Value in the Accumulated Experience

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Acknowledgements

Somewhere between 544 BC and 496 BC, Sun Tzu said:

> *"If victory is long in coming, then men's weapons will grow dull and their ardour will be dampened. If you lay siege to a town, you will exhaust your strength and the resources of the State will not be equal to the strain. Now, when your weapons are dulled, your ardour dampened, your strength exhausted and your treasure spent, other chieftains will spring up to take advantage of your extremity. Then no man, however wise, will be able to avert the consequences that must ensue"*
>
> *Source: The Art of War*

……..Fortunately he was wrong!

Through births, deaths, marriage and broken bones, my thanks to three very special people that were always there:

To Heidi for walking a path that transcended far beyond the intellectual to give me the strength to disprove Sun Tzu. Whilst this chapter closes we open the door on an even bigger adventure together

To Caroline for 20 years of guidance and belief – from teacher to friend

Finally to my son Archie, for bearing the price he had to pay with a smile

Abstract

Over the last decade access to cheap enabling technology has promoted widespread practitioner interest in online service propositions. In support of these propositions technology has become prominently established within the firm-consumer interface through self-service technologies (SSTs). SSTs are attractive to firms due to opportunities for cost reduction and the targeting of previously in-accessible customer segments. This attractiveness has led to an increasing shift in the mode of service provision from traditional personal service delivery to SSTs, which have evolved from limited time saving alternatives to the proliferation of chargeable subscription-based services in operation today. However, the viability of these channels relies on the customers' perception of value creation and the degree to which the SST contributes to it. Consequently, realising the potential benefits from SSTs has continued to be problematic for firms as they still have a poor understanding of how value is co-created across technology interfaces. Key to understanding this phenomenon is how value emerges through the customer experience, which has now transcended the traditional consumer/firm perspective to include the users' wider social network of actors. This is a gap in the literature and an important area of enquiry since it directly affects subscription channel uptake and long-term customer retention.

To date the extant empirical literature has not conceptualised value as emerging through the customers' experience or included current marketing thought, which views the customer as a resource integrator that co-creates value within a wider social network of actors. The contribution of this study lies in the development of a new measurement instrument that addresses these gaps and captures experiential value in an online subscription context. The context is Royal Mail's online postage channel (SmartStamp®) and the research is set within the value literature. Service Dominant Logic specifies that value is always uniquely and phenomenologically determined by the beneficiary, which has led to criticism (by the phenomenological school of thought) of the way multi-dimensional value models have previously made knowledge claims about value, since it is potentially both subjective and context specific. Uniquely, this research seeks to empirically address the phenomenological criticisms using accumulated experience as the mainstay of claims to ontological and epistemological legitimacy. The conceptualisation of experiential value in this thesis is applicable to most online subscription contexts and the contribution of this study also extends to informing future studies in this topical and important area.

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Chapter 1

Introduction

1 Introduction

"Customer experience is proving to be the only truly durable competitive advantage….by 2016, 89% of companies expect to compete mostly on the basis of customer experience, versus 36% four years ago....by 2017, 50% of consumer product investments will be redirected to customer experience innovations" (Marketing Spending Survey: Gartner, 2015).

Re-scripting marketing towards a new paradigm called Service Dominant Logic (S-D Logic) has been the subject of much debate for over ten years, and involves a shift from a goods based dominant perspective to a service dominant view based around intangibles, exchange processes and relationships (Vargo and Lusch, 2004). S-D Logic posits that value is defined by, and co-created with the customer and service relationships depend on an ongoing exchange of value (ibid 2004). This re-scripting places significant emphasis on the value phenomenon. A decade ago value was poorly understood; lacked consensus around definitions; was fragmented due to unclear differences between classifications and typologies of value (Woodruff and Flint, 2006); the empirical operationalisation of value remained disjointed (Parasuraman and Grewal 2000); and the literature was both confusing and conceptually self-contradictory (Lin et al., 2005). Little research had addressed the value construct itself and there was no well accepted value measure (Sweeney and Soutar, 2001). Indeed the maturity of the value literature at the time was deemed insufficient to support the proposed S-D Logic paradigm shift (Woodruff and Flint, 2006). Ten years on the value field has reached a broad consensus that the customer uniquely and phenomenologically determines value throughout the life of the service proposition (Vargo and Lusch 2008). Value is co-created, inherently relational and linked to value in use. The 'open source' nature of S-D Logic attracted contributions from multiple authors and numerous refinements have been made over the period. None more important than foundational premise (FP) 10, which was refined by Grönroos and Voima (2013) to: value is uniquely experientially and contextually perceived and determined by the customer. Recognising that value is experientially determined holds an important key to unlocking further support for this paradigm shift, however today, despite these advances in theory, the marketing literature still lacks a robust conceptualisation and measures that reflect this theory (Cronin, 2016).

In keeping with the importance of the customer experience and in search of the next means of differentiation, the experience concept has been widely adopted by practitioners (Carbone and Haeckel, 1994) and emerged as the successor to customer relationship marketing (Palmer, 2010).

The importance of the customer experience is manifested through its role in the development of customer advocacy (Allen, Reichheld and Hamilton, 2005); and delivering competitive advantage (Gentile, Spiller and Noci, 2007), whilst simultaneously reducing customer interaction costs (Prahalad and Ramaswamy, 2004). Experience marketing is a well-established and important concept in the marketing management, consumer behaviour, services marketing and retailing literatures (Tynan and McKechnie, 2009). However, despite this importance and the longevity of the concept within these various academic streams, there has been a vocal and tangible divergence in approach between academics and practitioners (e.g. Holbrook, 2006; 2007). Academia has openly criticised practitioner use of the term 'customer experience', which (they believe) has been widely abused, in part due to multiple contexts of use and circular definitions (Palmer, 2010), leading to both a shallow and partial understanding of the customer experience concept (Tynan and McKechnie, 2009). Today the gulf between academics and practitioners is now as wide as it has ever been (ibid, 2009) to the extent that an important construct is in danger of being dismissed due to the ambiguous manner in which is has been applied (Palmer, 2010). Resolving this issue is now of the utmost importance for both academics and practitioners. In response, and in part due to the emergence of S-D Logic as a unifying framework, but also in recognition of the importance of this area, there has been an unusually consistent and growing level of attention and convergence by numerous researchers and practitioners on customer experience (Tynan and McKechnie, 2009).

The area of interest in this thesis (within the wider umbrella term of experience marketing) is to derive an improved understanding of value as an experience concept (Helkkula et al., 2012), within an online subscription service context. Specifically the focus is value in the experience. The phenomenological characterisation argues that experiences are *'internal, subjective, event specific and context specific in the customers' everyday lives'* (Helkkula, 2011, p.375), which aligns with the S-D Logic view that value is always uniquely and phenomenologically determined by the beneficiary (Vargo and Lusch, 2008). However, whilst value in the experience is undoubtedly an important phenomenon, the evolution of the literature towards a more phenomenological approach that characterises value as experiential has led to significant criticism (by the phenomenological school of thought) of empirical value models (e.g. Helkkula et al., 2012). Failure to answer this criticism, in part supports the conclusions of Cronin (2016); that empirical value models have not yet progressed to the point where a robust conceptualisation of value can be claimed or that measures adequately reflecting this latest theory are in place. A key contribution made by this thesis is to develop an empirical model of value in the experience that answers the phenomenological challenge, which is explained in the next section.

1.1 Phenomenological Perspective

Recently the direction of the value literature has coalesced around the perspective that value is uniquely and phenomenologically determined by the beneficiary (Vargo and Lusch, 2008), although this still remains the subject of much debate (Gummerus, 2013). Whilst value measurement models have progressed through value in use and value in context (Vargo and Lusch, 2008), they have not kept pace with advancements in phenomenological research (e.g. Cova and Dalli, 2009; Grönroos, 2008; Heinonen et al., 2010), which has progressed to value in the experience (Helkkula et al., 2012). Value in the experience examines the broader context of service customers' individual every-day lived experiences and social contexts and is conceptualised as '*individual service customers' lived experiences of value that extend beyond the current context of service use to also include past and future experiences and service customers' broader lifeworld contexts'* (p.59). Within this view, '*value resides not in the object of consumption, but in the experience of consumption'* (Frow and Payne 2007, p. 91).

The phenomenological perspective strongly criticises research methods that aim to make objective approximations, claiming that generalised outcomes are not applicable (e.g. Helkkula et al., 2012). In response however, Gummerus (2013) criticises this perspective as extreme, pointing out that the dominant approach is to examine value perceptions as a multi-dimensional outcome incorporating cognitive and a range of sociopsychological value dimensions such as emotional value, social value, and epistemic value (Sheth, Newman, and Gross 1991; Sweeney and Soutar 2001; Sánchez et al. 2006). Sánchez et al. (2006) argue that, such a multi-dimensional perspective captures the experiential nature of value, which has conceptual support from the cognitive–affective–behaviour paradigm. Despite these claims, Tynan and McKechnie (2009) observe that the extant research in experiential marketing has predominantly been theoretical and call for further empirical work in the field.

This lack of empirical focus on experiential value is in part due to a substantial list of criticisms. The phenomenological perspective advocates that traditional value measures are best suited for analysing the experiences of current customers and tend to focus on a specific perspective rather than a holistic view of customer value. In addition, established customer value measures e.g. PERVAL examine a linear process involving pre-service, in-service, and post-service consumption phases (Sweeney and Soutar 2001), when arguably a consumer approaches sense making around their experience in a non-linear fashion i.e. iteratively over time (Helkkula et al., 2012). Indeed,

most value measures are: constrained to a judgement based on in-use experience; are limited by being anchored in some form of trade-off (e.g. Zeithaml's 1988 definition); fail to incorporate a more longitudinal perspective (Flint, Woodruff, and Gardial 2002; Holbrook 1994; Rescher 1969; Zeithaml 1988); do not adequately capture the perceptions of non-customers (Zeithaml et al. 2006); and focus on post-use service evaluations without examining how other related services or past, future or even imagined experiences may affect value judgments (Helkkula et al., 2012).

Added to this list is the nature of experiential value itself, which is not only uniquely and phenomenologically determined, but also context specific. This raises legitimate ontological and epistemological questions of whether such a phenomenon can be meaningfully measured and realistic generalisations drawn. To date no empirical study has been able to fully overcome these criticisms or to reconcile a robust claim to knowledge. Furthermore there remains a gap in the literature concerning the effect of an individual's wider social network on experiential value. The difficulties in answering these challenges are reflected in the earlier observation by Tynan and McKechnie (2009) that the majority of work in the field has been predominantly theoretical. This is also true of research into the value in the experience field, within which few studies have investigated use experiences (Dude and Helkkula, 2015). This thesis addresses both challenges by proposing that value in the experience can be measured when viewed through the lens of 'value in the accumulated experience' (VITAE).

1.2 Value in the Accumulated Experience

Sense making relating to the customer experience is based on an iterative and cumulative process of understandings both previous and current, including future imaginary perceptions (Helkkula et al., 2012) and is not necessarily a linear process involving pre-service, in-service, and post-service consumption phases (e.g. Sweeney and Soutar, 2001). Human experience is a dynamic construct that is subject to continuous change as individuals engage with others in their day-to-day life (Pollio, Henley, and Thompson, 1997). Service customers' experiences of value may iteratively flow back and forth between current, future, and past experiences within a hermeneutic spiral of sense making and current value in the experience can effect how a customer makes sense of past and future experiences (Helkkula et al., 2012). This is a key issue from a measurement perspective and poses the question of how can these non-linear elements be captured using quantitative methods, whilst at the same time justify a legitimate claim to knowledge? This thesis addresses the challenges of linearity and the incorporation of future/past experiences based on the way attitudes adjust over time, which is explained by a combination of figure-ground analysis and the literature

on cognitive dissonance (Palmer, 2010). Integral to this argument is answering the interconnected challenge of value being context specific. This nuance is addressed through a selection of an online subscription service, which exhibits routine and task orientated behaviours. This thesis argues that the intrinsic and subjective nature of the value phenomenon stabilises sufficiently to enable measurement, where conditions of accumulated experience are present within a routinized context. The next section examines how the gap in the literature relating to resource integration can be addressed within the conceptualisation of VITAE.

1.3 Resource Integration

Tynan and McKechnie (2009) argue that S-D Logic now offers the overarching theoretical basis to join practitioner and academic thinking on experience marketing. Its locus is value creation: which is achieved through the application of skills and knowledge; facilitation occurs through interaction; it is predicated upon co-creation; encompasses customer participation; is determined by the customer; affirms the concept of value in use over that of value in exchange; and therefore addresses the majority of the key features of experience marketing. However a robust conceptualisation and adequate measures of value (Cronin, 2016) are still required to join academic and practitioner thinking.

Resource integration is an important part of a holistic conceptualisation of experiential value, since value emerges for the focal customer through interaction and co-creation with others. However, *"little is yet understood about how consumers integrate their operant resources and those of co-consumers in the course of defining experiences and creating value"* (Baron and Harris, 2008, p.113). Indeed, calls for a robust conceptualisation or an adequate measure of value arguably cannot be answered without the consideration of other actors. Many consumption experiences are shared rather than individual in nature; value can be created for the consumer through interaction with other people (e.g. friends or family members) through a collective consumption experience (Tynan and McKechnie, 2009; McKechnie and Tynan, 2008) and social and relational sources of value can be obtained through consumption experiences with other people. There is now an urgent and compelling need for both academics and practitioners to gain a better empirical understanding of experiential value and how the customer and other actors contribute to the value experience.

The research position taken in this thesis is to agree with the Tynan and McKechnie (2009) premise and uses S-D Logic as the underpinning foundation for the thesis. Key to understanding resource integration is FP 9 (now also an axiom), which states that all social and economic actors are resource integrators (Vargo and Lusch, 2016). Indeed, value creating interactions are also not

limited just to the customer and supplier (as previously conceptualised) but can include members of their wider social networks e.g. fellow customers, shareholders, external experts and opinion leaders, partners within the supply chain and other stakeholders (Tynan and McKechnie, 2009). From the service provider's perspective there is now an imperative for wider engagement in: dialogue with both customers and members of their network; the total value proposition; resource integration; and the process of learning to offer solutions, which are achieved by jointly and flexibly working with customers (Vargo and Morgan, 2005); each of which is facilitated by information and communication technology (Baron and Harris, 2008).

Today S-D Logic stresses the importance of experiences in marketing and the narrative of value co-creation has progressed to one of resource-integrating, reciprocal-service providing actors co-creating value through holistic, meaning laden experiences in nested and overlapping service ecosystems (Vargo and Lusch, 2016). However, despite this theoretical progression the empirical understanding of resource integration and its link to experiential value remains unknown. Tynan and McKechnie (2009) call for further research into the experiential value phenomenon and point out that its relevance to practitioners could be enhanced by further empirical research underpinning the academic contribution. Conducting empirical work in this area, offers an opportunity to apply new understandings and approaches that are experiential in both the real and virtual worlds, which are interactive, progressive, evolving and flexible in nature. Such development is highly recommended to further embed and facilitate the evolution of this useful construct for both academics and practitioners (ibid, 2009).

This thesis sets out to reduce the academic/practitioner gap by developing a new conceptualisation called VITAE, which incorporates a preliminary measure of resource integration. The conceptualisation draws upon S-D Logic and combines the user's operant resources with those of their wider social network. That is, resource integration is conceptualised by combining the personal (technical) skills of the individual user with those of their network. When the user has insufficient personal resources, they turn to resources afforded by organisations and other network actors (Hibbert et al., 2012). From the user's perspective, learning to become effective at co-creating value for their own purposes is important. Customer resource integration effectiveness is defined as the '*customers' proficiency in deploying resources as they engage in value-generating processes'* (ibid, 2012, p.248). In an online subscription context, the degree of technical skill the individual possesses regulates the degree of support required from their network. VITAE is therefore directly affected by how capable the actor is at combining their own operant skills and/or

ability to co-create value with those of their network. To date there is still limited understanding of a) the participants in the user's wider social network or b) the effect of personal skills or the effect of the user's network on the components of experiential value.

Integral to the positioning of VITAE with resource integration is the theoretical underpinning provided by co-creation. The co-creation phenomenon is central to S-D Logic and has itself been the subject of much debate in the literature (e.g. Grönroos and Voima, 2013; Vargo and Lusch, 2016). The nuance between co-creation and co-production is an important one for this thesis, which is discussed in the next section.

1.4 Co-creation Versus Co-production

The debate around how the customer participates in co-production and co-creation has been ongoing for some time (Vargo and Lusch, 2016). Early research focused on a limited firm/customer perspective and terminology surrounding co-production and co-creation was used loosely and interchangeably.

Early work argued that co-produced value could be created through consumption or co-design; it could also occur through direct feedback (e.g. satisfaction surveys) or indirect feedback (e.g. cancelling orders). Customer influence on product and service design can be overt through direct design involvement or inadvertent via consequential action (Flint and Mentzer, 2006). The degree and nature of customer co-production ranges from low to high, within which the consumer plays a variety of roles (Bowen, 1986; Dabholkar, 1996; Lusch, Brown and Brunswick, 1992). Co-production is also a factor of solution content and product/service characteristics (Bettman, 1979; Petty and Cacioppo, 1986; Kalaignanam and Varadarajan, 2006). The co-production literature remains divided around the nature and extent of value creation between the personalisation (e.g. Prahalad and Ramaswamy, 2004) and customisation (e.g. Thomke and von Hippel, 2002) perspectives i.e. giving the customer free reign versus constraining the customers' ability to co-create within configurable technology orientated parameters. Despite this division, the co-production literature argued a shift in the locus of value creation to the consumer experience where interaction is the key enabler as early as 2000 (Prahalad and Ramaswamy, 2000). Interaction also lies at the root of S-D Logic and forms the building blocks of all marketing relationships, governing information exchange and knowledge generation. It is through interaction that services are co-designed, co-produced and co-consumed (Berthon and John, 2006). However, the dynamics of the interaction between marketing and technology remains a key challenge (Kimiloglu, 2004).

Prior to the introduction of S-D Logic in 2004 the debate centred on a more dyadic, micro-level view (Chandler and Vargo 2011). Since 2004, the debate developed towards a holistic, dynamic, and realistic perspective of value creation, through exchange, among a wider, more comprehensive (than just firm and customer) configuration of actors (ibid, 2011). How value is co-created remains at the centre of the debate, however the demarcation lines between co-creation and co-production continues to create divergent perspectives. In 2004 S-D Logic FP 6 stated that the customer is always the co-producer (Vargo and Lusch, 2004). In 2008 this was amended to the customer is always a co-creator of value. Recently Vargo and Lusch (2016) re-visited FP 6 again amending it to value is co-created by multiple actors, always including the beneficiary, arguing that it had now reached axiom status.

Value is not individually or dyadically created, rather it is created through the integration of resources, provided by many sources, including a full range of market-facing, private and public actors (i.e. a network). Indeed the co-creation of value is the purpose of exchange and therefore foundational to markets and marketing (Vargo and Lusch, 2016). The customer experience is co-created and the distinction between co-production and co-creation is fundamental to understanding how value emerges in use situations, which is turn is important in this thesis to create the underpinning case for the proposed conceptualisation of VITAE. The issue for this thesis is that S-D Logic does not provide sufficient theoretical support to operationalise VITAE. A position is taken by drawing on the Gronroos and Voima (2013) framework, which enables this thesis to better conceptualise the VITAE phenomenon. Central to the their argument is that value emerges in use and by anchoring the phenomenon in use, not only are the demarcation lines between co-production and co-creation clarified, accumulated experience can also be positioned. Consequently in this thesis, co-production means direct participation with the firm as a co-producer in the joint development and design process. Co-creation has a different nuance in that the customer co-creates value through resource integration either directly with the firm or independently outside direct interaction. This explanation is overly simplified but sufficient for purposes of this introduction and is discussed further within the literature review.

Building on this distinction, this thesis therefore engages predominantly with the co-creation of value. Involvement with co-creation occurs via the user's value creating activities outside the direct influence of the firm, which includes resource integration and also directly with the firm. Both phenomena are important to customers with changing expectations. These changing expectations are discussed in the next section.

1.5 The Changing Customer Landscape

Advancing technology is an important driver behind the shift in the role of the consumer and the changing basis of value creation. The inter-connectivity of computer systems and broadband communications not only enables access to knowledge that was previously dispersed (Prahalad and Ramaswamy, 2004), but also the prospect of one-to-one dialogues between the firm and the individual customer. One-to-one dialogues offer the potential of personalised service propositions. The personalisation argument is predicated on the basis that of unique value to customers is their experience (which is contextual) and the quality of that experience is dependent on the nature of the involvement the customer had in co-producing (or co-creating) it with the firm. Therefore products can be commoditised but co-created experiences cannot be (Prahalad and Ramaswamy, 2004). A personalised co-production/co-creation experience is based on the building blocks of interaction i.e. dialogue, access, risk-benefits and transparency, which challenges practitioners from the perspective of risk disclosure; financial transparency; open access; and dialogue with consumers and communities.

Experiential emphasis is changing the market to a forum for conversation between consumers, consumer communities, and firms where the basis of relationships is also transforming. Traditionally the relationship was controlled by the firm, communication was unidirectional and consumers were viewed as a passive target with the choice to buy or not buy within the confines of the firm's offer. The personalisation perspective argues that consumers' can now: co-construct their own experience within a firm's experience environment; communication is bilateral but has widened to include C2C dialogue through communities; consumers can impose their view of choice; and are active rather than passive (Prahalad and Ramaswamy, 2004). Today informed, networked and empowered consumers co-produce/co-create value with the company. The locus of value creation has become the consumer experience where interaction is the key enabler (ibid, 2004). The journey of the consumer from a passive target to active participant positions them as part of an emergent social and cultural fabric. In taking this journey, the role of the customer has evolved from self-service, through firm-scripted staging of customer experiences, to co-designing and finally the co-production/co-creation of a service (Prahalad 2004; Vargo and Lusch 2004; Cova et al. 2011).

Despite evidence that this new customer journey is evolving at pace, conceptualisations and operationalisations of value as an outcome have predominantly taken place in interpersonal contexts (e.g., Lin et al., 2005; Ruiz et al. 2008); less attention has been paid to self-service contexts, despite

their increasing importance (Mohd-Any, Winklhofer and Ennew, 2015). Further empirical research is now required in this field as the locus of value creation moves from the firm to the consumer and the customer experience becomes key. This thesis is situated within an online subscription service context, which is based on self-service technologies (SSTs). This area is under-researched (ibid, 2015) and discussed in the next section.

1.6 Online Subscription Relationships

Whilst online self-service propositions have evolved from time saving alternatives to the proliferation of chargeable subscription based services; an understanding of how value is co-created over a technology interface remains poorly understood, despite it being a clear area of importance. Indeed the degree to which the firm and the consumer are able to interact via technology forms the basis of co-production/co-creation and the propensity to develop online relationships.

The technology literature has primarily focused on SSTs that are located either at the firm's premises, or where usage cost is borne by the organisation. These encounters are inherently transactional with limited opportunity for co-production/co-creation. Increasingly SST services are used by individuals, either from their own location, or through mobile devices. These consumers play the dual role of technology user and service consumer. Services are consumed for personal purposes and the customer adopts the cost of service usage (Kim, Chan and Gupta, 2007). Online subscription-based SST services are different, in that they are subject to aspects of non-ownership and involve the consumer renting access to a firm's network to enjoy the benefit of a service for a defined period of time. The mechanism to pay for these services is the subscription. A subscription arrangement has relationship connotations and there is a governing contract in place. Whilst the customer and technology service provision in this area is rapidly maturing, academia has failed to keep pace. Despite Stockdale pointing out that development of competitive advantage in an online context, would require the development of customer relationships within the self-service culture as a necessity in 2007, subscription relationships have not been identified as a research area in their own right, typically being considered in the restrictive contexts of monetary cost or usage fees. In fact, there is a clear gap in the technology, SST and marketing literatures in this area. Whilst academia lags behind calling for further research, the market has matured to the point of 'subscription fatigue' (Murph, 2014). Subscription-based payment models have proliferated in the last decade, a recent BGR report (ibid, 2014) acknowledged that whilst subscription models were still attractive, customers had simply subscribed to too many services and were starting to reach saturation point on the number of individual expenses debited from their bank accounts each month.

Industry concerns about this issue were confirmed when subscription fatigue became top of the Financial Times' Digital Media 2014 agenda. The context of this investigation is online subscription services; a better understanding of which is not only key to closing the academic/practitioner gap in this area, but also to unlocking an understanding of how VITAE is co-created across a technology interface. The next section brings together the contributions made by this thesis.

1.7 Research Questions and Contribution to Knowledge

In summary, the contribution in this thesis is made via the following objectives:

1. To conceptualise, measure and validate the domain of VITAE in an online subscription service context
2. To provide empirical insights into how the customer as a resource integrator co-creates VITAE in an online subscription service context.

Within these objectives, the thesis will also address the following research questions:

1. How is VITAE formed in an online subscription service context?
2. How do the individual components of VITAE contribute to the overall accumulated value experience?
3. How does the user's VITAE affect customer satisfaction in an online subscription service context?
4. How does the user's VITAE affect re-subscription intent in an online subscription service context?
5. How does the user's VITAE affect word of mouth recommendation (WOM) in an online subscription service context?
6. How does resource integration affect VITAE in an online subscription service context?

Generalisability: this study has been designed to incorporate all of the components necessary to evaluate a subscription-based online service. These components are deemed interchangeable in the majority of business-related online (self-service) subscription channels e.g. accounting software, payment management solutions, expenses management or online grocery shopping (e.g. Tesco, Waitrose). A full analysis of generalisability by construct is contained in the methodology section.

Practitioner impact: use of the new model would not only give practitioners insight into the holistic user experience, but also the individual effects of each experiential component on value. This insight would allow marketing strategies (and budget) to be directed at the individual components of the user experience likely to provide the highest benefit. The new model also evaluates the effect of experiential value on customer satisfaction, WOM and re-subscription intent, which would deliver insight into how subscription take-up could be improved and churn rates reduced. Finally insight into the effect of resource integration (from both an individual user and multi-actor perspectives) on experiential value would enable marketers to understand whether specifically designed campaigns to enhance the wider co-creation of value would be worthwhile e.g. educational campaigns for users or offers targeted at friends and family.

1.8 Chapter Overview

This section provides an overview of chapter content to signpost the thesis.

1.8.1 Chapter 2: Literature Review

The literature review chapter is divided into two halves. The first half examines the changing technology, SST and customer landscapes, it outlines the context (online subscription relationships), before introducing the key underpinning theories. This includes S-D Logic as the governing marketing paradigm, co-creation (and co-production), experience and value in use. The chapter then links each stream to establish the argument for VITAE. Linked to this argument are the use of routinized online services and user attitude formulation. The resource integration concept is positioned with respect to S-D Logic and value in use. The chapter then reviews the extant literature relevant to online value models, and considers the main debates only, which include: benefit/sacrifice, means-end and the phenomenological position. The chapter concludes by defining VITAE and presents the case that experiential value can be empirically measured. The second literature review chapter focuses on the holistic conceptualisation of VITAE. The holistic nature of the conceptualisation is fundamental to a formative measurement approach so the measurement model debate is presented first. The chapter then reviews each of the components that form the conceptualisation of VITAE and develops propositions in support of the conceptualisation. Resource integration is then conceptualised and hypotheses are developed. Finally a preliminary conceptual model is presented.

1.8.2 Chapter 3: Methodology and Knowledge Position

This chapter reviews philosophical research perspectives before a knowledge position is established. The strategy of enquiry is presented and a two-stage research methodology justified.

The research primary focus is quantitative and uses qualitative techniques in support. Following this, an ontological and epistemological argument is presented to justify that VITAE can be empirically assessed. The online subscription service research context, which provides a software-based self-service technology to help small businesses generate their postage, is then introduced and a brief overview of the UK Mail and Parcel market provided. Generalisability of the research to other contexts is demonstrated, before discussing data collection. Qualitative date collection and sampling approaches are presented and analysis is undertaken using the Miles and Huberman (1984) framework. The second phase of the research is quantitative and data collection and sampling approaches are presented together with questionnaire design, which includes scale choice, development and an overview of the construct donor models is provided. The data cleansing procedure is presented and the chosen method of data analysis is the PLS-SEM (Partial Least Squares Structural Equation Modelling) approach (Hair et al., 2014). The chapter concludes with an overview of respondent profiles.

1.8.3 Chapter 4: Qualitative Findings

The qualitative findings chapter validates the domain of VITAE. Seven in-depth interviews are used to validate the meaning attached to each of the components and to establish whether they form the domain of interest. Meaning from the interview data is also used to support refinements to construct definitions and questionnaire items where necessary to reflect the specific nature of the context. Meaning from the interview data is then used to: validate the conceptualisation of resource integration; identify the actors in the user's wider social network; and their touch points within the channel of interest. A refined conceptual model is presented for evaluation in the quantitative phase.

1.8.4 Chapter 5: Quantitative Findings

Based on 126 usable responses from an online survey, the quantitative chapter begins with a preliminary analysis of the data set to remove anomalies and deal with missing values before justifying that the sample size remains suitable for the chosen analytical approach. Exploratory Factor Analysis was used to check for discriminant validity before using PLS-SEM for Confirmatory Factor Analysis. PLS-SEM was then used to test for validity and reliability, which includes evaluation of the reflective and formative aspects of the measurement model before assessing the structural model. PLS-SEM was then used to test the effect of each component of the new preliminary resource integration construct on each component of VITAE. Hypotheses are evaluated and results are presented, before a clear contribution to knowledge is outlined.

1.8.5 Chapter 6: Discussion and Conclusions

The chapter presents a discussion to augment research findings and begins with a commentary on the performance of the VITAE model, which includes the assessment of hypotheses and drawing conclusions on whether research questions have been answered and a contribution to knowledge made. Next a further commentary is provided on the effects of the preliminary resource integration construct on VITAE. Research limitations are then identified and implications for management discussed. The chapter concludes by providing insight into areas for further research.

Chapter 2

Literature Review

2 Literature Review

2.1 Introduction

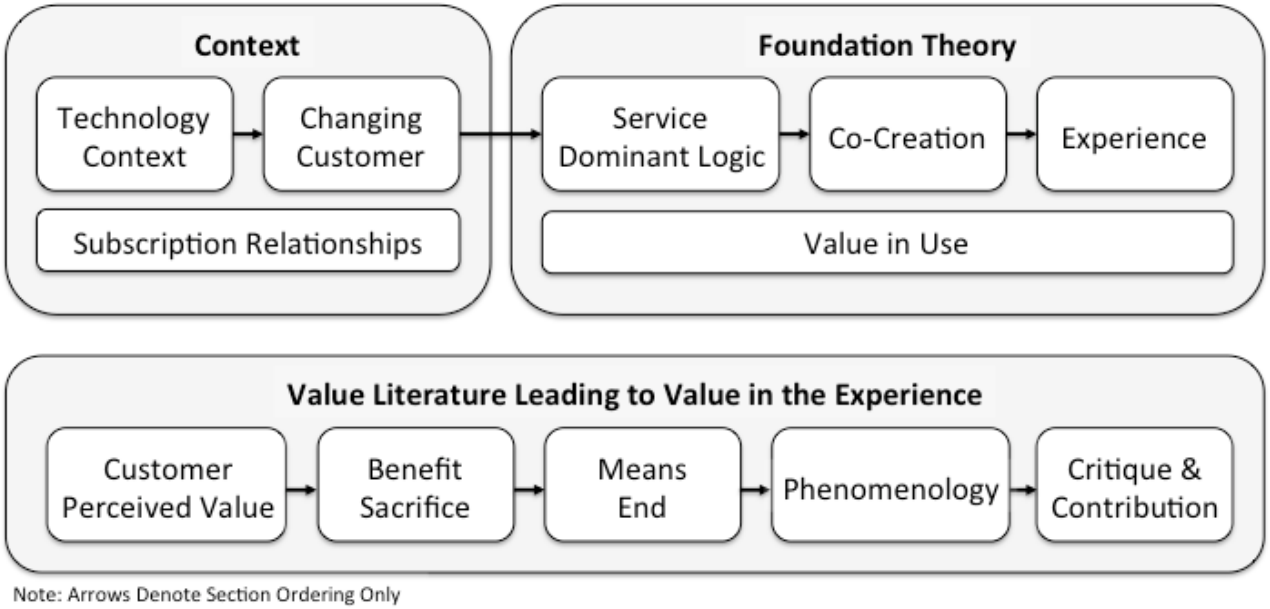
The research area for this thesis is set within the customer perceived value, self-service technology and customer experience literatures with a specific focus on value in the experience. The research area of interest is to empirically understand value as it arises from the customer experience. This literature review builds towards establishing a new lens through which to view value called value in the accumulated experience. The review concludes with a new definition.

A key theme linking these literature streams is Service Dominant Logic (S-D Logic) (Vargo and Lusch, 2004; 2008a, b; 2016), which is the primary overarching theory for this thesis. S-D Logic has re-scripted the marketing perspective on value, which now incorporates three inter-related themes: co-creation, value-in-use, and customer experience that provide the common denominator to evaluate the customers' role in value creation. Consideration of each has been present in most recent studies of value (e.g. Heinonen et al., 2010; Grewal et al., 2009; Grönroos, 2008; Holbrook, 2006; Payne et al., 2008; Vargo et al., 2008; Sandstrom et al., 2008; Vargo and Lusch, 2004, 2008a, b). From the customer's perspective, service contains three elements: outcomes from the service providers' internal activities, co-creation processes; and outcome elements from the customer's own activities (Heinonen et al., 2010). Within this perspective technology has played a progressively enabling role from its origins in self-service, through firm-scripted staging of customer experiences, to co-designing and finally the co-production of a service (Prahalad, 2004; Vargo and Lusch, 2004; Cova et al., 2011). This literature review is organised around these key interlinked themes, which are signposted using Figure 1.

This literature review is further organised into two chapters: the first chapter reviews the technology context, the changing role of the customer and sets the scene as to why this research exercise is important, before reviewing the key theoretical themes that underpin the study. The review then examines the value literature, considering its chronology, structure (Gummerus, 2013) and the key debates, which include: benefit sacrifice, means end and finally the phenomenological perspective. The review uses the phenomenological perspective to critique the current empirical position of the value literature, which then provides the underpinning platform to introduce where an important contribution to knowledge in this thesis lies. Integral to this contribution is the establishment of a value in the accumulated experience lens, which is necessary to ontologically and epistemologically

justify the empirical measurement of experiential value. Figure 1 signposts how this chapter is organised. Note the arrows denote section sequence only and do not imply any causal ordering.

Figure 1: Signposting the Review



The literature review combines the extant literature to conclude with a definition of value in the accumulated experience. The key building block on this journey is value in the experience, which is referred to throughout, until the conclusions are drawn together. The second chapter then moves on from the higher-level theoretical debates to review the multi-dimensional value models and to provide a conceptualisation of value in the accumulated experience within an online subscription service.

2.2 The Changing Technology and Customer Landscape

This section examines the changing role of technology and the changing nature of the customer in value creation (e.g. Gummerus, 2013). It reviews the progression of the online customer through the customisation and personalisation debates and links this with co-creation and co-production, which are conceptually different and require careful signposting early. Both concepts are explained in detail later, however their introduction, as a result of the interconnected nature of the discussion, occurs before the appropriate point at which they can be fully considered. To support an early and clearer understanding of the terminology, a simplistic clarification is required at this juncture. Co-production in the context of this thesis is intended to mean direct participation with the firm in design and development as a co-producer in the joint production process. Co-creation has a different nuance in that the customer co-creates value through resource integration either directly with the firm or independently outside direct interaction. This section concludes by introducing

subscription-based SST services, which is the focus context of this thesis, pointing out that the area is both important and under-researched, before discussing emergent perspectives.

The rapid acceptance of information and communication technologies in daily business life has been acclaimed as the most important long-term trend in the business world (Rust, 2001). This trend has enforced both theoretical and practical challenges on the emerging business environment, which has undergone radical changes in technology, competition and customer power (Ostrom et al., 2010, 2015). Technology change has affected the way services are consumed and the traditional personalised service through employees may no longer be the best service delivery method due to the increase in availability of high-tech alternatives and their importance (Kim et al., 2011). It has long been recognised that competitive advantage will depend on firms arranging the right combination of human and automated interfaces to go beyond any existing levels of performance and service (Rayport and Jaworski, 2005). In response the firm's mode of service provision has progressively turned to self-service technologies (SSTs) to allow customers to create a service outcome independent of direct service employee involvement (Meuter et al., 2000). A self-service technology is defined as a technological interface that allows customers to produce and consume services without direct assistance from employees (ibid, 2000).

Consumer motivation to use SSTs is derived from improved control over the service experience (Dabholkar, 1996); improved availability; convenience; and immediacy (Meuter et al., 2005). However, divergent objectives between firms and consumers raised the question of whether the consumer actually did receive an improved service. The root cause of these divergent objectives can be explained both in the way SSTs are categorised and also by understanding the firm's business motivations. SSTs were initially mainly associated with standardisation and routinization and Ritzer (1996) categorised them into four broad dimensions: efficiency (i.e. streamlining the process and putting the customer to work); calculability (i.e. an emphasis on things that can be quantified, which can have an adverse impact on quality); predictability (i.e. routine and consistency within the interaction, which can lead to dissatisfaction from problems with uniformity and routinization); and control (i.e. the replacement of humans with machines). A firm's potential motivations to deploy SSTs include: enhanced competitive advantage; financial benefits; handling of demand fluctuations without the expensive adjustments to employee levels (Curran, Meuter and Surprenant, 2003); standardisation of service atmosphere independent of employee personality or mood (Hsieh, Yen and Chin, 2004); and reaching previously inaccessible market segments (Meuter et al., 2005). Unfortunately these motivations are not necessarily aligned with improved customer

service (Fitzsimmons and Fitzsimmons, 1994). As a result SSTs suffered from technology failure; poor design and the absence of people when things went wrong (Irons, 1997). Today these divergent motivations have yet to be fully resolved. Exacerbation of this divergence remains likely as consumers evolve towards a greater reliance on SSTs but with higher expectations of choice, value, customisation and convenience. This evolution brings with it a dichotomy for firms: on one hand, building strong and lasting customer relationships; whilst on the other encouraging customer autonomy by developing more SSTs (Stockdale, 2007).

The theoretical underpinning for research into SSTs draws heavily on the marketing literature, which linked consumer attitudes to the adoption of technology (Curren et al., 2003; Dabholkar and Bagozzi, 2002; Davis et al., 1989). An attitude is defined as *"a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or dis-favour"* (Eagly and Chaiken, 1993, p1). Empirical work in the area also focused on the technology acceptance literature and seminal work included the Technology Acceptance Model (TAM) and the Diffusion of Innovations Theory (Rogers, 2003), which underpinned research into SSTs. TAM is limited as it explains behaviour with only two dimensions (perceived usefulness and ease of use), which are suitable for evaluating the adoption of technology in a work environment rather than the adoption of technology by the individual in non-organisational settings (Kim, Chan and Gupta, 2007). Baron, Patterson and Harris (2006) also criticised TAM's limited ability to capture the subtleties of marketplaces engendering consumer creativity and innovation. TAM was later arguably superseded by the electronic service quality literature (e.g. Parasuraman, Zeithaml and Malhotra, 2005). Whilst attitudes do play a key role in SST adoption, some authors argue it is a narrow perspective from which to understand value in the experience and other research demonstrated the need to explore additional factors (Curran and Meuter, 2007; Meuter et al., 2005; Parasuraman, 2000).

SST usage began with online shopping (Childers et al., 2001) and self-scanning systems (Dabholkar et al., 2003), before becoming established across numerous firm-consumer interfaces, ranging from information search to self-help training (Meuter et al., 2005), and are summarised in Table 1.

Table 1: Categories and Examples of Self-Service Technologies in Use

	Interface			
	Telephone, interactive voice response	Online, Internet	Interactive kiosks	Video, CD
Customer service	Telephone banking Order status Flight information	Package tracking information	ATMs Hotel check-out	
Transactions	Telephone banking Prescription refills	Retail purchasing Financial transactions	Pay at the petrol pump Hotel check-out Car rental	
Self-help	Information telephone lines	Internet information search Distance learning	Blood pressure machines Tourist information	Tax preparation software Television/CD based training

(Source: Adapted from Meuter et al., 2000, p.52).

Today these categories have expanded (e.g. interactive voice response technologies) and many of the traditional technology platforms have been replaced by applications (or apps) and consumers can now choose from multi-channel SST options including mobile devices (Robertson et al., 2016).

During this period of establishment, the SST literature argued that consumers engaged in co-production in any service experience at a number of levels: low, moderate to high (Bitner et al. 1997), and could play a variety of roles: productive resource (Bowen, 1986; Mills and Morris, 1986; Mills, et al., 1983); full participator (Bateson, 1983); contributor to quality, satisfaction and value through participation (Bateson, 1983, 1985; Dabholkar, 1996); or competitor to the firm (Lusch et al, 1992). Increasingly it was recognized that enabling the customisation of SSTs presented an enhanced opportunity to engage the consumer in co-production. Co-production in an SST context refers to customer engagement in self-service, using systems, facilities, or equipment supplied by the service provider (Lovelock and Gummesson, 2004). A decade ago this thinking progressed to viewing the consumer as an active player that could develop and personalise their relationships, again adopting a variety of roles: customer (i.e. payer); consumer; competence provider; quality controller; co-producer; and/or co-marketer (Storbacka and Lehtinen, 2001).

However, whilst the use of SSTs has continued to evolve as more companies adopt the technology and seek new applications for it (Kim et al., 2011), the SST literature has failed to keep pace. Diz-Comesaña and Rodríguez-López (2014) observed that comparatively few studies had considered customer interaction with technology and cited Dabholkar (1996); Bitner et al. (2000); Anselmsson (2001); and Bowden (2002) as examples, pointing out a narrow focus that predominantly

concentrated on the development of user profiles; the analysis of customer attitudes towards technology (from an adoption perspective), and the development of customer satisfaction (Meuter et al., 2000; Agnihothri et al., 2002; Walker et al., 2002; Pujari, 2004; Ramasubbu et al., 2008). For a full review detailing the chronology of major empirical SST studies see Wang et al., 2013 (p.401).

Meuter et al. (2005) had previously supported this view arguing that the exploration of customer perception and usage of SSTs was still in its infancy, indeed between 1979-2000, 23 studies on co-production were conducted, but only 3 were empirical (Bendapudi and Leone, 2003). Indeed research into SST outcomes has also been largely limited to reducing queuing or waiting times within a vendor-located service experience (e.g. Bateson, 1985; Meuter et al., 2000) despite saving time being one of the primary reasons for consumer use (Weijters et al., 2007). Furthermore, within the value literature conceptualisations and operationalisations of value as an outcome have predominantly taken place in interpersonal contexts (e.g. Lin et al., 2005; Ruiz et al., 2008); and less attention has been paid to self-service contexts, particularly in post adoption contexts (Wang et al., 2013), despite their increasing importance (Mohd-Any, Winklhofer and Ennew, 2015).

One of the more recent applications identified by Kim et al. (2011) includes subscription based SSTs that are consumed from the users' chosen location, they involve longer term relationships and co-creation (e.g. satellite TV (Sky), online banking (First Direct); or Radio (Spotify). The emphasis is no longer purely on the sellers' environment where the primary focus of the SST literature still remains. Given their importance to the business world, an understanding of SSTs within a subscription environment remains a significant gap, not just for the SST literature, but also for Marketing (Mohd-Any, Winklhofer and Ennew, 2015). Subscription-based SSTs are the context of interest in this study.

The challenges to implementation, adoption and management of SSTs that surfaced over a decade ago have not yet been fully resolved. Indeed, the early reluctance to adopt SSTs not only had its roots in differing motivations (firm and consumer), but also in an insufficient understanding (by firms) of how value is co-created across the consumer technology interface (Meuter et al., 2005). This issue is set to become an even bigger challenge as Marketing's understanding of the consumer experience progresses beyond the confines of the service interface to include value in the experience, the consumers' wider social network and the changing role of the firm in the customers' value creation activities. Understanding how to engage the customer in co-production/co-creation over a technology interface remains a key debate, which in part manifests itself in the distinction

between customisation and personalisation. The next section examines this debate before introducing the latest thinking in the academic literature, which endeavours to close the gap.

2.2.1 The Customisation Versus Personalisation Debate

From a SST perspective, an important debate lies in the distinction between personalisation and customisation, which is also a major issue of comparison between online and offline environments (Kimiloglu, 2004). The customisation argument (e.g. Thomke and von Hippel, 2002) assumes that a service is designed by a company to suit consumer needs i.e. is menu driven and firm centric. Personalisation involves the customer as an unrestricted co-creator of content around their own experiences (Prahalad and Ramaswamy, 2004). The key question lies in how much control the firm is required (or is prepared) to relinquish to the customer to enable co-production/co-creation; and to what extent this course of action is both practical and cost effective.

From a customisation perspective, the service literature refers frequently to the standardisation/non-standardisation dichotomy. However this represents an incomplete picture; a better conceptualisation derived from manufacturing is standardisation, modularisation and customisation. Many so called standardised services from banking to transportation actually represent a strategy of mass-customisation (Pine, 1993), in which consumers choose from a variety of modules (standardised in themselves) to create the service package that best suits their needs (Lovelock and Gummesson, 2004). The typical customisation approach is symptomatic of the firm retaining control and allowing the consumer to co-create value within configurable boundaries. This approach is a contributory factor to the conflicting objectives discussed earlier, in that it suits a mass customisation strategy and is deployed due to its cost effective nature.

The personalisation perspective emerged from a shift in the role of the consumer and a changing basis of value creation. The inter-connectivity of computer systems and broadband communications underpinned this change since it enabled access to knowledge that was previously dispersed (Prahalad and Ramaswamy, 2004). The traditional conception of value creation positioned consumers outside the firm. Value creation occurred inside the company (through activities) and outside markets e.g. value chain (Porter, 1980). The firm and the consumer had traditional roles of production and consumption respectively. The market, conceived either as a mechanism for exchange or as an aggregation of consumers, was separate from the value creation process (Kotler, 2002), instead its function was value exchange and extraction. Both the traditional concept of the market and the process for value creation was company-centric. This view is now

shifting to personalised customer experiences where informed, networked and empowered consumers' co-produce/co-create value with the company. The locus of value creation is becoming the consumer experience where interaction is the key enabler (Prahalad and Ramaswamy, 2004). This experiential emphasis is changing the role of the market to a forum for conversation and interactions between consumers, consumer communities, and firms where the basis of relationships between companies and customers is also transforming. The journey of the consumer from a passive target to active participant and part of an emergent social and cultural fabric is summarised in Table 2.

Table 2: The Evolution and Transformation of Customers

	← Customers as a Passive Audience →			← Customer as an Active Player →	
	Persuading predetermined groups of buyers	*Transacting with individual buyers*	*Lifetime bond with individual customers*	*Customers as co-creators of value*	*Customers as resource integrators*
Time Frame	**1970s, Early 1980s**	**Late 1980s & early 1990s**	**1990s**	**2000 to 2010**	**2010 and Beyond**
Nature of business exchange & role of customer	Customers seen as passive buyers with a predetermined role of consumption			Customers are part of the enhanced network: they co-create & extract business value. They are collaborators, co-developers & competitors	Customer is a resource integrator. Firm becomes part of the customers' co-creation activities
Managerial mind set	The customer as an average statistic: groups of buyers are predetermined by the company	The customer as an individual statistic in a transaction	The customer is a person: cultivate trust & relationships	The customer is not only an individual but also part of an emerging social and cultural fabric	The firm is part of the customers' wider social network of actors
Company's interaction with customers & development of products & services	Traditional market research & enquires: products & services are created without much feedback	Shift from selling to helping customers via help desks, call centres & customer services programmes: identify problems from customers, then redesign products & services based on that feedback	Providing for customers through observation of users; identify solutions from lead users & reconfigure products & services based on deep understanding of customers	Customers are co-developers of Personalised experiences. Companies & lead customers have joint roles in education & co-creating market acceptance for products & services	Customers' & their wider social network co-create personalised value in the experience. Firms' co-develop products & services to support the customers' co-creation objectives
Purpose & flow of communication	Gain access to & target predetermined groups of buyers. One way communication	database marketing: two way communication	Relationship marketing: two way communication & access	Active dialogue with customers to shape expectation & create buzz. Multilevel access & communication	Multi-way active dialogue and access to customers & their wider social network

Adapted from Prahalad and Ragaswamy, 2000. p.80.

Source: Adapted from Prahalad and Ramaswamy, 2000, p.80.

Traditionally the firm controlled the relationship, communication was unidirectional and consumers were viewed as a passive target with the choice to buy or not buy within the confines of the firm's offer. The personalisation perspective argues that consumers can now: co-construct their own experience within a firm's experience environment; communication is bilateral but has widened to include C2C dialogue through communities; consumers can impose their view of choice; and are

active rather than passive (Prahalad and Ramaswamy, 2004). The personalisation argument is predicated on the basis that their experience (which is contextual) is of unique value to customers and the quality of that experience is dependent on the nature of the involvement the customer had in co-producing/co-creating it with the firm. Therefore products can be commoditised but co-created experiences cannot (ibid, 2004). A personalised co-production/co-creation experience is based on the building blocks of interaction i.e. dialogue, access, risk-benefits and transparency, which challenges practitioners from the perspective of risk disclosure; financial transparency; open access; and dialogue with consumers and communities. Increased interaction also brings with it a greater customer expectation (i.e. through expectations of company learning and customer compensation). Moreover, a greater involvement in co-design and co-production increases the customers' ability to influence the firm with an enhanced potential of interaction fatigue (Berthon and John, 2006).

Despite these challenges for firms, intense competition and sophisticated demand trends for personalised services have rendered mass customisation a competitive imperative for all firms (Sigala, 2006). Evidence of a shift towards personalisation can be seen across a wide range of industries; for example both eBay and Amazon centre their information infrastructure on the consumer, providing a platform to enable individuals to construct their own experience. Both facilitate active dialogue and involve communities (Prahalad and Ramaswamy, 2004). The proliferation of mobile access to the Internet and the resulting mCommerce services have driven mass customisation strategies that enable the customer to become co-designers and co-producers of their own particular demands, profiles or requirements (Sigala, 2006). Opportunities for personalisation include: ring tones, phone interfaces and style, screen savers, information, SMS alerts, address books, pictures, albums and MMS services. Mass customisation is defined as the use of flexible processes and organisational structures to produce varied and often individually customised product/services at the price of standardised, mass-produced alternatives (Hart and Taylor, 1996). Over the last twenty years various categorisations and/or continuums of mass customisation have been developed (e.g. Pine, 1993; Lampel and Mintzberg, 1996; Sigala, 2006), however the market has moved on significantly. Since then mCommerce has developed at pace with the emergence of smartphones and the mobile applications (apps) business has become increasingly significant (Dube and Helkkula, 2015). Apps have become the key interaction and service provision mechanism between the smartphone and the consumer and have an impact through their service experiences on the everyday lives of their users (Dube, 2014). Indeed, the Apple App Store now has more than 750,000 apps available across both priced and free versions.

Apps have now largely replaced the use of other mobile-based services (Monti, 2013) and are typically accessed and consumed thought the use of online subscription-based contracts.

Undeniably the proliferation of mCommerce and the developments in mass customisation have been key contributors to claims in the literature of an inexorable market evolution towards personalisation. However despite this evolution, since the 1980s practitioners have only relinquished some of their traditional role and co-production/co-creation remains an experience staged by the firm (Prahalad and Ramaswamy, 2004) i.e. customised and menu-driven. Even though interactivity has been considered essential, it remains dominated by the service company and based on exchange value (Heinonen et al., 2010). Kalaignanam and Varadarajan (2006) temper the debate by arguing that a more realistic scenario for co-production/co-creation in the future will be the co-existence of both personalised and customised approaches. The final column in Table 2 updates Prahalad and Ramaswamy's (2000) work to include the developments of S-D Logic (Vargo and Lusch, 2004, 2008, 2016), which builds on their work in the personalisation area. This update is included to show that the emphasis of the firm is changing to one of being involved in the customers' co-creation activities rather than the other way round. The other significant change in emphasis within the literature is that firms must now consider the customers' wider network of actors when they seek to offer value propositions. However, the question still remains as to whether co-production/co-creation (in the sense of completely unconstrained personalisation) across a technology interface can ever be fully realised to align with the utopian view of the current literature. No matter whether this utopian view is achievable or not, understanding customer value in the experience across technology interfaces will be fundamental in harmonising the differing firm/customer objectives in the adoption and use of subscription-based SSTs.

