M.E. Sharpe Inc.
- Hunt, S.D. (2003), *Controversy in Marketing Theory: For Reason, Realism, Truth, and Objectivity*, New York: M.E. Sharpe Inc.
- Izard, C.E. (1977), *Human Emotions*, New York: Plenum
- Jarvis, C.B., MacKenzie, S.B. and Podsakoff, P.M. (2003), "A critical review of construct indicators and measurement model misspecification in marketing and consumer research", *Journal of Consumer Research*, 30(2):199-218
- Jones, M.A., Reynolds, K.E. and Arnold, M.J. (2006), "Hedonic and utilitarian shopping value: Investigating differential effects on retail outcomes", *Journal of Business Research*, 59(9):974-981
- Joo, J. (2007), "An empirical study on the relationship between customer value and repurchase intention in Korean internet shopping malls", *Journal of Computer Information Systems*, 48(1):53-62
- Kahle, L. (1989), "Using the List of Values (LOV) to understand consumers", *Journal of Consumer Marketing*, 6(3):5-12
- Keng, C.-J., Huang, T.-L., Zheng, L.-J., and Hsu, M.K. (2007), "Modeling service encounters and customer experiential value in retailing: an empirical investigation of shopping mall customers in Taiwan", *International Journal of Service Industry Management*, 18(4):349-367
- Khalifa, A.S. (2004), "Customer value: A review of recent literature and an integrative configuration", *Management Decision* 42(5):645-666
- Kim, Y.-K. (2002), "Consumer value: An application to mall and internet shopping", *International Journal of Retail & Distribution Management*, 30(1):595-602

- Kleijnen, M., de Ruyter, K. and Wetzels, M. (2007), "An assessment of value creation in mobile service delivery and the moderating role of time consciousness", *Journal of Retailing*, 83(1):33-46
- Kotler, P. and Levy, S., (1969), "Broadening the concept of marketing", *Journal of Marketing*, 33(1):10-15
- Kotler, P. (1991), *Marketing management*, 7th edition, Englewood Cliffs, New Jersey: Prentice Hall
- Kotler, P. (2000), *Marketing management: the millennium edition*, 10th edition, Upper Saddle River, New Jersey: Prentice Hall
- Kozak, M. (2001), "A critical review of approaches to measure satisfaction with tourist destinations", in J.A. Mazanec, A.G. Woodside and G. I. Crouch (Eds.) *Consumer psychology of tourism, hospitality and leisure*, Volume 2, Wallingford, Oxfordshire : CABI Publishing, 303-318
- Kumar, A. and Grisaffe, B. D. (2004), "Effects of extrinsic attributes on perceived quality, customer value, and behavioral intentions in b2b settings: a comparison across goods and service industries", *Journal of Business-to-Business Marketing*, 11(4):43-74
- Lages, L.F. and Fernandes, J.C. (2005), "The SERPVAL scale: a multi-item instrument for measuring service personal values", *Journal of Business Research*, 58(11):1562-1572
- Lai, A.W. (1995), "Consumer values, product benefits and customer value: a consumption behaviour approach", *Advances in Consumer Research*, 22(1):381-387
- Lai, F., Griffin, M. and Babin, B.J. (2009), "How quality, value, image, and satisfaction create loyalty at a Chinese telecom", *Journal of Business Research*, 62(10):980-986
- Lapierre, J. (2000), "Customer-perceived value in industrial contexts", *Journal of Business & Industrial Marketing*, 15(2/3):122-140
- Lancaster, K. (1971), *Consumer demand: a new approach*, New York: Columbia University Press
- Law, K. and Wong, C.S. (1999), "Multidimensional constructs in structural equation analysis: An illustration using the job perception and job satisfaction constructs", *Journal of Management*, 25(2):143-160
- LeBlanc, G. and Nguyen, N. (1999), "Listening to the consumer's voice: examining perceived service value among business college students", *International Journal of Educational Management*, 13(4):187-198
- Leclerc, F. and Schmitt, B.H. (1999), "The value of time in the context of waiting and delays", in M.B. Holbrook (Ed.) *Consumer Value: a framework for analysis and research*, 29-42, New York: Routledge