2.2.2 Online Subscription Relationships

The technology literature has primarily focused on SSTs that are located either at the firms' premises, or where usage cost is borne by the organisation. These encounters are inherently transactional with limited opportunity for co-production/co-creation. Increasingly SST services are used by individuals, either from their own location, or through mobile devices. These consumers play the dual role of technology user and service consumer. Services are consumed for personal purposes and the customer adopts the cost of service usage (Kim, 2007). Online subscription-based SST services are different; they are subject to aspects of non-ownership in that they involve the consumer renting access to a firm's network to enjoy the benefit of a service for a defined period of time. The mechanism to pay for these services is the subscription. A subscription arrangement has

relationship connotations and there is a governing contract in place. Subscription relationships have not been identified as a research area in their own right, typically being considered in the restrictive contexts of monetary cost or usage fees. Drawing customers into a co-production/co-creation role through SSTs has the ability to resolve the dichotomy between autonomy of action and close relationships. Whilst there is much to learn about SST relationships, one thing remains certain, if firms are to develop competitive advantage in an online context, developing customer relationships within the self-service culture is both a necessity and a challenge (Stockdale, 2007). Key to understanding this challenge is an understanding of how value in the experience is co-produced/co-created across a technology interface over time. There is a clear gap in both the technology and marketing literatures in this area. Subscription channels are key to unlocking this understanding and the context of interest for this study. The next section explores whether this situation is set to continue. Early signs indicate that online service design is advancing towards the inclusion of more personalised co-production/co-creation approach, which can accommodate wider experiential connotations.

2.2.3 SST Service Design: Emergent Perspectives

The literature has recently begun to acknowledge the importance of the customer experience in new service design (Mager, 2009; Moritz, 2005). However not only has there been limited research in the area (Verhoef et al., 2009; Stuart and Tax, 2004; Patrıcio et al., 2008; Roth and Menor, 2003; Hill et al., 2002), but the main focus has been on single elements of the customer experience rather than the complete landscape of experience factors (Teixeira et al., 2012). Examples of single experience elements include: personas (Saffer, 2010); the service delivery process (Smith et al., 2007); technology infusion (Froehle and Roth, 2004; Bitner et al., 2000); customer contact intensity (Chase, 1981), internal process design to support experience (Verma et al., 1999; Voss et al., 2008); service blueprinting (Shostack, 1984; Bitner et al., 2008), and other operations management methods (Johnston, 1999). Within this literature stream various definitions of the customer experience have been used: Meyer and Schwager (2007) define customer experience *as: the internal and subjective response customers have to any contact (direct or indirect) with a company*. Whereas Zomerdijk and Voss (2009) refer to the customer experience as *a holistic concept that encompasses every aspect of a company's offering.*

More recently the service design literature has embraced the S-D Logic perspective (Vargo and Lusch, 2004) arguing that customer experience is not designed, rather it is co-created through customer interactions incorporating several service elements along a customer journey (Berry et al.,

2002; Zomerdijk and Voss, 2009) that involves other elements that are not under the organisation's control e.g. the social environment (Verhoef et al., 2009). Teixeira et al., (2012) developed the Customer Experience Modelling (CEM) approach, which arguably begins to draw the service design and value literatures towards a consensus that the customer experience involves both the customer and a wider social network of actors. The CEM approach captures diverse customer experience components and systematises them for service designers. These components include the experience context; physical artefacts, technology-enabled systems; and the actors involved in each activity throughout a customer journey. The approach recognizes that some of these components are beyond a company's reach and that the experience should be considered through the customer's eyes. A number of important implications arise from the development of the CEM approach: design methodologies are progressing to support enhanced co-production/co-creation experiences over a technology interface; it validates the direction taken by this thesis in that any online value model should not only include the individual user's experience but also their wider social network of actors. The service design literature has moved ahead of the value field from an empirical perspective and the need for an empirical model of experiential value is both pressing and of material use to support further work in the service design field.

2.3 Foundation Theory

This section discusses the key theoretical cornerstones relating to this thesis, which include S-D Logic, experience and co-creation/co-production, arguing that each is underpinned by value in use. This last statement is not as controversial is it may first seem and does not dictate the perspective from which value is evaluated. It is however, an essential component in the clarification of how value emerges in co-creation and co-production relationships. No matter which lens value is viewed from, whether it be value in context, value in social context or value in the experience, each perspective is underpinned by value in use. Value cannot be created until it emerges from the use process and this premise is explored in depth. Note that each of the themes discussed in this section are interconnected. Introducing one topic inherently requires discussion of the other two out of context since there is no natural start point. Where possible signposting is used to guide the reader.

2.3.1 Service Dominant Logic

Since its inception in 2004, S-D Logic has been the subject of much debate as it sought to become the new dominant logic for marketing. More recently two further perspectives in the service field emerged: service logic (Grönroos, 2006; Grönroos and Gummerus, 2014); and customer-dominant logic (Heinonen et al., 2010). It remains too early to tell as to whether these differing perspectives

will co-exist or compete. All three have a different primary focus but explain the characteristics of service in society and business today (Heinonen et al., 2013). This situation has been further exacerbated by the recent introduction of customer dominant logic (Heinonen et al., 2010). S-D Logic focuses on systems and the co-creation between generic actors on a societal level (Vargo and Lusch, 2004; Lusch and Vargo, 2014), whereas service logic emphasises the interaction between the provider and the customer (Grönroos, 2006). Customer-dominant logic focuses on customer logic and the customer's co-creation activities, actors and experiences and the role the firm within this context (Heinonen et al., 2010; Heinonen and Strandvik, 2015). Tynan and McKechnie (2009) argue that S-D Logic now offers the overarching theoretical basis to join practitioner and academic thinking on experience marketing. Its locus is value creation: which is achieved through the application of skills and knowledge; facilitation occurs through interaction; it is predicated upon co-creation; encompasses customer participation; is determined by the customer; affirms the concept of value in use over that of value in exchange; and therefore addresses the majority of the key features of experience marketing. This thesis concurs with the Tynan and McKechnie (2009) perspective and considers S-D Logic the appropriate lens through which to view value in the experience.

S-D Logic involves a shift from a goods based dominant perspective to a service dominant view based around intangibles, exchange processes and relationships (Vargo and Lusch, 2004a). Service is construed as a process that involves customers in interactions; value is defined by and co-created with the customer; and service relationships depend on an ongoing exchange of value (ibid 2004a; Lusch and Vargo, 2014). The S-D Logic lens places significant emphasis on the value phenomena. A decade ago value was poorly understood; lacked consensus around definitions; was fragmented due to unclear differences between classifications and typologies of value (Woodruff and Flint, 2006); the empirical operationalisation of value remained disjointed (Parasuraman and Grewal, 2000); and the literature was both confusing and conceptually self-contradictory (Lin et al., 2005). Little research had addressed the value construct itself and there was no well-accepted value measure (Sweeney and Soutar, 2001). Indeed the maturity of the value literature at the time was deemed insufficient to support the proposed S-D Logic paradigm shift (Woodruff and Flint, 2006). Ten years on the literature has reached a broad consensus that the customer uniquely and phenomenologically determines value throughout the life of the service proposition (Vargo and Lusch, 2008). Value is co-created, inherently relational and linked to value-in-use. Table 3 provides the chronological development of S-D Logic over the last decade. Numerous researchers have contributed to its refinement over time as it evolved from eight foundational premises in 2004 to eleven in 2016. The latest update also positioned the eleven foundational premises in 4 axioms (Vargo and Lusch, 2016).

Table 3: Service Dominant Logic Foundational Premise Update

Foundational Premise	2004	2008	2016
FP 1	The application of specialised skills and knowledge is the fundamental unit of exchange	Service is the fundamental basis of exchange	No Change **AXIOM STATUS**
FP 2	Indirect exchange masks the fundamental unit of exchange	Indirect exchange masks the fundamental basis of exchange	No Change
FP 3	Goods are distribution mechanisms for service provision	No Change	No Change
FP 4	Knowledge is the fundamental source of competitive advantage	Operant resources are the fundamental source of competitive advantage	Operant resources are the fundamental source of strategic benefit
FP 5	All economies are service economies	No Change	No Change
FP6	The customer is always the co-producer	The customer is always a co-creator of value	Value is co-created by multiple actors, always including the beneficiary. **AXIOM STATUS**
FP 7	The enterprise can only make value propositions	The enterprise cannot deliver value, but only offer value propositions	Actors cannot deliver value but can participate in the creation and offering of value propositions
FP 8	Service-centred view is customer oriented and relational	A service-centered view is inherently customer oriented and relational	A service-centred view is inherently beneficiary oriented and relational
FP 9		All social and economic actors are resource integrators	No Change **AXIOM STATUS**
FP 10		Value is always uniquely and phenomenologically determined by the beneficiary	No Change **AXIOM STATUS**
FP 11			**New** Value co-creation is coordinated through actor-generated institutions and institutional arrangements. **AXIOM STATUS**

(Source: Adapted from Vargo and Lusch, 2016. P.8)

Currently, the focus of S-D Logic is shifting away from individual providers and customer–provider encounters to how value is created within systems of service exchange (Akaka et al., 2015). The narrative of value co-creation reflects this and has progressed to one of resource-integrating, reciprocal-service providing actors co-creating value through holistic, meaning laden experiences in nested and overlapping service ecosystems (Vargo and Lusch, 2016).

Within this narrative, foundational premise (FP) 10 is of specific interest to this study: if value is always uniquely and phenomenologically determined by the beneficiary then an understanding of value must transcend the visible customer-provider interactions and consider the invisible and mental life of the customer. Key to this is the extension of temporal scope to include accumulated experiences in the customer's life and ecosystem. The value construct is therefore multi-contextual and dynamic based on customers' lives and ecosystems (Heinonen and Strandvik, 2013). Recognition of this perspective points to inadequacies of the current empirical multi-dimensional value model definitions (examined in detail in the conceptualisation chapter) and a gap in the literature concerning the inclusion of accumulated experiences in any conceptualisation of value in empirical studies. This study intends to address both issues.

FP 9 (now also an axiom) is also of specific interest to this study and states that all social and economic actors are resource integrators (Vargo and Lusch, 2016). Value creating interactions are also no longer limited purely to the customer and supplier (as previously conceptualised), but can include members of the customer's wider social network e.g. friends, family, fellow customers, shareholders, external experts and opinion leaders, partners within the supply chain and other stakeholders (Tynan and McKechnie, 2009). From the firm's perspective there is now an imperative for wider engagement in: dialogue with both customers and members of their network; the total value proposition; resource integration; and the process of learning to offer solutions, which are achieved by jointly and flexibly working with customers (Vargo and Morgan 2005); each of which is facilitated by information and communication technology (Baron and Harris, 2008). However despite this imperative, there is a gap in the literature concerning the empirical understanding of resource integration (ibid, 2008). In an online subscription service context, not only do the actors in the wider social network remain unidentified but also their effect on experiential value remains unknown. This study intends to address both issues.

The next section examines the nuances between co-creation and co-production in more detail. The demarcation lines between each have created substantial misunderstandings and controversy leading to divergent perspectives in the literature (Vargo and Lusch, 2016).

Lovelock and Young (1979) pioneered customer co-production taking the view that customers were important contributors to a firm's productivity. Indeed, practitioners and academics have described a shift "*toward a recognition of the advantages, if not the necessity, of viewing the consumer as a co-producer*" (Vargo and Lusch, 2004a, p.11). Historically co-production was viewed from different perspectives e.g. B2B (supplier to end customer), socio-cultural, or B2C (Payne et al., 2007). Although Baron and Warnaby (2008) point out that from a resource integration perspective, these traditional demarcation lines are blurred. Prior to the introduction of S-D Logic, research into co-production had been categorised into five broad areas (Payne, Storbacka and Frow, 2007): a) the emotional engagement of customers through advertising and promotional activities e.g. Club Med; b) self-service where there is a transfer of labour to the customer e.g. Ikea; c) a supplier orchestrated experience e.g. Disney; d) customer self-selection based on the supplier's prescribed processes to solve a specific problem; e) customer and supplier engage in the co-design of products. Customer roles and hierarchies within a technology co-production context have already been covered previously.

Relatively little is known about how customers engage in co-production/co-creation across technology interfaces (Woodruff and Flint, 2006; Payne et al., 2007). At the time, co-production was understood to create value through: consumption or co-design, but it could also occur through customer feedback, either direct (e.g. satisfaction surveys) or indirect (e.g. cancelling orders). Through these processes, customers influenced design overtly via direct involvement or inadvertently via consequential action (Flint and Mentzer, 2006). The degree and nature of customer co-production was also a factor of solution content and product/service characteristics (Bettman, 1979; Petty and Cacioppo, 1986), which determine the feasibility of engaging the customer (Kalaignanam and Varadarajan, 2006). Until recently, co-production research specific to S-D Logic focused on: co-producing the voice of the customer (Jaworski and Kohli, 2006); a cost function model for co-production (Etgar, 2006); satisfying expectations (Oliver, 2006); supply chain issues and value chain management (Flint and Mentzer, 2006); cross functional processes (Lambert and Garcia-Dastugue, 2006); marketing strategy and effectiveness and operations efficiency (Kalaignanam and Varadarajan, 2006); and managing the co-creation of value (Payne et al., 2008). Despite this there remained relatively limited direction into how the co-production process operated (Payne et al., 2008).

Prior to the introduction of S-D Logic the debate had centred on a more dyadic, micro-level view (Chandler and Vargo, 2011). Since 2004, the debate developed towards a holistic, dynamic, and

realistic perspective of value creation, through exchange, among a wider, more comprehensive (than firm and customer) configuration of actors (ibid, 2011). How value is co-created remains at the centre of the debate, however the demarcation lines between co-creation and co-production continues to create divergent perspectives. Indeed the 'open source' nature of S-D Logic encouraged numerous inputs from academics leading to periodic refinements in the theory. In 2004 S-D Logic FP 6 stated that the customer is always the co-producer (Vargo and Lusch, 2004). In 2008 this was amended to the customer is always a co-creator of value. Recently Vargo and Lusch (2016) re-visited FP 6 again amending it to value is co-created by multiple actors, always including the beneficiary, arguing that it had now reached axiom status.

S-D Logic specifies that the service provider and the customer are always considered co-creators of value. Grönroos and Voima (2013) criticised this perspective as being too metaphorical in nature to apply from an analytical perspective, and that the term value creation is never explicitly defined. Moreover, despite widespread acceptance of the idea of value as *"perceived and determined by the customer on the basis of value-in-use*" (Vargo and Lusch 2004, p. 7), treating value creation as an all-encompassing process leaves the underlying locus of value unclear (Grönroos and Voima, 2013), requiring clarity around what the terms value creation, co-creation and co-production actually mean. The authors argue that when conceptualising value creation and asking what value is, along with where, how, by whom, and when it is created, the complexity of the value concept becomes evident (Voima et al. 2010). The authors conclude that the nature of value must also then be unclear because its locus cannot be value-in-exchange, since the customer's actions during usage are involved. Similarly it cannot be value-in-use, because the service provider's activities are involved (Grönroos and Voima, 2013). The authors go on to point out that treating value creation as an all-encompassing process not only contradicts the marketing concept (which is centred purely on the customer), but without a definition of the ontological basis of value creation, value can only be treated as a concept that can be perceived and constructed differently by various actors (e.g. provider and customer). With these conflicting ideas as a foundation, it is impossible to describe the nature of value. Therefore, this definition of value creation cannot offer theoretical or managerial implications about the roles and scope of the service provider or the customer (ibid, 2013).

Vargo and Lusch (2016) responded to this criticism in their recent update, arguing that value co-creation refers to the actions of multiple actors, often unaware of each other, that contribute to each other's wellbeing. The authors see co-production as being relatively optional, subject to the knowledge and desire of the beneficiary and existing knowledge of customer preferences on the part

of the provider. Co-creation of value is understood as a positive statement within human systems that are characterised by specialisation and interdependency, where value is always co-created and is consequently not optional. In specialised, human systems value is not individually or dyadically created, rather it is created through the integration of resources, provided by many sources, including a full range of market-facing, private and public actors (i.e. a network). Indeed the co-creation of value is the purpose of exchange and therefore foundational to markets and marketing (Vargo and Lusch, 2016).

Undoubtedly this debate will continue for the foreseeable future. The next section intends to clarify the position taken in this thesis and the first step uses the concept of value-in-use to provide a clearer framework to understand accumulated experience and the role of co-creation. S-D Logic remains positioned at the metaphorical level, which Grönroos and Voima (2013) argue is too high. This thesis agrees with the authors on this point. Grönroos and Voima (2013) do provide clear guidance through value-in-use, which provides the appropriate level of detail required by this research.

2.3.2 Positioning Co-Creation and Co-Production Through Value in Use

This section uses the framework proposed by Grönroos and Voima (2013) to help position co-creation, accumulated experience, value in use and resource integration.

Value is co-created, inherently relational and linked to value in use (Vargo and Lusch, 2008). However, within the same context, the terms co-production and co-creation have been used interchangeably in the literature over the last decade. Today the literature has progressed such that both have specific meanings dependent upon the context. Therefore clarification of these different positions requires an understanding of how value in use underpins each. Historically, value in use has been analysed across multiple dimensions which include: supporting the customer's peace of mind (Woodruff, 1997); making life easier for the customer (Miller et al., 2002); solving a customer's problems (Sawhney et al., 2006); letting the customer achieve more than the sum of the individual components/resources (Brax and Jonsson, 2009; Sawhney, 2006); satisfying customer needs (Tuli et al., 2007); or just relieving the customer of some responsibility (Normann and Ramirez, 1993; Strandvik et al., 2012). Recent literature argues that value is best defined as value in use, derived through *"an interactive relativistic preference experience*" (Holbrook 1994, p. 27). The value in use concept implies that value is created by the user during the process of using resources/processes/outcomes. Whilst alternative perspectives include value in context (Chandler

and Vargo, 2011; Heinonen et al. (2010), and value in social context (Edvardsson et al., 2011), interaction (Berthon and John, 2006), and possession (Holbrook and Hirschmann, 1982), use remains the fundamental concept in the analysis of value and value creation (Grönroos and Voima, 2013). The nature of value in use is the extent to which a customer feels better (positive value) or worse off (negative value) through experiences related to consumption. Therefore value accumulates over time through experiences during usage (Grönroos 2008, 2011). However, value as value in use cannot exist before it is created (or emerges) from the usage process, where it is accumulating, and consequently cannot be evaluated before usage (Grönroos and Voima, 2013). It is through use and during usage that value emerges or is created. The level of value derived through use reflects social, spatial, temporal, and physical contexts in which usage takes place, and is dependent on how these components of usage context change (ibid, 2013). The authors go on to define value as "*value-in-use, created by the user (individually and socially), during usage of resources and processes (and their outcomes*)" (p.144). Usage can be physical, virtual, a mental process, or just possession (Holbrook and Hirschman, 1982). Value creation is the customer's creation of value in use.

Once value in use is positioned in this way, its relationship to co-production and co-creation can be clarified using several interlinked themes: understanding the customer as value creator; the firm as a value facilitator; the opportunities for the firm to co-create value with the customer; the opportunities for the firm to influence the customers' value creation; how value emerges; and how value is determined. However, Grönroos and Voima (2013) argue that to operationalise value in this way requires a number of modifications to the current narrative of S-D Logic, which are shown in Table 4. Note that the authors also use this framework to critique S-D Logic.

Grönroos and Voima (2013) argue that once value creation is grounded in the value in use concept and defined as the customer's creation of value in use, rather than always being a co-creator of value, the customer then becomes the value creator (Heinonen et al. 2010) requiring a slight modification to FP6. Once this distinction is made the themes can be organised into the framework shown in Figure 2 with three spheres: provider, joint, and customer. Value in use is customer driven and accumulates over time in the customer's sphere independently from the firm, therefore value is created in different spatial and temporal contexts (Heinonen et al. 2010; Helkkula et al. 2012; Voima et al. 2010, 2011). If the firm can access the closed customer value sphere, a joint value creation sphere is created within which the service provider has the opportunity to become involved in joint value creation. If successful, the customer becomes a co-creator of value with the

firm. The customer participates as a co-producer in joint production, specifically in design and development, interacting through a merged dialogical process. Interactions are defined as: *"situations in which the interacting parties are involved in each other's practices*" (Grönroos and Voima, 2013, p.140). Interactions involve physical, virtual, or mental contact between the provider and their customers, provide opportunities to engage with their customers' experiences/practices, and consequently influence their flow and outcome.

Table 4: Revisiting the S-D Logic Premises with a Structured Definition of Value Creation

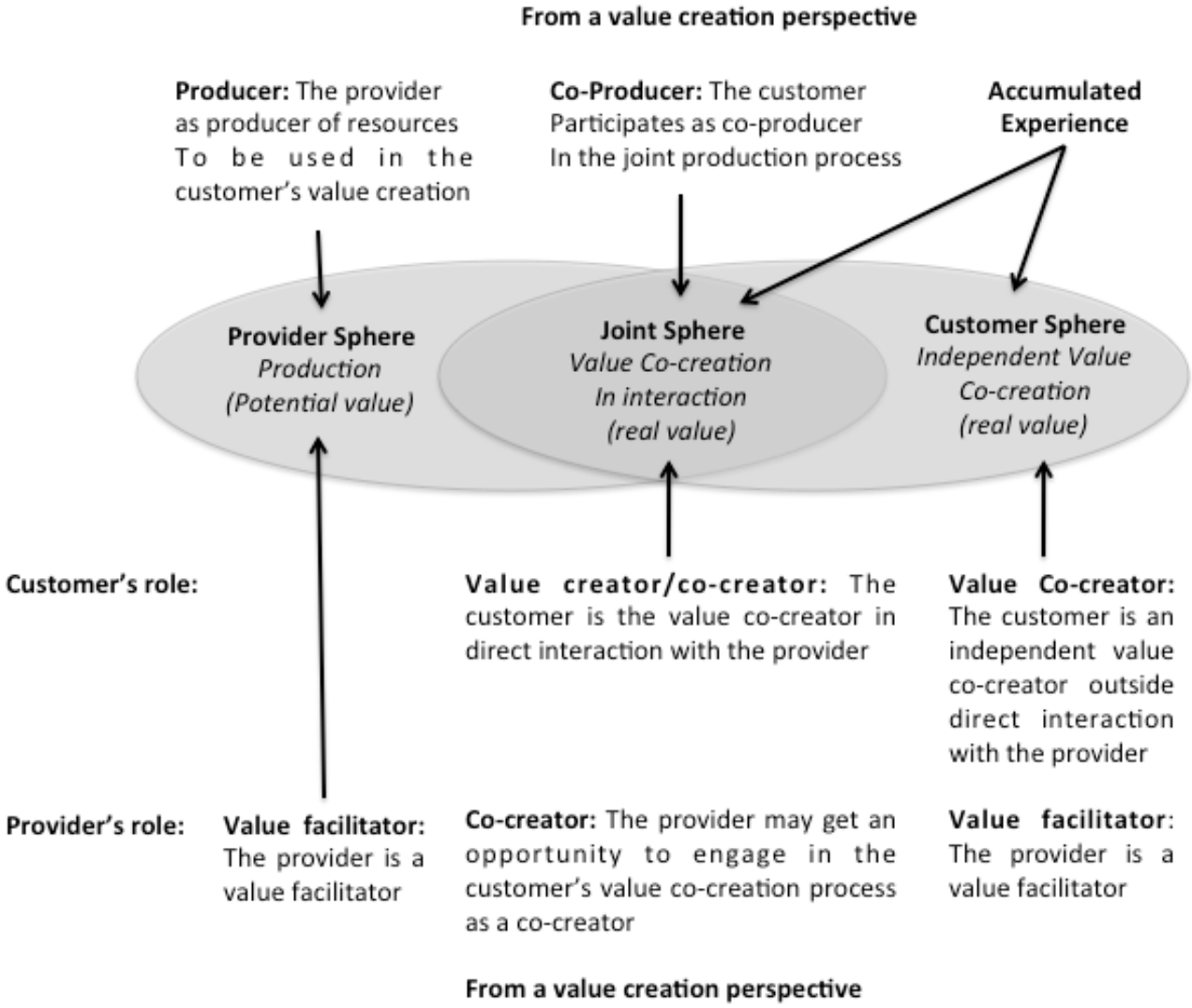
Revisited Foundational Premises		Revisited Foundational Premise New Labelling	Original Premises
No 6	The customer's role in value creation	The customer is the value creator	The customer is always a co-creator of value
No 7a	The firm's fundamental role in value creation	1) Fundamentally, by providing potential value the firm is a facilitator of value for the customer	The firm cannot deliver value
	The firm's expanded role in value creation	2) Provided that the firm can engage with its customer's value-creating processes during direct interactions, it has opportunities to co-create value jointly with them as well	
No 7b	The firm's marketing opportunities in value creation	The firm is not restricted to making value propositions only, but has an opportunity to directly and actively influence its customers' value creation as well	The firm can offer only value propositions
No 10	How value is created/ emerging	1) Value is accumulating throughout the customer's value- creating process	Value is always uniquely and phenomenologically determined by the beneficiary (e.g., customer)
	How value is determined	2) Value is always uniquely and both experientially and contextually perceived and determined by the customer	

Source: Adapted from Grönroos and Voima, 2013, P. 145

Interactions central to the joint sphere can be direct and indirect. Direct interactions occur when the customer's and firm's production and delivery processes happen simultaneously and can occur in any process where the customer interacts with the firm's resources in a dialogical manner e.g.

design and product development. Indirect interaction refers to situations in which the customer uses or consumes resources that are outputs of the firm's processes e.g. a product (Grönroos and Voima, 2013). From a critical perspective, the authors make the distinctions between value creator and co-creator based on the service provider/customer dyad only. This thesis includes a network perspective and therefore does not subscribe to the proposed change to FP 6 since terminology referring to value creator does not apply in a wider network context.

Figure 2: Value Creation Spheres



(Source: Adapted from Grönroos and Voima, 2013, p.136)

The authors argue that if the customer is the value creator then the role of the firm has to change. The firm operates in a closed sphere and produces (i.e. designs, develops, manufactures, delivers) resources, which represent potential value to the customer. During customer use value emerges positioning the firm as a facilitator of the customers' value creation. Fundamentally by providing potential value, the firm is a facilitator of value for the customer and consequently moves beyond

being only able to offer value propositions (as specified by S-D Logic), which requires a change to FP 7a/1.

The customer sphere is defined as: *"the experiential sphere, outside direct interactions, where value-in-use (real value) emerges (is created) through the user's accumulation of experiences with resources and processes (and their outcomes) in social, physical, mental, temporal, and/or spatial contexts"* (Grönroos and Voima, 2013, p.142). The customer's value sphere starts as closed to the firm, however if contacts between the firm and it's customers are created then direct interactions can occur and opportunities for the firm to co-create value with the customer become possible. The firm has to be invited to join the process (Grönroos, 2011) and if the firm as a service provider manages to engage with the customer's value creation process in the joint sphere, then value co-creation can occur. Direct interaction as part of a merged dialogical coordinated process, where both parties operate within each other's processes, becomes the platform for co-creation. The outcome of which can be co-creative or co-destructive (Echeverri and Skålen, 2011). FP 7a (2) is amended accordingly from the firm being unable to deliver value to becoming a joint value creator when able to engage in the customer's value creation activities.

Grönroos and Voima (2013) consider the value proposition a promise that customers can extract some value from an offering. Interactions do not flow in parallel since direct interactions in the joint value creation sphere can develop into merged dialogical processes, the firm as a service provider actively and directly influences and changes the flow and outcomes of the customer's process, and thus of the value creation process. A service provider then may go beyond just making value propositions as previously stated and consequently FP 7b is amended to include the ability of the firm to directly and actively influence customer value creation.

FP 10 states that value is always uniquely and phenomenologically determined by the beneficiary (Vargo and Lusch, 2008), however the fundamental question of how value forms or emerges during value creation is not clear. Grönroos and Voima (2013) claim it is fundamental to the understanding of value creation that value is understood to emerge from value in use. Value in use does not exist as a singular entity at any given point in time. Just as service quality accumulates throughout the usage process (Grönroos, 1984; Parasuraman et al., 1985), the experience of value and the value creation process accumulates as a dynamic process with both creative and destructive phases. Value in use emerges over time through physical, mental, and/or possessive actions by the customer in dynamic contexts. Therefore value accumulates throughout the customer's value-

creating process, which has a more precise meaning than 'value is uniquely determined phenomenologically by the beneficiary'; consequently FP 10/1 is amended accordingly.

Before value is determined or assessed by the beneficiary it must be perceived or experienced. The questions of how and by whom value is experienced must also be included. The term phenomenologically determined in FP 10 is considered by Grönroos and Voima (2013) to be too broad arguing that customers do not only determine value, they holistically experience it (Helkkula and Kelleher, 2010). Therefore, value is a concept that is contextually bound, longitudinally developed and accumulating, and always dynamic (Voima et al., 2011). They go on to reformulate FP10 as: value is uniquely experientially and contextually perceived and determined by the customer (FP 10/2).

At this juncture, positioning the concept of accumulated experience within the framework proposed by Grönroos and Voima (2013) is important. There is strong support in the literature that value is socially constructed through experiences (Berger and Luckmann, 1966; Edvardsson et al., 2011; Ramaswamy 2011; Thompson et al. 1989). However different authors have explored alternative ways to formulate this phenomenon. Recently value has been recognised as created in context (Chandler and Vargo 2011; Vargo 2008), in social contexts (Edvardsson et al. 2011), in practice (Holttinen, 2010), or in experience (Helkkula et al. 2012; Ramaswamy, 2011; Voima et al., 2010). No matter which way value is formulated, experience accumulates prior to value being perceived. Indeed, value is created in the user's accumulated experiences (both individual and collective/social) with resources, processes, and/or their outcomes and contexts accumulating from past, current, and envisioned future experiences in the customer's life (Helkkula et al., 2012; Voima et al., 2010). The locus of value creation is the customer's physical, mental, or possessive activities, practices, and experiences in multiple individual and social contexts. Value is therefore realised through possession, usage, or mental states (Grönroos and Ravald, 2011; Heinonen et al., 2010).

Given the customer creates value through experiences in an accumulating process. It follows then that experience accumulates in both the joint and customer spheres, where the customer co-creates value. Consequently, Figure 2 has been amended to show that experience accumulates in both spheres and summarises the position taken by this thesis. Conceptual clarity of where experience accumulates is fundamental to the conceptualisation of value in this study and the following key arguments can then be substantiated: a) value is formed by the experience b) value arises in both the joint and customer (i.e. resource integration) spheres therefore any holistic domain specification of

value in the experience must provision for both contexts. c) accumulated experience arises in both joint and customer spheres, which is a necessary condition to establish the case for measurement and indeed both the ontological and epistemological cases for a contribution to knowledge. These deductions also pave the way for a definition of value in the accumulated experience.

This section established that value in use not only underpins co-production and co-creation, but also value in the experience. Value is use also establishes the first building block of value in the accumulated experience. The same building block can be used to position resource integration. Conceptualising and measuring resource integration is a key contribution of this thesis and the phenomenon is used here as a vehicle to capture experiential value across both the joint and customer spheres.

2.3.3 Positioning Resource Integration Through Value in Use

Value in use has been analysed across multiple dimensions and categorised into firm controlled value creation and resource integration perspectives. Firm controlled value creation has been discussed previously. The resource integration perspective argues that customers evaluate individual sellers, products and services in the context of establishing a fit with current or future products and services (and sellers) and what this match implies (Grönroos and Voima, 2013). They do not assess them separately (Strandvik et al., 2012). Therefore, product and service interrelationships and product and service bundling (Harris and Blair, 2006) are part of the logic customers adopt and which effects their perception of value in use. This argument supports the S-D Logic resource integration argument (Vargo and Lusch 2004, 2008) and aligns with Moran and Ghoshal's (1999, p. 409) observation that the resource integration process i.e. the consumer's own ability to conduct resource integration is also important and "*it is not resources per se, but the ability to access, deploy, exchange, and combine them that lies at the heart of value creation*," where the customer's needs (Strandvik et al., 2012), internal linkages (Edvardsson et al., 2011), relational goals (Epp and Price, 2011), roles (Vargo and Lusch, 2011), networks (Gummesson 2006), and ecosystems (Voima et al., 2011) all have importance for understanding their resource integration and creation of value-in-use. It follows then that the individual customer's ability to access, deploy, exchange and combine resources will affect how their experience accumulates in use situations and the degree to which it is positive or negative. For example, when using an SST the customer's ability to access the service (i.e. they have the right technology that is correctly set up to operate effectively), access to the appropriate technical skills to operate the service (either personally or by using support from their wider network) or whether resources can be combined

with the service provider's fulfilment mechanism effectively will all shape the user's experience. Therefore resource integration is both separate from the technology experience itself and antecedent to it.

2.4 The Customer Experience

Customer experience is a well-established concept in the marketing literature and for the last thirty years has been a key concept in marketing management, consumer behaviour, services marketing and retailing (Tynan and McKechnie, 2009). More recently, in search of the next means of differentiation, experience marketing has emerged as the successor to customer relationship marketing when its underpinning assumptions were challenged (Palmer, 2010). The experience concept has also been studied by several other academic research areas including: natural sciences (experiment experience); philosophy (self-transformation from experience); sociology and psychology (subjective and cognitive experience); and anthropology (experience as a way of living) Caru and Cova (2003).

The experience concept has also been widely adopted by practitioners, driven by the challenge to differentiate goods and services (Carbone and Haeckel, 1994); recognition of the importance of customer experiences in the development of customer advocacy (Allen et al., 2005); and delivering competitive advantage (Gentile et al., 2007), whilst simultaneously reducing customer interaction costs (Prahalad and Ramaswamy, 2004). However despite a plethora of industry publications commensurate with the importance of the topic, scant attention has been paid to the contributions of academics (Holbrook, 2006, 2007), leading to both a shallow and partial understanding of the customer experience concept, creating a gulf between academics and practitioners that is now as wide as it has ever been (Tynan and McKechnie, 2009). No matter whether this criticism of practitioners is wholly justified or not, and despite this wide-ranging academic interest, little guidance has emerged that can be considered of use to practitioners (Pullman and Gross, 2004). Indeed the term 'customer experience' has been so widely used and abused, that a potentially important construct is in danger of being dismissed due to the ambiguous manner in which is has been applied (Palmer, 2010). In part due to the emergence of S-D Logic as a unifying framework, but also in recognition of the importance of this area, there has been an unusually consistent and growing level of attention and convergence by numerous researchers and practitioners on customer experience (Tynan and McKechnie, 2009).

Arguably academics are also culpable in the 'abuse' of the customer experience concept, little academic rigour has been added to the work of practitioners and consultants that have perpetuated the 'experience economy' (e.g. Pine and Gilmore, 1998) and definitions have also been circular in nature (Palmer, 2010). Part of this confusion lies in the multiple contexts in which the word experience is used. Experience can be used as a verb (i.e. I have or he has experienced) referring to a process of undergoing and living through an event that is a phenomenological characterisation of the concept, in which the activity of experience is uniquely personal. Conversely, experience can be understood as a noun (i.e. in my experience or I have learnt from my experiences), which refers to knowledge and expertise gained after an event and specific to the tacit or explicit knowledge aspects of experience (Dube and Helkkula, 2015). Notwithstanding whether experience is a noun or a verb, it can be formed by one or the other, or a combination of both perspectives. From this point forward, the review considers experience within a service context, which is the area of interest.

Despite the long history (e.g. Abbott, 1955; Dewey, 1963) and interest in the service experience concept, it remains underdeveloped in the marketing literature. This paradox has arisen because the concept has been hidden beneath, or run parallel to (Palmer, 2010) other more focused concepts in service marketing e.g. service quality, customer satisfaction, service environment and value in use (Dube and Helkkula, 2015). The literature recognizes the genesis of the service experience concept in the seminal article by Holbrook and Hirschman (1982), although Holbrook himself traced its origins back to Alderson (1957) and noted others had traced the concept as far back as the economists Keynes and Marshall and to Adam Smith in the eighteenth century (Holbrook, 2006). Holbrook and Hirschman's pioneering work marked a departure away from the traditional rational information processing view of consumption in favour of an experiential view advocating *"a primarily subjective state of consciousness with a variety of symbolic meanings, hedonic responses, and aesthetic criteria"* (Holbrook and Hirschman, 1982, p.132). The authors described these subjective experiential aspects of the consumption process as fantasies, feelings and fun, later extending them to include experience, entertainment, exhibitionism and evangelising (Holbrook, 2000). The key points arising from their work included: examination of the whole consumption experience from pre-purchase through to disposal and or outcomes is a necessity; emotions are a key part of consumption and are context specific. Individuals not only receive experiences in a multi-sensory mode, but also respond and react to them, therefore interactions lie at the heart of the experience; and finally consumers evoke both the past and imagine the future in response to experiences within the consumption process. This experiential perspective was a theoretical

milestone after which the view of consumption as a hedonic phenomenon gained increasing acceptance among marketing researchers (Dube and Helkkula, 2015).

Since then service marketing researchers applied the experiential perspective to consumption in service contexts. Service experience debuted with hedonic services e.g. river rafting (Caru and Cova, 2003; Pine and Gilmore, 1999; Arnould and Price, 1993). Two of the more restrictive characterisations of service experience received extensive attention in the literature: extraordinary (e.g. Abrahams, 1986; LaSalle and Britton, 2003); and memorable (e.g. Pine and Gilmore, 1999) before the economic sciences and marketing in particular focused on experiences as economic objects. This focus led to the development of the experience economy (Pine and Gilmore, 1998, 1999) and the research stream of experiential marketing (Schmitt, 1999) both of which broadened the service experience concept away from its restrictive early focus on hedonic and memorable services into the 'normal' day to day world of service experiences (Edvardsson et al., 2005). Consensus has been achieved in the literature on the omnipresence of service experiences regardless of their hedonic or non-hedonic nature (Dube and Helkkula, 2015). Service experiences have been characterised as a process that creates the customers' cognitive, emotional and behavioural responses resulting in a mental mark or memory (Johnston and Clark, 2001; Edvardsson et al., 2005). Characterising service experiences in this way brings them into the customer domain inferring that service experiences occur in every service encounter both prior to (Edvardsson et al., 2010) and post service encounter (Sandstrom et al., 2008). Multiple characterisations of service experiences then occurred throughout the 2000s, which were later grouped into a framework by Dube and Helkkula (2015), delineating service experiences as a process, an outcome and a phenomenon shown in Table 5.

These different characterisations of the service experience have arguably contributed to the lack of consensus in the field and the inability to provide meaningful rigour to practitioner thinking. Service experience as a process focuses on the dimensions or architectural elements (Helkkula, 2011) associated with service provision, which include: interactions with employees, technology and facilities (Edvardsson et al., 2010). Empirical and conceptual work using this characterisation views the customer as the subject of the experience and includes: the service scape (Bitner, 1982); service experience design (Pine and Gilmore, 1998); service experience blueprinting (Patricio et al., 2011); hyper-reality (Edvardsson et al., 2005); and experience room (Edvardsson et al., 2005, 2010). Each of these approaches assumes the effective management of the firm's resources improves the customers' service experience. The process approach has been criticised on the basis

that service experiences are co-created with the customer rather than a firm-centric service being presented to a passive consumer (Pareigis et al., 2011; Pine and Gilmore, 1998).

Table 5: Service Experience Definitions and Their Characterisations

Definitions	Authors	Characterisation
"Primarily subjective state of consciousness with a variety of symbolic meanings, hedonic responses and aesthetic criteria"	Holbrook and Hirschman (1982, p.132)	Phenomenon
"Service encounter research increasingly recognizes that service experience is inherently interpretive, subjective, and affective"	Arnould and Price (1993, p.28)	Phenomenon
"Experiences are inherently personal, existing only in the mind of an individual who has been engaged on an emotional, physical, intellectual, or even spiritual level"	Pine and Gilmore (1998, p.99)	Phenomenon and Process
"Experience is defined as a subjective episode in the construction/transformation of the individual, with, however, an emphasis on the emotions and senses lived during the immersion at the expense of the cognitive dimension"	Caru and Cova (2003, p.273)	Phenomenon
"We define a service experience as a service process that creates the customer's cognitive, emotional and behavioural responses, resulting in a mental mark, a memory"	Edvardsson et al. (2005, p.151)	Process
"Services are dynamic experiences, co-constructed with customers in accordance with their views"	Schembri (2006, p.386)	Phenomenon
"A service experience is the sum total of the functional and emotional outcome dimensions of any kind of service"	Sandstrom et al. (2008, p.118)	Outcome
"The term service experience refers to the customer's personal experience of the service process as a result of interactions with service organisation and its frontline staff, facilities and technology"	Edvardsson et al. (2010, p.313)	Process
"The internal and subjective response customers have to any direct or indirect contact with a company"	Meyer and Schwager (2007, p.118)	Phenomenon (direct and indirect)
"individual experiences - which are usually internal, subjective, event specific and context specific"	Helkkula (2011, p.375)	Phenomenon (direct and indirect)
	Dube and Helkkula (2015, p.229)	Phenomenon (direct and indirect)

(Source: Adapted from Dube and Helkkula, 2015, p.229)

Service experience has also not only been characterised as a process but also as an outcome (Helkkula, 2011). This approach advocates two outcomes: functional and emotional, which combined constitute the total service experience (Berry et al., 2002). The authors defined the total

service experience as the sum of all clues offered to the customer during the service provision. Functional clues refer to the actual functioning of the service and emotional clues include smells, sounds, sights, tastes and textures of the good or service combined with the environment in which the proposition is offered.

Service experience as a phenomenon characterises the concept as a conscious experience (Holbrook and Hirschman, 1982) with meanings, hedonic responses and aesthetic criteria of the customer. Rather than a service or goods related experience, the authors described the concept as a consumption experience, which characterises the service experience phenomenologically as individually determined and subjective in nature (Caru and Cova, 2003). S-D Logic (Vargo and Lusch, 2004, 2008) provided a welcome boost to consensus in the field by characterising the service experience as a co-created phenomenon. More recently it has been argued that the service experience is the foundation for the co-creation of value in use (Gummerus, 2013; Vargo and Lusch, 2008). This understanding of value in use is consistent with the value as an experience concept (Helkkula et al., 2012) and value in context (Akaka et al., 2013; Chandler and Vargo, 2011) and links the service experience into the earlier discussion in this literature review. The phenomenological characterisation argues that service experiences are *'internal, subjective, event specific and context specific in the customers' everyday lives'* (Helkkula, 2011, p. 375), which is in keeping with S-D Logic FP 10, which states that value is always uniquely and phenomenologically determined by the beneficiary (Vargo and Lusch, 2008). Note that it is also in keeping with the amendments made to FP10 in Table 4 and also with the concept of accumulated experience. In addition many consumption experiences can be shared, both social and relational sources of value can be created through interactions with other people such as friends or family through a collective consumption experience (Tynan and McKechnie, 2009). Consequently service experiences can be direct (i.e. direct use of the service) and indirect i.e. exposure to a firm's advertising, news reports, reviews and electronic word of mouth recommendations (Meyer and Schwager, 2007) or indeed the customer can engage indirectly with colleagues or other actors in their wider social network during the course of resource integration to co-create value.

The intention of this thesis is to measure value in the experience. Value in the experience is conceptualised as "*individual service customers' lived experiences of value that extend beyond the current context of service use to also include past and future experiences and service customers' broader lifeworld contexts*" (Helkkula et al., 2012 p.59). In order to position this study within the experience debate it is necessary to link value and the experience together. Whilst this will be

discussed in more detail in the conceptualisation chapter, the essence of the connection is that *"value resides not in the object of consumption, but in the experience of consumption''* (Frow and Payne, 2007, p. 91). Therefore in order to measure value, the unit of analysis is the experience (Helkkula et al., 2012), more specifically this thesis uses the accumulated experience as the unit of analysis. Therefore, value will be measured at the accumulated experience level, which includes both the process and the outcome elements of the experience.

The user is considered the person that uses the service and this thesis does not distinguish between use experience and user experience. Despite the current research interest in service experience (Ostrom et al., 2010), few studies have adopted the phenomenological approach to use or user experience (see Payne et al., 2008; Helkkula and Holopainen, 2011 for exceptions). Dude and Helkkula (2015) claim to be the first study to investigate use experiences (smartphone applications) in a service marketing context. To date there have been no empirical studies adopting the service experience as a phenomenon approach in online subscription services.

For many years the dominant perspective has been utilitarian, which posits that if the phenomenon cannot be measured then it does not exist. Integral to this view is that the user invokes reason when determining their experience and is not purely subjective. Indeed, a considerable weight of literature underpins the multidimensional view on value, which combines both cognitive and affective dimensions (Gummerus, 2013). Whilst the phenomenological school of thought can be criticised for labelling this approach unsuitable, on balance the weight of literature is moving inexorably towards the view that the service experience is a phenomenon (which includes both process and outcome elements). Consequently Palmer (2010) argues that the challenge to develop an operationally acceptable measurement model of the customer experience is a complex one requiring the integration of a diverse array of stimuli to enable evaluation of the trade-offs required to create value for customers. Despite his research being cognisant of the current phenomenological position on value in the experience, Palmer continues to argue that a trade-off is required to measure value. Given the phenomenological nature of the service experience, Palmer (2010) goes on to argue that to be of managerial usefulness for planning and control, any measure of the customer experience (relevant to this research) must address the following conceptual challenges: a) the complexity and variety of context specific variables (which includes the differences between individuals, where experience is conditioned) and the difference over time in an individual's emotional state; and b) the non-linearity of customer experience. This section intends to address these challenges as part of the argument that the service experience can indeed be

measured in a routinized online service context, where conditions of accumulated experience are present.

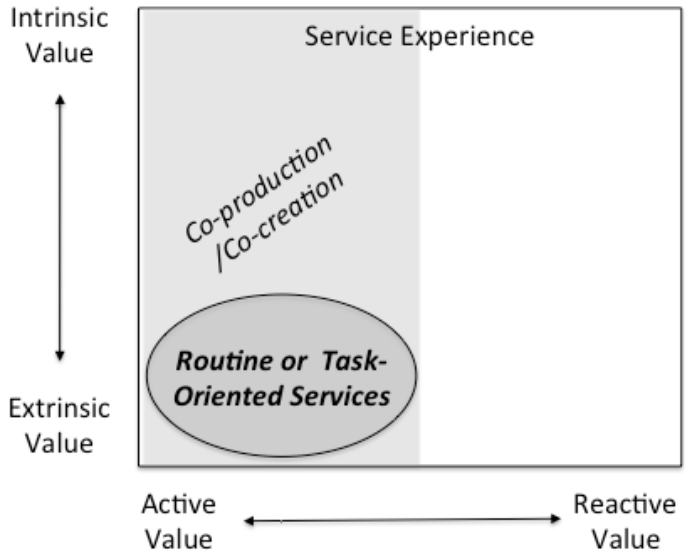
The complexity of this challenge has led to substantial criticism of empirical models attempting to measure the customer experience or value, questioning whether either can be legitimately operationalised. Much of the criticism comes from the phenomenological school of thought, which is discussed (and responded to) in depth in a later section. Ontological and epistemological claims to knowledge in this study are also discussed in depth within the methodology section. Faced with claims from the hedonistic position that experience has moved away from the utilitarian view and is internal, subjective, event and context specific in the customers' everyday lives (Helkkula, 2011), the argument to justify a measurement model of value in the experience is an intricate one.

The first step is to simplify the variety of subjective inputs that surround the context. The phenomenological view is considered extreme by some authors with the predominant perspective remaining positivist (Gummerus, 2013). The utilitarian perspective provides a strong argument to suggest that not all experiences have a hedonic component and that rational thought still prevails. Indeed some authors argue that experiential outcomes are irrelevant in online purchase contexts (Zeithaml et al., 2002). Notwithstanding whether this position is defensible or not in a retail environment, the argument is a particularly strong one for activities that are task orientated similar to an errand (Batra and Athola, 1991; Holbrook and Hirschman, 1982) whereby the user seeks to just 'get through' the encounter (Babin et al., 1994). Both the contemporary value discussion in S-D Logic (e.g. Korkman et al., 2010; Vargo et al., 2010) and researchers within the phenomenological school of thought (e.g. Helkkula et al., 2012) support the differentiation between routinized action and event-specific meaning-laden experiences, recognizing the importance of both phenomena and understanding them as resource integrating activities that lead to value creation. Online environments that are predominantly task orientated are commonplace today, particularly in a business environment and include online banking, e-invoicing and accounting subscriptions where the online service is designed to save time and make the process more efficient for the user. To date very little research has been undertaken to link routinized behaviours to S-D Logic and value co-creation (see Korkman et al. (2010) in the context of e-invoice services and Arnould et al. (2006) for exceptions). The focus of the research is how the individual makes sense of their routinized experience and the context of this thesis is set within a task-orientated business environment (online postage). The next section positions task orientated or routinized services within the experiential debate.

To progress the argument further, it is necessary to bring the divergent perspectives of the utilitarian and hedonistic debate together to understand value in the experience from the perspective of this research. Holbrook (1994) achieved this using the typology of experiential value. Whilst the terminology of the model itself is dated, the underpinning argument still prevails in today's debate and is useful to this thesis, not only to demonstrate that these divergent views should co-exist but also to position the context of interest within the experiential view. Experiential value perceptions are underpinned by interactions involving both direct and indirect usage (Dude and Helkkula, 2015). These interactions provide the basis for the relativistic preferences held by the individual (Holbrook and Corfman, 1985). Some researchers argue that experiential value is formed from both extrinsic (i.e. rational) and intrinsic (i.e. hedonic) benefits (Babin and Darden, 1995; Batra and Athola, 1991; Crowley et al., 1992; Mano and Oliver, 1993). Extrinsic value is explained as utilitarian in nature and task orientated as explained above. In contrast, intrinsic value is derived from the "*appreciation of an experience for its own sake, apart from any other consequence that may result*" (Holbrook, 1994, p.40) i.e. the hedonistic elements of the experience. Intrinsic value is subjective and personal in nature and value perceptions result from the fun and playfulness derived from an experience, rather than from the completion of a task (Babin et al., 1994). Holbrook (1999) later broadened the extrinsic-intrinsic conceptualisation of experiential value to include an activity dimension consisting of active and reactive value. Reactive or passive value is determined by the consumer's understanding of, appreciation for, or response to a consumption object or experience and refers to the value derived from a general consumer appreciation of a service provider to deliver on its promises through demonstrated expertise and task-related performance (Zeithaml, 1988; Holbrook, 1994; Holbrook and Corfman, 1985; Oliver, 1999). Active or participative value also implies a heightened collaboration between the consumer and the marketing entity.

In today's rhetoric this refers to a basis for co-creation (or co-production), and Holbrook's model enables co-creation to be linked with experiential value to further position this research. Consumer collaboration can occur in the form of cognitive, behavioural or financial investment. Holbrook is considered one of the leading thinkers within the phenomenological school of thought and his introduction of the activity dimension represented a mechanism to unify sources of functional and hedonistic elements of the experience under one conceptual framework (Mathwick, 2001). Whilst Holbrook's (1994) work has been modified over time, his original intent to view the service experience along two value-orientated continuums remains useful to this research and is shown in Figure 3.

Figure 3: Positioning Task-Orientated Online Services Within the Experiential Debate



Source: Adapted from Holbrook (1994).

The following argument positions routinized online activity within a frame of extrinsic active value.

Broadly the extrinsic active and reactive value continuum is functional in nature. Reactive intrinsic value underpins constructs such as aesthetics, which refers to the symmetry, proportion and unity of a physical object, a work of literature or a performance (Veryzer, 1993). The aesthetics construct has two dimensions, which are hedonistic and imply pleasure for its own sake: visual components of the environment; and the entertainment aspects of the service performance itself (Bellenger et al., 1976; Deighton and Grayson, 1995; Mano and Oliver, 1993). Visual appeal in an online environment is driven by colour, graphic layout and photographic quality, which combine to imply a desirable consumption experience (Schmid, 1998).

Active sources of intrinsic value refer to playful exchange behaviour whereby the consumer engages in activities that are sufficiently absorbing to offer escapism from day to day routine (Huizinga, 1955; Unger and Kernan, 1983) and could include memorable or extraordinary experiences e.g. river rafting. To some degree playfulness: exists in any activity that is freely engaged in; has restorative capability; operates outside of immediate material interests (Day, 1981); serves as an end in itself (Babin et al., 1994); and can also manifest itself in pretence (Huizinga, 1955) or imaginary perceptions (Helkkula et al., 2012). As the consumer evolves from observer to participant their role shifts from distanced appreciation of aesthetic components to co-producers (or co-creators) of value (Deighton and Grayson, 1995; Gummesson, 1998). However, in a repetitive task orientated context, repeat exposure to stimuli may lead to a learned response, consistent with

Ajzen and Fishbein's definition of an attitude. Supporting this view, hedonistic definitions of customer experience imply non-linear effects whereby the first encounter with a stimulus is highly valued because of its novelty, but the stimulus is less likely to be subsequently sought because if its lack of novelty value. Indeed the value (from a hedonistic perspective) may lie in the lack of a learned response (Palmer, 2010). It follows then that constant repetition of an online task reduces (and potentially eliminates) the hedonistic elements, which creates the basis of an argument that the service experience can be operationalised in task-oriented contexts because the user reverts predominantly to utilitarian cues over time as their experience accumulates.

As a learned response becomes the norm, the hedonistic component of aesthetics reduces over time as the task ceases to provide pleasure for its own sake and the visual and flow related components of the environment become routine and fade in importance. Similarly the entertainment aspects of the service performance, play or any restorative properties inherent within the proposition are replaced by the feelings of executing a task efficiently. Support for this contention can be found from Parasuraman, Zeithaml and Malhotra (2005) and Zeithaml et al. (2002). In their wide-ranging evaluation of constructs suitable for inclusion into their electronic service quality (E-S Qual) instrument, the majority of hedonistic/intrinsic constructs where removed from consideration (by factor analysis) since their effect on value was insufficiently strong to form discrete constructs. Learned responses within an online subscription environment are also more likely to be uniform between users since they all look at similar computer screens and receive the same stimuli from the software, which facilitates simple tasks that can only be undertaken within the confines of the configurable parameters set by the service provider.

According to Palmer (2010), the development of a customer experience construct should be informed by the seminal work of Sheth et al. (1999), which is still relevant in today's debate concerning the measurement of an experience (see Collier and Barnes, (2015) for a recent example in an SST context). The authors argue that a combination of the following three factors help to shape a consumer's attitude to an event: stimulus characteristics, context and situational variables. Firstly, users perceive a stimulus differently according to its sensory characteristics and information content. Stimuli that differ from others around them are more likely to be noticed. As argued above, the sensory characteristics and information content are the same for routine online services. There is limited opportunity for stimuli to be different (with the exception of service recovery stimuli) or to be perceived as different on any given day once a learned response is in place.

Secondly, when users perceive stimuli with a given set of characteristics, individuals are also influenced by the context of the stimulus (Biswas and Blair, 1991). The phenomenological school of thought argues that the experience cannot be operationalised in part due to the phenomenon being context specific. Put another way the user experiences sound, smell, ambiance or aesthetics differently in any given context, consequently the phenomenologists argue that the experience (and value) cannot be measured or be reduced to a generalised view. This argument can be criticised from the perspective of online task orientated or routinized services. The user consumes the service from home or their office using their own (or work place) information technology. The contextual criteria are the same for every usage and separate from the service provider or the external environment. Arguably when online services are used in this manner the subjective nature of the context and the variety of stimuli are minimised if not eliminated, such that these stimuli do not exert any significant influence on the experience, which arguably stabilises the construct to enable legitimate measurement. Support for this argument can be found in the SST literature. Wang et al. (2013) found empirical evidence that as experience accumulates, continued use of an SST is initially driven by rational cues (e.g. self-efficacy), then by emotionally driven cues before the user settles into a habit, which is an automatic behavioural tendency (Verplanken et al., 1997).

Thirdly, the perceptions of situational variables in which the information is received, including social, cultural and/or personal characteristics are greatly influenced by individual characteristics, including prior experience with a product or service offering. Similar to the argument established above, the opportunity for social or cultural stimuli to effect the service experience are also greatly reduced since such stimuli (e.g. branding, relational or self-image) are again reduced due to the routinized nature of the service. The familiarity and constancy of the context and cues relating to self-image could become largely irrelevant. However, whilst the variety of these stimuli can be reduced key aspects do remain relevant. The wider social network within a small (or home) office, which includes friends or colleagues and the supporting stimuli they provide to the user during their resource integration activities remains, so too do the effects of the individual's technical skills to use the software. Both aspects are addressed in the conceptualisation chapter. Prior experience is addressed in the next section under the auspices of accumulated experience.

It follows then that in routine or task orientated contexts, where the predominant cues that affect the experience are extrinsic, the variety and subjective nature of the service experience are potentially greatly reduced. This thesis argues that value in the experience within an online subscription service context can indeed be measured. However, a routine or task orientated context is

insufficient in itself to justify an empirical approach to evaluating value in the experience. The next section reviews the concept of accumulated experience to address the non-linear aspects of value formation.

2.4.1 The Accumulated Experience Lens

Recent definitions of customer value emphasise the notion that value stems from service customers' learned perceptions and preferences based on evaluations of the probable and resulting consequences in certain situations (e.g. Woodruff, 1997). Indeed, sense making relating to the service experience is based on an iterative and cumulative process of understandings both previous and current, including future imaginary perceptions (Helkkula et al., 2012) and is not necessarily a linear process involving pre-service, in-service, and post-service consumption phases (e.g. Sweeney and Soutar, 2001). Human experience is a dynamic construct that is subject to continuous change as individuals engage with others in their day-to-day life (Pollio et al., 1997). Service customers' experiences of value may iteratively flow back and forth between current, future, and past experiences within a hermeneutic spiral of sense making and current value in the experience can effect how a customer makes sense of past and future experiences (Helkkula et al., 2012). This is a key issue from a measurement perspective and poses the question of how can these non-linear elements be captured using quantitative methods, whilst at the same time justifying a legitimate claim to knowledge?

The answer to this question lies in how attitudes adjust over time, which can be explained by a combination of figure-ground analysis and the literature on cognitive dissonance (Palmer, 2010). Figure elements refer to memorable stimuli in comparison to ground elements, which are less memorable. According to the literature on cognitive dissonance (Festinger, 1957; Hausknecht et al., 1998) individuals are likely to rationalise away poor experiences over time and aspects of the total experience can be selectively forgotten. The current attitude is influenced by subsequent exposure to related stimuli and as expectations are updated, attitudes towards specific elements of a previous service encounter can adjust (Zeithaml et al., 1993). Over time elements of an encounter that were previously figure due to their novelty merge into ground because they become part of the user's anticipated level of expectation. Indeed perceptions are not stable over time and experiences that were once defined and separate from each other tend to become associated and confused (Palmer, 2010). These experiences are not forgotten just misremembered. Subsequent recall of an experience is likely to result in an attitude that is weighted towards selected elements of the overall

experience. Indeed some components of the total experience are more likely to persist as long-term attitude adjustment (O'Neill and Palmer, 2001) and it is the attitude that prevails over time, which is most likely to subsequently influence behaviour (Palmer, 2010). It follows then that in online routinized contexts, which are relational (i.e. ongoing opportunities to derive value in the experience using the same service), rather than a limited transactional context, provides a framework for the user to engage with the service experience over time. As experience is accumulated through successive iterations of the hermeneutical spiral (Helkkula et al., 2012) and the user lives through multiple pre-purchase, use and post contract renewal phases of the service experience (including potential positive and negative service recovery encounters), value is evaluated continuously and the user has the choice to continue paying for the service or to opt out if insufficient value is experienced.

A relational context combined with a controlled sample selection based on longevity (i.e. multiple years of service use), enables respondents to use a service, evolve though successive iterations of the hermeneutic spiral and access their wider social network to make sense of multiple experiences over time i.e. derive accumulated experience. Living through these multiple iterations of the hermeneutical spiral also enables sense making for imaginary aspects of the service experience. For example in technology-based services the user could imagine software improvements to help the efficiency of their business, over time the improvements are implemented by the service provider and imaginary perceptions transition into real experiences. Initially they represent a figure experience, which is again likely to fade over time into a ground experience, as they become part of the user's anticipated expectations. Conversely if these imagined improvements do not happen then a negative experience could occur, which again would fade over time. Consequently accumulated experience also addresses the imaginary nature of the service experience. Support for this conceptualisation of accumulated experience (i.e. the different effects of accumulated experience on temporal cues) can be found in the recent work by Helkkula et al. (2012). The authors also argue that sense making in relation to routinized value in the experience should not be separated from the overall phenomenological perspective; indeed routinized behaviours and experience are both intertwined and complimentary.

In conclusion then, as figure related experiences degrade to ground related experiences and the non-linear nature of the service experience stabilises, an overarching attitude emerges as the overall perception of the user resulting in an accumulated experience. This attitude is arguably measurable

and this research posits that where accumulated experience is present in relational online routinized environments, the service experience is sufficiently stable to be operationalised. At this juncture the challenges laid down by Palmer (2010) to operationalise the service experience have been addressed. Specifically these were: addressing the complexity and variety of context specific variables and the non-linearity of the customer experience. The next section reviews the value literature.

2.5 Review of the Value Literature

Previous sections have already reviewed the current value landscape and this section is intended to review the chronology and the key historic debates only. Detail regarding key models and constructs will be addressed in the conceptualisation chapter.

The term 'value' has been used in several different contexts, which are rooted in economics, marketing, accounting and finance. Value is also linked to strategy and organisational behaviour through the literature on competitive advantage and is underpinned by psychology and social psychology (Payne and Holt, 2001). Consumer values are defined as "*an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence*" (Rokeach, 1973, p.5). The origins of research on consumer values and consumer value are from work in the psychology, consumer behaviour and marketing areas (Payne and Holt, 2001). Viewed from a marketing perspective the term 'value' refers to a preferential judgement whilst 'values' refers to the criteria by which these judgements are made (Holbrook, 1994). The marketing literature on consumer value has primarily concentrated on understanding values e.g. the deeply held and enduring beliefs of the individual (Rokeach, 1973) and their affect on consumer behaviour. At the time this referred to value as a trade-off between benefit and sacrifice (Mitchell, 1983; Kahle, 1983), although today the literature has broadened this perspective towards an experiential view, which has been discussed previously. The literature in this area has also focused on the value obtained from the consumption event (Butz and Goodstein, 1996; Woodruff and Gardial, 1996; Woodruff, 1997) and value in use, which was considered in early definitions as a functional outcome, goal or objective satisfied through product consumption (Burns and Woodruff, 1992; Holbrook, 1994; Woodruff and Gardial, 1996) in anticipation of the accomplishment of a task or work (Wilson and Jantrania, 1994) (see previous section for the current perspective on value in use). Value is associated with an overall experience rather than the purchase of an isolated object (Holbrook, 1994). Therefore an understanding of consumer values, which are both subjective to the individual and hierarchical (Rokeach, 1973;

Perry, 1954), is important in determining the context and outcome of the consumption event (Payne and Holt, 2001). Consumer values have been conceptualised in various different ways: what is important in life (Dewey, 1922); interest (Perry, 1954); desire (Parker, 1957); and the quality of being useful or important (Hornby, 2000). Today the concept of value emerges across two different themes: the perspective that value is "*an interactive relativistic preference experience"* (Holbrook, 2006, p.212) and that value is context specific and always co-created (Vargo and Lusch, 2004, 2008). The values (i.e. the mechanism for preference or choice) of the individual underpin both themes.

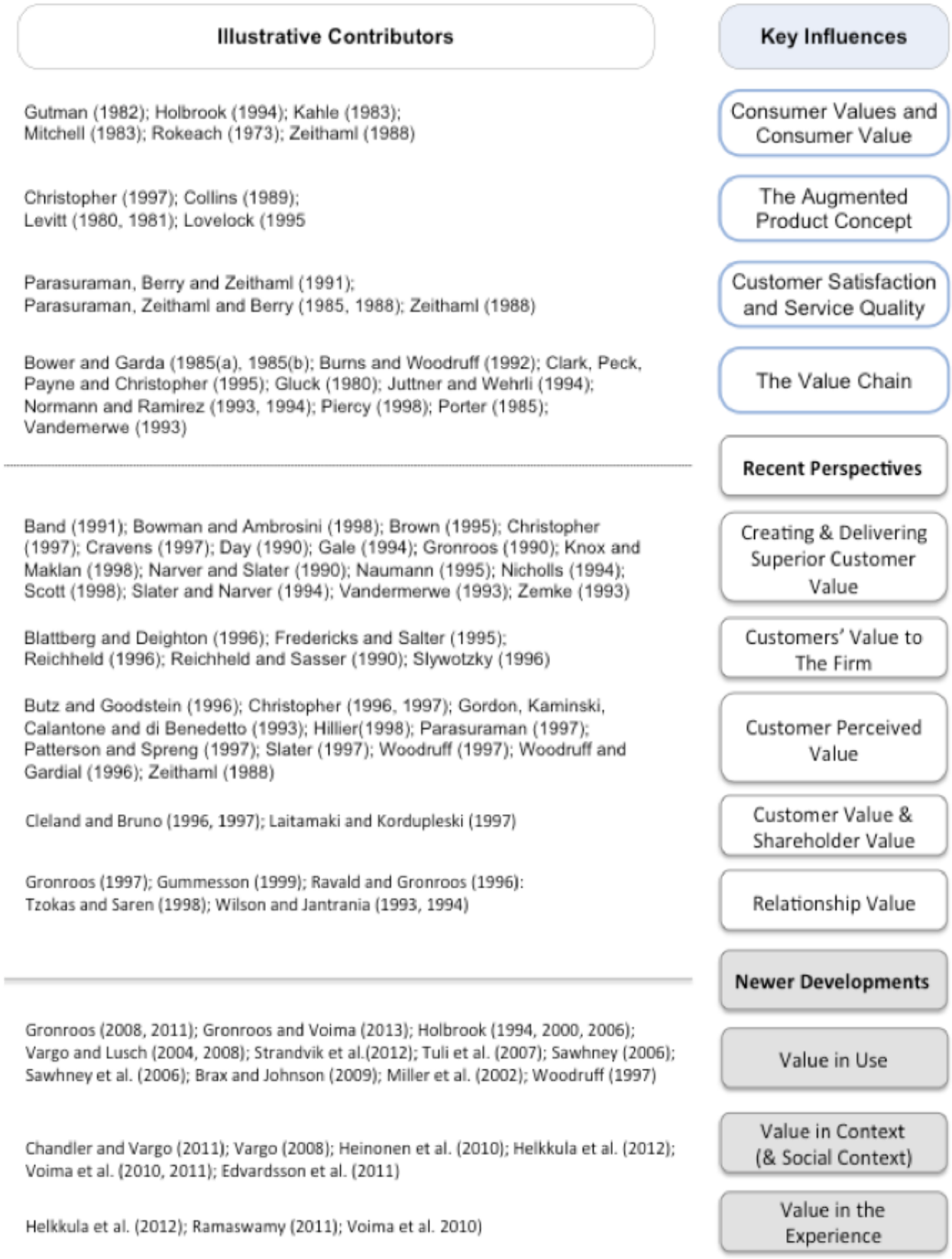
The evolution of value from different academic standpoints has contributed to a plethora of diverse meanings (e.g. Anderson et al., 1993, p.5; Monroe, 1990, p.46; Gale, 1994, p.14; Butz and Goodstein 1996, p.63). In 2001 Payne and Holt claimed the most comprehensive definition was: *"Customer value is a customer's perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer's goals and purposes in use situations*" (Woodruff, 1997, p.5). At the time this definition was positioned within the utilitarian debate and influenced by the benefit sacrifice and means-end perspectives, which are discussed in subsequent sections. Today the literature has moved more towards a phenomenological viewpoint, and whilst consensus on one definition of value remains elusive, a more up to date definition is provided by Holbrook (2006), which defines customer value as an *"interactive relativistic preference experience"* (p. 212). Within this experience the customer uses all inputs, current and remembered to form an impression of value influenced by both cognitive and emotional perceptions. These impressions serve to create an emotionally charged marker in the customer's memory.

At this juncture choice and positioning of definition becomes important. Indeed, part of the ambiguity for marketers revolves around definitions. Accepting the premise that value is formed from an individual's experiences; on the one hand, experience is a learned outcome that is associated with predictable behaviours, whereas on the other it has come to be associated with processes within which novelty may result in unpredictable responses by consumers (Palmer, 2010). This ambiguity is amplified by the historical stance taken by researchers that typically approach definitions either from the utilitarian perspective (e.g. means-end or benefit sacrifice) or the experiential (e.g. phenomenology). Previous sections have already established acceptance by this thesis that value in the experience is a phenomenon that includes both experiential process and outcome cues. This study has also argued in the previous section for a landscape that unified both

approaches under the Holbrook typology of value model, within the context of a routinized business service that creates a learned response. This study now extends this argument to posit that rational consumer choice in the form of trade-offs can exist within an experiential definition. Accepting Holbrook's (2006) definition of value as an interactive relativistic preference experience, the term relative is key. Within this definition, each context is relative and the individual is free to assess stimuli subjectively. As opposed to the utilitarian nature of routinized services, Palmer (2010) argues that the value of a hedonic experience may lie in the lack of a learned response. Indeed, both price driven and experience driven business models can co-exist, even within one individual's purchase portfolio. For example, a wealthy individual may use a no frills airline service in order to achieve a higher order experience available at their weekend holiday home. The concept of 'rocketing' explains how customers may use both very expensive and very cheap brands simultaneously (Silverstein and Fiske, 2004). Palmer goes on to argue that the challenge for the development of a customer experience construct is to integrate a typically diverse array of stimuli in order to assess the trade-offs that are entailed in creating value for consumers i.e. trade-offs still form part of experiential sense making. It follows than that trade-offs can still occur within Holbrook's experiential definition of value depending on the context. On this basis the Holbrook (2006) definition of value is accepted by this thesis as the second building block of value in the accumulated experience.

Despite the fragmented nature of the value literature, Payne and Holt (2001) consolidated the main themes and key works into nine core streams of research with three broad categories: key influences, recent perspectives and newer developments, which are broadly chronological and shown in Figure 4. Since 2001 the value field has evolved further and now includes more recent perspectives such as: customer desired value change (e.g. Day and Crask, 2000; Flint et all., 2002; Beverland and Lockshin, 2003) and co-produced/co-created value (e.g. Prahalad and Ramaswamy, 2000, 2004; Vargo and Lusch, 2004; Gummesson, 2004; Prahalad, 2004; Woodruff and Flint, 2006; Holbrook, 2006; Berthon and John, 2006). Newer developments include value in use, value in context (and social context) and finally value in the experience, which have all been previously discussed.

Figure 4: Themes and Key Works in the Value Literature



(Source: Adapted from Payne and Holt, 2001, p7).

Within these different perspectives the research focus evolved from customer satisfaction towards the extended view of value (Anderson and Narus, 1998; Butz and Goodstein, 1996; Fredericks and Salter, 1995; Garver and Gardial, 1996; Gordon et al., 1993; Grönroos, 1997; Hillier, 1998; Parasuraman, 1997; Patterson and Spreng, 1997; Ravald and Grönroos, 1996; Slater, 1997; Woodruff and Gardial, 1996; Zemke, 1993), where customer value becomes a customer directed concept e.g. the shape of the organisation's offer is determined by customer perception. Key streams of literature that underpin value include: consumer value/values, the augmented product concept, customer satisfaction and service quality (Payne and Holt, 2001). Whilst there have been many areas of conceptual pursuit, the logical flow of the literature begins with the study of service quality, moves through to customer satisfaction research, which gave way to the study of value (Snoj, Korda and Mumel, 2004). Over the last decade the field has continued to be influenced by S-D Logic (Vargo and Lusch, 2004). Within this dominant logic several key themes, relevant to this research emerged and include the assertion that value is always uniquely and phenomenologically determined by the beneficiary (Vargo and Lusch, 2008), and that value in use and co-creation are the basis of value creation (Vargo and Lusch, 2004), particularly as the debate moves towards the consumer experience (Holbrook, 1999). Influenced by these themes the value field evolved further to include value in use, value in context (and social context) and more recently value in the experience (Helkkula et al., 2012). However, value can also be destroyed and Echeverri and Skalen (2011) introduced the concept of value co-destruction, which captures the downside of interactive value formation. Within the S-D Logic literature, the customer is seen as having a dual role as co-creator: contributing to the experience, as well as assessing its value (Vargo and Lusch 2004; Gummerus 2013), both of which have been discussed in depth in earlier sections. Value in use is core to this research and has also been previously discussed in parallel with co-creation/co-production.

Several decades of evolution have occurred in the value literature, yet the field still remains divided with several competing conceptualisations of customer value, and no real consensus. Consequently, researchers have expressed criticism labelling value as one of the most misused terms (Leszinski and Marn, 1997), and that value research remains '*an area of continuing ambiguity ……with no clear theoretical anchor'* (Woodall, 2003: p.1), where there is '*ambiguity with respect to the definition, dimensions, and measurement'* (Sanchez-Fernandez and Iniesta-Bonillo, 2007: p.440). Despite its misuse and lack of clarity, value remains an important topic. Gummerus (2013) points out three fundamental issues in the latest value literature that ensure research into the concept remains important. Firstly, value remains the '*concept that captures the result of service' [and*

goods] (Babin and James, 2010: p.471), allowing the firm to measure its competitive advantage from the customer perspective (DeSarbo et al., 2001). The second issue centres on a shift in the logic of how value is created (compare Chandler and Vargo, 2011; Grönroos, 2008, 2011; Vargo and Lusch, 2006, 2008), which shows a divergence rather than a convergence in the value creation literature (Gummerus, 2013) as previously discussed. Third, the interrelationship between value creation and value perceptions remains under-researched, despite the undeniable logic that only by linking value creation activities and value perceptions, can companies analyse which activities are vital to create competitive advantage (Gummerus, 2013). She goes on to argue that previous literature reviews have concentrated on value outcomes (i.e. a user perception of the result from exchange and/or use), when the literature should be accounting for how value is generated (i.e. value creation processes) in parallel. Value creation processes consider the actors, activities, and resources involved in value creation (i.e. resource integration), whereas value outcome determination refers to the type of value outcomes customers (or any stakeholder) perceive. Indeed, value creation processes have remained under-researched for some time (Veloutsou et al., 2002) and previous value literature reviews have fallen short in two ways (see: Salem Khalifa, 2004; Sanchez-Fernandez and Iniesta-Bonillo, 2007; Woodall, 2003). Not only do they fail to address value as phenomenologically determined, which is the approach taken by S-D Logic (Vargo and Lusch, 2008), they do not cover literature on value creation processes (Gummerus, 2013). A unifying value framework is summarised below in Table 6 and Figure 5 combined.

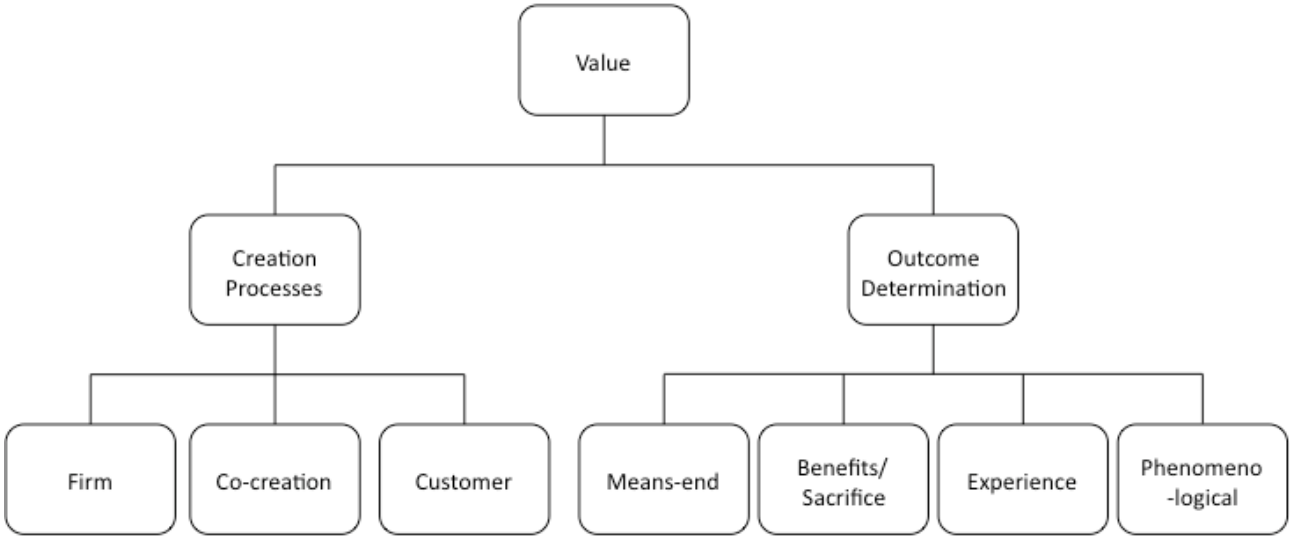
Table 6: Distinguishing Between Value Creation Processes and Value Outcome Determination

Value	Creation Process	Outcome Determination
Aim to understand	How value comes to be (actions)	What value is and how it is perceived/evaluated (cognitions/feelings)
Value basis	Activities/resources/interactions	Customer reactions/experiences
Time focus	Continuous	Transient
Result	Identification of how resources/activities/interactions create value	How much value is gained/what type of components value consists of/how to maximise customer evaluations

(Source: Gummerus, 2013. p.22)

The categorisation of the value literature into research streams is shown in Figure 5 below. The Gummerus (2013) review not only provides an overview of the latest position in the value literature, it also helps to signpost this review, which broadly follows the key categories identified.

Figure 5: Categorisation of Value into Research Streams



(Source: Gummerus, 2013. p.22)

Gummerus (2013) found support in the management literature for this categorisation (e.g. Lepak et al., 2007). Value creation processes study activities, resources, and interactions that result in value creation, whilst value outcome determination explores how customers make value assessments and what the value outcomes are. Value creation processes are typically continuous, whereas value outcomes are often bound to a specific point in time. Process logic differentiates between firm-created, co-created, and customer-created value. The outcome determination provides a framework to include the divergent value perspectives: 'value as means–end', 'value as benefit/sacrifice', 'value as experience outcomes', and 'value as phenomenological', all of which concentrate on value as determined by the customer. It is worth pointing out that much of the early work in the value literature around outcome determination centred on the debate between means-end (e.g. Gutman, 1982) and the benefit sacrifice approach (e.g. Zeithaml, 1988). This period generated many of the constructs that are still used in multi-dimensional models today. However the theoretical underpinning of the literature moved beyond these approaches to the experiential view (e.g. Holbrook, 1994) and has been strongly influenced later by the phenomenological perspective (e.g. Helkkula et al., 2012). Within the structure in Figure 5, broadly the chronology of the value literature moves from means-end on the left of the diagram through to the phenomenological

perspective on the right. The next sections review the benefit sacrifice, means-end and phenomenological perspectives.

2.5.1 Benefit Sacrifice Approach

Integral to the benefit sacrifice outcome determination of value is the notion of a trade-off between perceived benefit and perceived sacrifice (Christopher, 1996, 1997; Ravald and Grönroos, 1996). Perceived sacrifice involves the total costs incurred from a purchase e.g. price, acquisition cost, transport, installation, repairs and maintenance evaluated against the overall perceived benefits. The key contribution lies in the identification of linkages between desired product/service attributes and performances to desired consequences within the framework of usage based on customer driven objectives (Payne and Holt, 2001). However, '*what constitutes value - even in a single product category – appears to be highly personal and idiosyncratic'* (Zeithaml, 1988, p.13). Patterns of consumer response were grouped into four areas: value is low price; value is whatever I want in a product; value is the quality I get for the price I pay; and value is what I get for what I give (Zeithaml, 1988). The four expressions of value were captured in one definition as a trade-off between give and get components: 'p*erceived value is the consumers' overall assessment of the utility of a product based on perceptions of what is received and what is given*' (Zeithaml, 1988, p.14). Within which, what is received by the consumer varies (e.g. volume, quality or convenience) and what is given varies (e.g. monetary sacrifice or time and effort). Each expression varies within the product/service lifecycle (Sweeney and Soutar, 2001) and involves a different set of linkages among elements.

The diverse nature of these meanings provides a partial explanation for the difficulty in conceptualising and measuring the value construct in research (Zeithaml, 1988). Woodruff and Flint (2006) noted the literature also displayed unclear differences between classifications and typologies of value. Indeed, Sheth, Newman and Gross (1991) identified five types of value: functional value, social value, emotional value, epistemic value and conditional value. Lai (1995) suggested eight types of generic product benefit: functional, social, affective, epistemic, aesthetic, hedonic, situational, and holistic. Both approaches can be broadly linked to the benefit/sacrifice approach proposed by Zeithaml (1988). However, as previously discussed Holbrook (1994) proposed three further dimensions of value: intrinsic/extrinsic, self-orientated/other-orientated, and active/passive, which spawned eight additional forms of customer value: efficiency, excellence (quality), politics (success), esteem, play, aesthetics, morality, and spirituality. This approach

expands beyond benefit/sacrifice and is situated higher in the means-end chain (Gutman, 1982), which is discussed in the next section. Despite these differences, all classifications implicitly consider value as a perceived positive or negative experienced based judgement (Woodruff and Flint, 2006). However, consumer experience is becoming central to the meaning of value, and restricting definitions purely to goods and services is insufficient (Holbrook, 1999), particularly as the online experience economy proliferates (Pine and Gilmore, 1999), where value is perceived both in a discrete encounter; through the experiential consumption process; and via the subsequent memory of the encounter (Ponsonby and Boyle, 2004); or indeed an imaginary future state (Helkkula et al., 2012). Since Zeithaml's (1988) seminal work, the literature evolved and the dominant approach to examining value perceptions became multidimensional, incorporating cognitive and a range of sociopsychological value dimensions such as emotional value, social value, and epistemic value (Sheth et al., 1991; Sweeney and Soutar 2001; Sánchez et al., 2006). Sánchez et al. (2006) pointed out that this differs from a benefit versus sacrifice perspective that is more aligned with a purely cognitive assessment.

2.5.2 Means End Approach

The second outcome determination specified by Gummerus (2013) is the means-end approach. Means-end theory (Gutman, 1982, 1997; Reynolds and Gutman, 1988) demonstrates how preferred end-states of existence become specific choices in specific situations. The model's key contribution lies in its ability to move the consumer towards a desired end-state through the consequences associated with product/service choice (Payne and Holt, 2001). Consequences are defined as "*any result (physiological or psychological) accruing directly or indirectly to the consumer (sooner or later) from his/her behaviour*. *Consequences can be either desirable or undesirable*" (Gutman 1982, p.61). Whilst both approaches claim to be anchored within a means-end framework, the benefit/sacrifice approach to value research broadly confines itself to the measurement of consumers' pre-purchase/purchase perceptions of value and the immediate behavioural consequences. In contrast, the means-end perspective (e.g. Flint et al., 2002) examines value through product or service use to achieve consumer goals higher in the means-end chain. Mohd-Any, Winklhofer and Ennew (2015) noted that the means-end approach has been criticised due to difficulties in operationalisation. Indeed, Gutman (1997) himself failed to prove a means end chain using the laddering technique, finding that customers do not always use a rationale sequence of product or service choices to progress towards an end goal.

The next section reviews the phenomenological perspective. Whilst this perspective has already been identified as becoming more central to understanding the value phenomenon in earlier sections, it has not been reviewed in sufficient depth, to understand why this is the case, where the weight of criticism against multi-dimensional value modelling originates, or indeed how this thesis uses it as a vehicle to make a contribution to knowledge.

2.5.3 Phenomenological Value Measurement

Recently the direction of the value literature has coalesced around the perspective that value is uniquely and phenomenologically determined by the beneficiary (Vargo and Lusch, 2008). Helkkula et al. (2012) support this view and expanded the understanding of experiential value by introducing the perspective of 'value in the experience'. Despite this advance, they point out that the understanding of phenomenological value remains in its infancy. Whilst value measurement models have progressed (i.e. through value in use and value in context), value in the experience in the broader context of service customers' individual every-day lived experiences and social contexts has received limited attention (ibid, 2012). Woodruff Smith (2007) defines phenomenology as the study of phenomena as they appear in an individual's experiences and identifies different types of experience e.g. perception, imagination, thought, emotion, desire, volition, and action. Value in the experience (defined earlier), similar to other conceptualisations, is a subjective phenomenon (Holbrook and Hirschman, 1982; Goulding, 2005). However, a cautionary note is worthwhile at this juncture, Gummerus (2013) points out that whilst some customer/service logic researchers (e.g. Cova and Dalli, 2009; Grönroos, 2008; Heinonen et al., 2010; Wikstrom, 1996) argue that value creation is positioned within the customers' processes or lifeworld. Arguing that the customer is responsible for the value creation process could be considered an extreme perspective.

No matter which way the phenomenological approach to value is considered, Helkkula et al. (2012) point out that there is consensus within the literature, that value and value creation can be studied either as single universal concepts or from the vantage and contingency perspective of a particular source of value (Lepak et al., 2007). It is therefore possible to consider value from a number of perspectives, including those of the service customer and service provider (Payne et al., 2008; Smith and Colgate, 2007) or indeed from the perspective of a wider network from which the individual integrates resources (Vargo and Lusch, 2004). To date the effect of an individual's wider social network on value in the experience remains a gap in the literature from the perspective of value measurement models.

Helkkula et al. (2012) support the view that examining value from the perspective of company-centric value creation conceptualises value as an objective construct at the expense of a more holistic appreciation of its multi-dimensional nature, inclusive of affective and experiential aspects. Indeed, recent value definitions argue that it stems from service customers' learned perceptions and preferences based on evaluations of the probable and resulting consequences in certain situations (Woodruff, 1997), where value is no longer 'objectified' and reduced to that which is produced or processed for customers; rather value is a phenomenon that relates to customer experience and value in use (Heinonen, 2009; Heinonen et al. 2010; Kelleher and Peppard, 2010; Sandstrom et al. 2008).

The phenomenological school of thought criticises traditional value measures on the basis that they are best suited for analysing the experiences of current customers and tend to focus on a specific perspective rather than a holistic view of customer value. In addition, established customer value measures e.g. PERVAL examine a linear process involving pre-service, in-service, and post-service consumption phases (Sweeney and Soutar, 2001), when arguably a consumer approaches sense making around their experience in a non-linear fashion i.e. iteratively over time (Helkkula et al., 2012). Indeed, most value measures are: constrained to a judgement based on in-use experience; are limited by being anchored in some form of trade-off (e.g. Zeithaml's 1988 definition); fail to incorporate a more longitudinal perspective (Flint et al., 2002; Holbrook, 1994; Rescher, 1969; Zeithaml, 1988); do not adequately capture the perceptions of non-customers (Zeithaml et al., 2006); and focus on post-use service evaluations without examining how other related services or imagined experiences may effect value judgments (Helkkula et al., 2012).

Whilst various economic orientated measures e.g. customer assets (Gupta and Lehmann, 2003), customer equity (Blattberg and Deighton, 1996; Hogan et al., 2002), customer lifetime value (Berger and Nasr, 1998), and customer profitability (Reinartz and Kumar, 2003) do attempt to evaluate the longitudinal nature of value, they fail to capture the holistic customer experience over time. Indeed, many value measures examine post-use service aspects without accounting for how the use of other services or imagined experiences could affect value judgments. For example, Sweeney (2002) argued that some factors used to assess value prior to the service encounter were no longer important in post-purchase evaluation (e.g. inconvenience of service use). These models fail to *"acknowledge how past and future experiences of service customers and non-customers are inter-subjectively and intra-subjectively related when new and existing service customers seek to*

make sense of and evaluate perceived value within their idiosyncratic and socially constructed frames of reference" (Helkkula et al., 2012, p.62).

Researchers arguing from the phenomenological perspective claim that the traditional measures (identified and reviewed in the conceptualisation chapter) have limited conceptualisations of value and further research is required to better understand the customer value construct (Sanchez-Fernandez and Iniesta-Bonillo, 2007). They go on to argue that the phenomenological epistemology, combined with interpretive research methods optimise how service customers make sense of subjective experiences. In contrast, research methods that aim at objective approximations and generalised outcomes are not applicable (Helkkula et al., 2012). This perspective has been challenged in the literature. From a strict phenomenological perspective, value experiences need to be examined in terms of their deeper meaning for an individual; however, Gummerus (2013) argues that Vargo and Lusch (2008, p. 150) are vague as to their phenomenological perspective, regarding value as created when the customer's wellbeing has somehow been improved. Such a perspective can be reconciled with the literature that regards value as an experience outcome and is consistent with the multidimensional view of value, combining cognitive and affective dimensions (Gummerus, 2013).

On the one hand this study acknowledges that value is phenomenologically determined by the beneficiary (Vargo and Lusch, 2008) and is supportive of the criticism levied (above) at traditional value models to date. On the other hand, understanding this phenomenon better is not the sole preserve of qualitative research methods. Indeed quantitative approaches can be applicable. Whilst undoubtedly qualitative methods can provide a richer theoretical picture, quantitative techniques that provide objective generalisations can take a step closer to understanding the nature of the experience in a value context. Table 7 has been adapted to show how this thesis intends to address the phenomenological challenge and in parallel clarifies one of the areas where this research makes a contribution to knowledge. Table 7 is based on the work of Helkkula et al. (2012), and examines sense making through a value in the experience lens, which the authors call VALEX, which is then compared with a seminal multi-dimensional value model (PERVAL). Their work has been adapted to include a third lens: value in the accumulated experience, which is the combined approach shown in the third column, a combination of which constitutes a key contribution of this thesis. Note that the overall contribution includes interlinked methodological choices, which are greyed out in Table 7 and discussed in more detail in the methodology chapter.

Table 7: Comparison of Individual and Collective Sense Making of Value in the Experience (VALEX) to the Customer-Perceived Value Measurement (PERVAL) Scale.

Characterisation	Inductive Value Measurement Techniques e.g. VALEX Propositions	Deductive Value Measurement Models e.g. PERVAL	Contribution (This Thesis)
Philosophical perspective	Phenomenological (experiential)	Realist or critical realist	–
Evidence about value in the experience	Interpretive: individual's (service customers') subjective experiences are justified as data	Aims to present objective, generalisable results that are based on subjective self-reported data	–
Form of Knowing	Sense making that is based on an iterative and cumulative process of previous and current understanding (the hermeneutical spiral)	Based on theoretically justified hypotheses	1st phase sense making via in depth interviews, Theoretically justified hypotheses underpinned by 2nd phase questionnaire with open question & a sample with accumulated experiences
		Service provider's perspective on how individual service customers perceived value	Co-created context to reduce service provider influence. Social network perspective designed into study
Individual versus social value perspective	Experiences of value are both individually (Intra-subjective) and socially (inter-subjective) constructed	Analyses the effects of customer-perceived value on other constructs	Analyses the effect of both the user experience and their wider social network on value.
		Aims to generalise findings on a population	Establishes meaning around the social network from in-depth interviews to inform questionnaire design & subsequent discussion prior to generalising findings in a population with accumulated experience
Lived and Imaginary perspective	Includes lived and imaginary Value experiences. Incorporates both direct and indirect value experiences, that is, the individual service customer can imagine the experience of service in the external world	Focuses on customer perceived value. Does not discuss imaginary customer perceived value: therefore, necessitates direct experience or use of a particular service	Indirect experience perspective included: Sample with accumulated experience incorporates imagined perspectives. In-depth interviews to elicit imagined meaning. Open Question to surface and control for imaginary perspective
Temporal nature	Value experiences are based on current, previous and imagined future experiences within and outside the context of the specific service	Value is perceived in pre-service, in-service and post-service consumption phases	Relational in-use service context combined with longevity of sample to derive responses from accumulated experiences within and outside the specific service context
Context	Event specific and justified by the individual service customer in the individual's lifeworld, which is socially constructed. Identifies the world as lived, in comparison to the world as construed by an external entity, e.g. a service provider	Defined by the service provider	Multiple events via long-term relational service context to generate accumulated experiences. Co-created context to reduce service provider control.
			Accommodates world as construed by external entities via identification & inclusion of wider social network in conceptual model
Theoretical contribution	Suggestive propositions may act as an invitation for further work on the phenomenon or set of issues revealed by the study	A measurement scale that enables analysis of relationships between constructs; may add specificity, new mechanisms, or boundaries to existing theories	Expands value modeling theory beyond current boundary of linear view via accumulated experience sample and methodological design.
			Addresses gaps in literature by adding social network view and imaginary perception specificity

(Source: Adapted from Helkkula, Kelleher and Pihlstro¨m, 2012, P.68)

Sense making is based on an iterative and cumulative process of understandings both previous and current (i.e. the hermeneutic spiral posited by Helkkula et al. (2012)) and is not necessarily a linear process involving pre-service, in-service, and post-service consumption phases (e.g. Sweeney and Soutar, 2001). This study argues that a combination of accumulated experience, context, sample, methodological design and conceptual model design sympathetic to the phenomenological perspective can take a significant step closer to understanding the value in the experience phenomena. This step closer is accomplished in this thesis by evaluating value in the accumulated experience. Selection of a context that is relational (i.e. on-going opportunities to derive value with the same service), rather than a limited transactional context, provides a framework for the user to

engage with the service over time. The nature of this form of setting lends itself to delivering continuous iterative sense making opportunities (both positive and negative) over time. Value is evaluated continuously and the user has the choice to continue paying for the service or to opt out if insufficient value is experienced. A relational context combined with a controlled sample selection based on longevity (i.e. multiple years of service use), enables respondents to use a service, evolve through successive iterations of the hermeneutic spiral and access their wider social network to make sense of multiple experiences over time i.e. derive accumulated experience. A survey is still a structured snap shot at one point in time, but it is able to capture the responses derived from these accumulated experiences (see previous section on accumulated experience for a more in-depth argument). Whether a respondent is subjected to qualitative data gathering procedures or a questionnaire at any given point in time, the same accumulated experiences will be drawn upon to respond. The same argument for accumulated experience over time also addresses the temporal challenge as previously discussed.

Criticism is also levied at multi-dimensional value modelling research due to its focus on the service provider's perspective on how individual service customers perceive value. Indeed, this thesis supports the view that the customer is always a co-creator of value and there is no value until an offering is used and both experience and perception are essential to value creation (Vargo and Lusch, 2004). The phenomenological perspective again uses S-D Logic as a basis for criticism, FP7 states that the enterprise can only make value propositions and the value proposition exists to facilitate the co-creation of experiences (Vargo and Lusch, 2004). The focus of experience creation is not solely products; rather it is the relationships the customer has with the overall proposition and the emphasis is value in use instead of mere product features (Payne et al., 2008). This thesis argues that the selection of a co-creation context partially removes service provider control and goes some way to allowing the user to create their own experience with the value proposition. An open question requesting feedback from respondents after questionnaire completion provisions for imaginary or future experiences to be included in the discussion chapter e.g. future expectations of technology upgrades.

A tailored methodology is also important. A qualitative first phase to inform the questionnaire enables meaning to be derived about the social network, how it is constructed, identification of the key stakeholders and to understand how they interact and influence the end user. In-depth interviews with these key stakeholders in the network will also elicit meaning around the different perspectives that influence the user's experience (e.g. service provider) rather then relying solely

on deduced hypotheses from the literature. This approach will also uncover imaginary perceptions, which are particularly relevant in a technology context where opinions of how a service can be improved potentially exist. A post questionnaire open follow-up question will be used to: bring these imaginary perceptions to the surface; to capture these ideas; control for their existence; and to support the argument that such perceptions do exist within accumulated experiences.

To fully address the gap in the literature concerning the effect of an individual's wider social network on value, a reliance purely on measuring accumulated experience is insufficient. Three additional factors require consideration. Firstly, identification of who the participants are in the user's wider social network and why they are stakeholders is important. Secondly, a mechanism to include the wider social network must be included in the conceptual model design. Thirdly, deriving a measurement that establishes the effect of the social network on value (if any) is required to support or critique the phenomenological perspective.

At this juncture it is worth revisiting the Gummerus (2013) findings as a reminder. In her extensive review of the value literature, she concluded that the examination of holistic experiences might justify a phenomenological approach to value research. Nevertheless, the dominant approach is to examine value perceptions as a multi-dimensional outcome incorporating cognitive and a range of sociopsychological value dimensions such as emotional value, social value, and epistemic value (Sheth et al., 1991; Sweeney and Soutar, 2001; Sánchez et al. 2006). Sánchez et al. (2006) also argued that, such a multidimensional perspective captures the experiential nature of value, which has conceptual support from the cognitive-affective-behaviour paradigm. The argument in this section responds from an empirical perspective to the phenomenological criticism against the extant multi-dimensional models of value. The case to justify measurement of value in the experience was primarily established on the basis that accumulated experience was present within the context of interest and that the context also exhibited routinized behaviours. This section also established that value in the experience extends beyond the current context of service use and includes past and future experiences. On this basis the Helkkula et al. (2012, p.59) conceptualisation of value in the experience provides the third building block for the definition of VITAE.

2.6 Conclusion

Whilst alternative perspectives of value include value in context (Chandler and Vargo, 2011; Heinonen et al. (2010), and value in social context (Edvardsson et al., 2010), interaction (Berthon and John, 2006), and possession (Holbrook and Hirschmann, 1982), use remains the fundamental

concept in the analysis of value and value creation (Grönroos and Voima, 2013). Consequently the first building block identified in this research was the definition of value in use, which is *'created by the user (individually and socially), during usage of resources and processes (and their outcomes)*' (Grönroos and Voima, 2013, p.144). No matter which lens value is viewed from, the concept of values emerges across two different themes: the perspective that value is *'an interactive relativistic preference experience*' (Holbrook, 2006, p.212); and that value is context specific and always co-created (Vargo and Lusch 2004, 2008). The Holbrook (2006) definition provides building block two. Helkkula et al. (2012) provided building block three through their conceptualisation of value in the experience, which stated that, *'individual service customers' lived experiences of value that extend beyond the current context of service use to also include past and future experiences and service customers' broader lifeworld contexts'* (p.59). All three building blocks have been combined into the following holistic definition of value in the accumulated experience (VITAE), which in this thesis is *'an interactive relativistic preference experience created by the user (individually and socially), accumulated during usage of resources and processes (and their outcomes) over time, which also include past and future experiences beyond the context of service provision'*. Accumulated experience contributes to knowledge by providing a new lens through which to view experiential value. The VITAE perspective is also fundamental to ontologically and epistemologically justifying the empirical measurement of value, which will be conducted using a trade-off approach (Palmer, 2010) and provides the theoretical basis for the higher-level contributions below.

This review has already established that self-service technologies are of key importance to the business world and understanding the gap in the literature associated with how the experience is co-created across a technology interface is now vitally important (Stockdale, 2007; Mohd-Any, Winklhofer and Ennew, 2015) to enhancing a firm's competitive advantage and to go beyond any existing levels of performance and service (Rayport and Jaworski, 2005). In parallel understanding value in the experience is a focal point of interest for academics both to close the gulf with practitioners (Tynan and McKechnie, 2009) and to avoid an important construct being dismissed due to the ambiguous manner in which is has been applied (Palmer, 2010). This now concludes the contextual and philosophical elements of the literature review, which also provide the underpinning theory to justify the VITAE lens. The following chapter now draws together the extant value theory to conceptualise VITAE and to develop a conceptual model that correctly specifies the domain of value and addresses the gaps that have been identified. Specific contributions to knowledge relating to the VITAE model will be discussed at the end of the conceptualisation chapter.

Chapter 3

Conceptualisation

3 Conceptualisation

Over the last thirty years, considerable advances in theory have been made relative to the measurement of value, however the marketing literature still lacks a conceptualisation and measures that reflect this theory (Cronin, 2016). The objective of this chapter is to formulate a new model of value in the accumulated experience (VITAE), which includes the effect of resource integration. In so doing, an incremental contribution is made towards the call for better conceptualisations and measures of value. The chapter begins with a discussion on model taxonomy, as the start point of the conceptualisation. It then examines the value landscape and the relevant multi-dimensional models of value, before specifying the domain of VITAE. Following the domain specification, resource integration is conceptualised and positioned relative to VITAE, before generating hypotheses. Finally a conceptual model is presented with an accompanying explanation of the contribution to knowledge made by this thesis.

The literature review has already established that the individuals' holistic experience is a phenomenon that includes both experiential process and outcome cues (Dube and Helkkula, 2015) and within the context of an online routinized business service that creates a learned response, both cognitively and experientially driven business models can co-exist (Palmer, 2010). In addition routinized business services are predominantly driven by extrinsic cues, which can co-exist within the phenomenological definition of value adopted by this study. Inherently consideration of a cognitively driven model (i.e. one driven by extrinsic cues) requires a trade-off approach to the conceptualisation (Palmer, 2010) to enable the measurement of VITAE. Within the trade-off approach intrinsic cues (i.e. subjective/hedonic) must be allowed to co-exist to enable the holistic domain of value in the experience to be correctly specified.

Domain specification is an important point, which first requires positioning within the debate on how to correctly specify the measurement/structural model. The next section examines model taxonomy and articulates why the majority of reflective measurement models of value have been miss-specified leading to erroneous conclusions concerning value and its associated dimensions before identifying the appropriate structure of both the measurement and structural models. In so doing, the methodological contributions of this thesis become clear. Formulating value as a second order formative construct with first order reflective value components is a key first step in the overall conceptualisation. It sets out the framework within which both the experience and value

components are positioned and requires discussion prior to identifying the domain of value and formulation of the conceptual model.

3.1 Model Taxonomy

Empirical research has predominantly studied value by examining value perceptions at the dimensional level (Prebensen et al. 2013), but has not yet developed a mutually agreed set of dimensions (Bradley and Sparks 2012). There was also confusion around how these various value dimensions should be modelled (Lin et al., 2005: Mayr and Zins, 2012). Until 2001 there were two approaches: uni-dimensional, which globally measures value perceptions (e.g. Cronin et al., 1997; Patterson and Spreng, 1997; Grewal et al., 1998; Sweeney et al., 1999; Brady and Robertson, 1999; Varki and Colgate, 2001); and multidimensional, which used various give (sacrifice) and get (benefit) components to measure value (e.g. Lapierre, 2000; Mathwick et al., 2001; Sweeney and Soutar, 2001; Petrick, 2002; Chen and Dubinsky, 2003). Both were in keeping with the Zeithaml (1988, p.14) definition and both approaches have been criticised as inadequate and self-contradictory, displaying paradoxes between conceptualisation methods and theoretical definition (Lin et al., 2005). Modelling these dimensions as predictors of a generic value measure (e.g., Al-Sabbahy et al., 2004; Duman and Mattila, 2005; Petrick, 2004) is theoretically unparsimonious, while a generic value measure lacks validity (Woodruff and Gardial, 1996).

Uni-dimensional approaches have received more extensive criticism, since they do not capture the complex nature of value (Sweeney and Soutar, 2001; Chen and Chen, 2010; Prebensen et al., 2013) and are methodologically invalid since value is multi-dimensional (Hjorth-Anderson, 1984). Bagozzi and Warshaw (1990) suggest that people form complex, multidimensional attitudes towards goals (e.g. learning to use a particular technology) as opposed to forming uni-dimensional attitudes toward actions (Ajzen and Fishbein, 1980). Multi-dimensional approaches have been credited with more effectively identifying the complex nature of value but have also been criticised as incomplete since they do not form the overall value construct and therefore cannot effectively capture the give-get trade-off experience (Zeithaml, 1988; Lin et al., 2005). From a methodological standpoint, not only has the literature moved towards a recognition that value is multi-dimensional, the debate around model taxonomy has also evolved since the seminal paper by Diamantopoulos and Winklhofer (2001), which changed the multidimensional modelling landscape by introducing clarity around the use of formative (causal) and reflective (effect) indicators, which had previously been overlooked for various uncertain reasons (Diamantopoulos and Winklhofer, 2001; Jarvis et al., 2003; Williams et al., 2003). Theoretical parsimony can only be achieved when the overall

abstraction of value is conceptualized within the model and is specified as formative in the second-order (Lin, et al., 2005; Ruiz et al., 2008; Sánchez et al., 2006; Mayr and Zins 2012). Sánchez-Fernández and Iniesta-Bonillo (2007, p. 444) stressed the need to clarify the formative nature of the relationship between this multi-dimensional construct and its constituent dimensions. Recent work adopts this perspective (e.g. Mohd-Any, Winklhofer and Ennew, 2015) and argues that value is indeed multi-dimensional but should be conceived as a second order formative construct.