- Ledden, L., Kalafatis, S.P. and Samouel, P. (2007), "An empirical examination of the relationship between personal values and perceived value of education", *Journal of Business Research*, 60(9):965-974
- Ledden, L. and Kalafatis, S.P. (2008), "The dynamic nature of consumer value: an empirical examination of the passage of time on perceptions of educational value", *International Conference of Higher Education in Marketing (ICHEM)*, Krakow, Poland, 2-4 April
- Ledden, L. and Kalafatis, S.P. (2010, forthcoming), "The impact of time on perceptions of educational value", *International Journal of Nonprofit and Public Sector Marketing*, 23(2):page numbers unknown at time of writing

- Lee, N. and Hooley, G. (2005), "The evolution of 'classical mythology' within marketing measure development", *European Journal of Marketing*, 39(3/4):365-385
- Lemmink, J., de Ruyter, K. and Wetzels, M. (1998), "The role of value in the delivery process of hospitality services", *Journal of Economic Psychology*, 19(2):159-177
- Lichtenstein, D.R., Netemeyer, R.G. and Burton, S. (1990), "Distinguishing coupon proneness from value consciousness: an acquisition-transaction utility theory perspective", *Journal of Marketing*, 54(3):54-67
- Lin, C.-H., Sher, P.J. and Shih, H.-Y. (2004), "Past progress and future directions in conceptualizing customer perceived value", *International Journal of Service Industry Management*, 16(4):318-336
- Lindgreen, A. and Wynstra, F. (2005), "Value in business markets: What do we know? Where are we going? ", *Industrial Marketing Management*, 34(7):732-748
- Long, M.M. and Schiffman, L.G. (2000), "Consumption values and relationships: segmenting the market for frequency programs", *Journal of Consumer Marketing*, 17(3):214-232
- Lovelock, C.H. (1983), "Classifying services to gain strategic marketing insights", *Journal of Marketing*, 47(3):9-20
- Luck, D. (1969), "Broadening the concept of marketing – too far", *Journal of Marketing*, 33(2):53-55
- MacKenzie, B.S., Podsakoff, M.P. and Jarvis, B.C. (2005), "The problem of measurement model misspecification in behavioural and organizational research and some recommended solutions", *Journal of Applied Psychology*, 90(4):710-730
- Malhotra, N.K. and Birks, D.F. (2003), *Marketing research: an applied approach*, 2nd European edition, Harlow: Prentice Hall
- Mano, H. and Oliver, R.L., (1993), "Assessing the dimensionality and structure of the consumption experience: Evaluation, feeling and satisfaction", *Journal of Consumer Research*, 20(3):451-466
- Maringe, F. (2006), "University and course choice: implications for positioning, recruitment and marketing", *International Journal of Educational Management*, 20(6):466-479
- Mathieson, K., Peacock, E. and Chin, W.W. (2001), "Extending the Technology Acceptance Model: The Influence of Perceived User Resources", *DATABASE for Advances in Information Systems*, 32(3):86-112
- Mathwick, C., Malhotra, N. and Rigdon, E. (2001), "Experiential value: Conceptualization, measurement and application in the catalog and Internet shopping environment", *Journal of Retailing*, 77(1):39-56
- Mattson, J. (1990), "Measuring inherent product values", *European Journal of Marketing*, 24(9):25-38
- Mattson, J. (1992), "A service quality model based on an ideal value standard", *International Journal of Service Industry Management*, 3(3):18-33
- McDaniel, C., Jr. and Gates, R. (2002), *Marketing research: impact of the internet*, 5th Edition, New York: West Publishing
- McDougall, G.H.G. and Levesque, T. (2000), "Consumer satisfaction: putting perceived value into the equation", *Journal of Services Marketing*, 14(5):392-410

- Mehrabian, A. and Russell, J. (1974), *An approach to environmental psychology*, Cambridge, MA: The MIT Press
- Mentzer, J.T., Rutner S.M., and Matsuno, K. (1997), "Application of the means-end value hierarchy model to understanding service value", *International Journal of Physical Distribution & Logistics*, 27(9/10):630-342