In conclusion then, prior to the clarification of the second order formative approach to measuring value, the abstraction of overall value had not been specified in the extant multidimensional models, which is inconsistent with the conceptual definition of value. Failure to form overall value, results in an inability to correctly measure the customer give-versus-get trade-off experience implied in the construct. Directly applying give-get components as predictors in a structural model creates a potential problem concerning the levels of abstraction between endogenous and exogenous constructs. Put another way, given that measuring value is the area of interest, treating give-get components as a set of perceived values and directly modelling them as predictors in a structural model whilst omitting the role of overall value itself, effectively means that research hypotheses have been proposed at the value level, analyses have been conducted at the component level, but conclusions have then been made at the value level (Spiteri and Dion, 2004). Therefore, it is unconvincing to conclude the effects of value on other consequence constructs such as satisfaction and behavioural intentions, unless empirical analyses are conducted at the value level instead of the component level (Lin et al., 2005: Mayr and Zins (2012). Theoretical parsimony is also achieved when the overall abstraction of value is conceptualised in the model. To rectify these paradoxes, overall value must be included, and the relationships between give-get components and overall value should be specified in the measurement model. It follows then that a higher order formative model, rather than a reflective model is required, within which the value model should be specified as formative in the second-order, where the give-get components (i.e. the components that form the experience) in the first-order are defining characteristics of the value construct (Lin et al., 2005) i.e. the first order dimensions form the value construct. Consequently the approach taken in this thesis is to form experience from reflective first order constructs and value as a formative second order construct i.e. formed by first order experiential dimensions.

The predominant empirical approach to a trade-off model remains benefit sacrifice (e.g. Zeithaml, 1988), the intention of this study is to review the extant multi-dimensional literature in this area to

correctly specify the domain of accumulated value in the experience for online routinized business services. The next section reviews this landscape.

3.2 Value Dimension Landscape

In her recent literature review, Gummerus (2013) pointed out that the dominant approach is to examine value perceptions as a multi-dimensional outcome incorporating cognitive and a range of sociopsychological value dimensions, which captures the experiential view of value and has conceptual support from the cognitive–affective–behaviour paradigm (Sánchez et al., 2006). Table 8 has been adapted from the work of Lin et al. (2005) and Ruiz et al. (2008) and provides a selection of the key work in the multi-dimensional value model field. The table is not intended to be exhaustive and focuses on the key work relevant to this thesis. These models, together with work in the electronic service quality area will be drawn upon to specify the VITAE domain. Table 8 also provides an overview of value components and how value has been conceptualised i.e. whether the value components have been linked to the second order value construct either as reflective or formative reflective components.

Resolution of the model taxonomy debate leads to a number of areas where this research is able to make contributions to knowledge from a methodological standpoint: firstly there is a high likelihood that the multi-dimensional models shown in Table 8 and labelled as reflective have been miss-specified leading to erroneous conclusions about value and its associated outcome dimensions e.g. customer satisfaction and behavioural intent. Miss-specification primarily relates to the measurement model design, which should be second order formative. This thesis is the first to correctly conceptualise value in an online subscription service context as reflective first order and formative second order.

Secondly the narrative of value co-creation refers to actors co-creating value through holistic, meaning laden experiences (Vargo and Lusch, 2016), including a wider, more comprehensive (than firm and customer) configuration of actors. Indeed customers do not only determine value, they holistically experience it (Helkkula and Kelleher, 2010). There is consensus around a recent shift in the literature from a common cognitive perspective to this holistic and experiential perspective, which recognises value in the context of customer experiences (e.g. Heinonen and Strandvik 2009; Helkkula et al., 2012), as part of extended social systems (Edvardsson et al., 2011; Epp and Price, 2011).

Table 8: Multi-Dimensional Value Model Landscape

Author	Online/ Offline	Type of Value Component	Components of Customer Value (N° Items)	
			Benefit Components	Sacrifice Components
de Ruyter et al. (1997)	Offline	Reflective	Emotional value (5), practical value (5), logical value (5)	NA
Grewal et al. (1998)	Offline	Reflective	Perceived acquisition value (9)	Perceived transaction value (3)
Sweeney, Soutar and Johnson (1999)	Offline	Reflective	Functional service quality (5), technical service quality (2), perceived product quality (4),	Perceived relative price (2), perceived performance/financial risk (2)
Lapierre (2000)	Offline	Reflective	Alternative solutions (3), product quality (4), product customization (4), responsiveness (3), flexibility (4), reliability (5), technical competence (5), supplier's image (2), trust (5), solidarity (4)	Price (5) Time/effort/energy (5) Conflict (3)
Mathwick et al. (2001)	Online (Internet and catalog shopping)	Reflective	visual appeal (3), Entertainment (3), Escapism (3), Enjoyment (2), Efficinecy (3), Economic value (3)	NA
Sweeney and Soutar (2001)	Offline	Reflective	Emotional value (5), social value (4), performance/quality (6)	Price (4)
Petrick (2002)	Offline	Reflective	Quality (4), emotional response (5), reputation (5)	Monetary price (6) Behavioral price (5)
Lam et al. (2004)	Offline	Reflective	Service quality (5)	Price competitiveness (5)
Heinonen (2004)	Online (Internet bill payment service)	Reflective	Technical value (1), functional value (1), temporal value (1), spatial value (1)[a]	Technical value (1) functional value (1) temporal value (1) spatial value (1)
Wang et al. (2004)	Offline	Reflective	Functional value (4), social value (3), emotional value (5)	Perceived sacrifice (6)
Liu et al. (2005)	Offline	Reflective	Core service (3), support service (4)	Economic value (3)
Pura (2005)		Reflective	Social value (3), emotional value (2), epistemic value (3), conditional value (2)	Monetary value (3), convenience value (4)
Lin et al. (2005)	Online (web service)	Formative /Reflective	Web site design (5), fulfillment/reliability (3), security/privacy (3), customer service (3)	Monetary sacrifice (2)
Ruis et al. (2008)	Offline	Formative /Reflective	Confidence benefits (5), Servcie equity (4), Service quality (4)	Sacrifice (index)
Sanchez-Fernandez and Iniesta-Bonillo (2009)	Offline	Reflective	Quality (4)	Efficiency (3)
(Mohd-Any, Winklhofer and Ennew, 2014).	Online (travel websites)	Formative /Reflective	Utilitarian/control value (4), emotional value (2), social value (3)	Value for money (1), users cognitive effort (2)

Numbers in Parentheses denote the number of manifest indicators for measuring the construct

[a] The value components include an assessment of benefits and sacrifices.

[b] Six value components investigated independently; the discussion does not suggest a formative conceptualization

(Source: Adapted from Ruiz et al., 2008)

This shift in the literature provides a further platform to criticise the current multi-dimensional model structure. If value is formed from holistic experiences, it follows then that specification of the complete experience domain is critical to measure value appropriately. Not only have the majority of multi-dimensional models failed to conceptualised value as a second order construct formed by first order experiential dimensions, they have typically constructed models that examine value from a specific narrow perspective (Helkkula et al., 2012), rather than considering the holistic domain of value in the experience (which is an important phenomenological criticism). This approach has also been exacerbated by measurement approaches, which perform better with fewer constructs in the conceptual model. The contribution made by this thesis is to specify the full holistic domain of experience, which includes both outcome and process components within the given context.

The next sections review the main multi-dimensional models and the constructs key to the conceptualisation of value. They also begin to establish the domain from which constructs will be selected to fully capture experiential value. Note that despite structural model miss-specification, questionnaire items can be reserved from extant instruments, and can readily be applied to the first order of this proposed model because the dimension and item generation processes are rigorous and robust (Lin et al., 2005).

3.3 Multi-Dimensional Value Model Review

This section evaluates a selection of the key multi-dimensional value models relevant to this thesis. At this juncture, it is worth noting that whilst dated, the constructs in the models reviewed are still used and referred to in recent research e.g. Helkkula et al. (2012). Consequently the correct specification of the VITAE domain in this thesis requires investigation of the source models. Note that each of the multi-dimensional models discussed in this section are open to criticism from the phenomenological perspective. To avoid repetition this criticism is included with the review of the Mohd-Any, Winklhofer and Ennew (2015) model later in this section.

Whilst value has been investigated from a B2B perspective (e.g. Lapierre, 2000; Ulaga and Chacour, 2001; Ulaga, 2003; Menon et al., 2005), this thesis is focused on a B2C context although these demarcation lines are blurred (Baron and Warnaby, 2008) and also depend on whose lens they are viewed through i.e. customers to the service provider but small businesses in their own right in this context. Early B2C work in the multi-dimensional value field has already been outlined in Table 8 and includes the seminal PERVAL model (Sweeney and Soutar, 2001), which is a 19 item

instrument set in an Australian consumer durable goods context (white goods and stereos). The model builds on the Sheth, Newman and Gross (1991) framework, which suggests five dimensions: social, emotional, functional, epistemic and conditional value, which relate specifically to the perceived utility of a choice (i.e. Product A or B). Four distinct value dimensions emerged in PERVAL: emotional, social, quality/performance and price/value for money and the model was valid and reliable in pre and post purchase stages. PERVAL is acknowledged as the first B2C multi-dimensional value instrument (Sweeney and Soutar, 2001), however it is limited from the perspective that epistemic and conditional value were not specifically tested; and questions were raised concerning the generalisability of the instrument to other contexts, particularly with regard to the amendment of quality items for non-durable goods (Sweeney and Soutar, 2001).

The SERV-PERVAL model (Petrick, 2002) built on PERVAL and extended it into a service context. SERV-PERVAL is a 25 item instrument that measures the value of a service (tourism). Five dimensions of value were identified: behavioural price; monetary price; emotional response; quality and reputation. SERV-PERVAL is also limited since potential dimensions of value could have been omitted (i.e. domain not specified correctly) and the items included were not necessarily exhaustive of the five dimensions identified (Petrick 2002). Since SERV-PERVAL was developed other useful tourism related contributions have built upon it and include: changes in timeshare owners' value perceptions (Bradley and Sparks 2012) and adventure tourism (Williams and Soutar 2009). The value perceptions of cruise travellers (Petrick 2003, 2004) and golf travellers (Petrick and Backman 2002), while Sánchez et al. (2006) developed GLOVAL, which captured the consumption and purchase experience of a tourism product.

Early offline value research was extended into an American e-commerce retail context by Chen and Dubinsky (2003) through the development of an exploratory 36 item scale, which identified antecedents and mediating variables and their relationships to online shoppers' value perceptions. The instrument was based on previous scales and underpinned by a limited convenience sample of 110 American students. At the perceptual attribute level three constructs emerged: ease-of-use of web site; relevant information; and customer service. Five dimension level constructs were also identified: valence of experience; perceived product quality; e-tailer reputation; perceived risk; and product price. The study was exploratory and generated findings, which may not receive further empirical support; could require fine-tuning or substantial modification (Chen and Dubinsky, 2003). Further limitations lie in conducting the research at the pre-purchase stage when value should be evaluated from the total consumption experience (MacMillan and McGrath, 1997; Parasuraman,

1997; Woodruff, 1997). The study represented an early attempt to conceptualise the consumer experience as a defined construct within a model designed to measure value, which has been superseded by the contemporary discourse associated with value in the experience. Lin et al. (2005) developed a 28 item scale also in an online purchasing context. The instrument was based on previous scales and underpinned by a random sample of 356 Taiwanese online shoppers. This study was the first instance where online value was conceptualised as a multi-dimensional formative construct. Five dimensions emerged: monetary sacrifice; website design; fulfilment/reliability; security/privacy; and customer service. The authors acknowledged that the model may not be generalisable to other contexts and the instrument suffered from the same criticism as the Chen and Dubinsky (2003) model in that both do not evaluate the total consumption experience. Both the Chen and Dubinsky (2003) and Lin et al. (2005) models were positioned within an online value context and both models have a purely functional value emphasis.

The Experiential Value Scale (EVS) developed by Mathwick, Malhotra and Rigdon (2001) has been acknowledged as important early work that recognized the experiential nature of value and used the typology of experiential value (Holbrook, 1994) as a unifying mechanism to bring together the experiential and functional elements of value (as previously discussed). The authors labelled the four value dimensions: consumer return on investment (CROI), service excellence, playfulness and aesthetic appeal and their model was conceptualised using benefit constructs only, which included: visual appeal, entertainment, escapism, enjoyment, efficiency and economic value. Holbrook (1999) later extended the original typology of value to include self-orientated and other-orientated perspectives, which spawned additional categories of value, which included: status (e.g. success and impression management); ethics (e.g. virtue, justice and morality); esteem (e.g. reputation, materialism and possessions); and spirituality (e.g. faith, ecstasy, sacredness and magic). Holbrook's typology of value is recognized by some authors as the most comprehensive approach to the value construct since *'it captures more potential sources of value than other conceptualisations'* (Sanchez-Fernandez et al., 2009, p. 97). However, Sanchez-Fernandez et al. (2009) employed a subset of six of Holbrook's (1999) value types in a study of customer value in a service setting. Their findings combined status with esteem and ethics with spirituality, since the individual dimensions were too similar to study separately. Similarly, for reasons of parsimony the EVS model used only the self-oriented categories of value from Holbrook's (1999) typology. Consequently both studies failed to capture the holistic nature of value in the experience. Both the PERVAL and EVS models built on the research by Sheth, Newman and Gross, (1991) to inter-relate experiential dimensions (e.g. emotional and social value) with other functional components

(e.g. price and quality). The SERV-PERVAL model (Petrick, 2002) also included an experiential dimension (e.g. emotional response).

Ruiz et al., (2008) developed a reflective/formative measure, correcting the conceptual flaws in previous multi-dimensional research in an offline multi-service context. The sample was based on 800 self-completed questionnaires in the USA and Spain across medical care, hairdressers, dry cleaning, car repairs, health clubs and fast food restaurants. The conceptualisation was limited to service value, which was additionally limited by a small number of constructs. The study was functionally orientated and provides minimal insight to holistic experience. In contrast, Mohd-Any, Winklhofer and Ennew (2015) developed an online measure to evaluate customer travel website experiences in order to conceptualise e-value, and to examine how users' own activities (i.e., participation) on a travel website affected their value experience. Their model was based on 175 UK survey respondents and consisted of six constructs: utilitarian value; emotional value; social value; value for money; perceived control and freedom; and user cognitive effort. This model represents the closest model to the conceptualisation in this thesis. The context is online and the conceptualisation is a reflective first order and formative second order construction. In addition the experience is formed from first order constructs, which supports the approach taken here and is considered conceptually robust. This research can be criticised using the phenomenological perspective (note the same criticism is applicable to the other previously mentioned models). The approach taken evaluates the experiences of current customers and focuses on a specific perspective rather than a holistic view of customer value. There is no qualitative support in the research to validate whether the domain selected to measure value is sufficiently holistic, given that their model is formatively specified. In addition, the research measures a linear process (as discussed in detail previously) when the consumer experience is non-linear (Helkkula et al., 2012) and cannot defend this challenge using the concept of accumulated experience. Indeed, the model is constrained to a judgement based on in-use experience and fails to incorporate a more longitudinal perspective (Flint et al., 2002; Holbrook 1994; Zeithaml, 1988). Its focus is on post-use service evaluations without examining how other related services or imagined experiences may affect value judgments (Helkkula et al., 2012). Despite these criticisms the Mohd-Any, Winklhofer and Ennew (2015) work closely supports the conceptualisation in this thesis and emphasises the importance of the individual users' technical skills on e-value and the limited influence of user participation. Moreover their research also accepted that value is phenomenologically determined, within which a trade-off measurement approach is justified.

The majority of key empirical work has used either the Sheth et al. (1991) or Holbrook (1999) typologies as their underpinning theory. Indeed six of the ten most-cited multi-dimensional studies adopted either one as a conceptual foundation (e.g. Holbrook, 1999; Mathwick et al., 2001; Sanchez-Fernandez et al., 2009; Sheth et al., 1991; Sweeney and Soutar, 2001; Turel et al., 2007). This study has already adopted the Holbrook typology as previously discussed, which will be modified for routinized online services.

3.4 Domain Specification: Construct Analysis

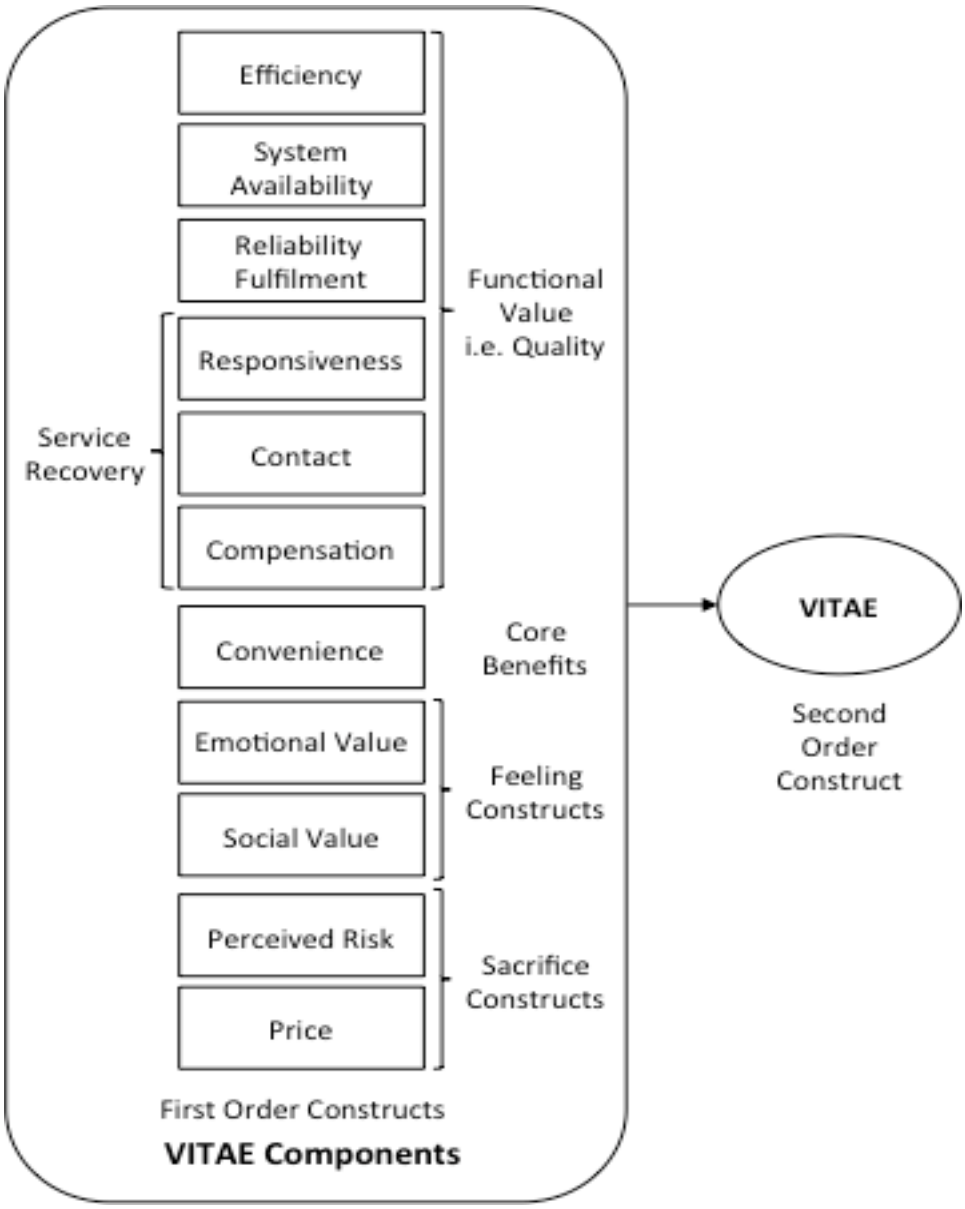
Underpinning the following sections, which bring together the conceptualisation in this thesis, an in-depth analysis to capture the domain of VITAE was required. A review across a broad range of extant multi-dimensional models in the value, electronic service quality, website usability and SST literatures was undertaken to assess their relevance to the conceptualisation of VITAE for online subscription services. Findings from the analysis identified multiple cases of dimensional overlap at the definition level. This necessitated further investigation at the item level, which identified that many constructs used different labels but effectively measured the same phenomenon. In addition there were mismatches evident between construct definitions and the items used for measurement. An extract from this analysis is included in Appendix 1, which shows the source constructs and their accompanying measurement items, together with an example stage of the analysis. The analysis example shows the process of identifying dimensional overlap. Note that the analysis is intended to show a snapshot on a journey to identifying appropriate constructs only and does not reflect the final conceptual model itself. The analysis enabled the elimination of the majority of constructs that were not relevant to the context of interest. The following sections discuss relevant constructs only, before enabling the deduction of the VITAE domain for online subscription services.

3.5 Value in the Accumulated Experience Components

The literature has conceptualised experience in different ways, either as a single construct (e.g. Chen and Dubinsky, 2003), or from the perspective that value is derived through the customer experience with the service offering (Babin, Darden and Griffin, 1994, Anderson and Narus, 1998; MacMillian and McGrath, 1997; Parasuraman, 1997; Woodruff, 1997, Berthon and John, 2006). More recently the literature has begun to build consensus, which is captured well by Sandstrom et al. (2008, p.118). The authors draw on S-D Logic and make the connection between service experience and value-in-use, arguing that: "*a service experience is the sum total of the functional and emotional outcome dimensions of any service…the service experience is always individual and*

unique to every single customer and every single occasion of consumption, and it assumes that the customer is an active co-creating part of the service consumption process". The authors also make the connection between the user's overall experience being formed from a collection of functional and emotional outcome dimensions, which then enables a perception of value to form. These outcome dimensions must be linked to process dimensions to incorporate the assumption that the customer has an active co-creating (or co-producing) role in the consumption process. This stance is supported by Gummerus (2013) and it is "*widely accepted within an experiential perspective that consumers are not passive agents reacting to stimuli, but, instead, the actors and producers of their own consuming experiences"* (Caru and Cova, 2007, p7). To date specification of outcomes and processes within one conceptualisation of value in the experience remains a gap in the literature.

Figure 6: Signposting The Conceptual Model



Domain specification becomes increasingly important when value is conceptualised as a formative construct. This approach relies on a complete formulation of the constructs that form VITAE to avoid model miss-specification. The construct analysis in Appendix 1 identifies multiple areas of overlap between constructs in the literature. Elimination of this overlap when determining the domain of VITAE is key to the correct domain specification to ensure conceptually distinct constructs. At this juncture it is important to signpost how this chapter builds towards the conceptual model. Figure 6 shows the first order outcome components that form VITAE and the link to value as a second order construct. This chapter presents the argument that the constructs shown in Figure 6 represent the holistic (outcome) domain of VITAE and discusses each construct in detail. The next section begins with service quality as the point of departure, which is the mainstay of perceived customer benefit and considered the baseline for formulating the experience (Palmer, 2010).

3.5.1 Service Quality

This section reviews the components relating to service quality that contribute to the formation of the VITAE phenomenon. First the quality literature is briefly reviewed before narrowing down to evaluate the electronic service quality models relevant to this conceptualisation. The E-S Qual model (Parasuraman, Zeithaml and Malhotra, 2005) is selected as the point of departure to specify the domain of VITAE. The constructs that make up E-S Qual are then reviewed before concluding with a proposition on how each construct supports the formulation of VITAE.

The mainstay that underpins the benefit component of the benefit/sacrifice trade-off is perceived quality, which has also been referred to as functional or utilitarian value (Zeithaml, 1988; Sweeney and Soutar, 2001; Petrick, 2002; Chen and Dubinsky, 2003). Zeithaml (1988) defines perceived quality as "*the consumer's judgement about a product's overall excellence or superiority*" (p.3). The basis of this definition is the degree to which instrumentality (i.e. quality) of an object or action will achieve an end (Gutman, 1982). The difference between objective quality and perceived quality lies in the distinction between mechanistic and humanistic quality. Mechanistic quality involves an objective aspect or feature of a thing or event e.g. technical superiority; humanistic quality involves the subjective response of consumers to objects and is therefore a relativistic phenomenon that differs between judges (Holbrook and Corfman 1985). This thesis is concerned with humanistic or perceived quality, any further review of mechanistic quality is ruled out. Historically, perceived quality had four key considerations within the multi-dimensional modelling field: it differs from objective or actual quality; it is a higher level abstraction rather than a specific

attribute of a product; it can become a higher order assessment that resembles attitude; and is a judgement usually made within a consumer's evoked set. However, in a contemporary formative conceptualisation of value the structural model has no second order quality construct. Rather, the first order benefits usually associated with a higher level abstraction of quality are conceptualised here as forming part of the holistic experience.

This conceptualisation is set within an online subscription context and consequently many of the aspects that relate to offline quality are not relevant e.g. physically evaluating quality cues from packaging. Indeed, Parasuraman, Zeithaml, and Malhotra (2005) established that online perceived quality differs from offline, or traditional perceived quality and requires dedicated scales. The next sections focus on electronic service quality.

3.5.2 Electronic Service Quality (e-SQ)

Quality is consistently included in all value typologies (e.g., Babin, Darden, and Griffin 1994; Sigala, 2006). Functional value relevant to online routinized services is derived from effective task fulfilment (Sheth, Newman, and Gross, 1991; Sánchez et al., 2006), or from efficient and timely service delivery (Childers et al., 2001). Historically service quality was also considered closely related to the concepts of perceived usefulness in the Technology Acceptance Model (TAM; Davis et al., 1989) and website usability literature (Kim and Eom, 2002; Ranganathan and Ganapathy, 2002), as well as relative advantage in perceived characteristics of innovations (Rogers, 2003). However, the construct analysis identified that research in the electronic service quality field not only overlapped with the constructs in these models (e.g. ease of use with systems efficiency) but had also superseded them in terms of relevance to VITAE within an online subscription service context. Consequently, for purposes of specifying the benefit component of the VITAE domain, the following sections consider electronic service quality only.

Table 9 outlines the key source models in the electronic service quality (e-SQ) domain and details both the purpose of each scale and areas where each can be critiqued. WebQual's (Loiacono, Watson and Goodhue, 2000) primary purpose was to generate information for website designers rather than to measure e-SQ as experienced by consumers. The instrument also omits the customer service and fulfilment dimensions due to the measurement approach. Barnes and Vidgen (2002) developed a different scale (also called WebQual) to measure a company's e-commerce proposition, which created an index based on weighted customer perception. However the scale was designed to be completed without the respondent experiencing the purchase process and is

therefore a transaction-specific assessment of a site rather than an evaluation of e-SQ. Similarly, SITEQUAL (Yoo and Donathu, 2001) measures website quality but does not capture all elements of the purchasing process and is therefore not a comprehensive evaluation of e-SQ. Szymanski and Hise (2000) used an online survey to investigate consumer online perceptions, but it is limited by virtue of a focus on the website and omission of the customer service and fulfilment dimensions. Furthermore the instrument measures satisfaction rather than e-SQ. The eTailQ model (Wolfinbarger and Gilly, 2003) used online and offline focus groups to measure consumer perception of online quality and was well regarded at the time, however the model attracted criticism concerning the internal consistency of the website design and customer service e-SQ dimensions (Parasuraman, Zeithaml and Malhotra, 2005). Based on a comprehensive review of the literature in 2002 and later work in 2005, Parasuraman, Zeithaml and Malhotra (2005) concluded that empirical research was limited; primarily focused on transaction specific site measurement rather than e-SQ; and was largely based on convenience samples (e.g. Loiacono et al., 2000; Barnes and Vidgen, 2002; Yoo and Donathu, 2001; Szymanski and Hise, 2000). More recently in an attempt to consider e-retailer roles more holistically, the e-SELFQUAL instrument (Ding et al., 2011) was developed and considered: perceived control; service convenience; customer service; and service fulfilment. However, e-SELFQUAL is considered a limited conceptualisation when compared to the E-S Qual instrument (Parasuraman, Zeithaml and Malhotra, 2005), with no provision for security/privacy risk, a confused conceptualisation of fulfilment (which includes price) and customer satisfaction that includes items that typically capture loyalty intent, word of mouth recommendation and value.

Parasuraman, Zeithaml and Malhotra (2005) also argued that customer assessment of website quality includes both interaction experience and post-interaction service aspects (e.g. fulfilment and returns) and define e-SQ broadly to encompass all phases of a customer's interaction with a website as: *"The extent to which a website facilitates efficient and effective shopping, purchasing and delivery"*(p.217).

Table 9: Extant Empirical Research into Electronic Service Quality

Study	Instrument	Dimensions	Purpose	Critique
Loiacono, Watson and Goodhue (2000)	WebQual	Information fit to task Interaction Trust Response time Design Intuitiveness Visual appeal Innovativeness Flow-emotional appeal Integrated communication Business processes Substitutability	Generation of website data for designers	- Does not measure e-SQ as experienced by consumers - Innovativeness, business processes and substitutability dimensions are tangential to model - Customer service and fulfilment dimensions excluded - Student convenience sample
Barnes and Vidgen (2002)	WebQual	Usability Design Information Trust Empathy	Measurement of a firm's e-commerce offering via index of website quality	- Transaction specific assessment of a site rather than an evaluation of e-SQ - Student convenience sample
Yoo and Donathu (2001)	SITEQUAL	Ease-of-use Aesthetic design Processing speed Security	Measurement of website quality	- Student convenience sample - Does not capture all aspects of the purchasing process and therefore does not constitute a comprehensive assessment of e-SQ
Szymanski and Hise (2000)	(No name)	Online convenience Merchandising Site design Financial security	Examines the role of customer perceptions in e-satisfaction assessments	- Omits customer service and fulfilment dimensions - examines website only - Measures satisfaction not e-SQ
Wolfinbarger and Gilly (2003)	eTailQ	Website design Reliability/fulfilment Privacy/security Customer service	Measures customer perception of e-tailing quality	- Robust scale based on three study approach (e.g. online and offline focus groups; sorting task; online customer panel survey) - Limited as 2 dimensions (website design and customer service) are not conceptually distinct
Parasuraman, Zeithaml and Malhotra (2005)	E-S-Qual	Efficiency System availability Fulfilment Privacy Responsiveness Compensation Contact	Measures service quality delivered by websites on which customers shop online	- Identified separate scale for service recovery (E-RecS-Qual) primarily for non-routine encounters - Begins shift in empirical focus from e-transaction to eservice

Source: Adapted from Parasuraman, Zeithaml and Malhotra, 2005, p.216-217)

The authors build on their comprehensive conceptual study of the nature and structure of e-SQ work in 2000 and their subsequent literature review in 2002 to synthesise the literature reducing numerous perceptual level attributes into 11 e-SQ dimensions (shown in Table 10), which formed the basis of their E-S-Qual model in 2005. The authors reduced the 11 dimensions into two separate scales to capture e-SQ: a 22 item basic E-S-QUAL instrument forming perceived quality from four dimensions applicable to online subscription services: efficiency, system availability,

fulfilment, and privacy. The second scale, E-RecS-QUAL contained 11 items in three dimensions, responsiveness, compensation, and contact, applicable to non-routine encounters (i.e. service recovery).

Table 10: Electronic Service Quality (e-SQ) Dimensions

e-SQ Dimensions	Description
Reliability	Correct technical functioning of the site and the accuracy of service promises (Having items in stock, delivering what is ordered, delivering when promised), billing, and product information
Responsiveness	Quick response and the ability to get help if there is a problem or a question
Access	Ability to get on the site quickly and the reach to reach the company when needed
Flexibility	Choice of ways to pay, ship, buy, search for, and return items
Ease of navigation	Site contains functions that help customers find what they need without difficulty, has good search functionality, and allows the customer to manoeuvre easily and quickly back and forth through the pages
Efficiency	Site is simple to use, structured properly, and requires a minimum of information to be input by the customer
Assurance/Trust	Confidence the customer feels in dealing with the site and is due to the reputation of the site and the product or services that it sells, as well as clear and truthful information presented
Security/Privacy	Degree to which the customer believes the site is safe from intrusion and personal information is protected
Price Knowledge	Extent to which the customer can determine shipping price, total price, and comparative prices during the shopping process
Site Aesthetics	Appearance of the site
Customisation/ personalisation	How much and how easily the site can be tailored to individual customers' preferences, histories, and ways of shopping

(Source: Parasuraman, Zeithaml and Malhotra, 2005, pp. 218-219)

A decade ago, both instruments represented an evolution in the conceptualisation of e-SQ and the first attempt to understand additional phases of a customer's interaction with a website, beyond pre-purchase and purchase phases. The Parasuraman, Zeithaml and Malhotra (2000, 2002 and 2005) research clarifies the benefit element of the routinized VITAE domain and also the non-routine i.e. service recovery elements of an online subscription service succinctly within one combined instrument. Both are empirically underpinned and the reduction of dimensions deemed sufficiently robust to form the point of departure for this conceptual model. Indeed, many of the more spurious

value dimensions that would not survive the rigour of empirical analysis have already been removed. The analysis undertaken as part of this review confirms that the E-S-QUAL and E-RecS-QUAL scales remain the closest instruments that reflect the service quality component of an online subscription-based service context today.

Whilst E-S-QUAL and E-RecS-Qual undoubtedly represented a significant step forward in understanding e-SQ at the time, its underpinning definition and purpose bounded both at the fulfilment phase of the consumer experience. This limitation has to be viewed in the context of the authors' claims that website quality should include both interaction experience and post-interaction service aspects. To this end, the authors acknowledge that both E-S-QUAL and E-RecS-Qual require further research in a pure service context i.e. in a use situation such as an online subscription service. Moreover, the E-RecS-QUAL scale is based on a limited sample with service recovery experience and was considered preliminary, requiring further research to establish reliability and validity in a more diverse online context. In response to these challenges, the intention of this thesis is to use both models as the point of departure for service quality and to make a contribution to knowledge by extending the E-S-QUAL and E-RecS-Qual models into an online subscription service context.

The next sections review the dimensions of the E-S-QUAL and E-RecS-QUAL instruments. Note that hypotheses are not required in the construction of a formative measurement model of value. The formative measurement model is defined through theory, consequently propositions will be used to specify the constructs that constitute the VITAE domain. Hypotheses will be used in the structural model to specify the relationships between VITAE, re-subscription intent, word of mouth recommendation and customer satisfaction, which are well established in the literature.

3.5.2.1 Efficiency

Efficiency is defined as: *the ease and speed of accessing and using the website* (Parasuraman, Zeithaml and Malhotra, 2005). Findings from E-S-QUAL demonstrate that efficiency and fulfilment dimensions are the most critical, and equally important, components of website service quality. These dimensions have the strongest influence on both the quality and value dimensions as well as loyalty intention (ibid, 2005). Consistency of results is important to practitioners since additional emphasis should be placed on these website attributes. The efficiency dimension addresses the design of the website-customer interface, whereas the majority of fulfilment attributes relate to back office delivery infrastructure. Therefore acquiring a high-quality image for a firm's

website requires significantly more than creating an excellent façade for the site (Parasuraman, Zeithaml and Malhotra, 2005). In contrast, Chen and Dubinsky (2003) based their website ease-of-use construct on the Szymanski and Hise (2000) scale. Analysis of the scale indicated that this construct had been superseded by a combination of the efficiency and system availability constructs from the E-S-QUAL model. Partial overlap was evident between efficiency and the relevant information construct specific to the efficient organisation (i.e. quality) of information. The stance taken in this conceptualisation was to maintain the structure of the efficiency construct and to subsume the overlap in dimensions from the relevancy of information construct. The efficiency construct was also considered generalisable to an online subscription service context.

Proposition 1: System Efficiency positively contributes to the formation of VITAE

3.5.2.2 Fulfilment

The E-S-QUAL model combines fulfilment and reliability into one fulfilment dimension, which is defined as *the extent a website's order delivery and item availability promises are fulfilled* (Parasuraman, Zeithaml and Malhotra, 2005). Previous research identified reliability as the dominant dimension in traditional service quality and it also emerged as an important factor in e-SQ (Palmer, Bailey and Faraj, 1999; Wolfinbarger and Gilly, 2002). Reliability is defined as "*the ability to perform the promised service dependably and accurately"* (Parasuraman, Zeithaml and Berry, 1988, p.23). Fulfilment and reliability have been consistently strong indicators of online quality (Parasuraman, Zeithaml and Malhotra, 2005). Indeed Wolfinbarger and Gilly (2002) found that fulfilment/reliability ratings were the strongest predictor of customer satisfaction and quality and the second strongest predictor of loyalty and intentions to repurchase at a site. Reliability in an online context translates into on-time and accurate delivery; accurate product representation; and technical reliability as it relates to the proper functioning of the site (Zeithaml et al., 2002). The E-S-QUAL fulfilment/reliability construct subsumes other fulfilment dimensions examined (e.g. Lin, et al., 2005).

Proposition 2: Fulfilment/Reliability positively contributes to the formation of VITAE

3.5.2.3 System Availability

System availability is defined as *the correct technical functioning of the website* and is a critical contributor to the consumers' perception of overall quality, value and loyalty intentions

(Parasuraman, Zeithaml and Malhotra, 2005). System availability consists of four perceptual attributes concerning the site: availability for business; launches and runs straight away; does not crash; and pages do not freeze after the entry of order information. These perceptual attributes indicate that the firm may not have full control over performance in this dimension (e.g. the type of computer and internet connection is likely to affect performance), therefore it is important that firms should be a) aware of the potential negative effects of designing sophisticated web features on system availability and b) proactive in identifying areas of system availability that are beyond its control and devise appropriate communication scripts to avoid complaints. The construct analysis indicated that the balance of meaning attached to the website ease-of-use construct (Chen and Dubinsky, 2003; Szymanski & Hise, 2000) can be superseded by the E-S-QUAL model. Similarly meaning attached to perceived ease-of-use originating in the technology adoption literature and extended specifically into an SST context by Weijters et al. (2007) can also be superseded by E-S-QUAL. The construct analysis also indicated that the system availability construct was generalisable to an online subscription service context with minor modifications.

Proposition 3: System Availability positively contributes to the formation of VITAE

This section concludes the constructs residing within the E-S-QUAL model, which relate to more routinized activities. The next section reviews the E-RecS-QUAL instrument, which relates to service recovery and is applicable to non-routine encounters.

3.5.2.4 Service Recovery

Parasuraman, Zeithaml and Malhotra (2005) reviewed the extant online service quality scales, concluding that the approach to measuring e-SQ was flawed, due to a high proportion (30-50%) of missing data relating to service recovery in every instrument. Service recovery is an exception to the norm and consumers have not necessarily experienced recovery situations (ibid, 2005). However, in situations where accumulated experience is present, users are highly likely to have experienced a service recovery encounter, potentially on multiple occasions as they have used the service over many years. Building on previous research, Parasuraman, Zeithaml and Malhotra (2005) separated service recovery items into a dedicated scale called E-RecS-QUAL (e-recovery service quality). In contrast, given the presence of accumulated experience in the sample, the approach taken is to incorporate service recovery components into the main conceptualisation, since service recovery is an important aspect of service (Irons, 1997).

E-RecS-QUAL has three dimensions: responsiveness, defined as: *the effective handling of problems and returns through the site*; compensation, defined as *the degree to which the site compensates customers for problems*; and contact defined as *the availability of assistance through telephone or online representatives*. Confirmatory research was conducted with amazon.com and walmart.com, however both had excellent reputations at the time and a low incidence of service recovery related encounters. Therefore the authors considered the E-RecS-QUAL scale preliminary due to limitations resulting from a small consumer sample with service recovery experience. Parasuraman, Zeithaml and Malhotra (2005) argue that all items under the efficiency, system availability and privacy dimensions (discussed later) of E-S-QUAL and the contact dimension of E-RecS-QUAL are directly applicable to pure service sites. Several items from the responsiveness and compensation dimensions should also be applicable with the remaining items requiring modification, supplementation or elimination (ibid, 2005). Based on the construct analysis in Appendix 1, this study concurs with the view taken by the authors and considers these constructs generalisable to an online subscription service context with minor modifications. The construct analysis also found that the meaning attached to a combination of the responsiveness, compensation and contact constructs, subsumed meaning relating to other similar customer service related constructs e.g. Chen and Dubinsky (2003); Szymanski and Hise (2000); and Lin et al. (2005). Therefore:

Proposition 4: Responsiveness positively contributes to the formation of VITAE
Proposition 5: Contact positively contributes to the formation of VITAE
Proposition 6: Compensation positively contributes to the formation of VITAE

The construct analysis identified that dimensions of the E-S-QUAL and E-RecS-QUAL instruments also overlapped with other regularly used constructs in the online service quality literature. For example, constructs such as relevant information (including usefulness of information and information motivation) overlapped with the efficiency construct. Customer service was duplicated within the E-RecS-QUAL model and was subsumed accordingly. Ease-of-use has been examined extensively in the context of technology adoption (e.g. Kerem, 2004; Black et al., 2001; Shim et al., 2001; Yoh et al., 2003) primarily using the Technology Acceptance Model (Kimiloglu, 2004). Early research identified two key constructs: perceived ease-of-use, and perceived usefulness (Davis et al., 1989). Perceived ease-of-use manifests itself in the value literature as website ease-of-use or website design. Ease-of-use is also sometimes termed usability in an online context (Swaminathan et al., 1999), and incorporates: download speed, overall design and organisation

(Jarvenpaa and Todd, 1997; Lohse and Spiller, 1998; Nielson, 2000; Novak et al., 2000; Spiller and Lohse, 1997-1998). Meaning attached to the website ease-of-use construct overlapped with the efficiency construct in E-S-QUAL and was subsumed. Note that perceived usefulness overlapped with the convenience construct and is also subsumed later in the conceptualisation.

The next section reviews privacy and security considerations, which are integral to online propositions. Both constructs are considered outcome elements within the VITAE domain but reside outside service quality.

3.5.2.5 Privacy and Security

Privacy is defined as *the protection of personal information* (i.e. selling lists), *providing anonymity and informed consent* (Friedman, Kahn and Howe, 2000). Security is defined as *protecting users from the risks associated with fraud and financial loss from the use of credit cards or other financial information (*Parasuraman, Zeithaml and Malhotra, 2005). Security risk perceptions have been shown to have a strong influence on the attitude toward the use of financial services (Montoya-Weiss et al., 2000). Early online value research considered security and privacy as separate first order dimensions and important evaluative criteria (Hoffman, Novak and Peralta, 1999; Culnan and Armstrong, 1999; Montoya-Weiss et al., 2000; Quelsh and Klein, 1996). Later work either combines the dimensions (e.g. Lin et al., 2005); supports a single privacy dimension (e.g. Parasuraman, Zeithaml and Malhotra, 2005); or positions privacy as a higher order dimension, which is part of perceived risk (Chen and Dubinsky, 2003). Parasuraman, Zeithaml and Malhotra, (2005) support the view that privacy plays a significant, clear and consistent role in consumers' higher order evaluations concerning web sites. Privacy will undoubtedly be an ongoing risk to the consumer in an online subscription service, however the literature is unclear as to whether privacy and security can be combined as one construct or should be separated into two. The formative conceptualisation positions both constructs, as first order contributing to the formation of VITAE and the point of departure is to consider one combined construct. A combined or separate approach for these constructs will be validated during the quantitative phase of the thesis. The construct analysis identified that the E-S-QUAL model privacy construct (Parasuraman, Zeithaml and Malhotra, 2005) is generalisable to an online subscription service context. The construct also accounted for identical meaning in other online models e.g. Lin, et al. (2005). Therefore:

Proposition 7: Security/Privacy risk perceptions negatively contribute to the formation of VITAE

The next sections establish core benefit components within the overall outcome related dimensions that form the VITAE domain in an online subscription service context.

3.5.3 Value in The Accumulated Experience: Core Benefit Components

The construct analysis identified that the measurement of core benefit components has previously been accomplished using constructs such as perceived usefulness, convenience (or its converse behavioural sacrifice), time or location. These constructs typically relate to the consumers' use of online services to save time or to achieve 'less hassle' (i.e. greater convenience) in conducting the chosen task. This section reviews perceived usefulness, convenience, behavioural sacrifice, time and location to establish which constructs form the core benefit elements of the VITAE domain. Overlap in meaning between each construct is identified and the review discards both perceived usefulness and the behavioural sacrifice approach; considers standalone time and location constructs; before deciding in favour of adopting convenience as the single relevant construct.

3.5.3.1 Convenience

The continuous rise in consumer demand for convenience has been attributed to socio-economic change, technology progress, competitive business environments and changing perceptions of opportunity cost as incomes have risen (Seiders, Berry and Gresham, 2000). Early literature recognized that non-monetary cost was central to the concept and the first multi-dimensional conceptualisation of the convenience phenomenon was brought together by Berry, Seiders and Grewal in 2002. Their conceptualisation combined the time, energy expenditure, consumer waiting and consumer convenience orientation literatures. Time can be characterised as a limited and scarce resource (Jacoby, Szybillo and Berning 1976), which cannot be expanded and is finite (Berry, 1979; Gross, 1987). Consumer perceptions of saving time actually refer to the reallocation of time across different activities to achieve greater efficiency (Feldman and Hornik, 1981). Time can be viewed as: a cost (typically) or an investment (Anderson and Shugan, 1991); can constrain choice like price (Becker, 1965); an opportunity cost of forgone income or the participation in alternative activities (Bivens and Volker, 1986). Time allocations influence both lifestyle and consumption behaviours (Holbrook and Lehmann, 1981) and consumers differ in their temporal orientation, including perceived time scarcity, how they value time, and their sensitivity to time related issues (Bergadaa, 1990; Durrande-Moreau and Usunier, 1999: Graham, 1981; Murphy and Enis, 1986). In each case the marketing literature has consistently supported a relationship between time scarcity and a consumer desire for services (or goods) that offer convenience.

Energy expenditure (or effort) is recognized as a form of non-monetary cost for consumers, which like time, influences perceived convenience (Seiders, Berry and Gresham, 2000) and satisfaction (Lovelock, 1994). In an equitable exchange, the more effort one party contributes, the greater the outcome expected (Oliver and Swan, 1989). Effort has been related to time, thought (intellectual effort) and emotion (Youngdahl and Kellogg, 1997), and is underpinned by physical, cognitive and emotional effort (Mohr and Bitner, 1995). The literature consistently supports the view that consumers have limited cognitive resource and as 'cognitive misers' will seek to minimise this resource during the course of decision-making (Fennema and Kleinmuntz, 1995). Consumers also display a limited ability to predict task effort required (Fennema and Kleinmuntz, 1995); and there are also significant individual differences in consumer perceptions of required effort (Bettman, Johnson and Payne (1990). Typically the energy expenditure or effort is captured in the multi-dimensional modelling literature using either convenience or sacrifice dimensions e.g. behavioural sacrifice.

Convenience orientation refers to a consumer's general preference for convenience goods or services (Berry Seiders and Grewal, 2002). A convenience-orientated consumer is defined as one that *"seeks to accomplish a task in the shortest time with the least expenditure of human energy"* (Morganoski, 1986, p.37). Other early research defined it as *"the value consumers place on goods and services with inherent time or effort saving characteristics"* (Brown, 1990). The literature consistently supports the theory that convenience orientation influences consumer buying decisions (Berry, Seiders and Grewal, 2002), which has been researched from several different perspectives including: convenience foods, time saving durables, household income, various different demographics, and lifestyle variables (e.g. time pressure, role overload, emphasis on leisure, hedonism etc.). Convenience and cost-orientated consumers have also been found to be significantly different (Berry, Seiders and Grewal, 2002).

Service convenience is defined as the *'consumers' time and effort perceptions related to buying or using a service'* (ibid, p.4*)*." Consumers experience an increase in time deficiency when conducting tasks related to the acquisition and consumption of a service (Zeithaml and Bitner, 2003). Therefore, service convenience can be thought of as a means of adding value to consumers, by decreasing the amount of time and effort a consumer must expend on the service (Colwell et al. 2008). Service convenience has been conceptualised in various different ways; product convenience (Yale and Venkatesh, 1986); from an economic utility theory perspective; as a convenience continuum (Anderson and Shugan, 1991); and shopping convenience (Berry, Seiders

and Greshaml, 2000). Brown (1990) proposed five convenience types: time, place acquisition, use and execution. Berry, Seiders and Grewal (2002) brought together the various literature streams and developed the first recognized multi-dimensional activity-based conceptualisation of the convenience phenomenon, classifying the consumers' time and effort perceptions into five different components: decision convenience, access convenience, transaction convenience, benefit convenience and post benefit convenience, which reflect the stages of buying a product or service. Following this research the field broadened to include self-service technologies with a focus on how to enhance convenience and increase consumer satisfaction with service encounters (Dabholkar et al., 2003; Meuter et al., 2000, 2005). The Berry, Seiders and Grewal (2002) conceptualisation was also operationalised by Colwell et al. (2008) but remains the most suitable source instrument to use in forming benefit convenience within the VITAE domain.

Evaluation of the convenience construct for suitable meaning to include within the VITAE domain identifies that benefit convenience is the only component that is necessary to be included without introducing considerable overlap in dimensions or being irrelevant to the context of interest. Benefit convenience is defined as *"the consumers' perceived time and effort expenditures to experience the service's core benefits"* (Berry, Seiders and Grewal, 2002, p.7). It is important that companies move their customers to the benefit stage as quickly and efficiently as possible (e.g. conclude the taxi ride or watch the film), as inconveniencing them at this stage can introduce the perception of burden, which could dilute the core benefits of the service. Decision, access and transaction convenience are irrelevant during the use phase since long-term online subscription relationships have already progressed beyond the decision to buy and pay stages, access criteria has also already been established. Therefore the relevant components of convenience to this study occur from the benefit convenience stage onwards. It is also worth noting that dimensional overlap is also evident for both the access and transaction convenience phases with the electronic service quality components of the proposed model (e.g. system efficiency, system availability and fulfilment). Similarly, meaning from the post purchase convenience phase again overlaps with service quality through the responsiveness and compensation constructs. Assessment of the core benefit component of the service remains a necessary condition for the accurate specification of the value domain, however evaluation against the sacrifice literature identifies further overlap in dimension meaning.

3.5.3.2 The Relationship Between Behavioural Sacrifice and Convenience

The construct analysis identified (at the item level) that the (behavioural) sacrifice dimension contains the reverse meaning of benefit convenience (i.e. one is positive and one is negative) and effectively measures the same phenomenon. Therefore only one construct can be represented within the VITAE domain, which requires a trade-off on whether to view the core benefits of the service through a negative or positive lens. Value models anchored in the benefit/sacrifice perspective typically consider time, location and human energy expenditure as a cost or behavioural sacrifice (e.g. Petrick, 2002). The convenience literature positions these aspects as core benefits of the service, rather than just a sacrifice, which enables an evaluation of whether the core service proposition actually delivered what it promised, namely to save time and energy costs (i.e. an end derived from use rather than one encounter), sufficient for the individual to reallocate resources to a task higher in their means end chain. Measurement of core benefits within multi-dimensional models is currently under-researched (see Heinonen et al., 2010 for an exception) and is a gap in the literature from a formative/reflective measurement perspective. Consequently, the approach taken in this study is to subsume the behavioural sacrifice construct in preference of benefit convenience (hereafter referred to as convenience) in order to bring core benefits into the conceptualisation.

Time, energy and location are central to understanding the core benefit outcome within the VITAE domain. The next sections examine other key constructs that have been used for similar purposes in the literature before providing a justification to subsume their meaning within the convenience construct.

3.5.3.3 Perceived Usefulness

The Technology Acceptance Model (TAM) is considered suitable as a theoretical basis for understanding use, behaviour and acceptance of new internet-based technologies (Monsuwe et al., 2004; Gefen et al., 2003). According to TAM, two key belief constructs determine technology acceptance behaviours: perceived usefulness and perceived ease-of-use. Perceived ease-of-use has already been discussed in the previous section. Perceived usefulness is defined as "*the prospective user's subjective probability that using a specific application or system will increase his or her job performance within an organisational context*" (Davis et al., 1989, p.985). Attitude towards system use is determined by both constructs, which determines behavioural intention to use and ultimately actual system use (McKechnie, Winklhofer and Ennew, 2006). Numerous studies identify perceived usefulness as a stronger predictor of the dependent variables than perceived ease-of-use (Adams, Nelson and Todd, 1992; Hendrickson, Massey and Cronan, 1993). The TAM model has

been extended into a SST context for pre-purchase and purchase situations (e.g. Weijters et al., 2007; Dabholkar and Bagozzi, 2002). However, the literature remains divided with researchers not only identifying different dimensions of perceived usefulness but also evidence of different perspectives on its relevance. For example, Dabholkar and Bagozzi (2002) identify three dimensions: ease-of-use; performance; and fun. Whereas Weijters et al. (2007) identified five: perceived usefulness; ease-of-use; reliability; perceived fun; and newness. Dabholkar and Bagozzi (2002) argued that perceived usefulness is not relevant for SSTs in which the consumer participates but does not own. Instead the authors replaced perceived usefulness with a performance construct (Dabholkar, 1994b), which refers to the encompassing reliability and accuracy of the technology-based self-service, as perceived by the consumer. This concept is similar to the 'did its job' dimension identified by Meuter et al. (2000). However, Weijters et al. (2007) argue that both performance and perceived usefulness should be considered and that collectively they reflect the benefits of SST usage. Aspects relating to reliability and performance are addressed in this study through the efficiency and systems availability dimensions in the E-S-QUAL model (Parasuraman, Zeithaml, and Malhotra, 2005). The above studies are also limited in that they consider SSTs within the context of vendor location, where the consumer has limited opportunity for 'ownership' or 'buy in'. The SST context i.e. service access, format and location are likely to have an important influence on the specification of any conceptual model of online value. SSTs can also be software based where the consumer purchases access to a service over the Internet from a home or office computer, as is the case in this thesis.

On balance, the stance taken by this thesis is to subsume the meaning associated with the perceived usefulness construct within convenience. This decision is based on the following rationale: the literature remains divided and consequently the approach to an online subscription service context is unclear; the TAM definition is too narrow, in that it is restricted to job performance; there is significant dimensional overlap with the electronic service quality constructs; and the link between ease of use and perceived usefulness is broken in a formative conceptualisation. Baron, Patterson and Harris (2006) also criticised TAM's limited ability to capture the subtleties of marketplaces engendering consumer creativity and innovation, which argues that the construct is unsuitable for a co-production/co-creation context. The next section reviews the suitability of a standalone temporal construct within the domain of VITAE.

3.5.3.4 Temporal Value

Online subscription relationships have similar connotations to the rental paradigm, which explicitly focuses on time that is central to most services. Ownership lasts for the duration of the object or until the owner chooses to dispose of it. Rental nearly always relates to a specified time period and time itself is perishable (Lovelock and Gummesson, 2004). Temporal access is frequently related to time allocations (e.g. Hendrix et al., 1979); time availability (e.g. Darian and Cohen, 1995; Kaufman, Felker and Lane, 1996); time orientations (Settle et al., 1978; Bergadaa, 1990); opening hours (Kaufman, Felker and Lane, 1996); punctuality (Taylor, 1994; Brady and Cronin, 2001); and speed of delivery (Zeithaml et al., 2000; Jun and Cai, 2001). We have lived in the most time conscious era in human history for over a decade (Lovelock and Gummesson, 2004), symptomatic of changing expectations for delivery timeliness together with evolving technologies and processes to enable it (McKenna, 1997). For some time firms have also had to understand the changing importance of consumers' perceived expenditures of time to create transaction convenience (Berry, Seiders and Grewal, 2002). Despite the importance of time, limited attention has been paid to understanding how customers perceive, budget, consume and value time (Graham, 1981; Cherlow, 1981; Le Clere, Schmitt and Dubé, 1995; Soman, 2001). Indeed, in an SST context Langeard et al. (1981) and Bateson (1985) found that consumers avoiding SSTs did so because of a perception that use would involve too much effort, time and/or risk. The most commonly discussed applications relate to the management of waiting lines (Durrande-Moreau and Usinier, 1999; Jones and Peppiatt, 1996; Kostecki, 1996; Rossiter, 2003) and shaping consumers' decisions on when to use a service (Lovelock, 1984; Kimes and Wirtz, 2003). In an SST context, research relating to time has typically focused on in-store waiting time (Weijters et al., 2007; Dabholkar, 1996; Dabholkar and Bagozzi, 2002). However there is broad agreement in the literature that the primary benefit of SST use is to save time (Bateson, 1985; Meuter et al., 2000; Czepiel, 1980; Davis and Vollmann, 1990; Taylor, 1994; Gail and Lucey, 1995). Indeed it is a perceived time saving that forms the basis of the consumer experience and behaviour rather than an actual time saving (Gail and Lucey, 1995). It follows then that time is a key component of the core benefit of a service and must also form part of the VITAE domain.

However, whether time should be included as part of the convenience construct or as a standalone construct that directly influences value remains the subject of debate in the literature. Heinonen (2004) argued that temporal value (i.e. time) is a discrete construct that directly affects value. Her temporal dimension represents how the consumer perceives the temporal flexibility of the SST relating to when the interaction occurs. Temporal latitude i.e. a result of flexibility in activities has

been conceptualised as a continuum ranging from complete latitude; through some latitude; to no latitude at all (Hendrix et al., 1979). Heinonen (2004) notes that SSTs are now available almost independently of temporal boundaries. However despite conceptualising time in an SST context, time is not an end in itself. In addition, Heinonen's (2004) findings also identified that time is a hygiene factor. Lower levels of temporal flexibility than the current situation are perceived as highly negative, whilst higher levels provide little additional value. Time is already a component part of the convenience construct, which is well established in the literature. The core benefits of the service are also wider than just a time saving (e.g. savings in energy expenditure and location convenience). Inclusion of a standalone time construct would also create dimensional overlap with convenience, therefore the meaning attached to the constructs proposed by Heinonen (2004, 2006) is subsumed within the more inclusive convenience construct.

3.5.3.5 Location Value

The debate also remains undecided in the literature regarding the influence of location on value. Many e-service models (e.g. Zeithaml et al., 2000; Kaynama and Black, 2000; Wolfinbarger and Gilley, 2003) are conceptually based on the SERVQUAL dimensions and do not acknowledge either time or location (Heinonen, 2004). The Heinonen (2004) conceptualisation argued that location value (which she refers to as spatial value) is a standalone construct that directly effects value in a SST context. The dimension relates to usage location i.e. the location flexibility relating to where the service interaction occurs. Electronic service delivery can occur either at the service site (i.e. vendor location); a neutral site or at the customers' site i.e. home or work (Dabholkar, 1994a,b; Lovelock, 1983) and is typically based on technology that is fixed to a specific location (Lovelock, 1983). Heinonen (2004) points out that location flexibility also takes into account whether the SST can be extended to accommodate mobile customer access. Indeed the value added by either the temporal or location value dimensions is dependent on the possibilities and limitations of technology. A key component of the Heinonen (2004) argument is that both time and location are related to convenience in a SST context (Yale and Venkatesh, 1986; Brown, 1990; Zhu et al., 2002; Peterson and Balasubramanian, 2002) and access convenience is critical for services that require customer participation, since consumers must be present at the right time and place (Berry et al., 2002).

However, whilst consideration of a location construct could be potentially important in an online subscription service context, since the user derives benefit convenience from the ability to access the service 24/7/365 from their own home or office location rather than a vendor's location. In this

context access convenience is less relevant (note that system access is addressed in the E-S Qual instrument). Heinonen's (2004) findings also revealed that location is a hygiene factor. Lower levels of location flexibility than the current situation are perceived as highly negative, whilst higher levels provide little additional value. On balance there is no supporting guidance from the literature as to whether location should be a standalone construct or subsumed as part of the convenience construct. Given the context, whereby the consumer has the choice of whether to operate the service from home or their own office location, it is highly likely that location will become a hygiene factor and the argument for a standalone construct therefore diminishes. The stance taken in this study is to accept that location is part of the convenience construct and to evaluate extending the benefits convenience construct to include a specific location item at the qualitative phase.

In conclusion then, inclusion of a single convenience construct combines the key core benefit elements of the VITAE domain into one construct that includes time, location and convenience, which also (by virtue of its corollary) includes behavioural sacrifice. Therefore:

Proposition 8: Convenience positively contributes to the formation of VITAE

The next section examines the hedonic components relevant to the VITAE domain.

3.5.4 Value In The Accumulated Experience: Hedonic Components

This section sets out the argument to include emotional and social value as hedonistic components of the VITAE domain.

The typology of value (Holbrook, 1994) is used to guide this domain specification of VITAE. It has already been established that online subscription services are predominantly routinized and components relating to extrinsic active and reactive value have been addressed in the previous sections. However it should be noted that whilst these cues are predominant within the context of interest, the service does exhibit non-routinized components e.g. service recovery. To specify the domain of VITAE for online subscription services correctly, due consideration must be given to aspects of intrinsic active and reactive value (Deighton and Grayson, 1995; Gummesson, 1998). Holbrook's (1994) model refers to intrinsic active value as playfulness and intrinsic reactive value as aesthetics. Early work in the value literature included the EVS model (Mathwick, Malhotra and Rigdon, 2001) and PERVAL (Sweeney and Soutar, 2001), however despite an elapsed period of

fifteen years since these models were first introduced, the literature remains limited with respect to formative value conceptualisations (See Mohd-Any, Winklhofer and Ennew (2015) for a recent exception). These early multi-dimensional models conceptualised aesthetics and playfulness in part as flow (Mathwick and Rigdon, 2004). The usefulness of these concepts when applied to the full range of online consumer behaviour has been criticised. Some researchers argue that flow and other experiential outcomes are irrelevant in online purchase contexts (Zeithaml et al., 2002) and best reserved for recreational Internet use since goal-directed tasks do not create truly compelling experiences (Novak et al., 2000). However, later research suggested that goal-directed users who do not use the Internet for experiential purposes do characterise their online experience as flow (Novak, et al., 2003). The EVS model (Mathwick et al., 2001) is anchored in the pre-purchase and purchase phases and there is limited literature to suggest the applicability of playfulness or aesthetics in an online subscription service context. However, as previously discussed Parasuraman, Zeithaml, and Malhotra (2000, 2002) synthesised the value literature to reduce numerous perceptual level attributes into 11 e-SQ dimensions (see Table 10). Aesthetics was one of the 11 dimensions and was subsequently removed from the final E-S-Qual model since it did not significantly affect value. Meaning relating to flow (i.e. the aesthetics dimension) is captured within the efficiency component of the E-S-Qual model. Playfulness has also been described as irrelevant in online purchase contexts (Zeithaml et al., 2002). There is a strong likelihood that the dimension will not be part of the domain of VITAE in an online subscription context due to its task-orientated nature. Over time the initial consumer inclination to play (i.e. discover how the system works) would be subjugated by routine. For this reason playfulness is not included. This stance will be validated at the qualitative phase of this investigation.

Holbrook (1999) later augmented the original typology of value with self-orientated and other-orientated perspectives, which spawned additional categories of value, which included: status (e.g. success and impression management); ethics (e.g. virtue, justice and morality); esteem (e.g. reputation, materialism and possessions); and spirituality (e.g. faith, ecstasy, sacredness and magic). The routinized nature of the online subscription service context renders many of these more recent categories unsuitable for inclusion. Subscription access to the service means that nothing is owned; the service is operated from the users home or office via a personal computer and it is a cost effective replacement for a mundane low involvement activity i.e. a routine task. The service also has no inherent properties to enhance self-esteem. Consequently meaning associated with status, esteem or spirituality are not included in this domain specification. Ethical perspectives are relevant when viewed through the lens of non-routine encounters, but are considered restricted to

aspects of service recovery i.e. a judgement on whether the service provider addressed issues appropriately when things went wrong. These aspects are addressed in this domain specification through the responsiveness and compensation constructs within the E-S Qual model. Ethics also extends in this context to a perceived moral obligation upon the service provider to safeguard the users' security and privacy, which is discussed in the following sections.

At this juncture, consideration of experiential aspects within this domain specification still leaves two areas, which remain unaccounted for when the online subscription service proposition is evaluated. These areas relate to active intrinsic and other orientated value categories. Firstly, whilst fun has been considered unsuitable for further consideration, there remains an opportunity for the user to experience pleasure from executing the task effectively. The literature specifies that value can be obtained from the consumption event itself (Butz and Goodstein, 1996; Woodruff and Gardial, 1996; Woodruff 1997) in anticipation of the accomplishment of a task or work (Wilson and Jantrania, 1994). Indeed, Heijden (2004) argues that the hedonic value of an experience is the self-fulfilling benefit derived from the process where the utilitarian value of an experience is the instrumental benefit the process provides to the user. Secondly, enhanced social value could be achieved through the use of the technology. Effective use of the online tool could positively influence the user's social network (i.e. work colleagues or family members) from the perspective of being perceived (by the network) to be good at their job. The construct review identified that both areas could be addressed within the domain specification of VITAE using a combination of two dimensions: emotional value and social value, which are discussed next.

Sheth, Newman and Gross, (1991) identified emotional and social value as experiential or feeling dimensions. Emotional value refers to the affective states generated from a product or service (Holbrook 1994; Mathwick et al., 2001; Richins 1997; Lee et al., 2011); it captures a user's feelings of pleasure and enjoyment (Williams and Soutar, 2009; Lee et al., 2011); and has been described as a pleasure-seeking activity (Gnoth, 1997). Emotional value is defined as 'the *utility derived from the feelings or affective states that a product generates*' (Sweeney and Soutar, 2001, p.211). The literature on online purchasing of services takes the perspective that emotional value can be experienced from both the process of searching and the purchase itself (e.g., Mathwick et al., 2001; Heinonen, 2009; Sánchez et al., 2006). Emotional value is widely included in conceptual value typologies and empirical studies (Sheth, et al. 1991; Sweeney et al., 1999; Sweeney and Soutar, 2001; Mohd-Any, Winklhofer and Ennew, 2015). and was operationalised by the PERVAL model (Sweeney and Soutar, 2001) and extended into a service context by Petrick (2002). In a recent

study into e-value tourist websites, emotional value was the third highest contributor to the users' e-value perceptions, indicating that users gained intrinsic value from the online experience itself (Mohd-Any, Winklhofer and Ennew, 2015).

C2C value co-creation and social value within the context of the experience has received scant attention from an empirical value perspective. To date, evaluation of the phenomenon includes: social value (Sheth, et al. 1991), social esteem (Laukkanen and Lauronen, 2005), social pressure (Kleijnen, Wetzels and de Ruyter, 2004; Venkatesh, Morris, and Davis 2003), and the social context of service-use situations (Pura and Heinonen, 2008). The theory of consumption value (Sheth et al. 1991) posits that customers can also experience social value through their consumption experience, since "*the very act of participation and performance of the relevant tasks can yield experiences that provide psychological benefits*" (Etgar, 2006, p. 102). Sweeney and Soutar (2001, p. 211) defined social value as *the utility derived from the product's ability to enhance social self-concept',* where utility is derived from the constructs of esteem, fashion, and sociability (see also Holbrook, 2006; Williams and Soutar 2009; Sánchez et al., 2006). Research into the diffusion of innovations has shown that consumers' use of electronic innovations can enhance their status and image (Pura, 2005; Sigala 2006). The use of Internet self-service technologies may be expected to have a similar impact (Mohd-Any, Winklhofer and Ennew, 2015).

However, more recently in an online website travel context Mohd-Any, Winklhofer and Ennew (2015) initially argued that social benefits still occur as users who explore a larger proportion of its features are likely to come across aspects that more basic users would not have explored, and consequently could discuss their searches and purchases with peers and derive social value from these discussions. However, later findings indicated that the magnitude of social value derived did not significantly contribute towards e-value. The expectation is that social value will follow a similar pattern in an online subscription service. Any connotations of social value are peripheral to the core proposition and unlikely to significantly affect VITAE. The stance taken in this thesis is to include social value in the initial conceptualisation of VITAE, but to validate its relevance at the qualitative phase of the investigation.

The construct analysis in Appendix 1 identified that the meaning attached to the emotional and social value constructs from the PERVAL model (Sweeney and Soutar, 2001) are generalisable to an online subscription service context. The emotional value construct is interchangeable with the emotional response construct from the SERV-PERVAL model (Petrick, 2002) and the Mohd-Any,

Winklhofer and Ennew (2015) construct consequently separate provision is not required. Therefore:

Proposition 9: Emotional Value positively contributes to the formation of VITAE
Proposition 10: Social Value positively contributes to the formation of VITAE

The next section reviews the sacrifice components necessary to conceptualise the VITAE domain.

3.5.5 Value in the Accumulated Experience: Sacrifice Components

The sacrifice component of the benefit/sacrifice trade-off typically consists of perceived price (in its various guises) and perceived risk. This section reviews both constructs and includes both in the conceptualisation of VITAE.

3.5.5.1 Price

The foundation for the concept of value as a trade-off between benefits and sacrifices (i.e. value for money), which is based on economic theory of exchange where quality is associated with benefits and the price paid is associated with monetary sacrifice (Zeithaml, 1988). The conceptualisation of price as a sacrifice has been consistent throughout the literature for some time (Chapman, 1986; Mazumdar, 1986; Monroe and Krishnan, 1985). Jacoby and Olson (1977) distinguished between objective monetary price, which is described as the actual price of a product and perceived price (i.e. the overall price understood by a consumer). Objective monetary price is defined as "*what is given up or sacrificed to obtain a product"* (Zeithaml, 1988, p.10). However, objective monetary price is often not the price perceived by consumers. Perceived price is deduced by each consumer differently i.e. through the actual price of the product, by category i.e. cheap or expensive or not deduced at all. Historically price was considered a higher level attribute in multi-attribute value models since it is a 'give' component rather than a 'get' component (Ahtola, 1984). The negative link between price and value is also widely accepted in the literature (e.g. Dodds et al., 1991; Monroe, 1990; Zeithaml, 1988). Consequently in this domain specification, price is considered a first order construct that negatively contributes to the formation of VITAE for a task-orientated service (note that the negative relationship may well be different in a luxury goods context).

The construct analysis in Appendix 1 identified that Lin et al. (2005) and Sigala (2006) adopted a monetary sacrifice perspective in the context of online shopping and mobile services. However, multi-dimensional measures of value vary in terminology, including functional value due to price (Sweeney and Soutar 2001), monetary price (Petrick 2002), economic value (Mathwick et al.,

2001), value for money (Williams and Soutar, 2009); or the distinction between price assurance and unreasonable price (Mayr and Zins, 2012). Despite these terminological differences, the literature has reached consensus that the relative price is assessed with respect to the service/goods received (Mohd-Any, Winklhofer and Ennew, 2015). Given that this domain specification has already addressed the issue of sacrifice in the section on convenience and subsumed the requirement for meaning relating to behavioural sacrifice, specification of price (in the objective sense) only is required to avoid introducing dimensional overlap within the conceptual model.

On this basis the construct analysis in Appendix 1 identified that that the meaning attached to the monetary price construct from the SERV-PERVAL model (Petrick, 2002) is the most suitable construct to support the conceptualisation of VITAE since it has already been tailored for use in a service context. Indeed, SERV-PERVAL builds on the PERVAL model (Sweeney and Soutar, 2001) and is considered suitable for higher order price measurement. The analysis also identified that the monetary sacrifice construct identified by Lin et al. (2005) attempts to include the meaning of a wider sacrifice beyond price; however the items relate to monetary price only. Use of the PERVAL model (Sweeney and Soutar, 2001) required modification for both service and use contexts and was also ruled out accordingly. Therefore:

Proposition 11: Price negatively contributes to the formation of VITAE

3.5.5.2 Perceived Risk

A consumer's evaluation of a 'deal' is a function of benefits, costs and risk (Wood and Scheer, 1996; Chen and Dubinsky, 2003). However, perceived risk is one of the least studied concepts of perceived sacrifice in the marketing literature (Snoj, Korda and Mumel, 2004). The introduction of perceived risk to the marketing literature occurred with the seminal work of Bauer in 1960 (Korgaonkar and Karson, 2007) and is reviewed specifically concerning its relationships with and between perceived quality and value. Broad consensus has been reached: both in the marketing literature; and other literature streams (e.g. fear appeals); that perceived risk is multi-dimensional and conceptualised as a combination of uncertainty and consequences (Snoj, Korda and Mumel, 2004). Risk is integral to consumer behaviour since any purchase decision will produce consequences, some of which cannot be foreseen with any certainty, and some could be unpleasant. Perceived risk is defined as *the consumer's perception of the uncertainty and potential adverse consequences of buying a product or service* (Dowling and Staelin, 1994). Risk therefore is a

subjective anticipation of a loss, or a subjective estimation by a consumer connected with the possible consequences of a wrong decision. From a service perspective, this entails the possibility that the service will not offer all of its expected benefits (Roselius, 1971). Murphy and Ennis (1986) argued that perceived risk was multi-dimensional formed of: financial; performance; physical; psychological and social risks. Financial risk refers to the probability of monetary loss associated with buying or subscribing to a service, which fails to deliver the expected benefits. A consumer's perceived financial risk can be reduced through compensation, refunds, warranties or money-back guarantees (Broydrick, 1998) but cannot be removed entirely (Bearden and Shimp, 1982). Performance (or functional) risk refers to the loss incurred when a service fails to meet a consumer's expectations (Horton, 1976; Simpson and Lakner, 1993) and typically increases in an online environment due to a lack of intrinsic quality cues that the consumer would normally rely on to make a purchase decision. Psychological risk refers to the risk of choosing a wrong service, which may have a negative effect on a consumer's ego. Physical risk refers to the potential harm a wrong service decision or use may have on the self or others. Social risk refers to the risks associated with service choice, which may change the consumer's status among a combination of friends, family or colleagues. Mumel (1999) built on this work and included time risk in the sense that the time spent in searching for a service will be lost if it does not perform to expectation. All six risk elements are rarely incorporated into a single study (Korgaonkar and Karson, 2007) and beyond consensus around risk being a combination of uncertainty and consequences (Snoj, Korda and Mumel, 2004), the literature lacks clarity on these different types of risk, which remain largely context specific.

An individual's assessment of a threat is a function of both the severity of the threat and that individual's vulnerability to it (Rindfleisch and Crockett, 1999). When considering a purchase decision, consumers not only consider immediate situational factors such as price and service, but also the longer-term implications of the ownership of a product or indeed committing to long-term service contracts, which is the case in this context. Therefore future expectations of, as well as current perceptions of benefits and sacrifices require consideration in any conceptualisation of value (Sweeney et al., 1999). Consumers consider potential long-term losses when evaluating value relative to the purchase price. The purchase decision always contains an element of performance concern since perfect information about future performance is never known. These concerns manifest themselves as consequences, which are considered by the consumer to be components of risk (Bauer, 1960) when developing perceptions of value.

Use of the risk construct in the empirical value literature has been mixed. Some multi-dimensional value models have omitted perceived risk (e.g. Zeithaml, 1988; Sweeney and Soutar, 2001; Petrick, 2002; Lin et al., 2005), whereas others have included the construct (e.g. Sweeney et al., 1999; Chen and Dubinsky, 2003). In their conceptualisation of perceived risk in a value model in an electrical appliances (retail) context, Sweeney et al. (1999) considered performance/financial risk only, with social risk being removed from the model (by factor analysis). The authors found empirical support to indicate that perceived risk had a direct negative effect on value, which was stronger than the traditional antecedents of perceived price and perceived quality. In their empirical study in a mobile phone use context, Snoj, Korda and Mumel (2004) sampled 473 students and found that after factor analysis, the five original risk indicators was reduced to three: financial; technical (i.e. performance) and social. Empirically, the five original components of risk consistently reduce to two functional factors i.e. financial and performance (Snoj, Korda and Mumel, 2004; Sweeney et al., 1999). However, dependent on context, social risk may require inclusion (Snoj, Korda and Mumel, 2004). Indeed the more visible the use of the product, the higher the social risk (Bearden and Etzel, 1982).

The perceived risk construct has been extended into the online pre-purchase phase, however there are differing arguments on how the construct should be formulated. Strader and Shaw (1999) argued that it is formed by financial risk, performance risk and privacy risk. Korgaonkar and Karson (2007) argued that two risks, economic (i.e. financial) and psychosocial, are most likely to form the perceived risk construct. This claim is based on the argument that regardless of the online retailer: time; performance; and physical dimensions of risk remain largely invariant. Psychosocial risk is in essence a hybrid of psychological and social risks and relates to how the purchase decision will affect the opinions that other people hold of the individual and can vary with the social conspicuousness and social relevance of the product/service. The authors go on to argue that perceived risk in an online context has two main sources: risk relating to the type of service purchased; and the risk associated with the type of online company. There is currently a gap in the literature concerning the nature of perceived risk in online subscription service contexts. Evidence from the literature suggests that the formation of perceived risk will depend on the use context and the degree of risk perceived in using the service i.e. the extent to which an SST is embedded within the consumer's daily activity and the consumer's vulnerability to that risk. The start point for this study is to include financial and performance risks, which are generalisable from the literature, and relevant to use situations through aspects of service recovery; subscription pricing; changing contractual terms and conditions; technology obsolescence; and the maintenance of privacy and

security. Despite the inclusion of social risk in a use context (Snoj, Korda and Mumel, 2004) and that online services are perceived by the customer to be high risk (Korgaonkar and Karson, 2007), social or psychosocial risk is omitted from the initial conceptualisation in this study. This stance is taken for two reasons: firstly, social or psychosocial risk is context specific. Use of an SST at home or to complete daily tasks from a business computer are less likely to be socially overt in the context of self-consciousness in the presence of other consumers and therefore social risk is unlikely to apply. Secondly, social risk is often removed at the quantitative stage of studies (e.g. Sweeney et al., 1999). Note that security and privacy risks are handled as a separate construct in this conceptualisation.

The construct analysis identified that the perceived risk construct (Sweeney et al., 1999) encapsulated performance and financial risk and was generalisable with minor modifications to an online subscription service context. Therefore:

Proposition 12: Perceived Risk negatively contributes to the formation of VITAE

Proposition 12 constitutes the final outcome component in the holistic conceptualisation of VITAE. The next section examines the inclusion of resource integration within the wider conceptual model to address the process element of the VITAE conceptualisation.

3.6 Resource Integration Components

Resource integration in the context of this conceptualisation is intended to capture not only how the individual engages with the firm's value proposition in order to co-create value, but also how value is co-created by an individual actor as they engage with their wider social network. This engagement includes the actors' own ability to engage with the proposition, which includes both personal skills and their motivation to do so. These elements form the process component in the overall conceptualisation. The following sections position resource integration and draw on S-D Logic before conceptualising its relationship to VITAE. Whilst there is limited empirical literature to support the conceptualisation of the actors' social network, literature does exist relating to the individual actor's personal skills and motivation. This section considers potentially relevant constructs before arguing that elements of the consumer readiness construct are sufficient to capture the effect of the individual's personal skills and that the participation construct requires inclusion as a control variable only.

3.6.1 Positioning Resource Integration Within S-D Logic

The body of literature surrounding resource integration and value co-creation in service research has expanded in recent years, however it has primarily been limited to conceptual and theoretical contributions and the empirical understanding of resource integration remains incomplete (Edvardsson, Skalen and Tronvoll, 2012). Moreover, much of the extant empirical research on value has considered individual customer value independently of other stakeholders and has ignored the effects of the latter (Graf and Maas, 2008; Kelleher and Peppard, 2011) with some notable exceptions, including the Nordic School of Marketing and S-D Logic. Unsurprisingly Edvardsson et al. (2012) specifically call for further research in self-service contexts. Calls for further research into the concept of consumers as integrators of resources have been in existence for some time. Vargo and Lusch (2006, p284) suggested that *"like most aspects of S-D Logic, this resource integration concept needs refinement and elaboration",* while Arnould, Price and Malshe (2006, p95) point out that *"Much remains to be done to systematise our understanding of consumers' operant resources…..firms must understand how consumers juggle their own and firm resources in order to compensate for specific types of operant resource deficits"*. This thesis intends to make an original empirical contribution to knowledge by identifying the actors that support the resource integrator in the co-creation of value and the subsequent measurement of the effect (if any) on VITAE within an online subscription service context.

The term resource-integration is used in this thesis, however other terms have been used and include: use-initiation (Szmigin, 2003) and resource interaction (Arnould, Price and Malshe, 2006) to convey the ability of consumers to employ their resources, individually, or collectively as co-consumers, to determine and enhance their own consumption experiences (Baron and Harris, 2008). Resources have also been categorised in different ways, Vargo and Lusch (2004) use the operant and operand distinction. Hunt and Derozier (2004) introduced five categories of resources: physical product or raw materials; human (skills and knowledge of customers and employees); organisational (routines, cultures, competencies); informational (knowledge about markets, competitors and technology); relational (relationships with competitors, suppliers and customers). This conceptualisation draws upon S-D Logic to theoretically frame the concept of resource integration and focuses, from the individual perspective on operant resources. Use of S-D Logic also draws out that any conceptualisation of the process components should accept two key premises: incorporation of the effect of the individual's operant resources; and those of their network, which are discussed below.

Value is co-created, contextual and meaning-laden. Resources are integrated and operated on during the value co-creation process. The outcome is the involved actors' assessment of value in their respective contexts (Vargo and Lusch, 2004; 2008). The intended and actual resource integration can vary; this variation can have a positive or negative effect on the outcome i.e. value (Edvardsson et al., 2012). Note that this context does not emphasise resource integration at the episode level, rather accumulated experience is derived from a combination of many episodes. There are two main resource categories: operand (or static) and operant, which are dynamic and refer to the actors' knowledge and skills. Operant resources are used on physical products, information or processed materials. Consequently this conceptualisation accepts that inclusion of the effect from the actor's personal knowledge and skills (i.e. operant skills) are required to conceptualise a resource integration construct. However, *"little is yet understood about how consumers integrate their operant resources and those of co-consumers in the course of defining experiences and creating value*" (Baron and Harris, 2008, p.113) despite the literature on consumer participation recognizing that consumers have a wide range of personal resources, which can be actively used in value creation thirty years ago (Bowen, 1986; Johnston and Jones, 2003; Kelley et al., 1990; Rodie and Kleine, 2000). Within this literature, classifications of these resources included: mental, physical and emotional (Rodie and Kleine, 2000), and the level of input varies dependent on the degree of consumer involvement and role performance (Bitner et al., 1997). Resource integration in relation to operant resources has also been considered in peer production, or value created through consumer-to-consumer (C2C) exchanges (Grove and Fisk, 1997; Gruen et al., 2007; Harris, Baron and Parker, 2000; Nicholls, 2005). The next section considers the wider social network component of resource integration.

Actors and their available resources form a value-creating network or service system (Vargo and Lusch, 2004, 2008). All social and economic actors, including organisations are resource integrators (Lusch et al., 2010) and firms exist to create value propositions with market potential. To accomplish this, companies must address value creation in networks. Edvardsson et al. (2012, p.90) define an actor as: "*a human being or a group of human beings with a common goal (i.e. a company or an organisation*)". The understanding of value creating systems is in its early stages in the literature. To date they have been described in different ways: as constellations (Normann, 2001); value networks (Lusch et al., 2010); a configuration of resources (Spohrer et al., 2007); and service ecosystems (Vargo and Lusch, 2011). However, Edvardsson et al. (2012) point out that the focus has been on the resources themselves e.g. operand or operant resources. When in fact to co-create value, customers, employees, partners and other actors in the broader social network require

a support system to integrate and operate upon resources. Value is created collaboratively through interactive configurations of resources and actors i.e. service systems (Vargo et al., 2010). The authors go on to argue that all beneficiaries/actors become resource integrators and value co-creators in a complex joint endeavour. Value in the experience cannot be restricted to a single dyadic relationship between an individual service customer and a service organisation. The experience occurs within a value constellation of multiple firms, customers, and other actors with a service system or network (Gummesson, 2008; Vargo and Lusch, 2008). Indeed, few organisations actively consider how they might better engage with wider stakeholders to develop more relevant value propositions (Frow and Payne, 2011). Consequently, the second premise accepted by this conceptualisation is that the resource integration construct must include the effects of the actor's wider social network on value co-creation.

Despite the different descriptions of value creating systems, most recent studies have adopted the term service system, which is defined as: *"value co-creation configurations of people, technology, value propositions connecting internal and external service systems"* (Spohrer et al., 2007, p.72). Lusch et al. (2010) and Vargo and Lusch (2011) expanded upon the service system concept to include service ecosystems, which moved beyond aggregations of relationships (i.e. networks) to dynamic systems, which involve self-contained and self-adjusting systems of resource-integrating actors connected by shared institutional structures. Service ecosystems are defined as: "*a spontaneously sensing and responding spatial and temporal structure of largely loosely coupled value proposing social and economic actors' interactions through institutions and technology to (1) co-produce service offerings (2) exchange service offerings; and (3) co-create value"* (Lusch et al., 2010, p.31). This conceptualisation accepts the Vargo and Lusch (2011) definition of the actor's wider social network as a service ecosystem.

The context also influences value co-creation, markets and service through its influence on resources (Edvardsson et al., 2012). Chandler and Vargo (2011, p.38) reinforce the close link between the actor's context and resources by stating: "*how actors draw upon one another as resources is critically dependent on the context in which they are embedded",* which implicitly refers to the social context (Edvardsson, Skalen and Tronvoll (2012). Moreover, individually determined social contexts are not stable and may affect value in the experience (Helkkula, et al., 2012). Edvardsson et al. (2012) argue that studies to date have focused on the customer perspective (i.e. knowledge skills); and resources in action (i.e. integrating the firm or customer's resources, interactions and activities in the context of processes). Resources are described as isolated entities,

which excludes social contexts. The authors theoretically expanded the concept of value-in-context and coined the term 'value-in-social-context', positioning value as socially constructed. Despite significant conceptual and theoretical progression in the literature, social contexts that influence actors when integrating resources and co-creating value, have received little explicit attention (Edvardsson et al., 2012).

Aligned with S-D Logic's FP 10, which established the premise of value-in-use experienced in a specific context (Vargo and Lusch, 2008), the term experience (through a resource integration lens) refers to the customer's personal and context specific experiences of the resource integration and value-co-creation process and the outcome (Edvardsson et al., 2012). Contexts, practices, employees and customers all participate in the service system and consequently all exert a cumulative impact on the customer experience (Johnston and Clark, 2008; Meyer and Schwager, 2007). Therefore the effect of the social network and the individual's operant resources must be antecedent to the experience.

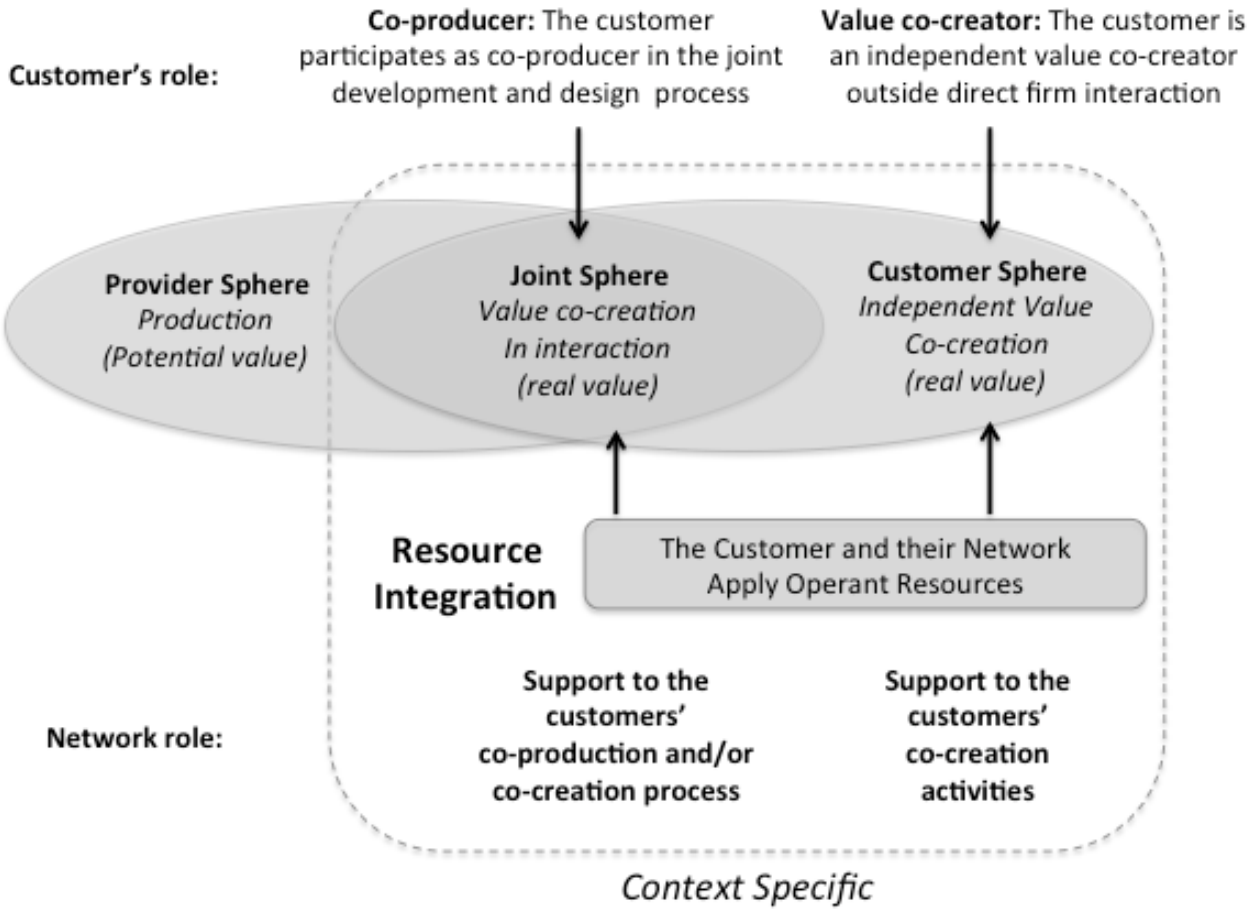
As a prerequisite to value co-creation, actors must engage in service-for-service exchange and in related interactions that lead to resource integration. Consequently, without actor engagement, no resource integration can occur and no value can be co-created. However, whereas value co-creation is difficult to observe empirically, actor engagement and related resource integration is observable and thus more likely to be designable and manageable (Storbacka et al., 2016), moreover *"consumers can and do play the role of resource-integrators"* (Baron and Harris, 2008, p114). Despite being observable and measurable, progression of the literature to explore value in a social networking context from an empirical perspective remains in its infancy. There are numerous gaps in the literature with respect to sufficient empirical data to support the theoretical work in this area (see section 3.6.4).

The qualitative phase of this investigation intends to identify the actors in the wider social network, establish how they interact and whether these actors contribute to the co-creation of value within an online subscription service context. The intent is to support the development of a resource integration construct within the wider conceptualisation and to inform the design of the empirical VITAE model. The next section reviews the operant skills of the individual and positions the resource integration conceptualisation within the current value co-creation/co-production narrative.

3.6.2 Conceptualisation of Resource Integration

Baron and Warnaby (2008) point out that most of the current contributions to the S-D Logic of marketing are at the conceptual level. Figure 7 extends the Grönroos and Voima (2013) value creation landscape framework to operationalise resource integration.

Figure 7: Positioning Resource Integration Within The Value Creation Landscape



(Source: Adapted from Grönroos and Voima, 2013, p.136)

Customer resource integration refers to the processes by which customers deploy their resources as they undertake bundles of activities that create value directly or that will facilitate subsequent consumption/use from which they derive value (Arnould, 2008; Baron and Harris, 2008). The customer applies their personal skills and knowledge (i.e. operant resources) to co-create value directly with the firm in the joint sphere and also to their own indirect co-creation activities, which are independent of the firm in the customer sphere. In the customer sphere value is co-created with the customers' service ecosystem, which is dynamic and changes with the specific context. During resource integration in the joint sphere, the customer can play a variety of roles including designer, manufacturer, chooser, order processor, negotiator, payer, consumer/user, quality controller, maintainer, repairer, and disposer (Frow et al., 2010; Storbacka and Lehtinen, 2001) and can also

draw upon their service ecosystem (or network) to support direct co-creation activities (i.e. asking friends or colleagues how to perform a specific technical activity). When the user has insufficient personal resources, they turn to resources afforded by organisations and other network actors (Baron and Harris, 2008; Hibbert et al., 2012). Customer resource integration effectiveness is defined as the '*customers' proficiency in deploying resources as they engage in value-generating processes'* (ibid, 2012, p.248). In an online subscription service context, the degree of technical skill the individual possesses regulates the degree of support required from their network. VITAE is therefore directly affected by how capable the actor is at combining their own operant skills and/or ability to co-create value with those of their network. This conceptualisation therefore recognises that resource integration is captured via the individual user's personal skills (i.e. technical skills) and those of their network. To identify the specific operant resources that could be deployed in Figure 7, the Arnould, Price and Malsche (2006) classification of operant resources can be drawn upon to support the VITAE conceptualisation and is shown in Table 11.

Table 11: Operant Resource Classifications

Operant Resource Classification	Sub-Classification
Physical Resources	Physical and mental endowment: energy, emotion, strength
Social Resources	Family relationships Consumer communities Commercial relationships
Cultural Resources	Specialised knowledge/skills History and Imagination

Source: Arnould, Price and Malsche (2006)

Baron and Warnaby (2008) observe that the consumer has authoritative control over operant resources, which include: physical, cultural and social resources. Physical resources include: mental endowment, energy, strength and emotion. Social resources include: family, consumer communities and commercial relationships. Cultural resources reflect the personal skills of the individual and include specialist knowledge, history and imagination. Arnould, Price and Malsche (2006) argue that these operant resources influence how the consumer engages in resource integration. Baron and Warnaby (2008) extended the Arnould, Price and Malsche (2006) conceptual framework and found empirical support in a study undertaken at the British Library. Their findings established that: individual customers possessed stocks of operant resources

(physical, social and cultural) that can be integrated in partnership with the firm; the framework was applicable to both individuals and business users; a resource integration lens provides organisations with a framework to consider perceived customer resource deficiencies; and the communications potential of employing the resources of existing customers, as relationship-building options (Baron and Warnaby, 2008). The wider VITAE conceptualisation draws on social and cultural resource classifications only. Note that the history and imagination elements within cultural operant resources are handled in the VITAE conceptualisation within accumulated experience. Validation of the relevant social resource sub-classifications will be conducted in the qualitative phase. Physical resources are not the focus as the context is routine and set within a small business/home user online environment where specialist IT skills are required. The next section investigates the domain of cultural resource components.

3.6.3 Operant Cultural Resource Components

The cultural operant resources required to use Internet-based self-service technologies are predominantly specialist Information Technology skills. This section reviews the Technology; eCommerce and SST literatures to specify which operant resource components are relevant to the conceptualisation of resource integration in this thesis.

Early research identified that consumers were reluctant to embrace technology. This reluctance was in part a consequence of differing motivations and an insufficient understanding (by firms) of how value is co-created across the consumer technology interface (Meuter et al., 2005). At the time very little was known about how to engage the active consumer in co-production with an online value proposition. Indeed, between 1979 - 2000, 23 research articles on co-production were published, but only 3 were empirical (Bendapudi and Leone, 2003). Today the consumer has advanced at pace embracing technology and developing a greater reliance on Internet SSTs. This reliance comes with higher expectations of choice, value, customisation and convenience (Stockdale, 2007). However, despite almost two decades of SST evolution, firms still struggle to build strong and lasting co-production/co-creation relationships (Stockdale, 2007). The next section reviews the individual's operant skills that underpin this reluctance to engage with technology and to develop co-production/co-creation relationships.

Gupta and Kim (2007) reviewed the electronic commerce literature focusing on the major information systems journals. Various contexts were examined including online stores, ebookstores, online banks, retail sites, sports and video shops. The authors found that the majority

of studies focused on the category of search products, within which quality varied minimally. These studies were also predominantly underpinned by the expectation-disconfirmation model or the technology acceptance model (or their variants), which have previously been considered as unsuitable and ruled out of this domain investigation. Consequently this literature stream was removed from further consideration. The next section reviews the technology literature.

The literature on adoption of new technologies and people-technology interactions posits that consumers simultaneously have favourable and unfavourable views about technology-based services. Extensive qualitative research undertaken by Mick and Fournier (1998), into users' reactions to technology, identified eight technology paradoxes with which consumers have to cope: control/chaos, freedom/enslavement, new/obsolete, competence/incompetence, efficiency/ inefficiency, fulfils/creates needs, assimilation/isolation, and engaging/disengaging. These paradoxes imply that technology triggers both positive and negative feelings (e.g., for the competence/incompetence paradox, technology facilitates feelings of intelligence or efficacy, and it can also lead to feelings of ignorance or ineptitude). Although positive and negative feelings about technology may coexist, the relative dominance of the two types of feelings is likely to vary across individuals. Therefore, users can be positioned along a technology-beliefs continuum anchored by strongly positive at one end and strongly negative at the other. Positioning on the continuum correlates with the users' propensity to embrace and employ technology (i.e. their technology readiness). Support for this premise can also be found from Cowles (1989, 1991); Cowles and Crosby 1990).

Therefore a combination of positive and negative feelings about technology underpins the domain of technology readiness. Whilst the positive feelings drive users towards new technology, the negative feelings hold them back (Parasuraman, 2000). The dichotomies in the eight technology paradoxes (Mick and Fournier, 1998) reflect general facets of potential drivers and inhibitors of technology readiness. Other studies (e.g., Davis, Bagozzi, and Warshaw 1989; Dabholkar 1994) also identified specific consumer beliefs and motivations that enhanced (e.g., perceived ease of use, fun) or inhibited (e.g., perceived risk) adoption or use of new technologies.

These consumer beliefs are subjective to the individual and have been categorised in various ways: self efficacy and its influence on technology adoption (Ellen, Bearden and Sharma 1991; Hill Smith and Mann 1987); the need for human interaction alongside technology (Dabholkar 1996); the need for cognition in Internet shopping (Jones and Vijayasarathy, 1998); the effect of traits e.g.

impatience and self-esteem on perceived quality (Anselmsson 2001); technology readiness (Parasuraman 2000); consumer readiness (Meuter et al., 2005): the capacity and willingness of customers as predictors of adoption (Walker et al. 2002); and customers' attitudes toward the technology as a means to predict behavioural intentions (Curran, Meuter, and Surprenant 2003; Dabholkar and Bagozzi 2002; Plouffe, Vandenbosch, and Hulland 2001). Building on Dabholkar's original (1994b; 1996) research, Dabholkar and Bagozzi (2002) developed a model to evaluate which personality characteristics determined consumer interest in technology-based services. The authors identified that personality traits were at the heart of consumer attitude formation and behavioural intention. Four consumer traits emerged with direct relevance to technology-based self-service: self-efficacy; inherent novelty seeking; need for interaction with a service employee; and self-consciousness, which were drawn from a variety of discussions on consumer trials of new technologies (e.g. Agarwal 2000; Breakwell, Fife-Schaw, Lee and Spencer 1986; Dabholkar 1996; Davis 1986; Ellen et al. 1991; Hirschman 1980). Parasuraman (2000) built on these studies to develop a scale to measure technology readiness. The technology-readiness construct refers to a user's propensity to embrace and use new technologies for accomplishing goals in home life and at work. The construct is viewed as an overall state of mind resulting from a gestalt of mental enablers and inhibitors that collectively determine a person's predisposition to use new technologies. Technology readiness has four dimensions, which include: optimism and innovativeness (classed as drivers of technology readiness); and discomfort and insecurity (inhibitors).

The literature review concluded that the research into consumer use of SSTs had a primary focus on individual differences (e.g., Parasuraman and Colby 2001) and on attitude models to predict intended behaviours (e.g., Curran, Meuter, and Surprenant 2003; Dabholkar and Bagozzi 2002); or adoption/trials (e.g. Meuter et al., (2005). The results of these studies have often been inconclusive or contradictory (ibid, 2005). The most suitable construct to operationalise operant resources in an internet-based SST subscription context is the Meuter et al. (2005) consumer readiness construct. The rationale for this conclusion is based on: 1) it is the first and most comprehensive investigation into understanding the drivers that underpin SST co-production/co-creation relationships. 2) Whilst adoption and trials focused, the underlying theory as well as the practical lessons learned can be extended to other co-production/co-creation situations in which consumer readiness for a significant behaviour change may be equally important i.e. Internet use situations. 3) The ability to provide marketing managers with a concise and actionable set of factors for directly influencing SST behaviour. The consumer readiness constructs can be actively managed before an SST is introduced as well as after it is fully operational. This is important because the innovation

characteristics and demographic factors that have been previously shown to influence use are: not readily manipulated (e.g., age, sex); produce inconsistent findings; or are easily managed only before the SST is introduced e.g., complexity and trial-ability (Meuter et al., 2005) 4) Both users and non-users of the services were included in the study.

The next sections review the consumer readiness construct for its suitability to operationalise the individual's operant cultural resources in an online subscription context. The review considers related but peripheral constructs and either subsumes any overlapping meaning or removes irrelevant constructs from the conceptualisation.

3.6.3.1 Consumer Readiness

Consumer use of a new SST implies co-creation of the service and requires customers to engage in new behaviours. The consumer readiness construct developed by Meuter et al., (2005) is a condition or state in which a consumer is prepared to use an innovation. Successful SST co-creation relies on customers knowing what is expected of them (role clarity), being motivated to engage in desired behaviours (motivation), and having the necessary knowledge and skills (ability) to fulfil their responsibilities (Dellande, Gilly, and Graham 2004; Schneider and Bowen 1995).

Meuter et al., (2005) based the construct on a framework to improve employees' performance from the human resource and industrial psychology literature streams (Bowen 1986; Schneider and Bowen 1995; Vroom 1964). Consumer readiness is conceptualised as a combination of role clarity, motivation, and ability.

Role clarity is important during initial usage of an SST where a new set of co-creation behaviours for the consumer is required. In contexts where accumulated experience is in place, role clarity is assumed to become clear over time. Failure of the user to embrace the system would inevitably lead to a decision not to re-subscribe to the service at the end of the contractual period. Consequently the construct is not relevant to the context of interest. Similarly, whilst motivation is a key predictor of usage of technology-based products and services in the adoption and early use phases (Barczak, Ellen, and Pilling 1997), in a routinized context where accumulated experience is in place, the concept is not relevant. The user has had multiple years in which to establish the motivation to use the service and to develop experiential value perceptions over time. A lack of motivation would also result in a decision not to re-subscribe to the service. Note that motivational aspects relating to participation are discussed later in this section.

This leaves the ability construct, which is relevant to this conceptualisation. Ability is defined as *'having the necessary skills and confidence required to perform a task'* (Meuter et al., 2005, p.64) and is supported by other research (e.g. Ellen, Bearden, and Sharma 1991; Jayanti and Burns 1998). Ability refers to what an actor 'can do' rather than what they 'want to do' or 'know how to do'. The ability construct is based on self-efficacy research, which has shown that competent behaviour in a situation requires both specific skills and beliefs of self-efficacy. Low self-efficacy is more likely with complex tasks, however relatively simple tasks still create feelings of inability (Ellen et al., 1991). Self-efficacy refers to an individuals' assessment of their ability to perform a behaviour (Bandura, 1977; 1994); is a major factor that underlies intrinsic motivation (Davis et al 1989); and indirectly influences behavioural intention (Bandura, 1994). These effects have been empirically supported across different contexts in predicting decisions to use technologies (Ellen et al. 1991). User confidence in the ability to engage in a task also influences behaviour within computer-mediated environments (Hoffman and Novak, 1996). Broadly the technology literature agrees that self-efficacy is a strong predictor of behaviour (Meuter et al., 2005). When users' perceive they are incapable of performing a task, they will not engage in the behaviour, despite acknowledgement of a better alternative. Use of consumer readiness as a co-creation framework provides a lens through which firms can develop, adjust, and evaluate their operational procedures, technology friendliness, human resource practices, and performance criteria (Bettencourt et al., 2002). Effective co-creation can increase the likelihood of SST service success, customer satisfaction, and can present a competitive opportunity for firms (Meuter et al., 2005). More recently, Dong et al. (2015) built on the Meuter et al. (2005) research and conceptualised perceived ability as the customer's perceived knowledge and skills that enable them to participate effectively in co-creation. The authors argued that perceived ability was of particular importance in contexts where high levels of collaboration were required; within which the customer assumes the primary responsibility for service production, and the role of the service provider is limited to one of facilitating and supporting i.e. platform and tool provision. These conditions are in place in an online subscription service context.

In conclusion then, the ability construct developed by Meuter et al. (2005) is deemed suitable to capture the required meaning associated with the individual's cultural operant resources in the context of interest. Ability has the same meaning as technical competence in an online subscription service context and is referred to as such from this point onwards. Note that the perceived control construct has not previously been discussed and relates to the individual. Appendix 2: Cultural Operant Resources provides the rationale as to why the construct does not form part of the resource integration conceptualisation. The next section discusses the user's operant social resources and

focuses on how the network is drawn upon to complete activities when individual technical skills are insufficient i.e. inability is replaced by network support.