- Mitchell, A. (1983), *The Nine American Lifestyles*, New York: Warner
- Moliner, M.A. (2009), "Loyalty, perceived value and relationship quality in healthcare services", *Journal of Service Management*, 20(1):76-97
- Moliner, M.A., Sánchez, J., Rodríguez, R.M. and Callarisa, L. (2007), "Perceived relationship quality and post-purchase perceived value: an integrative framework", *European Journal of Marketing*, 41(11/12):1392-1422
- Möller, K.E.K. and Törrören, P. (2003), "Business suppliers' value creation potential: a capability-based analysis", *Industrial Marketing Management*, 32(2):109-118
- Molm, L.D., Peterson, G. and Takahashi, N. (2001), "The value of exchange", *Social Forces*, 79(2):159-185
- Monroe, Kent B. (1990), *Pricing: making profitable decisions*, New York: McGraw Hill
- Morris, R.T. (1941), *The theory of consumer's demand*, New Haven, CT: Yale University Press, cited in Holbrook, M.B. (1994), "The Nature of Customer Value: an Axiology of Services in the Consumption Experience", in R.T. Rust and R.L. Oliver (Eds.) *Service Quality: New Directions in Theory and Practice*, 21-71, Thousand Oaks, CA: Sage Publications
- Munson, J.M. and McIntyre, S.H. (1979), "Developing Practical Procedures for the Measurement of Personal Values in Cross-Cultural Marketing", *Journal of Marketing Research*, 16(1):48-52
- Munson, J.M. and McQuarrie, E.F. (1988), "Shortening the Rokeach Value Survey for Use in Consumer Behavior", *Advances in Consumer Research*, 15(1):381-386
- Neal, W.D. (1999), "Satisfaction is nice, but value drives loyalty", *Marketing Research*, 11(1):20-23
- Oh, H. (1999), "Service quality, customer satisfaction, and customer value: A holistic perspective", *International Journal of Hospitality Management*, 18(1):67-82
- Oliver, R.L. (1996), "Varieties of value in the consumption satisfaction response", *Advances in Consumer Research*, 23(1):143-147
- Oliver, R.L. (1999), "Value as excellence in the consumption experience", in M.B. Holbrook (Ed.) *Consumer Value: a framework for analysis and research*, 43-62, New York: Routledge
- Oppenheim, A.N. (1992), *Questionnaire design, interviewing and attitude measurement*, London: Pinter Publishers
- Overby, J.W., Gardial, S.F. and Woodruff, R.B. (2004), "French versus American consumers' attachment of value to a product in a common consumption context: a cross-national comparison", *Journal of the Academy of Marketing Science*, 34(4):437-460
- Overby, J.W. and Lee, E.-J. (2006), "The effects of utilitarian and hedonic online shopping value on consumer preference and intentions", *Journal of Business Research*, 59(10/11):1160-1166
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988), "SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality", *Journal of Retailing*, 64(1):12-40

- Parasuraman, A. (1997), "Reflections of gaining competitive advantage through customer value", *Journal of the Academy of Marketing Science*, 25(2):154-161
- Parasuraman, A. and Grewal, D. (2000), "Serving Customers and Consumers Effectively in the Twenty-First Century: A Conceptual Framework and Overview", *Journal of the Academy of Marketing Science*, 28(1):9-16
- Pariseau, S.E. and McDaniel, J.R. (1996), "Assessing service quality in schools of business", *International Journal of Quality & Reliability Management*, 14(3):204-218
- Parvatiyar, A. and Sheth, J.N. (1994), "Paradigm shift in marketing theory and approach: the emergence of relationship marketing", in J.N. Sheth and A. Parvatiyar (Eds.) *Relationship marketing: theory, methods, and applications*, Volume 2, Atlanta: Center for Relationship Marketing
- Patterson, P.G. and Spreng, R.A. (1997), "Modelling the relationship between perceived value, satisfaction and repurchase intentions in a business-to-business, services context: an empirical investigation", *International Journal of Service Industry Management*, 8(5):414-434