3.6.4 Operant Social Resource Components

Drawing on S-D Logic FP 9, which states that all social and economic actors are resource integrators (Vargo and Lusch, 2016), this thesis has already established that value creating interactions are no longer limited purely to the customer and supplier but also include members of the customer's wider social network e.g. friends, family, fellow customers, shareholders, external experts and opinion leaders, partners within the supply chain and other stakeholders (Tynan and McKechnie, 2009). Whilst these actor entities have been categorised as social resources and grouped into three sub-classifications that include: family, consumer communities and commercial relationships (Arnould, Price and Malsche, 2006); as previously established there remain significant empirical gaps in the literature from a resource integration perspective concerning online subscription services, which include answers to the following questions: 1) who are the other actors in the user's social network? 2) How do these actors interact? 3) What affect does the actor's social network have on VITAE? 4) Which components of VITAE are influenced by the actor's social network (and to what extent)? An important contribution made by this thesis is to provide answers to these questions, however *"little is yet understood about how consumers integrate their operant resources and those of co-consumers in the course of defining experiences and creating value"* (Baron and Harris, 2008, p.113). The next section creates the argument to form hypotheses, which will be refined further in the qualitative phase of the investigation. Cadogan and Lee (2013) point out that *'when antecedents' relationships with endogenous formative variables are modelled at the formative latent variable level rather than the formative indicator level, theory construction can verge on the superficial and empirical findings can be ambiguous in substantive meaning"* (p.233), Hypotheses are developed at the component level Note that hypothesis generation is discussed separately at the end of this section. The next section discusses participation and why it is used in a control role in this thesis.

3.6.5 Participation

The concept of customer participation is well established in the literature (Bendapudi and Leone, 2003, Dong et al., 2015). Customers co-create online service experiences directly by participating with the features and functionalities of websites (Prahalad and Ramaswamy, 2004) and additionally as they think, act and sense when using these features (Gummerus, 2013). Customer participation has been connected to: customer satisfaction with service delivery (Ennew and Binks 1999),

contribution to quality (Sigala, 2006), self-service bias (Bendapudi and Leone, 2003), new product development processes (Fang, 2008; Shaw et al., 2011), and customer loyalty (Auh et al., 2007). Researchers have also investigated customer participation from the perspective of human-to-human interaction, and online settings (Wang and Fesenmaier, 2004; Casaló, Flavián, and Guinalíu 2010). Participation has recently received new momentum from the attention given to co-creation of the value experience (Vargo and Lusch, 2004). Indeed, Prebensen et al. (2013) examined tourists' motivation and involvement as antecedents to perceived value of their destination experience, implying that tourists co-create their own value experience, which is supportive of this conceptualisation's stance to specify resource integration as an antecedent relationship to VITAE. More recently researchers have started to examine how customer participation affects value perceptions in self-service technology environments. However, these studies were either exploratory (Heinonen, 2009) or orientated towards service recovery (Dong, et al., 2008). Mohd-Any, Winklhofer and Ennew (2015) linked participation to their formative conceptualisation of e-value in a tourist context. The authors acknowledged the important role the customer plays in co-creating their value experience in an SST context and drew upon TAM (Davis, 1989), Diffusion of Innovations (Rogers, 2003) and Technology Readiness (Parasuraman, 2000), which attempted to understand consumer behaviour relative to technology adoption, acceptance, and usage.

Customer participation (CP) is typically viewed as a behavioural concept and is defined *as the degree to which a customer contributes effort, preference, knowledge, or other inputs to service production and delivery* (Chan, Yim, and Lam 2010). With the proliferation of SSTs CP has become an important tool for firms to improve productivity (Vargo and Lusch, 2004). The general theoretical understanding in the literature is that CP leads to enhanced productivity, improved service quality, and increased customer satisfaction (Dong et al., 2015; Bitner et al., 1997). However, empirical research on the effect of CP provides inconsistent findings (Meuter et al., 2005). Also definitions have generally been context specific e.g. service failure (Dong et al., 2008), or involvement in a firm's new product development process (Fang, 2008; Shaw et al., 2011). S-D Logic refers to CP as co-creation activities. Customers create experiences when engaging in these activities (Prahalad and Ramaswamy, 2004), and consequently reflect on these experiences (Gummerus, 2013); these then result in value assessments (Helkkula and Kelleher, 2010). Consequently actors form a perception about both the co-creation/CP process in addition to the outcome experience Mohd-Any, Winklhofer and Ennew (2015). Organisational behaviour research distinguishes between actual and perceived participation. Perceived participation is defined as "*the extent to which the individual feels that he or she has influenced the decision*"

(Vroom and Jago 1988, p. 15) and can sometimes be higher than actual participation since customers believe that their impact on the decision is substantially greater than it actually is.

Extant empirical research typically evaluates participation via multi-item measures, using Likert-type scale response format and therefore only capture perceived participation (Chan et al., 2010). Heinonen's (2009) research is a notable exception in an SST context, which elicited responses on the use of specific features with a yes/no response format. The sum of the features employed represented an actual measure of participation (see also Barki and Hartwick, 1994). Note that Heinonen's approach supports the approach taken in this thesis with respect to the Network construct. Yes/no answers will be used to identify Network participants and a summated scale used in the questionnaire to derive an actual measure of Network effect. Participation has also been linked to multi-dimensional value models from the perspective that greater user participation has a positive influence on value. In an online co-creation context, Mohd-Any, Winklhofer and Ennew (2015) argued that more participative users found the website easier to use and consequently devoted less cognitive effort in exploring its features. The authors found that (1) the extent to which customer participation affected the e-value experience varied greatly in magnitude across value dimensions, and (2) there are distinct differences in the effects of actual and perceived customer participation. Customers that make more use of features (i.e. actual participation) gained more utilitarian/control value and also derived more emotional value from their most frequently used travel website. Only utilitarian/control value was predicted better by actual website usage compared to perceived participation. The authors also found that increased levels of perceived participation better explained users' emotional and social value perceptions. Note that the different nuances between the actual and perceived approaches to measuring the effect of the Network on VITAE will be discussed further in the limitations and future research direction section.

To understand the likely effect of online participation on a routinized online subscription service context, the effect of participation on value requires observation though an online relationship lens. Payne, Storbacka and Frow (2008) argue that from a relationship perspective, S-D Logic requires that the relationship between the consumer and the firm be viewed as "*a longitudinal, dynamic, interactive set of experiences and activities performed by the provider and the customer, within a context, using tools and practices that are partly overt and deliberate, and partly based on routine and unconscious behaviour"*. (p.85). Indeed routine tasks that are performed unconsciously may dilute the effects of participation or be irrelevant in use situations (Zeithaml et al., 2002). Therefore, this domain specification acknowledges that participation is likely to have a limited

effect on VITAE in a routinized context. Moreover the definition of CP introduces clear overlap in meaning with technical competence discussed earlier. However, use of advanced system functionality may have a different effect on VITAE, than basic use. Indeed, participation may underpin the user's resource integration effectiveness. Consequently the conceptualisation will restrict the use of the construct to a control role to observe whether the use of basic and/or advanced functionality influences VITAE. The next section argues that there is sufficient literature to support hypothesis generation, which is conducted at the end.

3.7 Hypothesis Generation

Drawing on S-D Logic FP1, which states that service is the fundamental basis of exchange (Vargo and Lusch, 2008), this literature review has already established that value is co-created within systems of service exchange (Akaka et al., 2015), which include resource-integrating, reciprocal-service providing actors co-creating value through holistic, meaning laden experiences in nested and overlapping service ecosystems (Vargo and Lusch, 2016). It has also been established that 1) the user's own activities effect their value experience in online environments (Mohd-Any, Winklhofer and Ennew (2015), which includes both their technical competence and their network in an online subscription service context 2) resource integration is both separate from VITAE itself and antecedent to it.

The next stage of the conceptualisation requires discussion of the underpinning literature to establish the relationships between resource integration capability (i.e. the actor's technical competence and their network) and the components of VITAE. It has already been established that a combination of positive and negative feelings about technology underpins the domain of technology readiness. Whilst the positive feelings drive users towards new technology, the negative feelings hold them back (Parasuraman, 2000). However, there is limited literature to draw upon to substantiate whether resource integration relationships with value in the experience are positive or negative, or indeed whether these relationships exist between, zero, one or more components of value in the experience. The next section links the available evidence from the literature to justify the development of hypotheses.

Early work in the consumer behaviour field indicated that the basic costs of consumption include money, time and effort (Downs, 1961). In an equitable exchange, the more effort one party contributes, the greater the outcome expected (Oliver and Swan, 1989). Therefore the greater the degree of individual skills contributed to the co-creation of value the more positive the result

expected. Indeed, a key reason for the proliferation of Internet SSTs is that they enable consumers to reduce their dependency on service providers (Meuter et al., 2000, 2005). If the effect of the user's personal resources combined with their network's contribution did not outweigh the alternative then the user would not subscribe to the service. Therefore the combined effect of the individual actor's personal technical skills and their network upon the relevant constructs that form VITAE are likely to be generally positive (or the inverse for sacrifice components). Echeverri and Skalen (2011) support this premise arguing that interactive value formation process entered into by the firm and the customer can be creative or destructive (i.e. generally positive unless the firm performs poorly). Further clarity can be found from the SST literature. Focus group findings from the National Technology Readiness Survey (NTRS) indicated that when considering adopting or trialling a SST, users reacted positively to themes relating to flexibility, convenience, efficiency, and enjoyment. They reacted negatively towards security concerns, risk of obsolescence, impersonalisation, and lack of control (Parasuraman, 2000). These findings were positioned through a technology readiness lens and the degree of positive or negative feelings towards each theme were underpinned by the user's level of confidence or apprehension (i.e. their personal skills combined with an expectation of their network contribution). The NTRS findings not only validate which areas within the domain of VITAE could be influenced by resource integration components, but also point towards whether these relationships are likely to be positive or negative.

Learning how to be a capable resource integrator is a customer-controlled process by which they build their capacity to be effective resource integrators (Hibbert et al., 2012). Indeed, it has already been established that when insufficient personal resources are available, users turn to resources provided by organisations and other network actors. The themes from the NTRS were also consistent with the notion that customers have positive feelings as well as apprehensions about technology (Parasuraman, 2000). Less capable integrators are likely to have a lower level of technical understanding, feel more apprehension and need to rely more on their network to co-create value effectively. Technical competence has already been defined as having the necessary skills and confidence required to perform a task, therefore the more able and confident a user is, the more effective an integrator, and the higher the likelihood they can associate with these positive themes and mitigate the apprehension (i.e. negative links) associated with sacrifice dimensions (e.g. security and privacy, risk and price) sufficient to then engage with the service. Note that access to the network may not always be available for less capable integrators and decisions may need to be made without support. Ineffective resource integrators with a low level of ability and confidence are more likely to be apprehensive about using the SST (Wang et al., 2013), will question whether

they can achieve the positive benefits and are less likely to make a positive link to the benefit related themes. It follows then that the more capable the integrator the larger the effect on the relevant constructs that form VITAE (and vice versa). In support of this argument, Wang et al., (2013) found empirical evidence in an SST context that as a user accumulates experience the anxiety associated with initial system use reduces and confidence increases, which has a positive influence on continued SST use. Put another way, as the user becomes a more effective resource integrator the more positive the effect on VITAE.

Further empirical support can be found in the recent study by Mohd-Any, Winklhofer and Ennew, (2015) which investigated co-creation relationships in travel websites and their effect on e-value. Whilst the study did not conceptualise resource integration it did position participation as antecedent to value in a formative conceptualisation and includes the effects of participation on e-value. The findings from their research showed that a customer's participation level positively influences: 1) utilitarian value perceptions 2) emotional value perceptions 3) social value perceptions 4) value-for-money perceptions and 5) is inversely related to their perception of cognitive effort. These findings enable the inference that if these relationships have been supported for participation, which is also part of this conceptualisation (albeit in a control role), then the same relationships can be inferred for other resource integration components.

Finally support for the deduction of hypotheses can be found in the co-creation literature. Social exchange theory posits that consumers investing additional effort into an activity are motivated by the expected returns (Blau, 1964). Indeed the literature on customer motives to co-create value confirms that customers expect different benefits in return for co-creation (Verleye, 2015). Both Hoyer et al. (2010) and Etgar (2008) identified three broad categories of expected co-creation benefits: economic benefits (referring to the reduction of risks associated with products or services not performing as expected and compensation in line with effort contributed; social benefits (i.e. opportunities for social contact and improved status and/or social esteem; and psychological benefits (referring to enjoyment, fun, excitement, learning and mastering new skills/techniques). Nambisan and Baron (2009) drew upon the uses and gratification framework to argue that customers who co-create in virtual environments expect: hedonic benefits; cognitive benefits (i.e., knowledge about products, services, and technologies); social benefits; and personal benefits (i.e., status and self-efficacy). Füller (2010) reviewed the virtual co-creation literature and identified similar customer expectations, including: intrinsic playful tasks (i.e. hedonic benefits); opportunities to keep up with new ideas and develop skills (i.e. cognitive benefits); opportunities to connect with

like-minded people (i.e. social benefits); and/or self-efficacy and recognition (i.e. personal benefits). Füller (2010) broadened the list of expectations to include pragmatic benefits i.e. solutions that address personal requirements more effectively; and economic benefits in the form of monetary rewards i.e. compensation in line with effort contributed. Building on this work (Verleye, 2015) found a positive link between customer role readiness and connectivity, and the following components of the co-creation experience: hedonic, cognitive, social, personal, pragmatic and economic, which aligns with the majority of the VITAE dimensions in this thesis. Verleye's use of the customer role readiness construct is identical to the consumer role readiness construct specified by Parasuraman (2000), which is referred to earlier in this conceptualisation (but includes all components). Connectivity is defined as *'the availability of help from other customers'* (p.9), which reflects a narrower definition of the actors network than posited in this conceptualisation, but nevertheless positions the link between the network and value components and the positive direction of that link. Indeed co-creation experiences are not only affected by the co-creation process itself, but also characteristics of the co-creation environments, which include the connectivity within the user's network and the skills of the individual co-creation actors i.e. consumer role readiness. Findings from the Verleye (2015) exploratory research not only provide support for this conceptualisation of resource integration, but also empirical support for the domain specified, the links between resource integration and the VITAE components, and the nature of those links (i.e. positive or negative).

In conclusion then, hypotheses can now be generated based on the premise that the following areas have been deduced from the literature 1) the domain influenced by the resource integration components has been identified 2) the nature (i.e. positive or negative) of these relationships can be inferred 3) the more effective the integrator the larger the effect on value on the experience components (and vice versa). Given that the resource integrator will apply their own skills to co-create value and supplement these skills through their network (Hibbert et al., 2012) where necessary to achieve the same result, hypotheses generation will be conducted by pairing each under the same explanatory narrative.

Systems efficiency:

The NTRS survey established a positive link between technology readiness and efficiency. This positive link is supported by Mohd-Any, Winklhofer and Ennew, (2015) through utilitarian value, and Verleye (2015) through pragmatic benefits, therefore:

H_1a Technical competence has a positive effect on systems efficiency perceptions

H_2a Network usage has a positive effect on systems efficiency perceptions

The same rationale is applicable to fulfilment/reliability, therefore:

Fulfilment/reliability:

H_1b Technical competence has a positive effect on fulfilment/reliability perceptions

H_2b Network usage has a positive effect on fulfilment/reliability perceptions

The NTRS survey established a positive link between technology readiness and convenience. This positive link is supported by Mohd-Any, Winklhofer and Ennew (2015) through a combination of utilitarian value (i.e. time and effort savings) and value for money (convenience as an outcome). Similarly Verleye (2015) supports this link via pragmatic and economic benefits, therefore:

Convenience:

H_1c Technical competence has a positive effect on convenience perceptions

H_2c Network usage has a positive effect on convenience perceptions

The NTRS survey established a positive link between technology readiness and enjoyment. This positive link is supported by Mohd-Any, Winklhofer and Ennew (2015) through emotional value perceptions and Verleye (2015) via hedonic benefits, therefore:

Emotional value:

H_1d Technical competence has a positive effect on emotional value perceptions

H_2d Network usage has a positive effect on emotional value perceptions

The NTRS survey established a negative link between technology readiness and security concerns (meaning that less capable resource integrators feel more apprehensive about security issues). A positive link is supported by Mohd-Any, Winklhofer and Ennew (2015) through utilitarian value perceptions (i.e. a component part of electronic service quality) and Verleye (2015) via pragmatic benefits, therefore:

Security /Privacy:

H_1e Technical competence reduces the effect of security/privacy perceptions

H_2e Network usage reduces the effect of security/privacy perceptions

The NTRS survey established a negative link between technology readiness and risk. The negative link is expected to behave in the same way as security and privacy concerns, therefore:

Perceived Risk:

H_1f Technical competence reduces the perceptions of perceived risk

H_2f Network usage reduces the perceptions of perceived risk

The NTRS survey established a positive link between technology readiness and efficiency. This positive link is supported by Mohd-Any, Winklhofer and Ennew (2015) through utilitarian value and Verleye (2015) via pragmatic benefits (service recovery components are part of functional/utilitarian value), therefore:

Responsiveness:

H_1g Technical competence has a positive effect on responsiveness perceptions

H_2g Network usage has a positive effect on responsiveness perceptions

The same supporting rationale used for responsiveness can be used for both the contact and compensation dimensions, therefore:

Contact:

H_1h Technical competence has a positive effect on contact perceptions

H_2h Network usage has a positive effect on contact perceptions

Compensation:

H_1j Technical competence has a positive effect on compensation perceptions

H_2j Network usage has a positive effect on compensation perceptions

Mohd-Any, Winklhofer and Ennew (2015) and Verleye (2015) established a positive link with social value perceptions, therefore:

Social value:

H_1k Technical competence has a positive effect on social value perceptions

H_2k Network usage has a positive effect on social value perceptions

The individual's technical competence and network will have no effect on the system availability construct, since the service provider is responsible for the IT infrastructure. Consequently a link with system availability is not expected to be significant. Similarly the service provider sets the price and there is no reason to believe there is a link to technical competence or network either. This concludes the domain specification of VITAE. The next section discusses the constructs used for validation purposes. Each of these constructs is well established in the literature, consequently a brief discussion only is provided.

3.8 Validation Constructs

This section reviews the use of reflective outcome constructs typically used in formative conceptualisations (e.g. Lin et al., 2005; Mohd-Any, Winklhofer and Ennew, 2015) to form a nomological net to validate the conceptualisation of value. Given that outcome constructs are only used in this conceptualisation for validation purposes and that they are all well established in the literature, this conceptualisation conducts a brief review only.

The literature supports the central role of value from the perspective of consequential action (Garbarino and Johnson, 1999). Outcomes are also included in multi-dimensional models of value for validation purposes (Parasuraman, Zeithaml and Malhotra, 2005); Lin et al., 2005) and practitioner benefit (Jankowicz, 1995). Key outcome variables used include; purchase/repurchase intent (Petrick, 2002; Chen and Dubinsky, 2003; Lin et al., 2005); word of mouth recommendation (Petrick, 2002; Lin et al., 2005); loyalty intentions (Parasuraman, Zeithaml and Malhotra, 2005) and customer satisfaction (Lin et al., 2005). The positive effect of value on each of these constructs is also well established in the literature (Fornell et al., 1996; Zeithaml, Berry and Parasuraman, 1996; Carver and Scheier, 1990; Bolton and Drew, 1991). Typically three outcome variables are used in value modelling: loyalty intentions, customer satisfaction, and positive word of mouth (or WOM) recommendation. WOM is defined as '*informal person-to-person communication between a perceived non-commercial communicator and a receiver regarding a brand, a product, an organisation or a service*' (Harrison-Walker, 2001, p.63).

Service researchers have long recognised the need to retain, as well as attract customers (Berry, 1983). The relationship marketing literature acknowledges the value of current customers and the need to ensure that they remain loyal (Fisk et al., 1993). Both researchers and practitioners embrace

the view that small changes in loyalty and retention (e.g. 5%) can yield disproportionately larger changes in profitability (e.g. 25%-100%; Reichheld et al., 2000; Reichheld and Teal, 1996). Providing customers with value is widely recognised as a means of improving loyalty intentions (Fornell et al., 1996; Zeithaml et al., 1996). Indeed, value is the key dimension that affects loyalty (Garbarino and Johnson, 1999; Woodruff, 1997) regardless of service category (Sirdeshmukh, Singh and Sabol, 2002). Businesses that can create trust and increase the value of online purchasing can turn satisfied customers into loyal ones (Anderson and Srinivasan, 2003). Online customers also have an increased propensity to become loyal in order to reduce the risk of online purchasing once they are initially satisfied (Khalifa et al., 2002; Reichheld et al., 2000). However, the literature is incomplete in its explanation of why satisfied customers defect and dissatisfied customers do not (Bendapudi and Berry, 1997; Ganesh, Arnold and Reynolds, 2000; Jones and Sasser, 1995; Keaveney, 1995). Repurchase intention can also differ from actual repurchase behaviour (Bolton, 1998; Kamakura et al., 2002; Mittal and Kamakura, 2001); and loyalty is often miss-interpreted as actual retention (Gustafsson et al., 2005).

An important consumer response for marketers is positive WOM referral (Christopher et al., 1991; Reichheld, 2003), which is the 'ultimate test of the customer's relationship' (Bendapudi and Berry, 1997). The premise behind WOM is that information about brands, products or services can be spread from one consumer to another either in person or via some communication medium. WOM can be positive or negative and marketers are interested in promoting positive WOM e.g. recommendations. Positive WOM has been empirically investigated from a variety of perspectives: as the primary driver of the diffusion of new innovations (Arndt, 1967; Bass, 1969; Mahajan et al., 1999; Sultan et al., 1990; Feick and Price, 1987), opinion leadership (Richins and Root-Shaffer, 1988), product judgements (Bone, 1995), the characteristics of consumer product innovators (Summers, 1972), the structure of networks through which WOM is transferred (Brown and Reingen, 1987; Money et al., 1998), conditions influencing the transfer of WOM-based information (Gilly et al., 1998), culture (Money et al., 1998), and cooperation information exchange partners (Frenzen and Nakamoto, 1993).

The direct positive effect of value on WOM has also been well established in the literature (Lin et al., 2005; Petrick, 2002). The online value literature positions WOM either as part of the loyalty intention construct (e.g. Parasuraman, Zeithaml and Malhotra, 2005) or as a discrete variable linked directly to value (e.g. Petrick, 2002). In a formative conceptualisation, the Lin et al. (2005) model included WOM as a discrete construct directly affected by value. Their instrument also included re-

patronage (rather than loyalty intent), and both were treated as discrete reflective outcomes directly linked to value. This approach is replicated in this conceptualisation for the following reasons. Firstly, the construct analysis identified that re-patronage and loyalty intent have identical meaning at the item level across the majority of extant value multi-dimensional models. Secondly practitioners are interested in re-subscription intent in online channels, consequently this conceptualisation intends to re-label re-patronage (which is an American term) to 're-subscription intent'. The construct analysis concluded that the meaning associated with the re-patronage and WOM outcome variables in the Lin et al. (2005) study are generalisable to an online use context with minor modifications only. This approach also follows the guidelines specified by Jarvis et al. (2003). Note that the literature not only specifies a direct positive effect of value on customer satisfaction, but satisfaction has also been used as a mediating construct between WOM and loyalty intent. Methodologically this mediating role is not required to establish the necessary nomological net to validate the formative conceptualisation in this thesis. Therefore:

H_3a: VITAE has a positive effect on re-subscription intent
H_3b: VITAE has a positive effect on customer satisfaction
H_3c: VITAE has a positive effect on WOM

The next section brings together the conceptual model deduced from the literature review. It also provides a summary of the intended contribution to knowledge.

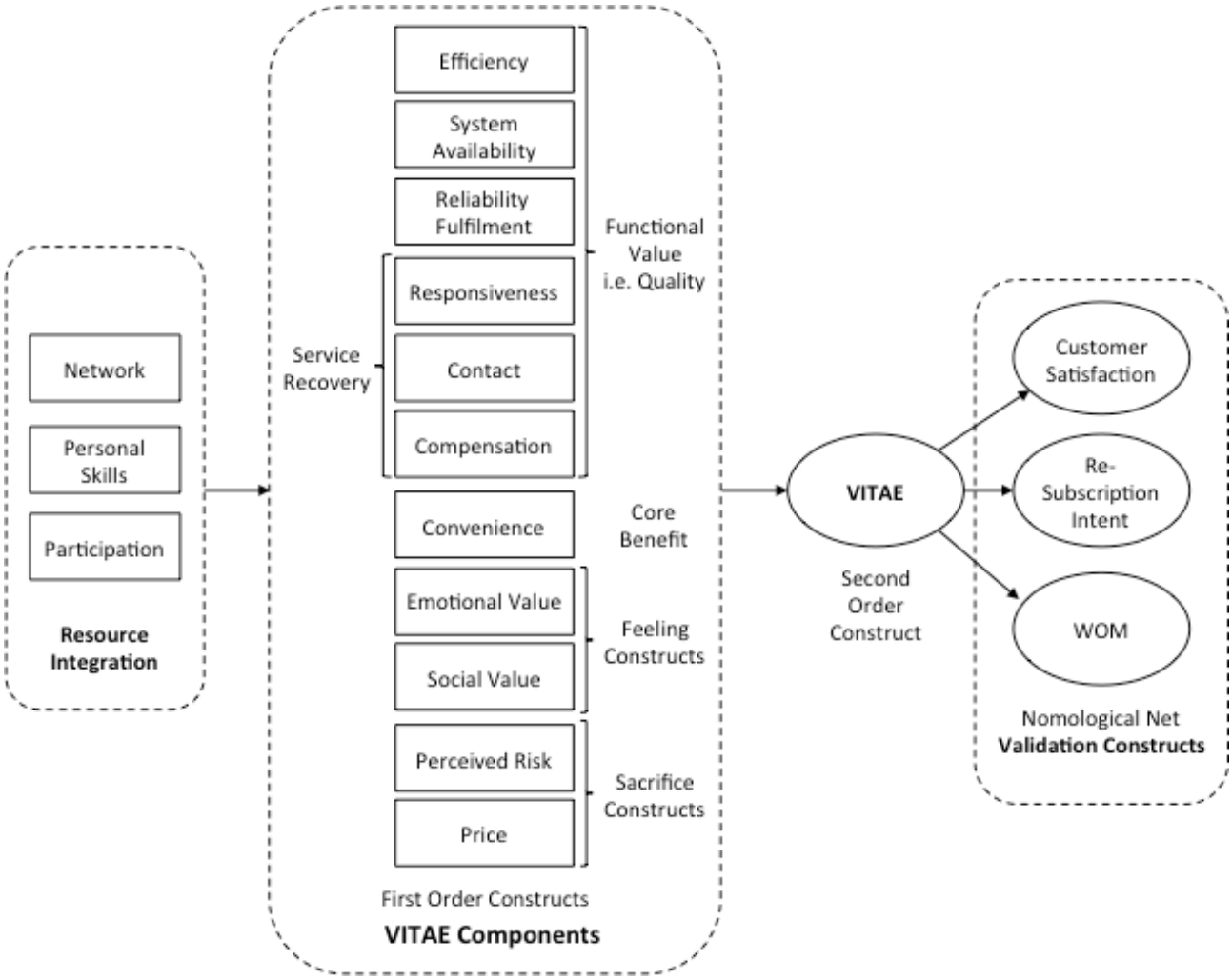
3.9 VITAE Conceptual Model and Contribution to Knowledge

This section begins by drawing together the deductions from the literature review through the conceptual model before providing a reminder of the importance of the value topic and identifying specific calls for further research in the value field. The research questions are provided as a reminder and the specific contributions to knowledge made by this thesis discussed in depth. The section concludes by discussing potential generalisability and practitioner impact. The unit of analysis is the online user's accumulated value experience.

Figure 8 describes the conceptual model deduced from the extant literature. The model is designed to understand VITAE in an online subscription service context. In order to specify the correct holistic domain to ensure a complete understanding of the VITAE phenomenon, the point of departure for the model contains a large amount of constructs. The intention is to use the qualitative

phase of the study to refine the model design in line with the specific context of the study. It is anticipated that the number of constructs will reduce in subsequent phases of the investigation.

Figure 8: VITAE Conceptual Model



The intention is to refine the model at the qualitative phase of the investigation and to validate the domain specification within an online subscription service context through in-depth interviews. The next part of this section discusses the importance of further research in the value field and the contribution made by this thesis.

The leading service marketing and management scholars in the world have ranked value among the top 10 research priorities, and in particular, the requirements to measure and optimise the value of service and to enhance the service experience through co-creation (Ostrom et al., 2010). The empirical design of this thesis answers this call by conceptualising the user experience in a second order formative model and the subsequent measurement of value in an online subscription context.

The Phenomenological perspective criticises the current empirical conceptualisations of value and associated measurement scales, which are considered limited with further academic research required to better understand the customer value construct (Sánchez-Fernandez and Iniesta-Bonillo, 2007). Indeed, Helkkula et al. (2012) call for approaches that adopt a longitudinal perspective and acknowledge the dynamic and iterative nature of value in the experience from the individual service consumer perspective. The authors go on to encourage empirical studies that characterise value in the experience and reflect the epistemological and ontological position that knowledge is dynamic, inter-subjective, intra-subjective, and socially constructed. This stance is supported from the formative/reflective multi-dimensional modelling perspective by Mohd-Any, Winklhofer and Ennew (2015), arguing that the understanding of a customer's value experience and its sub-dimensions is still underdeveloped.

The conceptual model answers these calls by addressing the following research questions:

1. How is VITAE formed in an online subscription service context?
2. How do the individual components of VITAE contribute to the overall accumulated value experience?
3. How does the user's VITAE affect customer satisfaction in an online subscription service context?
4. How does the user's VITAE affect re-subscription intent in an online subscription service context?
5. How does the user's VITAE affect word of mouth recommendation (WOM) in an online subscription service context?
6. How does resource integration affect VITAE in an online subscription service context?

The three main contributions to knowledge are made through the development of a new model of VITAE in an online subscription service context. The conceptual model is designed to incorporate the holistic domain of experiential value and includes both outcome and process elements for the first time in an online subscription service context. The second main contribution comes from 1) conceptualising resource integration as a process component and 2) operationalising resource integration. The third main contribution is theoretical and is derived from developing a new lens through which to view value: accumulated experience. Together these contributions answer the call made by Mohd-Any, Winklhofer and Ennew (2015) for further research into the understanding of the customer's value experience and its sub-dimensions. The combined VITAE approach also

answers calls from Helkkula et al. (2012) to develop empirical studies that characterise value in the experience. A number of peripheral contributions are also made. The first such contribution is to answer the phenomenological challenge. To do this the contribution relies on an interconnected approach across research design and conceptualisation. To summarise how these elements connect together to form the contribution, as previously discussed the same table is presented again.

Table 12: Answering the Phenomenological Challenge

Characterisation	Inductive Value Measurement Techniques e.g. VALEX Propositions	Deductive Value Measurement Models e.g. PERVAL	Contribution (This Thesis)
Philosophical perspective	Phenomenological (experiential)	Realist or critical realist	–
Evidence about value in the experience	Interpretive: individual's (service customers') subjective experiences are justified as data	Aims to present objective, generalisable results that are based on subjective self-reported data	–
Form of Knowing	Sense making that is based on an iterative and cumulative process of previous and current understanding (the hermeneutical spiral)	Based on theoretically justified hypotheses	1st phase sense making via in depth interviews, Theoretically justified hypotheses underpinned by 2nd phase questionnaire with open question & a sample with accumulated experiences
		Service provider's perspective on how individual service customers perceived value	Co-created context to reduce service provider influence. Social network perspective designed into study
Individual versus social value perspective	Experiences of value are both individually (Intra-subjective) and socially (inter-subjective) constructed	Analyses the effects of customer-perceived value on other constructs	Analyses the effect of both the user experience and their wider social network on value.
		Aims to generalise findings on a population	Establishes meaning around the social network from in-depth interviews to inform questionnaire design & subsequent discussion prior to generalising findings in a population with accumulated experience
Lived and Imaginary perspective	Includes lived and imaginary Value experiences. Incorporates both direct and indirect value experiences, that is, the individual service customer can imagine the experience of service in the external world	Focuses on customer perceived value. Does not discuss imaginary customer perceived value: therefore, necessitates direct experience or use of a particular service	Indirect experience perspective included: Sample with accumulated experience incorporates imagined perspectives. In-depth interviews to elicit imagined meaning. Open Question to surface and control for imaginary perspective
Temporal nature	Value experiences are based on current, previous and imagined future experiences within and outside the context of the specific service	Value is perceived in pre-service, in-service and post-service consumption phases	Relational in-use service context combined with longevity of sample to derive responses from accumulated experiences within and outside the specific service context
Context	Event specific and justified by the individual service customer in the individual's lifeworld, which is socially constructed. Identifies the world as lived, in comparison to the world as construed by an external entity, e.g. a service provider	Defined by the service provider	Multiple events via long-term relational service context to generate accumulated experiences. Co-created context to reduce service provider control.
			Accommodates world as construed by external entities via identification & inclusion of wider social network in conceptual model
Theoretical contribution	Suggestive propositions may act as an invitation for further work on the phenomenon or set of issues revealed by the study	A measurement scale that enables analysis of relationships between constructs; may add specificity, new mechanisms, or boundaries to existing theories	Expands value modeling theory beyond current boundary of linear view via accumulated experience sample and methodological design.
			Addresses gaps in literature by adding social network view and imaginary perception specificity

(Source: Adapted from Helkkula, Kelleher and Pihlstro¨m, 2012, P.68)

The contribution has already been explained in depth in the main literature review. This table will be used again at the appropriate time to discuss aspects relating to the methodology. Consequently these areas remain greyed out at this juncture. Further discussion of the methodological components occurs in chapter 4 together with a full ontological perspective.

In essence, combining the following interconnected phenomena makes the key contributions:

1. Identification and use of the accumulated experience phenomenon to address the twin challenges of longitudinality and non-linearity, which are inherent within the empirical measurement of value in the experience. This argument is anchored within the hermeneutical spiral concept posited by Helkkula et al. (2012). To date previous multi-dimensional models have failed to address these challenges adequately
2. Inclusion within the conceptual model of resource integration as a process component, which includes the actor's personal skills (i.e. technical competence) and the effect of their wider social network via a preliminary measure. Operationalising resource integration in this way enables the following sub-contributions by empirically establishing:
    a. The extent to which the user's technical competence (i.e. cultural operant resources) affect VITAE
    b. Identification of the actors in the individual's wider social network within an online subscription service context
    c. How the network of actors interacts with the individual user and the wider co-creation process
    d. The extent to which the network influences VITAE (and indeed identifying which components (if any) of VITAE are affected and to what extent)
3. The extent to which past, future and imagined experiences exist within the accumulated experience phenomenon (i.e. are they contained within respondent answers as part of their wider value in the experience perceptions).

The second series of peripheral contributions stem from the new model of VITAE in an online subscription service context, within which further contributions to knowledge come from a more in-depth specification of the experiential value domain and include contributions at both the measurement design level and at the construct level by operationalising and synthesising new constructs to form VITAE. The contribution as the measurement design level is as follows:

Since the evolution of the multi-dimensional modelling perspective towards conceptualising value as formative/reflective (Diamantopoulos and Winklhofer, 2001; Jarvis et al., 2003), specification of the holistic conceptual domain of value in the experience has become more important in order to establish content validity. Given that formative indicators form a construct and are not necessarily interchangeable, formative indicators must capture the majority (if not all) of the components of a construct. Content validity is addressed by accurate content specification, which requires clear

articulation of the domain of content the indicators are required to measure. Failure to compile a comprehensive set of indicators could exclude important inherent parts of the construct (Hair et al., 2014). To date the focus of multi-dimensional models has been on proving a contribution to knowledge from a limited number of constructs and the relationships between those constructs, rather than on the entirety of the value domain (accepting it is experiential). This issue has been exacerbated by measurement techniques that have an inherent limit to the number of formative indicators that can obtain a statistically significant weight (Cenfetelli and Bassellier, 2009) making it more likely that additional formative indicators in larger models will become non-significant (Hair et al., 2014). This condition potentially motivates researchers to design and test smaller models rather than focus on the correct specification of the overall domain, which is integral to the formative/reflective approach. Extant models are arguably too small to specify the experiential value domain correctly and therefore content validity is at best questionable. This thesis seeks to break this pattern.

The contribution at the construct level is as follows: following Hart's (1998) guidance to form a different phenomenon, which is considered sufficient to make a contribution to knowledge in itself. The next sub-contribution comes from synthesising, re-positioning and re-forming existing constructs to form the VITAE phenomenon and to extend them into an online subscription service context. Whilst this is applicable to all the VITAE components, electronic service quality construct examples only are included as follows: synthesis and modification of the E-S-QUAL and E-RecS-QUAL; extension into a pure service site context; and further refining of the reliability and validity for the E-RecS-QUAL (service recovery) model. The next part of the section considers generalisability and practitioner impact.

The VITAE conceptualisation has been designed to incorporate all of the components necessary to evaluate an online subscription service. A summary is provided below with a full analysis of generalisability by construct in the methodology section.

Generalisability: The VITAE instrument was designed to incorporate all of the components necessary to evaluate subscription-based online services, which are routinized. These components are deemed interchangeable in the majority of online (self-service) subscription channels for businesses e.g. accounting software; payment management solutions; expenses management; field services management; or online grocery shopping.

Practitioner impact: use of the new VITAE model would not only give practitioners insight into the holistic user experience, but also the individual effects of each experiential component on value. This insight would allow marketing strategies (and budget) to be directed at the individual components of the user experience likely to provide the highest benefit. The model also evaluates the effect of experiential value on customer satisfaction and re-subscription intent, which would deliver insight into how subscription take-up could be improved and churn rates reduced. Finally insight into the effect of resource integration (from both individual user and multi-actor perspectives) on experiential value would enable marketers to understand whether specifically designed campaigns to enhance the creation of value would be worthwhile e.g. educational campaigns for the individual or offers targeted at friends and family.

Chapter 4

Research Design And Methodology

4 Research Design and Methodology

This chapter examines the various research positions before adopting a quantitative research approach using a post-positivist research paradigm. The first section discusses the ongoing philosophical debate and informs the reader about the researcher's knowledge position before examining the ontological and epistemological rationale to justify the measurement of value using the post-positivist paradigm. The research context is then introduced and linked to both epistemology and methodological choices before discussing generalisation potential and the context's fit with the research area of interest. The chosen methodological approach is a two-stage study with a qualitative first phase to validate the domain of value in the accumulated experience (VITAE), refine construct definitions and to inform questionnaire design. A second quantitative phase then develops and tests the VITAE measurement instrument. The following sections examine both qualitative and quantitative data collection procedures and analytical approaches. The quantitative section includes questionnaire design and concludes with respondent profile findings. The next section reviews the research philosophy of this thesis.

4.1 Research Philosophy

This section briefly reviews the various philosophical perspectives, including: positivism, phenomenology, pragmatism and post-positivism, before presenting the strategy of enquiry for this thesis.

4.1.1 Philosophical Perspectives

The researcher's view of the world (ontology) and how they intend to construct knowledge (epistemology) are important considerations for all research projects. Ontological assumptions relate to what we can know and what reality and truth are (Oats, 2012). The researcher's motivation, intent and expectations are derived from paradigm choice (Mackenzie and Knipe, 2006). A paradigm is defined as *"a cluster of beliefs and dictates, which for scientists in a particular discipline, influence what would be studied, how research should be done and how results should be interpreted*" (Bryman, 1988, p.4). There are two main paradigms from which to derive ontological assumption: positivism (also referred to as realism), and phenomenology (also referred to as nominalism, interpretivism or constructivism) (Creswell, 2002; Oats, 2012). Philosophers of science are concerned with the process of knowing. How we know what we know is not an easy question and philosophers are divided on how it should be answered (Deshpande, 1983; Easterby-Smith, Thorpe and Lowe 1994; Teddlie and Tashakkori, 2012). Table 13 shows a simplified summary of both paradigms.

Table 13: Key Features of Positivist and Phenomenological Paradigms

	Positivist Paradigm	Phenomenological Paradigm
Basic beliefs:	• The world is external and objective • Observer is independent • Science is value-free	• The world is socially constructed and subjective • Observer is part of what is observed • Science is driven by human interests
Researcher should:	• Focus on facts • Look for causality and fundamental laws • Reduce phenomena to simplest elements • Formulate hypotheses and then test them	• Focus on meanings • Try to understand what is happening • Look at the totality of each situation • Develop ideas through induction from data
Preferred methods include:	• Operationalising concepts so that they can be measured • Taking large samples	• Using multiple methods to establish different views of phenomena • Small samples investigated in depth over time

Source: Easterby-Smith, Thorpe and Lowe 1994, p.27.

4.1.1.1 Positivism

A purist positivist stance advocates that social observations should be treated as entities in the same way that a scientist would treat physical phenomena. The observer is separate to the entities under observation and purists maintain that social science enquiry should be objective i.e. time and context free generalisations are both desirable and possible. Real causes of scientific outcome can be determined both reliably and validly; researchers should eliminate their biases; remain emotionally detached from the objects of study; and empirically justify stated hypotheses (Tashakkori and Teddlie, 1998).

4.1.1.2 Phenomenology

Phenomenological purists reject the positivist stance arguing for the superiority of constructivism, idealism, relativism, humanism, hermeneutics and postmodernism. Purists contend that multiple-constructed realities exist, within which time and context free generalisations are neither desirable

nor possible. Research is value-bound and it is impossible to distinguish between cause and effect. Logic flows from specific to general i.e. explanations are generated inductively from data. The entity that knows cannot be separated from the known since the subjective knower is the only source of reality (Johnson and Onwuegbuzie, 2004).

4.1.1.3 Pragmatism and the Mixed Method Paradigm

Both groups of protagonists view their paradigm as the ideal vehicle for research but implicitly advocate the incompatibility thesis (Howe, 1988), which argues that both positivist and phenomenological paradigms (including their respective methods) should not be mixed. More recently in an attempt to move beyond these 'paradigm wars' a third research paradigm; the mixed method paradigm has emerged. Mixed method research is defined as *"the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study"* (Johnson and Onwuegbuzie, 2004, p. 17). The mixed method paradigm acknowledges the merits of both approaches and seeks to minimise the weaknesses of both in single research studies. Mixed methods research is often aligned with pragmatism as its philosophical partner as a way to think about the traditional dualisms debated by the purists and to settle metaphysical disputes that might otherwise be interminable i.e. it rejects dogmatism. Advocates of pragmatism believe that the social world is in constant change but causal relations (i.e. knowledge) can be found in a snapshot of time, which is referred to as the falibilism thesis (Johnson and Onwuegbuzie, 2004). Pragmatists acknowledge that the subjective reality of individuals and the objective reality of classes or populations are both possible, but do not present a clear ontological or epistemological stance for the generalisation of knowledge (Tashakkori and Teddlie, 2010).

Advocates of the mixed method paradigm contend that epistemological and methodological pluralism should be promoted to generate more effective research and that the right question to ask is one of determining which research approach is most helpful and when and how they should be mixed or combined for any given study (Greene and Caracelli, 1997; Johnson and Onwuegbuzie, 2004; Teddlie and Tashakkori, 2012). Advocates of this non-purist stance recognise that today's research is increasingly inter-disciplinary, complex and dynamic arguing that a solid understanding of both quantitative and qualitative approaches and how they can complement each other is not only important to provide the best chance of answering the research question effectively, but also to facilitate communication and collaboration with the end goal of superior research in mind. Whilst many research procedures have been traditionally linked to the various paradigms, advocates of the

mixed method paradigm argue this is neither sacrosanct nor necessary (Howe, 1988, 1992). Indeed the logic of justification (an important consideration of epistemology) does not dictate what specific data collection and data analytical method researchers should use and should not therefore preclude choice. The mixed method research paradigm remains in the early stages of its evolution and supporters recognize that it is not yet in a position to solve the metaphysical, epistemological, axiological (e.g. ethical, normative), and methodological differences between purist positions (Johnson and Onwuegbuzie, 2004). Whilst the design of this study includes an inductive first phase qualitative stage paired with a second phase quantitative component, it is important to clarify at this juncture that the knowledge position taken for this research project does not embrace the mixed method approach as it fails to articulate a clear ontological and epistemological position with respect to knowledge generation.

4.1.1.4 Post-Positivism

Post-positivism emerged in response to criticisms of the positivist paradigm (Robson, 2002); it builds on positivism but changes the perspective from certainty to probability (Crotty, 2007). From an ontological standpoint post-positivism adopts a critical realist perspective, advocating an external reality i.e. the real world exists, and can be imperfectly and probabilistically discovered (Guba and Lincoln, 1998; Tashakkori and Teddlie, 2010). Critical realism acknowledges that knowledge and observation of the social world is fallible and theory-laden and the world exists independently of our knowledge of it (Sayer, 2000). The social world is not governed by mechanical logic; rather it consists of dynamic open systems with blurred boundaries, within which social actors have active and reflective roles (Pawson and Tilley, 1997). Social phenomena are unlikely to be fully revealed or fully understood and the role of critical realists is not only to measure a social phenomenon but to describe it's meaning (Danermark et al., 2005). Consequently critical realism rejects methodological individualism and universal claims to truth due to research limitations (Denzin and Lincoln, 2005); preferring instead to claim approximations of truth (Crook and Carratt, 2005), which hold no end in themselves, but which steadily advances social science towards an endless end (Crotty, 2007). Post-positivism takes a flexible approach to research methods, encouraging researchers to use both quantitative and qualitative methods (Creswell, 2002). Indeed theory should be built, and then confirmed or rejected before testing for generalisability (Healy and Perry, 2000).

4.1.2 Strategy of Enquiry

The knowledge position taken in this research project aligns to the post-positivist paradigm. Theory has been built deductively from the literature to specify the domain of VITAE in online subscription services. This theory (and the various components of it) will be confirmed, rejected or refined

during the qualitative phase to validate the constructs that form the domain of VITAE, their inter-relationships and to derive meaning within the context to inform questionnaire design, conceptual model refinements and subsequent findings. The main phase of this study is quantitative and the primary objective is to design and test a questionnaire to empirically confirm or reject hypotheses. Wider generalisability is the subject of future research.

Whilst the dominant approach is quantitative, at this juncture it is important to clarify the integral role that the qualitative phase of this study plays. To date the domain of VITAE has not been specified for online subscription-based services. Correct specification of the domain concerning VITAE is fundamental to a formatively specified measurement model. Nor has the wider network of actors that the resource integrator accesses in the value creation process been identified. Whilst the domain has been specified deductively through the literature review, there remains a requirement to validate these conclusions through the use of qualitative methods. Similarly qualitative methods will be required to identify the wider network of actors that are involved in the value creation process to inform the construction of the questionnaire and to support the operationalisation of new constructs i.e. resource integration. The refinement of construct definitions and questionnaire items will also be conducted through qualitative techniques.

4.2 Research Methodology

Tashakkori and Teddlie (2010, p.21) define methodology as: '*a broad approach to scientific inquiry specifying how research questions should be asked and answered, which includes worldview/paradigm considerations, general preferences for design, sampling logics, data collections and analytical strategies, guidelines for making inferences, and the criteria for assessing and improving quality'*. Methodology choice should be aligned to ontological and epistemological assumptions (Denzin and Lincoln, 2005). There are two main research methodologies accepted by social research; qualitative and quantitative (Creswell, 2002). Table 14 below integrates the mixed methods perspective and summarises the typical positions taken by each approach.

Table 14: Summary of Research Methodology Features and Approach

Features	Qualitative	Mixed Methods	Quantitative
Preferred Methods	Qualitative Methods	Qualitative and Quantitative Methods	Quantitative Methods
Preferred Data Collections Tools	Interviews Observations Document Reviews Visual Data Analysis	Includes Data Collection From Both Methodologies	Experiments Quasi-Experiments Tests Surveys
Partnering Paradigms	Constructivism Interpretivism	Pragmatism (Can Partner with Paradigms Associated with Qualitative and Quantitative Methodologies)	Post-Positivism Positivism
Form of Data	Typically Narrative	Narrative and Numeric	Typically Numeric
Purpose of Research	Typically Exploratory	Confirmatory and Exploratory	Typically Confirmatory
Sampling	Typically Purposive	Probability, Purposive and Mixed	Typically Probability
Data Analysis	Thematic Strategies: Categorical and Contextualising	Integration of Thematic and Statistical: Data Conversion	Statistical Analysis: Descriptive and Inferential
Validity	Trustworthiness: Credibility; Transferability	Quality and Transferability of Inferences	Internal and External Validity

Adapted from Tashakkori and Teddlie, 2010

4.2.1 Quantitative Methodology

Quantitative methodology is usually partnered with positivism or post-positivism philosophies since it is used to explore cause and effect relationships and seeks quantification within data collection and analysis (Bryman and Bell, 2011). Fundamental tenets of the quantitative approach include: a preference for a deductive approach to the relationship between theory and research (Bryman, and Cramer, 2011); drawing general conclusions from social enquiry using deductive logic from empirical data and its analysis (Creswell, 2002; Neuman, 1997); common use of surveys or experiments for data collection (MacKenzie and Knipe, 2006); use of mathematical and statistical techniques to test hypotheses to elicit relationships between variables and to test general propositions (Guba and Lincoln, 1998). Quantitative methods require large representative samples

to demonstrate reliability of findings (Punch, 2013); some techniques (e.g. PLS) enable cause and effect testing; consequently these techniques are suitable to explore the underlying structure of social phenomena (Bryman, 2011). This research is predominantly quantitative and embraces each of the fundamental tenets described above through the use of an online questionnaire for data collection and the PLS analysis technique for cause and effect testing.

Quantitative techniques have been criticised due to a tendency for researchers to exhibit confirmation bias i.e. research focuses purely on theory testing and fails to identify social phenomena that may require a more in-depth understanding (Johnson and Onwuegbuzie, 2004). This research addresses the risk of confirmation bias through the inclusion of a first phase qualitative stage to induct richer data to enhance research design prior to quantitative testing (Greene and Caracelli, 1997; Johnson and Onwuegbuzie, 2004). In addition quantitative methods have been criticised for an inability to evaluate complex phenomena. However, recent quantitative techniques e.g. PLS provide tools that can explain the mechanisms of the complex social world. PLS enables the construction and analysis of complex networks of cause and effect relationships and to test the underlying mechanisms of a particular phenomenon (Kline, 2011). This study uses PLS to test the complex relationships between the constructs that form VITAE, customer satisfaction, word of mouth recommendation and re-subscription intent.

4.2.2 Qualitative Methodology

Qualitative methods can be defined as '*An array of interpretative techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world'* (Van Maanen 1983, p9). Qualitative researchers analyse and draw conclusions from narratives and text, communication with, and observation of informants to explain perceptions and understandings within the social world (Jogulu and Pansiri, 2011). The key tenets of qualitative research are as follows: it is suitable for research questions requiring the exploration and description of complex social phenomena and personal experiences; research is conducted, not to generalise findings, but to provide research question understanding and description (Creswell, 2003); it is highly descriptive and sufficiently sensitive to capture the image of the world as seen through the eyes of the informant (Bryman, 2011). Consequently data is not necessarily structured, and is typically presented using comprehensive texts. Data collection techniques require personal fieldwork and include: interviews, focus groups, ethnography, observations, field notes and case studies (Bryman, 2011).

Qualitative methods have also been criticised in the following areas: personal fieldwork situations can be a source of bias as it is possible for the researcher to exert an influence on the informant (Gephart, 2004); qualitative research is typically built on small samples, which are not considered representative of the population; despite the claim to rich insight, by their very nature data analysis techniques remain influenced by the subjective meanings and conclusions drawn by the researcher (Miles and Huberman, 1994); the unstructured approach contributes to a lack of ability to claim validity and reliability of findings (Elliott et al., 1999); and finally qualitative techniques lack the quantitative capability to quantify phenomena or to study cause and effect relationships (Bazargan, 2007). Interviews are one of the most popular and frequently used methods of data collection (Brinkman, 2013). The data gathered is rich and provides answers to how and why questions enabling an understanding of complex social phenomena (Denzin and Lincoln, 2005). Interviews also have a unique potential for obtaining access to and describing the every-day lived world (Kvale and Brinkman, 2009). Indeed Sieber (1973) and Marsden and Littler (1998) specify best practice for this form of combined study as follows: a) In-depth interviews with limited samples to explore consumers' meaning systems (i.e. the reasons why they buy a service), the values they associate with it and the specific decision making styles to inform and operationalise the questionnaire; b) Exploratory interviews preceding the larger scale survey to yield information about respondent receptivity, frames of reference and span of attention. Interview selection will be based on a random sample from SME, Small Office/Home Office and home user respondent groups; c) Qualitative observations from the informant interviews are used to validate the theoretical conceptual model and the statistical results from survey data analysis; d) Transcripts will be used to check the accuracy of interview records (Silverman, 1994). Consideration of other approaches e.g. observation; texts and case studies are therefore ruled out.

The arrangement of an interview provides the opportunity *'for the researcher to probe deeply to uncover new clues, open up new dimensions of a problem and to secure vivid, accurate inclusive accounts that are based on personal experience'* (Burgess, 1982, p.107). The rationale behind this is to understand '*how individuals construct the meaning and significance of their situations..... from.....the complex personal framework of beliefs and values'* (ibid. p.45). Similarly the interview is seen to give greater depth than other research techniques since it is based on a sustained relationship between the informant and the researcher (Silverman 1994). The selection of in-depth interviews should facilitate the following objectives: a) to elicit information and meaning within the specific context to validate the domain of VITAE; b) to identify the network of actors with which the resource integrator creates value; c) to support the operationalisation of the constructs e.g.

resource integration within the chosen context; d) to refine construct definitions in line with the context of interest and to provide input to the design of a questionnaire (e.g. refine items) for subsequent test. Transcripts will be used in a quantitative sense to provide evidence of the analysis.

The selection of the in-depth interview format, not only provides an excellent way to uncover meaning in an environment where the recipient is comfortable (i.e. their own office), but the small office/home office community is symptomatic of very busy people with a limited amount of time available for research. Therefore the fixed duration of an interview is preferred, since it minimises perceived 'wasted time'. The current UK privacy laws necessitate the service provider taking an opt in approach to soliciting interest in the research project, therefore negotiation of access is only possible with a limited number of participants lending itself to a small sample, which again suits the interview approach. The combination of deductive theory (hypotheses already deduced) drawn from the literature with the strongest points of the qualitative research methods chosen, namely interviews to provide authenticity enabling a focus on 'meaning' within the selected channel of study, will provide the best way to support and operationalise the statements to be tested.

4.2.3 Philosophical Perspective Versus Research Question

Contemporary discourse around S-D Logic places phenomenologically (experientially) determined value at the centre of the value debate (Edvardsson et al., 2010; Helkkula et al., 2012), where value is characterised as a subjective experience (i.e. uniquely determined by the beneficiary) in a specific social context (Vargo and Lusch, 2008). Ontological recognition of the subjective nature of experience predetermines what evidence can be accepted as knowledge with respect to experiential value. It also raises the wider question of whether experiential value can be legitimately evaluated from a post-positivist standpoint. More specifically, does the subjective and context specific nature of experiential value preclude reduction of the phenomenon into generalised patterns (i.e. can a measurement scale be used)?

The stance taken in this research is that experiential value can be evaluated from a post-positivist perspective and the argument is organised as follows: a) understand what is value in the experience (an ontological question); b) establish what can be accepted as evidence when evaluating value in the experience (an epistemological question); c) once ontological and epistemological legitimacy has been established, methodological choices are then identified throughout the balance of the chapter. Note that the above questions are key to the contribution of this research and have already

been evaluated in detail within the literature review. The next section considers the questions from an ontological and epistemological perspective only.

The phenomenological epistemology legitimises the primacy of individuals' views and subjective experiences as data (Goulding, 2005). The inter-subjective nature of value in the experience acknowledges service customers' individual and collective relational engagement with the world and how they make sense of it, both at individual and collective levels (Smith, Flowers and Larkin, 2009). Consequently value in the experience is interactional within the context of service customers' phenomenologically determined social networks (Finsterwalder and Tuzovic, 2010; Vargo and Lusch, 2008). Service customers also make sense of and experience value in an iterative way, based on previous experiences or understandings i.e. pre-understandings. Value is also emergent from service customer integration of other cultural and social resources, including other customers (Arnould et al., 2006; Baron and Harris, 2008). Value in the experience has therefore been characterised as individually intra-subjective and socially inter-subjective (Helkkula et al., 2012). Indeed, value has also been characterised as both lived and imaginary, which can occur via word of mouth recommendations or reviews without any direct contact with the service provider (Helkkula, 2011); and as temporal in nature with the experience constructed from previous, current and imaginary experiences that are not by their very nature linear (Tynan and McKechnie, 2009; Helkkula et al., 2012).

Despite these compelling characterisations of value in the experience, phenomenologists acknowledge that pure experience will never be fully accessible to the researcher using any of today's available research methods. The ontological focus remains on the subjective experience and how the individual service customer makes sense of it (Helkkula et al., 2012). Indeed, characterising value as an: intra-subjective, socially inter-subjective, context and situation-specific phenomena that is both lived and imaginary; constructed from previous, current and imaginary future experiences that are also temporal has a direct impact on the ontological, epistemological and methodological choices of this study.

On the basis that value is characterised as above, the epistemological legitimacy of previous positivist approaches has been questioned by the phenomenological school of thought (see Helkkula et al., 2012) on the basis that traditional value measures: a) are best suited for analysing the experiences of current customers; b) focus on a specific perspective rather than a holistic view of customer value; c) examine a linear process involving pre-service, in-service, and post-service

consumption phases e.g. PERVAL (Sweeney and Soutar, 2001); d) are constrained to a judgement based on in-use experience; e) are limited by being anchored in some form of trade-off (e.g. Zeithaml (1988); f) fail to incorporate a more longitudinal perspective (Flint et al., 2002; Holbrook, 1994; Rescher, 1969; Zeithaml, 1988); g) do not adequately capture the perceptions of non-customers (Zeithaml et al., 2006); h) focus on post-use service evaluations without examining how other related services or imagined experiences may affect value judgments (Helkkula et al., 2012). This argument brings into question the epistemological legitimacy of positivist claims that their findings constitute acceptable evidence that can be considered knowledge with respect to the value phenomenon, which prompted Helkkula et al. (2012) to argue that research methods that aim at objective approximations and generalised outcomes are not applicable in this context.

Gummerus (2013) challenges this phenomenological stance considering it an extreme perspective. She goes on to argue that the S-D Logic phenomenological perspective (Vargo and Lusch, 2008) can be reconciled with the literature that regards value as an experience outcome and is consistent with the multidimensional view of value, combining cognitive and affective dimensions. This research attempts to advance the positivist claim to epistemological legitimacy by designing the research with the inter-connected approach shown once again as a reminder in Table 15. Note that no areas are greyed out in this instance, as discussion within this chapter is the appropriate place to introduce the methodological discussion.

A formative measurement approach requires specification of the holistic domain of value (Hair et al., 2014). Specification of a holistic domain addresses claims of focusing on a specific perspective (Helkkula et al., 2012) or indeed succumbing to the constraints of measurement models that suit smaller numbers of constructs to optimise test results. Identification and incorporation of the service customer's social network into the research design addresses criticism aimed at the exclusion of the wider network of stakeholders. Choice of an online service context that includes co-creation reduces service provider influence, whilst bounding the subjective nature of value in the experience through repeatable or routinized actions. The experience is bounded since it can only be derived from a limited number of stimuli, subjective nuances are consequently reduced, which in turn then become normalised over time by repeatable activities. Put another way, experiential stimuli are predominantly extrinsic and intrinsic stimuli are reduced to having a minimal affect on value in the experience as explained previously. Choice of such a context is expected to yield data from respondents that have a very clear idea of their value experience, which is business driven and should limit the number of constructs to a manageable holistic domain of value. These conditions

will be validated at the qualitative phase and are expected to provide the platform to make legitimate generalisations i.e. test hypotheses.

Table 15: Ontological and Epistemological Justification of Value Measurement

Characterisation	Inductive Value Measurement Techniques e.g. VALEX Propositions	Deductive Value Measurement Models e.g. PERVAL	Contribution (This Thesis)
Philosophical perspective	Phenomenological (experiential)	Realist or critical realist	–
Evidence about value in the experience	Interpretive: individual's (service customers') subjective experiences are justified as data	Aims to present objective, generalisable results that are based on subjective self-reported data	–
Form of Knowing	Sense making that is based on an iterative and cumulative process of previous and current understanding (the hermeneutical spiral)	Based on theoretically justified hypotheses	1st phase sense making via in depth interviews, Theoretically justified hypotheses underpinned by 2nd phase questionnaire with open question & a sample with accumulated experiences
		Service provider's perspective on how individual service customers perceived value	Co-created context to reduce service provider influence. Social network perspective designed into study
Individual Verses social value perspective	Experiences of value are both individually (Intra-subjective) and socially (inter-subjective) constructed	Analyses the effects of customer-perceived value on other constructs	Analyses the effect of both the user experience and their wider social network on value.
		Aims to generalise findings on a population	Establishes meaning around the social network from in-depth interviews to inform questionnaire design & subsequent discussion prior to generalising findings in a population with accumulated experience
Lived and Imaginary perspective	Includes lived and imaginary Value experiences. Incorporates both direct and indirect value experiences, that is, the individual service customer can imagine the experience of service in the external world	Focuses on customer perceived value. Does not discuss imaginary customer perceived value: therefore, necessitates direct experience or use of a particular service	Indirect experience perspective included: Sample with accumulated experience incorporates imagined perspectives. In-depth interviews to elicit imagined meaning. Open Question to surface and control for imaginary perspective
Temporal nature	Value experiences are based on current, previous and imagined future experiences within and outside the context of the specific service	Value is perceived in pre-service, in-service and post-service consumption phases	Relational in-use service context combined with longevity of sample to derive responses from accumulated experiences within and outside the specific service context
Context	Event specific and justified by the individual service customer in the individual's lifeworld, which is socially constructed. Identifies the world as lived, in comparison to the world as construed by an external entity, e.g. a service provider	Defined by the service provider	Multiple events via long-term relational service context to generate accumulated experiences. Co-created context to reduce service provider control. Accommodates world as construed by external entities via identification & inclusion of wider social network in conceptual model
Theoretical contribution	Suggestive propositions may act as an invitation for further work on the phenomenon or set of issues revealed by the study	A measurement scale that enables analysis of relationships between constructs; may add specificity, new mechanisms, or boundaries to existing theories	Expands value modeling theory beyond current boundary of linear view via accumulated experience sample and methodological design. Addresses gaps in literature by adding social network view and imaginary perception specificity

(Source: Adapted from Helkkula, Kelleher and Pihlstro¨m, 2012, P.68)

Choice of a sample where conditions of accumulated experience exist is fundamental. Multiple years usage of a bounded routinized online service enables sense-making up and down the hermeneutical spiral multiple times (see Helkkula et al., 2012) and the literature review for further detail), it addresses the non-linear aspects of value in the experience and draws on past, present and future experiences on multiple occasions, which enables a steady state attitude to prevail over time (i.e. has temporal connotations) that can be measured and an argument for legitimate

generalisations. Accumulated experience allows both intra-subjective and socially inter-subjective interactions to take place multiple times and incorporates both lived and imaginary experiences as users request technology upgrades and process improvements from the service provider, see them implemented (or not) and live through both good and bad experiences. A follow-up question after respondent questionnaire completion has also been designed into the research to incorporate past, future and imaginary experiences in this discussion and to test for their existence in a sample of accumulated experience. These experiences are expected to manifest themselves in future expectations of technology upgrades to improve business performance. Capture of this information enables validation that past, future and imaginary experiences do indeed form part of the subjective online experience and can be used, both to contextualise and provide richer meaning to the research findings.

Phenomenological criticism also extends to relying on deduced hypotheses from the literature, when sense making is an accumulation of previous and future sense making. This research uses first phase in-depth interviews to validate the meaning attached to each hypothesis by capturing the 'stabilised' attitude within the accumulated experience as previously discussed.

From a post-positivist perspective combining accumulated experience within a context that allows repeatable activity is key to addressing the challenges presented by the phenomenological approach. Whilst a survey is still a structured snap shot at any one point in time, it is able to capture the responses derived from these accumulated experiences. In conclusion then, the combined approach in Table 15 addresses the majority of criticisms generated by the phenomenological school of thought. Constructed in this way a post-positivist approach can make a legitimate contribution to knowledge providing acceptable evidence towards a better understanding of experiential value. The combined contribution is called the VITAE model in this thesis. VITAE also remains consistent with the dominant multi-dimensional view of value, which combines cognitive and affective dimensions of value (Gummerus, 2013).

4.3 Research Context

The research context for this study is the Royal Mail online postage service, which is called SmartStamp®. Royal Mail Group Limited has a turnover of around £6Bn, and operates Royal Mail (UK letters), Parcelforce Worldwide (UK parcels) and General Logistics Systems (GLS). Royal Mail was privatised in 2006 and since then has been engaged in a modernisation journey to compete effectively in a liberalised Mail and Parcel market.

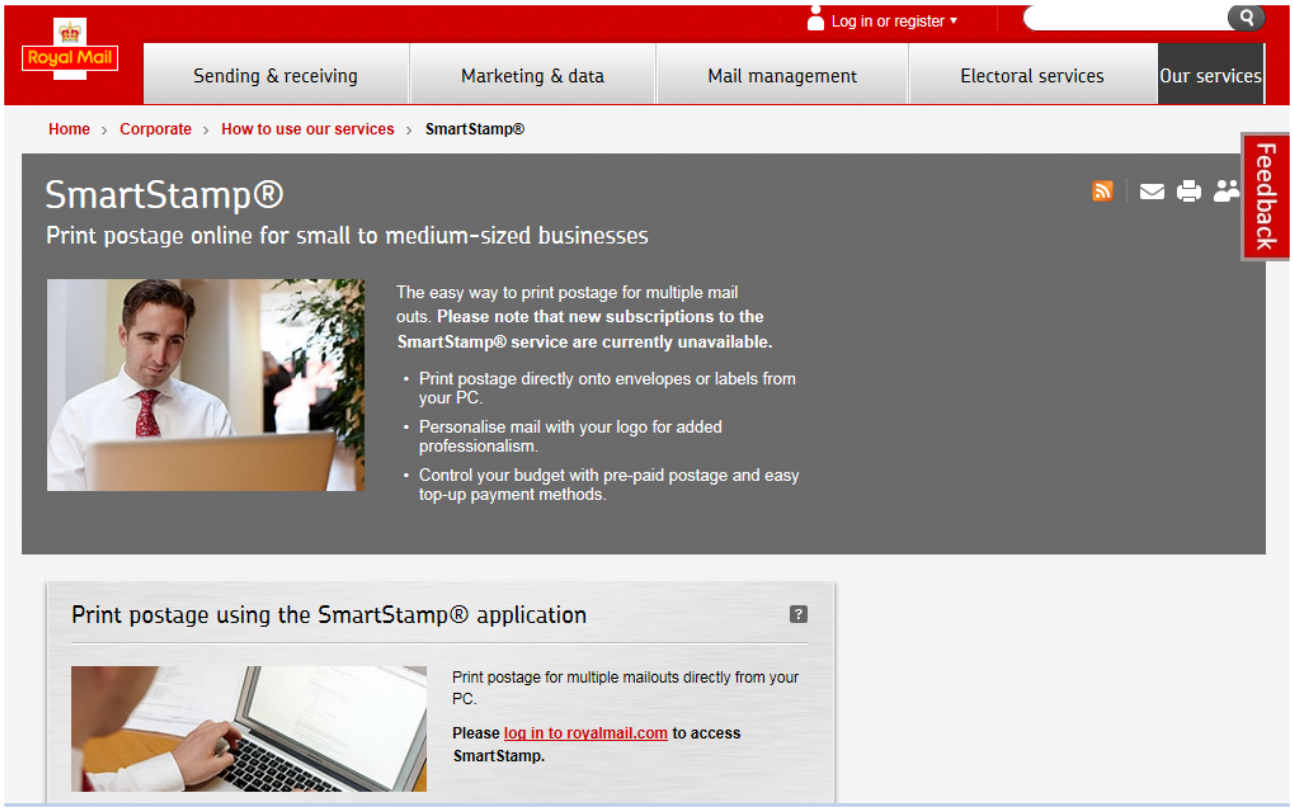
4.3.1 The UK Mail and Parcel Market

The UK mail market has experienced significant structural change over the last decade. The market was deregulated in January 2006 and Royal Mail lost its monopoly protection. The UK regulator (at the time Postcom) forced Royal Mail to provide access to its delivery network to promote competition. Subsequently Royal Mail's market share has steadily declined with key Government and commercial contracts moving to competitors. In parallel, physical mail volume continues a long-term decline as competing media (e.g. television, newspaper, radio) and electronic substitution (e.g. Internet and e-mail) erode the overall market size. Whilst the Internet has forced a decline in the Mail market, conversely it has also driven an increase in the Parcel market by changing customer buying behaviour and expanding the e-fulfilment sector. Against this backdrop Royal Mail continues its metamorphosis into a parcel business. In parallel, increasing customer power is forcing Royal Mail to improve its customer focus, which began with the 'transformation of the customer offer' initiative in 2005. This transformation involves the ongoing reconstruction of its service portfolio to become a multi-channel online retailer, integral to which is an improved understanding of customer needs and a focus on service excellence. Knowledge of what constitutes value to the end-customer is recognised as fundamental to the future success of Royal Mail. The next section reviews the context of interest.

4.3.2 SmartStamp® Online Self-Service Postage Channel

SmartStamp® is a subscription-based online postage service aimed at the UK small enterprise and home office business market, which was launched in January 2004. Customers open an account through Royal Mail's e-commerce portal and then download client-based software to enable postage creation via their own computer and printer. The service is aimed at small UK businesses, but also accommodates home users. The Internet now enables SmartStamp® users to benefit from: improved convenience (i.e. avoiding Post Offices); the ability to personalise postage; a professional mail image; and 24/7 ordering and availability. Prior to SmartStamp® the SME market segment constituted a gap in Royal Mail's online service offer. The channel now enables Royal Mail to manage many small accounts efficiently and SmartStamp® has its own C2C community, which provides significant CRM opportunities. However, Royal Mail has a limited understanding of value within the channel or how it influences re-subscription intent, customer satisfaction or positive WOM recommendation. A screenshot from the Royal Mail website showing the SmartStamp® portal is included in Figure 9.

Figure 9: SmartStamp® Web Portal



4.3.2.1 Service Functionality

The service allows users to print a postage mark directly onto envelopes and labels, using their own PC and printer. Postage marks can be personalised to include corporate logos and advertising slogans. The system integrates with commonly available PC address books and can be used as part of a mail merge capability. From Royal Mail's web portal, users can download trial software; create an account, credit the account; purchase postage and monitor the account spend. Users subscribe to the SmartStamp® service by accepting the service providers contractual terms and conditions, and opt for a yearly subscription (£49.99), or an initial 3 month contract followed by a monthly ongoing subscription of £4.99. Lockheed Martin (supplier) provides a managed service to support the system. The service is accessible via Royal Mail's web portal at: www.royalmail.com/smartstamp. Further details about the SmartStamp® service can be found in Appendix 3: Online Subscription Service Context.

In line with its transformation agenda, during the 2007 - 2010 timeframe Royal Mail procured and deployed a new eBusiness platform. Key to the success of the programme was the migration of both legacy and a new range of online services to the new platform without impacting Royal Mail's business critical operations. These services enabled a single view of customers across eBusiness

relationships and facilitated 'closed loop' customer experiences across sales, marketing and customer services. The system has over 100 interfaces to over 20 different systems, including third parties such as Amazon and eBay. In 2013 the site supported over 10 million unique visitors a month, handled over 100,000 transactions a day and had over 4.5 million registered users. The eBusiness platform continues to handle customer personal details to facilitate customer management and online payments. Installation of the eBusiness platform had a direct effect on the SmartStamp® service. Royal Mail's supplier faced significant challenges with the final release of the e-Business platform. Whilst the solution remained largely available, problems with slow running, poor end-user service and financial discrepancies adversely affected SmartStamp®. Since 2010 Royal Mail has been unable to allow new users to subscribe to the service. In 2007 the SmartStamp® channel had 40,000 users and was growing. Since 2010 the user numbers declined to 5000 when this researcher was able to access the channel in November 2014. This set of circumstances provided a sample frame of users with a minimum of 5 years service usage.

The unit of analysis in this research is VITAE accrued by UK subscribers to the Royal Mail SmartStamp® online postage service.

4.4 Generalisability

The conceptual model upon which the questionnaire is based can be broken down into the following basic components: the overall proposition; a software or web-based interface to perform the task; a fulfilment component e.g. delivery; a service provider support component e.g. help desk; a service recovery process; a cost or value for money component; and risk trade-off e.g. privacy; and a hedonic or feeling component that reflects personal pleasure from task completion when using a system. Each of these basic components would exist in any business related online offer that a customer (business or home user) is required to pay for. The next section examines each component further from the perspective of generalisability.

The overall proposition: self-service technologies typically offer the consumer a (perceived) time saving, additional convenience (or reduced behavioural sacrifice), often through location or time related benefits. To be of benefit to the consumer an online service should be available at a time convenient to the customer i.e. 24/7/365 to perform any given task. The service must be capable of being performed at a location convenient to the customer i.e. from an Internet connected device at home or increasingly from mobile locations. Design of the overall proposition in this research is therefore generalisable across any online subscription service.

The software or web interface: any online service proposition inherently has to have a technology component whether on a PC or a telephone. Usability of the technology has standard components that are generalisable and relate to functional value. For example the service has to work properly (availability); the user must be able to find information, navigate round the software and find it easy to use (efficiency); the service then needs to perform the required task (fulfilment/reliability). Again the design of this instrument is generalisable across the technology components of any online service. For instances where the online service has no fulfilment component, the fulfilment/ reliability dimension can be removed, since the VITAE model is modular in design.

Support component: any paid online service requires a support facility when it is technology-based for service recovery purposes. When technology goes wrong the service provider is expected to provide either telephone contact details or some form of online support to help resolve the user's issue (contact). The way a service recovery encounter is resolved is also important to the customer (responsiveness). Resolution of an issue may also require a mechanism to financially compensate or refund the customer for any errors made by the service provider or the service itself (compensation). From a support and service recovery perspective the design of this measurement instrument is generalisable across any paid online service.

A risk trade-off: in an online era symptomatic of viruses, identity theft, loss and misuse of personal data (privacy) or the risk of the service compromising the user's existing assets (i.e. telephone, PC or printer) are all issues that need to be considered for any paid online service. Both prior to subscription and throughout use, the consumer will undoubtedly consistently weigh up these risks and the service provider performance (both policy and track record) and reputation will be important considerations. These factors are captured in the perceived risk construct, which is generalisable across any online service.

All customers that pay for an online service will consider the price they pay against the benefits of the service they have subscribed to. Price is clearly generalisable across all paid online services. Finally, any online service will generate a 'feeling' component i.e. the pleasure derived from completing the task efficiently. If there were no feeling that the service supported improved task efficiency, it is unlikely the user would continue to subscribe. Consequently the emotional value component is also generalisable.

In conclusion then, this research has been designed to evaluate all of the components necessary to evaluate a subscription-based online service. Removal of postal connotations would enable re-use of the instrument across a wide range of business related online services e.g. accounting software; payment management solutions; expenses management; field services management; or online grocery shopping (for delivery subscription services).

4.5 Context Fit with Research Questions

Demonstration of the following conditions are required to justify whether the SmartStamp® online service is a suitable context for use in this study: 1) the ability to specify and measure the domain of VITAE; 2) generalisation across online subscription-based services; 3) to identify and measure the effect of the customer's wider social network; 4) evidence that co-creation occurs.

As previously discussed, the SmartStamp® service consists of the following broad components: a software interface to perform the task; a fulfilment component i.e. delivery; a support component i.e. helpdesk; and a service recovery process. In keeping with other online subscription-based services the service inherently incorporates: a cost or value for money component; a risk trade-off e.g. privacy; and a hedonic or feeling component that reflects personal satisfaction of task completion or the inherent fun of using a system. These components reflect the typical design of any paid online service deployed in industry today. The SmartStamp® channel context enables each of the constructs specified in the conceptual model (i.e. the domain) to be measured and is considered suitable to meet the first condition. The second condition is also met, as generalisation is possible across a standard online subscription based structure as discussed above.

Day to day activity within the SmartStamp® channel occurs in the customer sphere (see Gronroos and Voima, 2013). Note that the service provider's software facilitates this activity. Creating and expediting post is predominantly a routine task, which involves the customer performing the necessary activity at their own location. Technical help or advice on how to use the service optimally for their own particular set of business circumstances can either be accessed through the service provider's support facilities (i.e. the joint sphere) or via the customer's own social network i.e. work colleagues or friends. Consequently the SmartStamp® channel offers access to the customer's wider social network and satisfies condition three.

Interaction with the customer inside the SmartStamp® channel occurs in both the customer and joint spheres. Table 16 below adapts the work of Gronroos and Voima (2013) to identify the

demarcation lines between co-production and co-creation in the SmartStamp® service channel. The table also identifies service offer functionality and the associated activities in both the customer and joint spheres.

Table 16: Clarifying Online Service Areas of Co-Production and Co-Creation

Activity	Provider Sphere	Joint Sphere	Customer Sphere
Production Role	Producer: The provider as a producer of resources used by the customer in their co-creation activities	Co-producer: The customer participates as a co-producer in the joint development and design process	NA
Customer Role	NA	Value-creator/co-creation: The customer is the value co-creator but when inviting the provider into this process via a merged dialogue, value is co-created in direct interaction with the provider	Value co-creator: The customer is an independent co-creator of value outside direct interaction with the firm
Provider Role	Value facilitator: The provider is a value facilitator	Co-creator: The provider may get an opportunity to engage in the customer's value co-creation process as a co-creator	Value facilitator: The provider is a value facilitator
Service Functionality	NA	The support function (Helpdesk) and network access points (Post Office) create opportunities for the service provider to engage in direct co-creation with the customer 1) Helpdesk for technical advice and support (both call centre and online) 2) Helpdesk advises on optimising the customer value proposition, brand and business efficiency (via education mail merge, campaign and branding via the slogan generator) 3) Post Office counter acceptance	Co-creation occurs across the SmartStamp® online interface as follows: 1) Create label 2) Print to envelope 3) mail merge 4) International postage calculator 5) Slogan generator and image import 6) Account: buy postage online 7) Online refunds (trust basis) 8) Online frequently asked questions

Source: Adapted from Gronroos and Voima (2013, p136).

The SmartStamp® service concept contains elements of co-creation and consequently satisfies condition four. In conclusion the context is considered a strong fit to address the research questions in this thesis.

4.6 Qualitative Data Collection

Data collection in both the qualitative and quantitative phases draws on the Churchill (1995) procedure, which identifies a six-stage approach to determining a sample shown in Figure 10.

Figure 10: A Six-Step Procedure for Drawing a Sample



Source: Churchill 1995, p575.

Although the procedure would normally be used to select a quantitative sample, there is no reason not to use the framework as a guideline for qualitative sample selection, provided any quantitative connotations are removed.

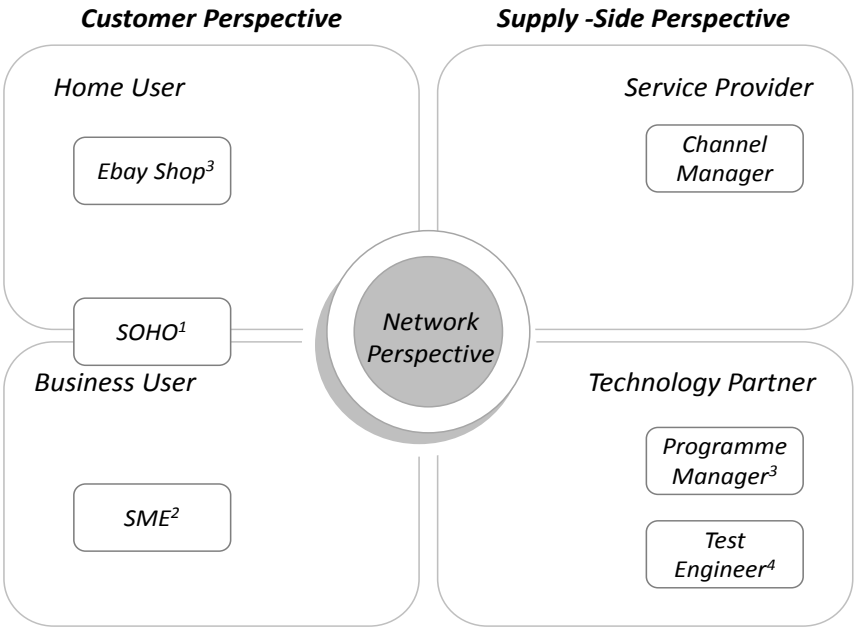
4.6.1 Defining the Population

Population is defined as *'the totality of cases that conform to some designated specifications'* (Churchill, 1995, p.574). The sample selection is based on UK subscribers to the Royal Mail SmartStamp® online postage service. At the time of writing the total subscription base was approximately 5000 users. Since 2010 the SmartStamp® online postage channel has been closed to new members (as previously discussed in the context section) consequently all users have between 5 - 11 years accumulated usage experience.

4.6.2 Identification of the Sample Frame

Royal Mail's intention for the SmartStamp® online postage service is to provide an online proposition for UK small business to access postage from a convenient location. Target market segments are high volume stamp users and lower volume meter machine users. Users can be categorised into three defined segments: small and medium sized businesses (SME); small office home office (SOHO) users; and home users.

Figure 11: Identification of the Sample Frame



1. Small Office Home Office Segment
2. Small Medium Sized Business Segment
3. Same interview Participant
4. Pilot interview

One objective of this study is to identify the wider network of actors that a resource integrator interacts with to co-create value. Consequently the sample frame is designed to include perspectives from both the defined user segments and other potential stakeholders that are visible prior to conducting the qualitative analysis. These stakeholders are: the service provider (Royal Mail) and the technology provider that supports the online postage system (Lockheed Martin). Figure 11 provides a boundary for the sample frame.

4.6.3 Sample Procedure

The sample methodology is designed in two parts:

1. A judgement sample to gain insight from the wider network of actors i.e. service provider and technology partner. The users that fulfil the criteria have been hand-picked since a)

they fulfil the research purpose, b) they are representative of the population of interest and c) perform specific boundary personnel roles (i.e. the SmartStamp® channel manager) working on the online postage project. The choice of informant was also governed by selection of senior personnel to facilitate knowledge of the constructs involved. Three boundary personnel agreed to participate in the research:

   a. The service provider (SmartStamp® channel manager)
   b. The technology partner (SmartStamp® programme manager). This participant is also a home user that operates an eBay shop selling vintage Meccano construction toys. The advantage of this selection is the provision of a blend of home user and wider network actor perspectives. Note also that home users represent a small user segment, which was omitted from the Royal Mail random sample generated
   c. The technology partner (SmartStamp® chief test engineer) was used for the qualitative pilot questionnaire

2. A convenience sample to gain insight from each of the user segments. Royal Mail provided a random list of 25 subscribing users within a 100 mile radius of the researcher's location. Each company on the list provided was contacted by the researcher on behalf of Royal Mail and a total of 5 users agreed to participate in the research project. Each user was offered a £25 incentive to participate. Small business users cited lack of time as the main constraint on access.

4.6.4 Sample Size

The sample frame requires a minimum of 5 interviews to achieve a blend of perspectives across each user segment and the wider network of actors. A total of 8 interviews were conducted, one of which was the methodological pilot. The pilot was conducted with the technology partner test engineer to preserve the number of user and network actor participants in the research project. From the user list of 25 provided by Royal Mail, 5 users volunteered to participate, equivalent to a 20% response rate. Saturation was reached at 7 interviews (plus 1 pilot).

4.6.5 Selection of Sample Elements

The following sample elements were considered across the 7 participants:

1. The largest user group is the SOHO segment. 3 interviews were conducted with this group, 2 with the SME segment and 1 with the home user segment. 1 interview was conducted with the service provider and 1 with the technology partner (note dual role of home user)

2. Participants included 5 female and 2 male respondents. All male respondents operated in the supply side of the sample frame
3. Perspectives on technology usage may differ between older and younger users. The sample was designed to include a broad range of age profiles: <20 years (1); 21-30 years (1); 31-40 years (2); 41 – 50 years (2); >51 years (2). Similarly the sample covered a range of technical abilities with 2 users describing themselves as expert, 2 as competent and 3 as novices with some level of competence
4. Perspectives can also differ between business owners and non-owners (frequently administration staff). The sample included 2 owners and 5 non-owners
5. User industry contexts included: a magazine publisher, a baby food manufacturer, a sailing repair and overhaul business; a property developer; an eBay shop selling vintage Meccano construction sets; and a software company.

4.6.6 Collection of the Data from the Designated Elements

Data collection will be conducted via face-to-face interviews. Interviews can be structured, semi-structured or unstructured. Structured interviews follow a rigid format, whilst unstructured interviews allow the interaction between the researchers and the respondent to develop more naturally (Schostak, 2006). Semi-structured interviews are more open than structured interviews and more focused on the research topic. The technique allows the researcher to blend the best of both structured and unstructured approaches. Semi-structured interviews are flexible, allow questions outside the guiding format and enable the researcher to probe emergent issues during the course of the interview. Specific technical terminology such as interaction, configuration, customisation etc. may not arise using an unstructured approach. Similarly the structure should be free enough to surface additional phenomena that may extend the domain of VITAE beyond the deduced constructs from the literature review. On this basis, semi-structured interviews were selected as the optimum fit for the research questions.

Each in-depth interview was executed using a short pre-set list of open-ended questions, at the work place of the subject involved on a one-to-one basis. The recipient was be allowed to roam anywhere within the subject area with a minimum of guidance from the interviewer. The expected duration of each interview was set at one hour. Every interview was recorded subject to consent being achieved to facilitate coding and the evidence required for transcription.

4.6.7 Pilot Study

The pilot study was executed with the technology partner chief test engineer from Lockheed Martin. Negotiating access proved difficult with small businesses, so the methodological pilot relied entirely on the input from the service provider's technology partner. Whilst not specifically a (paying) user, the participant had used the SmartStamp® system for many years; was familiar with both the product and its value proposition; had interfaced with numerous users and operated the system personally as part of his role. He was also instrumental in finding issues with the service and making recommendations for improvements.

Ring and Van De Ven (1994) state that the constructs that contribute to a phenomenon may exist even though the subject being interviewed may not be aware of it, for example the term or acknowledgement of an 'interaction' may not surface until the construct was specifically mentioned. Therefore the decision was made to semi-structure the qualitative questionnaire, the objective being to retain the interactionist perspective of open-ended questions, allowing the interviewee to explore without being prompted but constrained along post-positivist lines within a semi-organised framework. The advantage here in terms of validity, was the ability to generate data which would hold independently of both researcher and interview setting achieved by developing a list of standardised questions, which from a post-positivist viewpoint also helps to reduce bias (Silverman, 1994). Other advantages of a semi-structured itinerary were that, the recipient had to be shown the list, for reasons of time and to ensure that all the material was covered. Most interviewees would not stop the interview midway when the format was in front of them. A structured list of open-ended questions was compiled and designed to elicit the constructs that form the domain of VITAE. The structured itinerary was amended accordingly after the pilot interview. The final revision involved the elimination of questions that induced repetitive replies, balanced the format to last as close to one hour as possible and was re-tested with the chief test engineer participant. The result provided a concise discussion of each salient issue and was deemed suitable for use in the SmartStamp® service channel. The final semi-structured questionnaire is contained in Appendix 4: Semi-Structured Questionnaire.

4.6.8 Interview Bias

The positions of the interviewer and participants in the qualitative data gathering phase should be made clear at this juncture. At the time of conducting the qualitative interviews, the researcher was employed by Lockheed Martin (Royal Mail's technology partner). The researcher was also a user of SmartStamp® and engaged in various marketing activities (with Royal Mail) to launch and

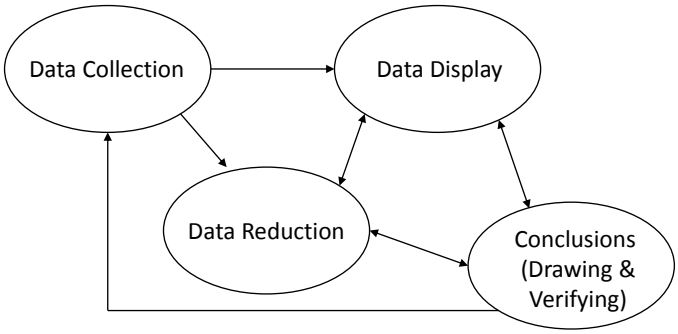
establish the SmartStamp® proposition in the UK market. This privileged position allowed access to service provider boundary personnel, members of Lockheed Martin's SmartStamp® project team and the SmartStamp® user base. All boundary personnel are professionally known to the researcher. All user interview participants were unknown to the researcher and interviewed on behalf of Royal Mail to operate within the constraints of privacy legislation in place at the time. Interview participants from the technology partner were both users of the SmartStamp® system in their own right and were requested to respond from their perspective as a user. Note that both participants were considered technically competent and brought with them experiences of the wider social network e.g. Royal Mail helpdesk and Post Office staff and the systems and processes they were required to work within; other manufacture perspectives (e.g. printer companies that worked on dedicated SmartStamp® labels); the nuances of Royal Mail's internal processes and culture; the history of SmartStamp's® evolution; and the service provider's business conditions that were perceived to constrain some elements of the SmartStamp® proposition.

A critical appraisal of the sample selection may indicate that use of technically aware respondents could elicit a perspective on some of the more complex elements of the study (e.g. the nuances between customisation and configuration) that may not have surfaced within the general population. However, the stance taken by this researcher is that the perspectives of the wider social network of actors requires these perspectives since the resource integrator is likely to interact with more technically advanced stakeholders as they co-create value. In addition the relationship between participants and the interviewer provided a relaxed atmosphere for the interview within which the participants were free to talk about their experiences with SmartStamp®. Rather than introduce any bias into the qualitative process, these relationships produced a richer discussion, which contributed to an improved understanding of the context within which the research questions are set.

4.7 Approach to Qualitative Analysis

The approach to the project has been selected and justified, however the style of analysis within the qualitative method requires clarification. Analysis of raw data is conducted using the Miles and Huberman (1984) approach and follows the framework shown in Figure 12.

Figure 12: Components of Data Analysis - Interactive Model



Source: Miles and Huberman, 1984, p.23.

4.7.1 Data Analysis

Data reduction refers to the process of selecting focusing, simplifying, abstracting, and transforming the raw data that appears in written-up field notes (Miles and Huberman, 1984). Data reduction will occur in this study in the following areas: selection of framework, choice of sample sites, research questions and the adoption of a data collection process. It is also evident in the action of searching for themes, use of selected information to support data and in the choice of the evolving story. Each element is an analytical choice and implication of any form of quantification is not the objective. *'A display is an organised assembly of information that permits conclusion drawing and action taking'* (ibid, p.21). This study will attempt to display data in simplified gestalts or easily understood configurations to demonstrate support for the constructs on one level, but also to display the data clearly to develop 'meaningful' conclusions. Conclusion drawing/verification is essential to begin to understand what things mean, noting regularities, patterns, explanations, possible configurations, causal flows and propositions. The meanings emerging from the data require testing for their plausibility or 'confirmability' i.e. validity. '*Without this the analysis is merely a story with no basis'* (ibid, p.21).

4.7.1.1 Coding Approach and Tactics for Generating Meaning

Miles and Huberman (1984) organise tactics for generating meaning into a five-stage data reduction process. Note that this research is designed primarily as a quantitative piece and only requires the first two phases of the process to achieve the desired outcome. The authors term the method 'data counting' which in this case can be misleading. The research design will include a cross-case analysis intended to show the amount of agreement between informants, not respondents, therefore it should not be construed that any form of frequency counting is implied. The decision to analyse the data in such a way is based on three factors: to see patterns quickly in a large amount of data; to verify hypotheses; and to mitigate any potential bias.

A key technique in this study involves organising data into gestalts to enable the researcher to note recurring patterns and themes. Level one clustering is used to see which phenomena go together and which do not. A clustering of different themes may be necessary to establish the support required for each hypothesis. Start bins will be allocated based on hypotheses identified from the conceptual model and other key themes within the study and given start codes. Relevant themes will be clustered into each bin, and coded according to association. Overall encompassing themes will be identified and integrated into a cross-case analysis. The rationale behind clustering is to attempt to understand a phenomenon better by forming categories, grouping and then conceptualising objects that have similar patterns or characteristics. Following the clustering phase, the next stage in the model is called 'making metaphors'. The purpose of metaphors in this study is not to label each clustering of patterns with one word but to reduce data by developing one statement that captures a number of constructs or themes in a cluster. The establishment of a cross-case analysis will enable a number of statements to be made that capture the essence of what is going on within the channel.

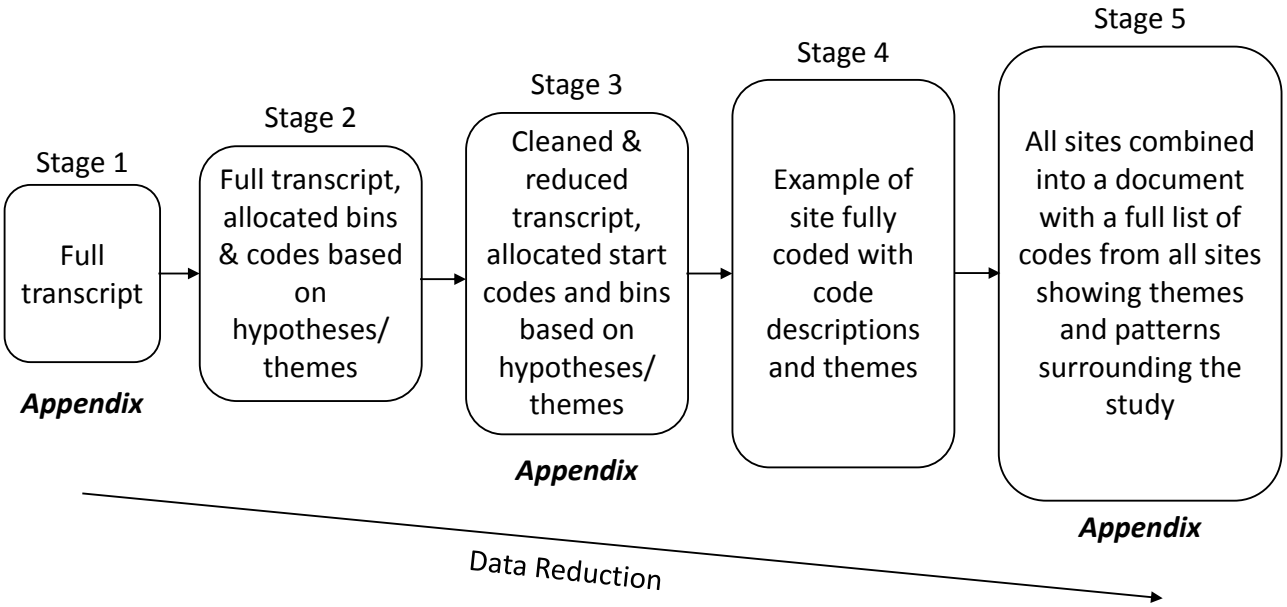
Level two builds on the level one clustering technique. The next tactic investigates what the specific clustering is an instance of, or whether it belongs to a more general class. This technique relates to pattern coding and analyses in greater depth by locating the immediate act, event, actor, or activity in a more abstractly defined class. 'Factoring' (used in this study as a summary of underlying factors) will be used to search for unobserved or second order variables (factors), which could be uncorrelated or have a degree of communality overlapping with each other. Once the relevant variables are known 'noting relations between variables' is used to allow the researcher to pinpoint how they relate to each other. In order to take an overall view within the online postage channel, it will be necessary to find other 'related variables', which could help to explain a number of interrelationships. An amalgamation of each technique should support the construction of a schema, which will provide context around the actor touch points and their activities within the context of interest.

The remaining three levels of the Miles and Huberman approach are designed to induce hypotheses or to build theory from the qualitative section, which is not the intention of this study. Concluding the qualitative phase with a cross-case view (i.e. at level 2) is considered sufficient to meet the research objectives and will inform the quantitative phase on the following: a) validation of the holistic domain of VITAE; b) provide meaning to validate construct definitions; c) identification of any dimensional overlap d) any questionnaire item content refinements required to fit the context; e)

development of a schema identifying the touch points of actors and their activities within the wider social network; f) validation of hypotheses and g) provide meaning to support the interpretation of survey data.

Within the Miles and Huberman approach, this study organises the stages of data reduction into five distinct steps (separate from the Miles and Huberman 5 stage model). The five-step process, including the approach to marshalling evidence is diagrammatically represented in Figure 13 below.

Figure 13: Five Stage Data Reduction Process



Transcribed interviews were organised into a coding structure by construct (derived from the conceptual model) and key themes important to the study. Clusterings of meaning were allocated meta codes. Meta codes were used: to reduce the number of start codes into a manageable number; as the basis of analyses to validate, refine or eliminate aspects of the four research objectives discussed above.

Additional codes have been included beyond those necessary to assess construct definitions. These codes are intended to provide contextual meaning to support each section in this chapter and to assist in the interpretation of survey data downstream. These supporting codes are not intended to redefine extant constructs. To provide evidence of each key stage in the analysis, the appendices will include: one full transcript; an extract from one coded interview; and the cross-case analysis showing the degree of agreement amongst respondents. This concludes the qualitative approach to data analysis overview. The next section examines quantitative data collection.

4.8 Quantitative Data Collection

Data collection in the quantitative phase also follows the procedure defined by Churchill (1995) as previously specified in Figure 10. Consequently population definition is the same as previously stated and the sample frame draws on the same UK subscribers to the Royal Mail SmartStamp® online postage service as discussed in section 4.6.2.

4.8.1 Sample Size, Procedure and Selection of Sample Elements

This research is in the fortunate position to be able to approach the entire SmartStamp® population. Royal Mail sent an online request to participate in the survey to all 5000 subscribers (see Appendix 5: Royal Mail Request to Participate in Survey). This approach removes all issues associated with the sampling procedure, the selection of the sample elements and the representative nature of the sample with respect to the population. It also removes any potential bias in the sampling process.

4.8.2 Collection of the Data from the Designated Elements

Royal Mail's privacy policy required SmartStamp® subscribers to opt into the survey. Consequently Royal Mail gave no personal details to the researcher. Royal Mail sent an online letter of endorsement to support the research and provided a call to action to its entire SmartStamp® subscriber base. The letter was written by the Head of SmartStamp® to add weight to the request with a view to increasing take-up. The letter also informed participants of the expected time required to complete the survey. Privacy laws notwithstanding, the primary purpose of a covering letter is to win the co-operation of respondents. Studies have shown that a covering letter can affect the response rates to surveys (Houston and Nevin 1977). Drawing on the Parasuraman (1991, p.400) guidelines, the following techniques to improve response rates were incorporated into the covering letter for this research:

1. Personal communication, (i.e. subscribers email contact)
2. Importance of the research (to improve the SmartStamp® service)
3. Importance of the replies in general (to draw meaningful conclusions)
4. How the recipient may benefit from the research (improve their business)
5. Completing the questionnaire will only take a short time (i.e. timed at 15 minutes)
6. Answers are confidential and anonymous
7. Appreciation of sender

The endorsement letter is included as above in Appendix 5: Royal Mail Request to Participate in Survey.

All subscribers expressing a wish to take part were sent a letter (written by the researcher, but signed by the supervising Professor) from Nottingham University to maintain the authenticity of the research and to provide continuity to Royal Mail's initial notification. The letter reinforced why the research was important to the respondents' business and contained a link to participate in the online survey. The letter is included in Appendix 6: Nottingham University Survey Request. The email contact details of all respondents that opted in were then subsequently available to the researcher and followed up after the initial letter for two reasons a) to remind participants to complete the questionnaire to improve response rates and b) to request additional feedback on respondent perceptions. The letter is contained in Appendix 7: Survey Request Reminder. These views are contained in Appendix 8: Past, Future and Imaginary Experiences and are important to validate the phenomenological perspective that VITAE incorporates both past, future and imaginary experiences (Helkkula et al., 2012). Data was collected by online questionnaire via Bristol Online Surveys. Questionnaire design and the rationale for selecting an online survey as the chosen approach is discussed in the next section.

4.8.3 Questionnaire Design

In line with the post-positivist stance taken in this research, an online survey instrument was used as the main data collection tool. An online survey approach has numerous advantages and was selected based on the following rationale: a fast response time; ease of entry; cost effective data collection (Granello and Wheaton, 2004); broad geographic reach; fewer instructions to guide respondents (Deutskens et al., 2006); random presentation of questions; which allows more control over the order in which each question is answered (Granello and Wheaton, 2004) and can reduce systematic errors (Brace, 2008). Online questionnaires allow for sophisticated question routing (Stanton, 1998). In order to specify the holistic domain of VITAE correctly the questionnaire in this study has a significant number of constructs to test and is considered reasonably lengthy, which may negatively affect response rates. Filtering and branching questions are necessary to reduce the perceived survey completion time. For example those that have not experienced a service recovery situation are branched away from questions related to that topic, which effectively reduced the survey length for many participants.

4.8.3.1 Choice of Scale

This research is behaviourally orientated, and attitudes can only be inferred and not measured directly or observed, which justifies the choice of an attitudinal scale. An attitude can be defined as *'underlying mental states capable of influencing a person's choice of actions and maintaining consistency across those actions'* (Parasuraman, 1991, p.414). Attitudes are widely believed to be a

key determinant of behaviour and are usually measured by some form of rating scale (ibid, 1991). Attitudes are multifaceted and multiple item scales are required to reflect the underlying variables (single item scales are typically deficient). A multi-item scale, designed to examine each construct from different directions, is considered a more reliable measure. The nature of this research requires the possibility of a neutral view since some of the constructs may not be perceived to exist, and if they do, may not provoke a positive or negative response, therefore an odd numbered non-forced response choice is preferred. A balanced scale to reduce possible bias and potential end piling is preferred over an unbalanced scale. Verbal labelling will be used with the main anchors on the scale being strongly agree to strongly disagree. The nature of the constructs in question do not require a fine mental distinction, which suits multiple item scales (Parasuraman, 1991). The size of the scale providing the best fit for the study is the seven point option. The five point Likert scale is considered to provide too limited a variety of responses to suit the requirements of this investigation. Validity of scale choice is demonstrated by following previous seminal work in the field e.g. PERVAL (Sweeney and Souter, 2001) and SERV-PERVAL (Petrick, 2002).

4.8.3.2 Scale Development

In this section scale development is explained in two parts a) defining the domain of VITAE and b) describing the development of the measure for the resource integration construct.

Defining the holistic domain of VITAE is addressed in three sequential steps:

1. The literature review deduced the constructs that form VITAE
2. To eliminate dimensional overlap and to adapt the wording of items for an online subscription service, an in-depth construct analysis was undertaken across a number of multi-dimensional value models, which provided the candidate pool of constructs to form the domain of VITAE. Several constructs displayed variation in definition and labelling but revealed many similarities at the item level. The analysis was undertaken at both the construct and item levels to evaluate where dimensional overlap occurred and the output is included in Appendix 1: Value Construct Analysis. This output is incorporated into the second stage of the literature review where the rationale for the selection of each construct to be included is set out in detail. Based on this analysis, the constructs in Table 17 and their associated models (where a name was available), captured the domain of VITAE and were considered suitable for inclusion.

Table 17: Construct Donor Models

Construct	Donnor Model	Reference
System Efficiency	E-S-QUAL	Parasuraman, Zeithaml and Malhotra (2005)
Availablity		
Fulfillment/Reliability		
Respnsiveness	E-RecS-QUAL	
Contact		
Compensation		
Convenience	Benefit Convenience	Berry, Seiders and Grewal (2002)
Emotional value	PERVAL	Sweeney and Soutar (2001)
Perceived Risk	E-S-QUAL (Secuirty/Privacy)	Parasuraman, Zeithaml and Malhotra (2005)
	Performance/ Financial Risk	Sweeney, Soutar and Johnson (1999)
Price	SERV-PERVAL	Petrick (2002)
Customer Percieved Value		Sweeney, Soutar and Johnson (1999)
Word of Mouth Recomendation		Lin, Sher and Shih (2005)
Customer Satisfaction		
Re-subscription Intent		

(Note the social value construct is removed at the qualitative phase of the investigation).

3. The final step used the qualitative output to: validate the existence of each construct within an online subscription service; refine construct definitions and item terminology to reflect the context; which then informed questionnaire design (see chapter 5).

Resource integration is captured using two components: personal (or technical skills) and network. Participation (i.e. the use of software features) is included for control purposes only. Note that participation remains part of the resource integration domain, however evidence from the literature review indicated a minimal effect on VITAE (see Chapter 3). Operationalisation of each resource integration component was approached in two phases.

Phase one was qualitative and relates specifically to the network actors facilitating resource integration. The qualitative phase was used to identify the actor participant categories (i.e. who) interacting with the resource integrator in the social network. Phase one also assessed how these actors interacted with the resource integrator to construct an overview of the touch points in the network within the online subscription service context and also to inform downstream quantitative findings.