- Payne, A. and Holt, S. (2001), "Diagnosing customer value: integrating the value process and relationship marketing", *British Journal of Management*, 12(2):159-182
- Perry, R.B. (1914), "The definition of value", *Journal of Philosophy, Psychology and Scientific Methods*, 11(6):141-162
- Peter, J.P., Churchill, G.A., and Brown, T.J. (1993), "Caution in the use of difference scores in consumer research", *Journal of Consumer Research*, 19(4):655-662
- Petrack, J.F. (2002), "Development of a multi-dimensional scale for measuring the perceived value of a service", *Journal of Leisure Research*, 34(2):119-134
- Petrack, J.F. (2004a), "First timers' and repeaters' perceived value", *Journal of Travel Research*, 43(1):29-38
- Petrack, J.F. (2004b), "The Roles of Quality, Value, and Satisfaction in Predicting Cruise Passengers' Behavioral Intentions", *Journal of Travel Research*, 42(4):397-407
- Pihlström, M. and Brush, G.J. (2008), "Comparing the perceived value of information and entertainment mobile services", *Psychology & Marketing*, 25(8):732-755
- Plutchik, R. (1980), *Emotion: A Psychoevolutionary Synthesis*, New York: Harper & Row
- Pura, M. (2005), "Linking perceived value and loyalty in location-based mobile services", *Managing Service Quality*, 15(6):509-538
- Ravald, A. and Grönroos, C. (1996), "The value concept and relationship marketing", *European Journal of Marketing*, 30(2):19-30
- Rieber, L.T. (1996), "Seriously considering play: Designing interactive learning environments based on the blending of microworlds, simulations, and games", *Educational Technology Research and Development*, 44(2):43-58
- Reid, J.R. (1931), "A definition of value", *Journal of Philosophy*, 28(25):673-689
- Remenyi, D., Williams, B., Money, A. and Swartz, E. (1998), *Doing Research in Business and Management: An Introduction to Process and Method*, London: Sage
- Richins, M. (1997), "Measuring emotions in the consumption experience", *Journal of Consumer Research*, 24(2):127-146

- Richins, M. (1999), "Possessions, materialism, and other-directedness in the expression of self", in M.B. Holbrook (Ed.) *Consumer Value: a framework for analysis and research*, 85-104, New York: Routledge
- Rindfleisch, A., Malter, A.J., Ganesan, S. and Moorman, C. (2008), "Cross-sectional versus longitudinal survey research: concepts, findings and guidelines", *Journal of Marketing Research*, 45(3):261-279
- Rintamäki, T., Kanto, A., Kuusela, H. and Spence, M.T. (2006), "Decomposing the value of department store shopping into utilitarian, hedonic and social dimensions: evidence from Finland", *International Journal of Retail & Distribution Management*, 34(1):6-24
- Ritchie, J. and Lewis, J. (2003), *Qualitative Research Practice: A Guide for Social Science Students and Researchers*, London: Sage
- Roig, J.C.F., Sánchez-García, J.G., Moliner-Tena, M.A.T. and Monzonis, J.L. (2006), "Customer perceived value in banking services", *International Journal of Bank Marketing*, 24(5):266-283
- Rokeach, M. (1968), "The Role of Values in Public Opinion Research", *Public Opinion Quarterly*, 32(4):547-559
- Ruiz, D.M., Gremler, D.D., Washburn, J.H. and Carrión, G.C. (2008), "Service value revisited: Specifying a higher-order, formative measure", *Journal of Business Research*, 61(12):1278-1291
- Ruth, J.A., Brunel, F.F. and Otnes, C.C. (2002), "Linking thoughts to feelings: Investigating cognitive appraisals and consumption emotions in a mixed-emotions context", *Journal of the Academy of Marketing Science*, 30(1):44-58
- Sánchez, J., Callarisa, J., Rodríguez, R.M. and Moliner, M.A. (2006), "Perceived value of the purchase of a tourism product", *Tourism Management*, 27(2):349-409
- Sánchez-Fernández, R. and Iniesta-Bonillo, M.Á. (2007), "The concept of perceived value: a systematic review of the research", *Marketing Theory*, 7(4):427-451
- Sánchez-García, J., Moliner-Tena, M.A., Callarisa-Fiol, J. and Rodríguez-Artola, R.M. (2007), "Relationship quality of an establishment and perceived value of a purchase", *The Service Industries Journal*, 27(2):151-174
- Sánchez-Fernández, R. and Iniesta-Bonillo, M.Á. and Holbrook, M.B. (2009), "The conceptualisation and measurement of consumer value in services", *International Journal of Market Research*, 51(1):1-10
- Saunders, M., Lewis, P. and Thornhill, A. (2003), *Research methods for business students*, 3rd edition, Harlow: Prentice Hall
- Sekaran, U. (2003), *Research Methods for Business: A Skill building Approach*, 4th edition, New York: John Wiley and Sons
- Shaw, D. and Clarke, I. (1999), "Belief formation in ethical consumer groups: an exploratory study", *Marketing Intelligence & Planning*, 17(2):109-119
- Sheldon, W.H. (1914), "An empirical definition of value", *Journal of Philosophy, Psychology and Scientific Methods*, 11(5):113-124
- Sheth, J.N., Newman, B.E. and Gross, B.L. (1991a), "Why We Buy What We Buy: A Theory of Consumption Values", *Journal of Business Research*, 22(2):159-170
- Sheth, J.N., Newman, B.E. and Gross, B.L. (1991b), *Consumption values and market choice*, Cincinnati, OH: South Western Publishing
- Silverman, D. (2005), *Doing qualitative research: a practical handbook*, London: Sage

- Sinha, I. and DeSarbo (1998), "An integrated approach toward the spatial modeling of perceived customer value", *Journal of Marketing Research*, 23(2):236-249
- Sirdeshmukh, D., Singh J. and Sabol, B. (2002), "Consumer trust, value and loyalty in relational exchange", *Journal of Marketing*, 66(1):15-37
- Slater, F.S. and Narver, C. J. (1994), "Market orientation, customer value, and superior performance", *Business Horizons*, 37(2):22-28
- Slater, F.S. and Narver, C. J. (2000), "Intelligence generation and superior customer value", *Journal of the Academy of Marketing Science*, 28(1):120-127
- Smart, D.T., Kelley, C.A. and Conant, J.S. (1999), "Marketing education In the year 2000: changes observed and challenges anticipated", *Journal of Marketing Education*, 21(3):202-216
- Smith, J.B. and Colgate M. (2007), "Customer Value Creation: A Practical Framework", *Journal of Marketing Theory and Practice*, 15(1):7-23
- Smith, N.C. (1999), "Ethics and the typology of consumer value", in M.B. Holbrook (Ed.) *Consumer Value: a framework for analysis and research*, 159-182, New York: Routledge
- Smith, M.J. (2002), *Social science in question*, London: Sage
- Snoj, B., Korda, A.O. and Mumel, D. (2004), "The relationships among perceived quality, perceived risk and perceived product value", *Journal of Product and Brand Management*, 13(3):156-167
- Solomon, M.R. (1999), "The value of status and the status of value", in M.B. Holbrook (Ed.) *Consumer Value: a framework for analysis and research*, 63-84, New York: Routledge
- Spiteri, J.M. and Dion, P.A. (2004), "Customer value, overall satisfaction, end-user loyalty, and market performance in detail intensive industries", *Industrial Marketing Management*, 33(8):675-687
- Spreng, R.A., Dixon, A.L. and Olshavsky, R.W. (1993), "The impact of perceived value on consumer satisfaction", *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behaviour*, 6:50-55
- Srinivasan, N. and Ratchford, B. (1991), "An empirical test of a model of external search for automobiles", *Journal of Consumer Research*, 18(2):233-242
- Stafford, T.F. (1994), "Consumption values and the choice of marketing electives: treating students like customers", *Journal of Marketing Education*, 16(2):26-33
- Stedham, Y., Yamamura, J.H., Taylor, D. and Nelson, M. (2002), "Organisational factors and dimensions of satisfaction: a comparative study of accountants in Australia and the US", *Australian Accounting Review*, 12(28):32-40
- Steenkamp, J.-B.E.M. and Geyskens, I. (2006), "How country characteristics affect the perceived value of websites", *Journal of Marketing*, 70(3):136-150
- Stodnick, M. and Rogers, P. (2008), "Using SERVQUAL to measure the quality of the classroom experience", *Decision Sciences Journal of Innovate Education*, 6(1):115-133
- Styles, C. (2004), "Introduction to marketing: A value exchange approach" (book review), *Australasian Marketing Journal*, 12(1):73-75
- Sweeney, J.C., Soutar, G.N. and Johnson, L.W. (1999), "The Role of Perceived Risk in the Quality-Value Relationship: A Study in a Retail Environment", *Journal of Retailing*, 75(1):77-105
- Sweeney, J.C. and Soutar, G.N. (2001), "Consumer perceived value: the development of a multiple item scale", *Journal of Retailing*, 77(2):203-220

- Teas, R.K. and Agarwal, S. (2000), "The effects of extrinsic product cues on consumers' perceptions of quality, sacrifice, and value", *Journal of the Academy of Marketing Science*, 28(2):278-290
- Thaler, R. (1985), "Mental accounting and consumer choice", *Marketing Science*, 4(3):199-214
- Uлага, W. and Eggert, A. (2005), "Relationship value in business markets: the construct and its dimensions", *Journal of Business-to-Business Marketing*, 12(1):73-99
- Unni, R.M. (2005), "Value perceptions and retention of textbooks among marketing and other business majors", *Marketing Education Review*, 15(2):71-79
- Vargo, S.L. and Lusch, R.F. (2004), "Evolving to a new dominant logic for marketing", *Journal of Marketing*, 68(1):1-17
- Vinson, D.E., Scott, J.E. and Lamont, L.M. (1977a), "The role of personal values in marketing and consumer behaviour", *Journal of Marketing*, 41(2):44-50
- Vinson, D.E., Munson, J.M. and Nakanishi, M. (1977b), "An investigation of the Rokeach Value Survey for consumer research applications", *Advances in Consumer Research*, 4(1):247-252
- Wagner, J. (1999), "Aesthetic value: beauty in art and fashion", in M.B. Holbrook (Ed.) *Consumer Value: a framework for analysis and research*, 126-146, New York: Routledge
- Watson, D., Clark, L.A. and Tellegen, A. (1988), "Development and validation of brief measures of positive and negative affect: The PANAS scales", *Journal of Personality and Social Psychology*, 54:1063-1070
- Wang, Y., Lo, P.H., Chi, R. and Yang, Y. (2004), "An integrated framework for customer value and customer-relationship-management performance: a customer-based perspective from China", *Managing Service Quality*, 14(2/3):169-182
- Webster, F.E. Jnr. (2002), "The role of marketing and the firm", in R.A. Weitz and R. Wensley (Eds.) *Handbook of Marketing*, 66-82, London: Sage
- Wetzels, M., Oderkerken-Schröder, G. and van Oppen, C. (2009), "Using PLS path modeling for assessing hierarchical construct models: guidelines and empirical illustration", *MIS Quarterly*, 33(1):177-195
- Williams, M. and May. T. (1996), *Introduction to the Philosophy of Social Research*, London: UCL Press
- Williams, P. and Soutar, G.N. (2009), "Value, satisfaction and behavioral intentions in an adventure tourism context", *Annals of Tourism Research*, 36(3):413-438
- Woodall, T. (2003), "Conceptualising 'Value for the Customer': An attributional, structural and dispositional analysis", *Academy of Marketing Science Review*, 2003:1-31
- Woodruff, R.B. and Gardial, S.F. (1996), *Know your customer: new approaches to understanding customer value and satisfaction*, Cambridge, MA: Blackwell Business
- Woodruff, R.B. (1997), "Consumer value: the next source for competitive advantage", *Journal of the Academy of Marketing Science*, 25(2):139-153
- Yang, Z. and Peterson, R.T. (2004), "Customer perceived value, satisfaction, and loyalty: the role of switching costs", *Psychology & Marketing*, 21(10):799-822
- Zeithaml, V.A. (1988), "Consumer perceptions of price, quality and value: a means-end model and synthesis of evidence", *Journal of Marketing*, 52(3):2-22

Zeithaml, V.A. and Bitner, M.J. (2000), *Services marketing: integrating consumer focus across the firm*, 2nd International edition, London: McGraw Hill