Phase two is quantitative; technical competence of the respondents (i.e. personal skills) draws on the consumer readiness construct from Meuter et al. (2005), which is captured through an attitudinal scale as specified above for the VITAE domain. The network component has not been operationalised to date and consequently there are no constructs available to draw on. The output from phase one was used to create a list of actors in the user's wider social network, which included a) the service provider (helpdesk) b) friends and colleagues c) customer/recipient d) service provider (fulfilment) i.e. postman and e) third party IT support. This list was incorporated within the questionnaire as a dichotomous scale to capture the required yes/no answers from respondents to confirm evidence of an interaction i.e. the user draws on these actors as part of their resource integration activities. Note that this approach was taken to measure actual resource integration activity by the user rather than perceived activity (see Heinonen et al., 2010; Mohd-Any et al., 2015). The dichotomous output was then summed using IBM SPSS V21, which resulted in a continuous variable to measure the breadth of the network (labelled resource integration). It is recognised that this approach does not capture the quality of the network interactions, rather it is intended as a preliminary indicator to establish whether indeed the wider social network of actors do affect VITAE. If this should be the case, future research is recommended to construct a more robust resource integration construct for testing within the full VITAE model.

The control role of the participation construct has been previously explained. It is measured similarly to the network construct above in that a dichotomous scale is used to capture the required yes/no answers from respondents to confirm evidence of actual functionality usage rather than perceived (Heinonen et al., 2010; Mohd-Any, Winklhofer and Ennew, 2015). A summated scale (as above) was created to check for any differences in effect of basic and/or complex functionality usage on VITAE.

The logical questionnaire layout included six sections. Section one included questions relating to the service experience i.e. functional value questions specific to the online software tool and co-creation processes. Section two included questions relating to the wider service proposition, which included core benefits (i.e. convenience) and sacrifice dimensions (i.e. price, risk and privacy/security). Section three incorporated questions relating to online interactivity i.e. emotional value and technology competence. Section four covers opinions of the user and included the validation constructs i.e. customer satisfaction, re-subscription intent and word of mouth recommendation. Section five is entitled support network and addresses the network component of resource integration. Section six relates to classification data.

The classification questions were organised as follows:

1. The type of user (e.g. company or home user) using a dichotomous scale
2. Technology competence ranged form novice to expert and used a semantic differential scale. The question was included to understand how respondents rated their own level of technical competence to support the findings from the attitudinal scale designed to capture a component of resource integration
3. Gender distinction was measured using a dichotomous scale and was included to understand whether administrative staff responses could be skewed toward women, which could constitute the largest segment in the sample
4. Respondent age was measured in 4 year increments from ≤ 20 to ≥ 61 using an ordinal scale. An age profile was included to ascertain whether it still has an affect on technology usage and consequently on VITAE
5. The service location was measured using a dichotomous scale e.g. home or office location
6. Subscription length ranged form ≤ 3 months to ≥ 5 years and was assessed using an ordinal scale. Subscription length was included to control for the existence of accumulated experience
7. Mail volumes were evaluated using an ordinal scale from ≤ 5 items per day to ≥ 101 items per day
8. Functionality measurement was based on software descriptions, which included: mail merge, logo/slogan generator, international postage calculator, print to labels and print direct to envelope using a dichotomous scale. Software functionality was used to capture participation via actual service functionality usage
9. Mail types i.e. parcel or letter types were captured using a dichotomous scale
10. The company years in operation was measured using an ordinal scale, which ranged from ≤ 1 to ≥ 11 years
11. The number of employees was captured using an ordinal scale, which ranged from 0 to ≥ 20 staff
12. Company turnover was assessed using an ordinal scale, which ranged from ≤ £50,000 to ≥ £5,000,000. The questions was included to infer market segments (SOHO etc.) to control for a representative spread of answers within the sample
13. Payment authorisation was evaluated using a dichotomous scale e.g. authorise payment or not authorise

14. Respondent role was established using a dichotomous scale e.g. owner or employee. The question was included to assess whether there are any differences in responses between the business owner (i.e. the decision maker) and administration staff.

The research instrument has the potential to be used by Royal Mail and therefore reflects relevant practitioner categories based on previous SmartStamp® research instruments to promote future practitioner usage. These categories related predominantly to the mail volumes, usage types and segmentation questions described above.

4.8.4 Pilot Study

The questionnaire pilot study was conducted in two phases. The first phase was undertaken with the two technically competent male boundary personnel from Lockheed Martin previously interviewed in the qualitative phase to check for face validity, which included: a) questions were understood correctly b) terminology was correct c) question sequencing worked d) statements introducing each question within the context were appropriate e) questionnaire completion time was within acceptable limits f) test for questions that were uncomfortable e.g. the turnover question.

The phase two user sample ranged from a female novice secretarial business user in her mid twenties to an expert home user/hobbyist in his early fifties. In addition to the boundary personnel mentioned above, five additional female administrative users took part in the pilot test, all respondents worked for Lockheed Martin and used the SmartStamp® service daily. Theoretical saturation of results occurred very quickly. Due to the rapid saturation a small user sample was deemed satisfactory as no new comments were forthcoming. Time to complete the questionnaire ranged from 8-11 minutes. The user taking 11 minutes was notably slow and the expected duration to complete the questionnaire was between 8 and 9 minutes.

Questionnaire amendments based on pilot user comments were as follows:

1. In all cases section 1 question 3 caused confusion between the demarcation lines of the SmartStamp® IT system and the wider Royal Mail service (delivery of mail). The questionnaire required a clarification to include the wider Royal Mail service proposition

2. Section 2 question 2 caused confusion between the cost of stamps and the cost of a SmartStamp® subscription, particularly for users that did not pay for the subscription. Users

that did not pay were also unaware of the current subscription cost. The questionnaire required amending to reflect subscription focus and pricing

3. Section 2, question 3, item 5 identified that user's did not actually know (for certain) that Royal Mail protected online user information. The questionnaire required amending to reflect an overall perception

4. Section 1 question 4 created confusion since some respondents had only used the online help facility and had never contacted the helpdesk by telephone. The question/items required amendment to reflect both telephone and online help usage

5. Section 3 question 2, item 4 created confusion over the term 'online interactions'. The item required amendment to reflect the postage context

6. Section 1, question 6 on compensation was ambiguous. The refund process is separate from both the helpdesk and the wider Royal Mail compensation process. The question required re-wording to reflect the SmartStamp® refund process for spoilt stamps only. In addition routing questions to identify service recovery users must not screen out questions on refunds since the user may not have used the helpdesk but may well have used the refund process

7. Section 3, question 3 the term 'mastering technology' was perceived to be a strange term. The question required amendment to 'confidence in using technology' to ensure the appropriate understanding

8. Section 5 was problematic since not all categories were applicable. Infrastructure providers e.g. broadband providers were not relevant and required removal. Pilot feedback indicated that inclusion of the construct as a continuous variable would create excessive missing values and would be problematic for downstream analysis. The decision was taken to amend the variable to a dichotomous variable to improve relevance

9. The classification section required minor amendments to the payment authorisation section and the inclusion of some additional not applicable options

These changes were made to the instrument, which was then deemed suitable for use in the main online survey. The final VITAE instrument is contained in Appendix 9: Questionnaire.

One of the main objectives of this research is to develop the VITAE measurement model, consequently data collection, data cleansing, coding and data entry, including choice of data analysis technique are all discussed in the quantitative findings section.

4.9 Respondent Profile Frequencies

The following sections provide respondent profile results from the online questionnaire. Results report frequency data only to provide context to the main findings, which are presented in the main quantitative findings section.

4.9.1 Online Subscription Service Channel Overview

The SmartStamp® service is an online proposition targeted at the UK Small Office and Home Office (SOHO) market segment. Prior to the launch of SmartStamp® in 2004 there was no online postage offer for small businesses. SmartStamp® was positioned to capture the upper end of the stamp user segment and the lower segments of the franking machine market. Originally the service targeted the 15-25 mail items per day segment, however early research found that SmartStamp® cannibalised more of the stamp market with typical users sending less than 10 items per day and employing small numbers of staff ranging from 0-5 people (Lockheed Martin, 2004). The proportions and participants of the study are represented with brief comments below. The commentary is divided into two sections; company profile and individual user profile.

4.9.2 Company Profiles

The majority of the respondents were companies (68%), however a small number of respondents were purely home users (9%). Within that, home or home office users represented 49% of the sample, users operating entirely from an office location accounted for 41% with a smaller proportion of respondents using the service from multiple locations (11%). 77% of the population reported a company turnover < £500,000 with almost 40% of respondents reporting a turnover of < £50,000. 66% of participants sent less than 5 mail items per day with 83% of the sample sending less than 10 items. 72% of companies employed ≤5 people, with 37% of SOHO operators employing 2-5 people. 63% of companies had been in operation for ≥10 years and 61% of the sample had subscribed to SmartStamp® for >5 years, with 97.6% of the sample subscribing for more than 3 years duration. This high percentage of longer serving subscribers is expected given the subscription situation explained above and supports the premise of accumulated experience in the sample population. Whilst the recorded sample profile is considered representative of the current SmartStamp® subscriber base, it is acknowledged that a sample with a high proportion of experienced users that have been subject to a prolonged period of service disruption could introduce

response bias with respect to value perceptions, particularly in the service recovery area. Company respondent participation matched the expected SmartStamp® user population; the majority falling within the bounds of a SOHO operator i.e. operating from a home office with a small turnover, sending a low volumes of mail and employing small numbers of staff. The next section examines respondent profiles.

4.9.3 Respondent Profiles

Respondent profiles consisted of 62% Male and 38% female participants. 68.3% were either the owner or a company director, whilst employees accounted for 27.6% of the sample. 84.6% were in a position to authorise the SmartStamp® subscription purchase (or renewal) whereas 10.6% were required to ask permission, which is potentially important when considering the risks associated with subscribing to the service. Examining the male/female data in more depth revealed that 1% of males and 35% of women asked permission to purchase the subscription, which indicates a potentially higher proportion of women employed to undertake administrative roles i.e. expedite the post.

Responses were heavily weighted towards older users with 85% of the sample being ≥ 40 years old. This is not surprising given starting your own business typically requires a number of years to acquire the necessary skills and financial means to become commercially viable. The older age profile is also consistent with long established SOHO companies i.e. to have operated your own company for over 10 years there is a strong likelihood of being older. Given the age profile of respondents it is important to consider the degree of technology competence within the sample. Respondents were asked to rate their perceived technical competence on a scale of 1 to 5 (1 being novice and 5 being expert). Early literature reported age has been synonymous with low levels of technology readiness, however the profile of this sample indicated that technology readiness amongst the older generation was now less of an issue.

Respondent usage of software functionality also provided an insight into the user profile. All key elements of the SmartStamp® technology proposition were being actively used by respondents. 37% of the sample used the logo/slogan generator. This allows users to personalise their mail by adding a company logo or a campaign slogan to the mail item for brand recognition. It also allows home users to include personal images e.g. children or significant events. The qualitative phase of the study identified this functionality as a key contributor to co-creation and a key driver of emotional value. 25% of the sample used the international postage calculator. This implies that

many items are being sent overseas and the functionality allows the user to calculate postage from their desktop without sacrificing time and resources queuing at the Post Office to ascertain the necessary postage tariff. The ability to avoid queues in the Post Office is a key component of Convenience within the SmartStamp® proposition. This finding provides an early indicator that the participation construct is unlikely to have a significant affect on VITAE. Respondents had been using the full functionality appropriate for their businesses for a long period of time and there were no indications that any of the functionality was considered complex.

Mail usage provides a useful insight into the type of user. 62% of the sample sent small or medium sized parcels. 23% sent larger letters (i.e. magazines). Only 7% of the sample posted standard letters. This is not a surprise as e-substitution (i.e. email) has been eroding letter traffic for almost 20 years and the Internet continues to drive greater e-fulfilment, which drives up parcel volumes. Indeed many users of the SmartStamp® channel use online market places such as Amazon or eBay, which generates substantial parcel traffic.

One of the aims of this study is to understand the effect of resource integration on VITAE within an online self-service subscription channel. The first component is the user's degree of technical competence, which influences how effective they are at resource integration. Despite the older sample population, nobody considered themselves a novice, in fact, on the one to five scale, 71% of the sample perceived themselves to be 4 or more with almost one quarter of the sample considering themselves an expert. The second component relates to the network part of resource integration. The first step in this research design is to identify who interacts with the user to support resource integration. Respondents were asked to identify which third parties had helped them make better use of the SmartStamp® proposition. Examples used to guide respondents included: who had helped them to resolve system problems; who had provided business advice; who had helped to optimise their system use; or helped to improve their sales proposition. Respondents identified a heavy reliance on friends and work colleagues (90%). Interactions with service provider staff occur through: Postmen; Post Office counter staff, or SmartStamp® helpdesk staff. Only 7% of respondents identified that service provider staff had assisted with their proposition or helped them integrate resources. It should be noted that Post Office counter staff have a conflict of interest in that SmartStamp® undermines their business model (i.e. the margin gained from selling traditional stamps) and Royal Mail helpdesk staff tend to be contacted in service recovery situations only. Lastly respondents reported that the recipient of their mail item (or their end customer) had helped them make better use of SmartStamp® in 2.4% of cases. This form of resource integration would

include eBay feedback and a greater propensity to purchase from an eBay seller due to accurate postage predictions.

In conclusion, the sample is considered representative of the SmartStamp® online subscription channel. To validate this premise, results were compared with previous research undertaken by Lockheed Martin in 2004, which established segmentation within the SmartStamp® channel. Respondent profiles were in broad alignment with this earlier research. Notable exceptions include user technical competence, which had clearly improved over the last 10 years and the length of subscription, which was much shorter as the service was in its early years. Please note that: this researcher led the Lockheed Martin research work into the SmartStamp® user base; and the research remains proprietary to Lockheed Martin.

This concludes the methodology chapter and the next chapter presents the qualitative findings.

Chapter 5

Qualitative Findings

5 Qualitative Findings

The primary objectives of the qualitative findings chapter are to validate the deductive conclusions from the literature review, to support the design of an online questionnaire and to provide contextual meaning to support the discussion and conclusions chapter. Support to the literature review conclusions includes a) validation of the domain of value in the accumulated experience (VITAE) b) validation of construct definitions and refinement as necessary for the specific context and c) refinement of construct items to reflect the context and d) validating the conceptualisation of the resource integration construct. Integral to validating resource integration is the establishment of who the different network actors are and their touch points within the wider ecosystem.

This chapter begins with validating the domain of VITAE, discusses each construct in turn and refines definitions, before identifying the network of actors and describing their touch points to show how the network interacts. This chapter concludes with a refined conceptual model, which reflects the domain of VITAE based on the meaning derived from the qualitative analysis results. Note that the outcome constructs used in this research are well established in the literature and are included in the model for nomological validation reasons only. Consequently they are not discussed further in this chapter.

Coding is explained in detail within the methodology chapter, as a reminder the approach takes a post-positive stance and the start point is the extant construct definition. The coding structure is designed to accomplish two objectives: a) eliciting meaning to support each of the constructs that form the VITAE model and b) to identify aspects of the VITAE domain that were not identified at the literature review stage. Both objectives must be satisfied to establish the correct holistic domain of VITAE. Refinements to extant definitions and questionnaire items are contained in Appendix 12: Construct and Item Refinements. Transcript evidence is provided in Appendix 13: Transcript Participant F.

5.1 Domain Validation

This section establishes whether meaning elicited from participant interviews supports the domain of VITAE deduced from the literature. Please see Appendix 11: Cross Case Analysis for the supporting analysis.

Table 18: Domain Constructs Forming Value in the Accumulated Experience (VITAE)

Construct Category	Domain Construct	Interviews						
		A	B	C	D	E	F	G
Functional Value	System efficiency	✓	✓	✓	✓	✓	✓	✓
	System availability	✓	✓	✓	✓	✓	✓	✓
	Fulfillment/reliability	✓	✓	✓	✓	✓	✓	✓
	Responsiveness	✓	✓	✓	✓	✓	✓	✓
	Contact	✓	✓	✓	✓	✓	✓	✓
	Compensation	✓	✓		✓	✓	✓	✓
Outcome	Convenience	✓	✓	✓	✓	✓	✓	✓
Hedonic	Emotional value		✓	✓	✓	✓	✓	✓
	Social value							
Resource integration	Network	✓	✓	✓	✓	✓	✓	
	Personal skills	✓	✓	✓	✓	✓	✓	✓
	Participation							
Sacrifice	Risk (financial/performance)	✓	✓	✓	✓	✓	✓	✓
	Security/Privacy	✓	✓	✓	✓	✓	✓	✓
	Price	✓		✓	✓	✓	✓	✓
Other	Perceived control	✓	✓	✓	✓	✓	✓	✓
	Behavioural Sacrifice	✓	✓	✓	✓	✓	✓	✓

Interview participants were asked for their perception about what constituted a good and a poor experience (Please see Appendix 4: Semi-Structured Questionnaire). The majority of constructs emerged at this juncture but not all. Meaning to support the conclusions in Table 18 has been elicited across the entire interview content for each participant, since participants did not immediately recognize all aspects of their experience until they emerged in later dialogue.

The qualitative findings showed a significant amount of agreement to support all constructs deduced from the literature that form VITAE. As shown in Table 18, theoretical saturation occurred quickly with participant dialogue reflecting identical meaning, consequently seven interviews were deemed sufficient to validate the holistic domain of VITAE. Interview data was also analysed for additional meaning not previously identified in the literature review, but which could form part of the VITAE domain. Only two potential constructs emerged: perceived control and behavioural sacrifice both of which had been previously evaluated and found not to form part of the VITAE domain, since they introduced overlap in meaning with other constructs.

Table 18 shows that all interview participants had experienced a service recovery encounter, reflected in the responsiveness, contact and compensation constructs. Based on this finding the service recovery constructs will be included in the main VITAE model. The next sections discuss each construct in the VITAE model and provide supporting meaning from the interview data.

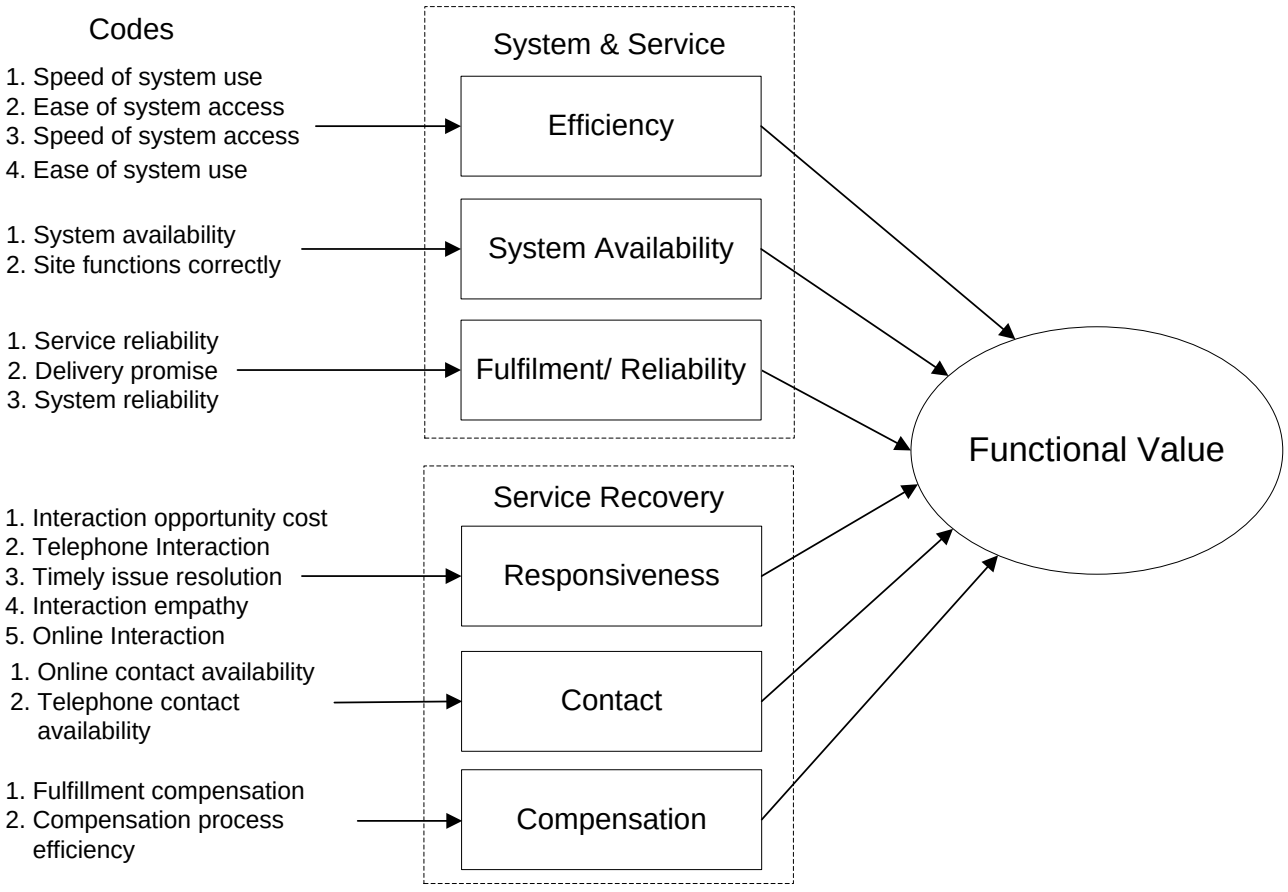
5.2 VITAE Construct Validation

This section discusses each construct within the VITAE domain in turn, refining both definitions and extant questionnaire items, beginning with functional value constructs. Note that changes to construct definitions refer to minor changes to reflect the context only and do not change the meaning of any constructs. Illustrative quotes are used in each section to provide supporting context. Dialogue in bold relates to the interviewer. Reference to significant item level changes only are made in the text.

5.2.1 Functional Value Constructs

Functional value relates to the six constructs that form electronic service quality (Parasuraman, Zeithaml and Malhotra 2005). Figure 14 signposts functional value codes and associated constructs.

Figure 14: Codes Supporting the Functional Value Construct



Constructs relating to the effective operation of a website or technical system include efficiency and systems availability. The fulfilment/reliability construct refers to the effective operation of the overall service itself. The responsiveness, contact and compensation constructs refer to service recovery situations where the service has not operated correctly. The following sections describe each specific construct.

5.2.1.1 Systems Efficiency

The systems efficiency construct is defined in the literature by Parasuraman, Zeithaml and Malhotra (2005) as: *"the ease and speed of accessing and using the site".* Emergent codes supporting this definition from the qualitative analysis are as follows:

1. Speed of system use
2. Ease of system access
3. Speed of system access
4. Ease of system use

A significant amount of user agreement across all codes was evident. Users expressed requirements for a simple easy to use system that they could access quickly and easily on demand. Ease-of-use, access speed and an overall efficient proposition are brought out clearly in the dialogue from Participant C.

> *"**What makes a good experience for you?** Well its lovely when I get 10 stamps printed off instantly, as I say I think it is, its fast, its efficient, it looks good and you know, I just think it's a great little system".*
> Source: Participant C

> ***"What was it about it that was confusing and what would have helped you?** Ummm the only confusing, there wasn't a lot to confuse me, its just a different mindset really ummm I thought it was incredibly efficient um I was surprised actually just how simple it was".*
> Source: Participant C

The extant definition for the efficiency construct remains robust in the online channel context. However the definition refers specifically to a site. The context of the online self-service subscription-based channel includes both website and system integrated together. Therefore the definition requires a minor refinement to reflect the system content, as follows: *"the ease and speed of accessing and using the site and/or system".*

5.2.1.2 Systems Availability

The systems availability construct is defined in the literature by Parasuraman, Zeithaml and Malhotra (2005) as: *"the correct technical functioning of the site".* Emergent codes supporting this definition from the qualitative analysis are as follows:

1. System availability
2. Site functions correctly

Participant F draws out the relevant meaning attached to systems availability below.

> ***"What about a bad experience - what does that mean to you?*** *From a SmartStamp perspective?* ***Yes*** *Any systems outage is a bad experience. Thankfully they're very few. I tend to use a system on a Sunday night, which is fairly low volume transactions. I've never noticed any delays or time outs. I've only had one outage, I think of the system, in the two and a half years I've been using it. Obviously that is a bad experience because it means that I couldn't get the items posted the next day".*
>
> Source: Participant F

The extant definition for the systems availability construct remains robust in the online channel context. However the definition again refers specifically to a website. The context of the online self-service subscription-based channel includes both website and system integrated together. Therefore the definition requires a minor refinement to reflect the system content as follows: *"The correct technical functioning of the site and/or system"*.

5.2.1.3 Fulfilment and Reliability

The fulfilment and reliability construct is defined in the literature by Parasuraman, Zeithaml and Malhotra (2005) as: *"the extent to which the site's promises about order delivery and item availability are fulfilled*". The codes relating to this definition from the qualitative analysis are as follows:

1. Delivery promise
2. Service reliability
3. System reliability

Dialogue from the participants clearly reflected the importance of the service provider delivery promise. When an item is posted, there is an expectation that the item will a) be delivered and b) it will be delivered within the expected time frame. Once the item leaves the user's span of control, the service provider is seen as responsible for the item until it is delivered. The service is expected to be reliable on a daily basis.

> *"**What does the term value mean to you?*** *Um for me it's paying the right price for the postage in terms of the*

quality of service I'm getting and again I would gladly pay more money for SmartStamp or even the postage based on the quality of service that Royal Mail deliver, particularly their first class delivery is still absolutely excellent for me. I can send high volumes of small Meccano items out with a high degree of confidence that they will arrive the next day and get good feedback from UK sellers".

Source: Participant F

Both the delivery component and the online self-service system itself are perceived to be part of the overall service proposition. The technical system is also expected to be reliable as part of a holistic service offer. However, prior to a service recovery situation, technical system reliability is perceived as separate.

*"**Do you just look at SmartStamp in isolation and go yes that's SmartStamp - that's what that does, and do you divorce the rest of the process from Royal Mail, or is it all connected, how do you look at that?** It is all connected but I suppose I don't look at it beyond SmartStamp unless we would have an issue where our post wasn't getting to its destination then I'd make that wider link of SmartStamp to Royal Mail; post office; post man woman".*

Source: Participant D

System reliability is already considered within the functional value constructs (efficiency and systems availability) and is not required to be integrated into the fulfilment/reliability definition. However the definition does require further refinement to reflect the context. The extant definition refers to item purchase and availability of stock as well as delivery. The context reflects an online subscription-based self-service (i.e. buying ongoing access to a system) and as such there is no purchase and stock holding component (with the exception of initial subscription and receipt of software). Consequently, the definition has been refined as follows: *"the extent to which the service provider's promises about delivery are fulfilled*".

5.2.1.4 Contact

The contact construct is defined in the literature by Parasuraman, Zeithaml and Malhotra (2005) as: *the availability of assistance through telephone or online representatives.* The codes relating to this definition from the qualitative analysis are as follows:

1. Online contact availability
2. Telephone contact availability

A significant amount of user agreement across both codes was evident. Users expressed requirements for a system-based online help capability (e.g. frequently asked questions and help functionality). In this context the online help facility did not refer to a physical person performing online help tasks. Typically users preferred to solve emergent technical issues from their own PC

desktop before resorting to a service recovery phone call. Use of the online contact functionality is shown in the dialogue from Participant A below.

> ***"Have you ever phoned Royal Mail up to speak to one of their operators?*** *.....Umm well generally if I have ever any questions like prices of things or whatever I have generally been able to get hold of someone and got to the right department quite easily"*
>
> Source: Participant A

Telephone contact availability was typically reserved for service recovery encounters i.e. when something had gone wrong or information could not be found. Key to the contact is a quick response and the ability to talk to the right person with the correct technical skills immediately. The need for immediacy was primarily driven by the perceived time to a successful outcome resolution. In contrast to the statements from Participant A, Participant D preferred the telephone helpdesk as a first source of contact to resolve business issues. Time pressure was given as the reason for attempting to resolve these issues as quickly as possible to ensure business continuity. Participant D perceived that the online help function would be slower than making a quick telephone call.

> *"Anyway I put the call in and I think if you hold down shift and drag drop you can ignore the places where the labels have already been used once - so things like that are quite handy - and I'm quite a lazy person whereas rather than look it up I'll get helpdesk"*
>
> Source: Participant D

The extant definition remains partially robust in the specific research context. The following aspects require consideration within the definition:

1. Timely assistance (i.e. answering the telephone quickly)
2. Routing to the right technically qualified person and
3. System-based online help only

Consequently the extant definition has been amended to: *"the availability of both online assistance and timely telephone assistance from competent representatives".*

5.2.1.5 Responsiveness

The responsiveness construct is defined in the literature by Parasuraman, Zeithaml and Malhotra (2005) as: *"the effective handling of problems and returns through the site".* The codes relating to this definition from the qualitative analysis are as follows:

1. Timely issue resolution (of potentially complex technical problems)
2. Interaction opportunity cost
3. Telephone interaction

4. Interaction empathy
5. Online interaction

The timely issue resolution code includes effective issue resolution and routing to the right technically competent person immediately. User perception of effective call handling is to achieve a quick and successful outcome to the service recovery encounter. Time is the key driver in the sense that the helpdesk call is preventing them from achieving other more important activities. A service recovery issue with the system or service inevitably has an impact on the user's business continuity. A delay in the task at hand could directly affect a potential higher value activity. Responsiveness both online and via the telephone were both perceived to be important. However the way the service recovery encounter was handled was fundamental to successful service recovery. The importance of interaction empathy was articulated strongly by users. Technology anxiety (and fear of looking incompetent) still remains relevant within a technology-based self-service channel and clearly lies at the route of the way the user wanted to be treated during the encounter. Helpdesk personnel were expected to possess more than just pure technical knowledge. Indeed the ability of service provider staff to empathise with a user (displaying negative mood), and to ascertain the problem in a non-threatening manner was important. Participant A and B bring out these aspects in the dialogue below.

> *"**What else is important when they do that?** Um that they answer the phone **Right** That they are accessible and also that they understand that when you are calling them it's because you have a problem **Yes** and also I don't want 'techy' people on the other end. I want to be able to talk to someone you know on a basic level. I don't want someone - when they are talking about IT, they click things down and they expect a certain level of knowledge **Right** because the person on the phone, when you phone up, you want the problem sorted then and there and a) you've just lost £5 on a letter and b) its got to go out - or whatever. **Yes** which might not sound a lot to some people but to a small company it is a lot **It adds up doesn't it?** Yes it does. I'll phone up and I'll be frustrated because it's gone wrong and I don't want it to go wrong, I want it sorted and I want to know what to do. So I know that I'm going to be a bit with my back up **Right** what I want is a person at the other end – who is sympathetic, who is efficient but also has enough about them that they can say OK what were you trying to do, what happened, do you understand this if I say that, do you know what an IP address is – you know. If you don't know what an IP address is - that gives you a level of what people's understanding is about computers **So it's not just technical knowledge** No **It's also about people skills?** Yes you do definitely, you do need people skills.*
>
> Source: Participant B

> ***"So is that important - being friendly?** Yeah I don't do very well when I've got someone on the other end of the phone who is quite rude - they get my back up a little bit. When I put the phone down I'll be in a bit of a bad mood and we don't like that **How important is it that they resolve the issue that you had?** Well it*

> *seems a bit of a waste of time me phoning them up and be in no better situation than I was before. If I've been on the phone for 15 or 20 minutes or whatever - I'd like to know the answer when I'm phoning people up"*
>
> Source: Participant A

The qualitative analysis potentially unearthed a much deeper meaning than the meaning attached to the extant responsiveness construct in a functional value context. In essence co-created service recovery was at the heart of user responses. In addition users experienced frustration when the self-service technology did not work. This frustration was driven by the opportunity cost of time allocations related to business continuity and a loss of perceived control. On initiation of the service recovery contact via telephone, users wanted helpdesk staff to first acknowledge the importance of the user's problem and express sympathy, then ascertain the level of technical capability the caller possessed (to re-stabilise their feelings of control). Communicating at the right technical level was also perceived to be helpful to ease feelings of frustration. Only then was it important to display efficiency and the technical ability to resolve the user's problem in a timely fashion. The users also wanted to be reassured that a successful outcome would be reached and that the impact to their allocations of time would be minimised. Participant A brings out aspects of technology anxiety and the wish to preserve self-esteem below.

> *"**So when you say stupid how do you mean - is that from an IT point of view?** No just generally, I don't even mean Royal Mail - just in general - if some people you ring up will go: 'well that's not possible' or something like that - well that definitely isn't doing it so - they generally kind of just say things like - make you feel a bit stupid for ringing up - well that was a bit of a stupid question to ask - its like well no I thought I needed to ask a question because I didn't want to get it wrong - if that makes sense?"*
>
> Source: Participant A

The root of the meaning attached to the responses around the responsiveness construct was driven by requirements for co-created problem resolution and avoidance of technology anxiety, which culminated in feelings of a loss of control. The meaning attached to these phenomena relate specifically to the constructs resource integration and perceived control, which are discussed later in this chapter. To avoid introducing duplication of meaning across constructs, the approach taken is to restrict definition refinement to aspects of functional value only.

The extant definition of responsiveness refers to the handling of returns through the site. This also has meaning attached to product returns. Neither aspect is relevant to responsiveness in an online service recovery situation. Therefore the extant definition for the responsiveness construct requires refinement to reflect the research context and has been amended as follows: *"The effective handling*

of problems through the helpdesk" (where helpdesk includes both telephone and online help channels).

Further investigation of the meaning attached the responsiveness construct at the item level revealed items relating predominantly to product returns. These items will be replaced with items from the SERVQUAL (Parasuraman, Berry and Zeithaml, 1991) and SERVPERF (Cronin and Taylor, 1992) scales that reflect the context more closely.

5.2.1.6 Compensation

The compensation construct is defined in the literature by Parasuraman, Zeithaml and Malhotra (2005) as: *"the degree to which the site compensates customers for problems".* The codes relating to this definition from the qualitative analysis are as follows:

1. Fulfilment compensation
2. Compensation process efficiency

The importance of the service provider delivery promise and the subsequent responsibility for items lost was discussed earlier under the fulfilment/reliability construct. The compensation construct now deals with the service recovery aspects of when this delivery promise fails. Fulfilment compensation in this context has two meanings: firstly for stamp refunds spoiled as a result of flaws in the process or user error (e.g. printing error); and secondly compensation for items lost in the delivery process. Delivery products have options for different levels of insurance to mitigate customer loss (for which the customer pays) or the service provider has a standard process to compensate users for lost items (e.g. stamps as compensation). In this research context the stamp spoils process typically reflects low value refunds. Users were very clear that the process needed to be efficient otherwise recovering the loss was not an efficient use of time. Failure to recover the loss leads to a negative service recovery encounter. Evidence to support both codes is illustrated below by Participant F.

> *"**Have you ever spoiled a stamp?** Oh OK right, yes I have, yes **How did that work?** There's 2 ways of doing that. You can return the spoils items as the physical evidence. That's very onerous because you've then got to produce another envelope even though it's freepost, put the spoil in, and send it. The far more convenient option, which is what I use, is you just lodge your appeal electronically and say that between this time this amount of value was spoilt. It's done on a trust basis today and Royal Mail just verifies that you did indeed print out that level of postage in those times and they have always refunded my SmartStamp account if I've made that claim. I would say I've got it down to probably 1 in 100 spoils now so I'm not making excessive claims. I'm sure if I went over some limit you'd start to get some investigation from the SmartStamp account team"*

Source: Participant F

The distinction between the terms compensation and refund was an important point of clarification for the service provider. The refund of a stamp is a very different financial proposition than the compensation payable for a high value lost item in the delivery process. Participant G demonstrates this below.

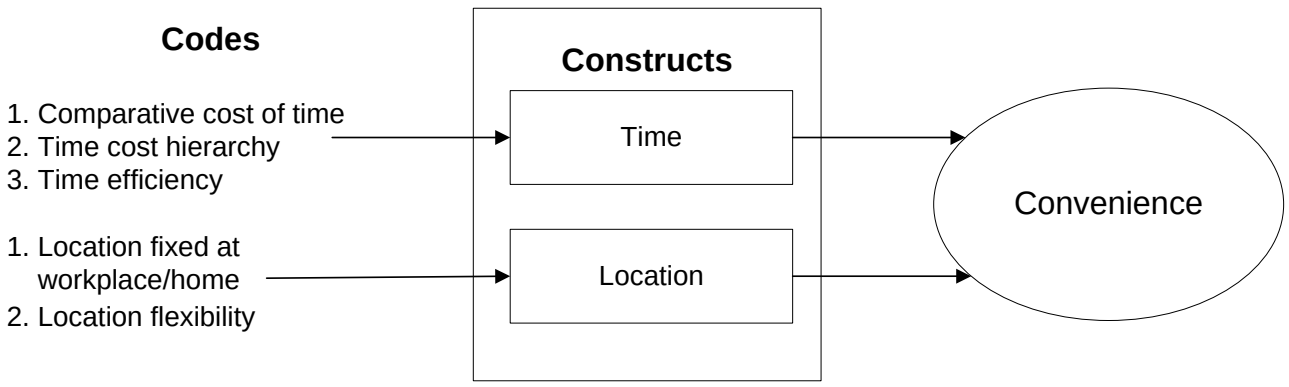
> *"**Can we just have a go at compensation? Why do you think that is poor?** Well lets get the words right. I think I used refund. Are we going to use refund or are we going to use compensation for the product?"*
>
> Source: Participant G

The Readers Digest Oxford dictionary defines the word compensation as "*money given as recompense*". The definition of the word compensation is deemed to adequately encompass the word refund, therefore the extant definition does not require amendment. However it does not sufficiently include the process efficiency component, therefore the definition has been amended as follows: *"The degree to which the site efficiently compensates customers for problems".*

5.2.2 Convenience

Convenience is defined as: *"Consumers' time and effort perceptions related to buying or using a service"* (Berry, Seiders and Grewal 2002). As previously discussed in the literature review, the phenomena that potentially form the convenience construct were: time, location and behavioural sacrifice. The literature review has already established that the behavioural sacrifice construct has overlapping meaning with the convenience construct and does not form part of the domain. The qualitative findings validate this perspective, which is discussed later in this section. Meaning attached to the codes supporting the inclusion of the convenience construct within the domain specification related to time and location benefit, which is shown in Figure 15.

Figure 15: Codes Supporting the Convenience Construct



5.2.2.1 Time

The time construct is defined in the literature by Berry, Seiders and Grewal (2002) as: *"consumers' perceived expenditures of time to create transaction convenience"*. The codes relating to this definition from the qualitative analysis are as follows:

1. Comparative cost of time
2. Time cost hierarchy
3. Time efficiency

The ability to save or make more efficient use of time is a fundamental part of the online self-service technology value proposition. The activity it replaces i.e. the generation of postage is considered a low value administrative task. Any reduction of time in this area to enable reallocation of effort to perceived higher value activities has value to the user. Time is typically quantified as a monetary cost per hour, or in terms of the opportunity cost of either the user, or in terms of lost activity within the user's network of actors e.g. work colleagues. Participant A articulates both the importance of time and how it is allocated below.

> *"**OK so there's a speed and a time issue then?** Yeah, for me it is generally all about being able to do things quickly and easily. The quicker I can do things like that then the longer I have for the stuff that really does take time **And an access issue is there?** Yeah the easier I can get to it - the quicker I can get my answer **So how important is price in that decision?** Well again its the case of - I have to work out what is more cost effective. Sending (name) up to the post office for 15 minutes or paying £50 a month £50 a year for the computer if that makes sense? **Yes it absolutely does um - so where does that trade off lie then, at what point do you** Well at the moment its a case of if I've got to send (name) up to the post office or whatever it means that he can't be doing a quote or he can't be checking the invoices or he can't be dressing a mast or can't be putting a mast in and that's where obviously the income comes in so **Right so there's an opportunity cost then?** Yeah, yeah that's more what it is - its his time. If he's doing that he can't be doing something else **How do you put value on that?** Just work out how much we charge out an hour I guess. Generally at the moment it works out that £50 a year is a hell of a lot less than sending him up every couple of months to get some stamps - or every month or so **So by the sound of it there's this I can make earnings elsewhere by using the time more efficiently?** A lot of the jobs that they do are 2 handed as well, so if there's only 2 of them in and they're doing a two handed job then the other guy stops what he's doing and the other guy's probably not going to be doing a lot while I've had to send him off to do stuff".*
>
> Source: Participant A

Actors within the user's network may be allocated a higher comparative cost of time or be valued in terms of lost potential revenue. Time allocations are ordered in terms of comparative cost. Matching the right actor to the right level of task and making time available for higher skilled actors to optimise value by being allocated higher return tasks is important. The self-service system

allows junior actors to add further value by providing higher value actors with more time to generate revenue. A perceived efficient use of time is fundamental to the business across all activities. There is also a difference between work and personal time allocations. The dialogue below provides the hobbyist (or home user) view, where time is not necessarily valued in terms of cost per hour, rather the emphasis is on the opportunity cost of time and the ability to create time for other activities.

> *"**Can we have a look more closely at how important time is to you?** OK I'm a hobbyist so its not as though I'm running a business so I can't value time, but in terms of personal time, if I've got a number of items that are completing on eBay on a Sunday night, the time factor for me is being able to get the postage correctly identified on the item without then having to spend hours queuing up in the Post Office on a Monday morning, or Tuesday morning, which would obviously mean lunchtime for me at work. I'd have to devote a lunchtime to that or get in for a late start on a Monday morning, which my job wouldn't allow me to do. So I've got to invest some personal time or I'm losing work hours, which have to be made up at a later time. So its convenience and the choice of when I can apply the time".*
>
> Source: Participant F

The Berry, Seiders and Grewal (2002) definition for time specifies the term transaction, which is arguably encounter specific, implies the giving of money for product (or service) received, and is considered narrow in an online self-service context. Transactions at the service provider channel location remain relevant; however time is expended on activities and interactions that do not necessarily require a transaction. Therefore the definition has been refined as follows: *"consumers' perceived expenditures of time to create activity convenience"*.

5.2.2.2 Location

The location construct is defined in the literature by Heinonen (2004) as: *"the location flexibility relating to where the service interaction occurs"*. The codes relating to this definition from the qualitative analysis are as follows:

1. Location fixed (home or workplace)
2. Location flexibility

The location of the self-service system is typically at home or at work i.e. in a location convenient to the user. Software is loaded onto the user's existing PC and uses their (home) office IT infrastructure. Convenience is typically generated by the avoidance of time expenditures, cost and the inconvenience associated with a trip to the Post Office.

> *"I'm entitled to a lunch hour but when you've got an hour just to park up, get out of the car, put a ticket on, walk all the way down the post office coz there's no car park near it* ***Do you just use it at work or is it at home*** *No its at work* ***so is location at all an issue for you about where you might use SmartStamp****? No not at all, I don't, I come to site probably once a week, anything that's done at site goes straight back to the office - on goes my SmartStamp* ***OK*** *Print, print, print, post, post, post* ***as you use SmartStamp what would you think is a good experience for you?*** *Its convenience, its there, its ready, they're printed, your letter's gone, end of story. Its a function of being able to just produce that stamp, run out the door to go and do something else, post that letter, haven't got to go anywhere else to get the stamp its there……Time and effort, hassle, grief just even getting into town and queuing in the Post Office which is a nightmare because they all seem to have lunch at the same time and that means you've got a queue of fifty and on the whole, it was an awful lot easier to stamp it all up, take to the post box and done".*
>
> Source: Participant E

Participants identified a nuance between the fixed work location of the service and location benefits relating to mobility. The majority of participants only used the service from a work location, which Participant E alludes to in the above text. In essence the meaning attached to location reflected removal of sacrifice rather than a benefit. Once the user subscribed to the service location became a hygiene factor. However, only one younger participant considered the mobility aspect of location as a benefit (when prompted). Participant D talks about location in the sense of mobility and use from different locations in the dialogue below.

> ***"When you say it's installed on your laptop, is mobility an issue for you with SmartStamp?*** *Umm no because it was set up to our printer in our office so I wouldn't be able to use it elsewhere* ***Right would you want to use it elsewhere?*** *Yes, yeah because our office is based at my partners home and I also work from my own home from time to time - so to be able to have that function - so its set up to 2 different printers - maybe it does that I don't know - we didn't look into that because its very rare umm but um yes it would help to have that mobility to have it functioning at different locations"*
>
> Source: Participant D

The Heinonen (2004) definition for location remains robust in this self-service technology channel context. However the location construct is problematic for the following reasons:

1. The convenience construct is framed from a positive benefit driven perspective. The qualitative analysis reveals that users are looking to remove location sacrifice
2. Location is predominantly considered a hygiene factor
3. Meaning associated with location is implicitly included within time allocations. For example, participants identified the avoidance of going to the Post Office due to time restrictions or a preference to allocate time for other activities rather than it being of specific benefit. Inclusion of a separate location construct therefore creates a potential overlap in

meaning. Consequently location is not included as a stand alone construct in the domain specification and is absorbed into the measure.

5.2.3 Price

Perceived price has been defined in the literature by Zeithaml (1988) as: *"what is given up or sacrificed to obtain a product".* This study focuses on comparative price (or just the money component) and the definition has also been amended to reflect a service context. The refined definition is as follows: *"money given up to use a product or service".* The codes supporting the price construct are as follows:

1. Cost/hour trade-off
2. Pure price
3. Efficiency trade-off

One key component for users subscribing to the service was comparative price. The online service replaces a low value business task (that of fetching and applying stamps). Price was important to each participant when deciding on service alternatives e.g. franking machines. Price was also considered to be relatively inelastic and some participants talked about a range from the current £49.99 per year subscription price to the cost of a television licence. Participant B captures one perspective on price.

> *"I know it's 2 pence per item more expensive, which is one that does aggravate me a little bit, but I think there is another scheme that I may look into at a later stage where it will probably be less expensive….. Well I think that, the only down side on it is cost because it costs 2p extra for every stamp that we use on here from what we did on (franking company name). Now if you want to look at it um in a way that probably the time it saves me, covers that cost, if you want to be really* ***Yes*** *Then it probably doesn't cost any more in fact we're probably saving money".*
>
> Source: Participant B

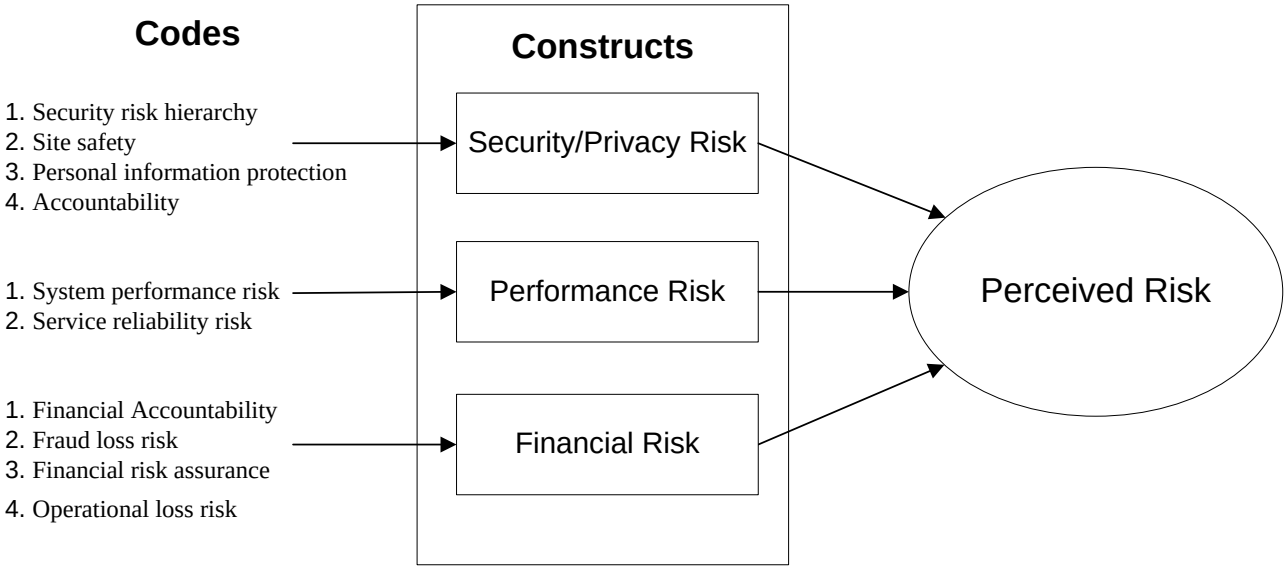
In most instances price is considered by participants as part of business cost that requires ongoing justification. This justification included enhanced efficiency, improved convenience, assessing the cost per item through the service channel, or indeed the cost per hour of other actors engaged in the business. No further refinements are considered necessary to the amended definition for price.

5.2.4 Perceived Risk

Perceived risk has been defined in the literature by Stone and Gronhaug (1993) as: *"the subjective expectation of a loss*". The perceived risk construct deduced from the literature (appropriate for an

online self-service channel) has three components: security and privacy risk; performance risk; and financial risk. Codes supporting each component are shown in Figure 16.

Figure 16: Codes Supporting the Perceived Risk Construct



5.2.4.1 Security and Privacy Risk

The security and privacy construct has been defined in the literature by Parasuraman, Zeithaml and Malhotra, (2005) as: "*the degree to which the site is safe and protects customer information*". The codes supporting the security and privacy construct are as follows:

1 Security risk hierarchy

2 Site safety

3 Personal information protection

4 Accountability

Security risk refers to: the ability of the service provider to process the user's financial payment details (e.g. bank account details and/or credit card) via an internet portal (site) for the appropriate purpose; to keep these details safe on an ongoing basis and free from exposure to fraud, whether that be internal or from third party access. Privacy risk refers to the storage and use of the user's personal details, whether that be for financial transactions or marketing purposes. The security capability of a service provider's site is largely intangible to the user. Service provider brand and reputation were used as cues to create a perception of whether the site (or service provider) could be deemed safe. Larger or well-known companies with established brands are perceived to be safer than smaller less well-known companies. Participants perceived that companies with established brand equity would not risk their reputation by operating insecure sites. Participant D articulates the issues around security and privacy risk below.

> *"**How do you assess your caution?** I suppose I just look at things like PayPal, but I shouldn't take that for read that that is safe, I don't know enough about the background about it - what is safe and what isn't safe. I make assumptions **On what do you base those assumptions?** Kind of like word of mouth and umm **what do you assess before you do that? And indeed after?** Well I assess whether I feel that the site is an authorised, well known, valid site which is safe and secure. So if it was for example a brand name: Royal Mail; Virgin; e-Bay; I know eBay is not actually safe - so I suppose I'd go down that route whereas if I was on a site that was lesser known, I would probably be more cautious and think well I'm not entirely sure because it is the brand name….If its a larger organisation with a good brand name you would probably get your money back - that's my assumption - If somebody were to steal your identity and use your funds".*
>
> Source: Participant D

Concerns about privacy were less focused on abuse from a marketing perspective, rather the risk focus was placed on how those personal details could be used by fraudsters e.g. card cloning or identity theft downstream. Downstream financial loss was perceived as a greater risk than that associated with the immediate financial transaction (for subscription or postage purchase). Established service providers are expected to provide a guarantee for any loss experienced by the user as a result of security or privacy issues. Again this guarantee was perceived to be part of the delivery promise and driven by brand and/or reputation protection. Peripheral to the main construct, different hierarchies of security perception were evident. Employees engaging in transactions on behalf of the business used company credit cards with minimal perceived risk, unless they were directly responsible for problems within the remit of their role. Personal transactions generated a much more significant assessment of risk. Participant B alludes to the different levels of risk below.

> ***"How much of a risk is that for you?** For me personally or the company? **Both** For me personally it's a big risk, the company I always assume it to be a smaller risk. Because banks tend to listen to companies more – you know accept more that a company has lost money rather than the individual has lost money".*
>
> Source: Participant B

Participants also talked about the security risk associated with company employees fraudulently using the system for their own purposes e.g. sending their own mail using company funds. Participant D brings this issue out below:

> ***"What could happen that would be abusive in that situation that is important to you?** Someone could be using our funds to do their own post. May not happen but as a small business every penny counts".*
>
> Source: Participant D

The audit trail capability within the system assisted those users requiring control of their own internal financial systems. Accountability is peripheral to the key risk of security and privacy and

an issue related to the user's own internal processes rather than part of the service provider's system. Similarly the discussion on security hierarchies has been included for contextual purposes only. Neither code drives a modification to the definition, which remains robust in the context.

Note that the approach taken in the conceptualisation is to maintain perceived risk as one construct until sufficient evidence is forthcoming to separate one or more of the three components. Whilst the qualitative findings could support a separate security/privacy construct, there is no definitive evidence that it is in fact a separate dimension. Therefore the decision taken is to keep perceived risk as one construct until the quantitative phase and to allow factor analysis to separate the construct as appropriate.

5.2.4.2 Performance Risk

The performance risk construct is defined in the literature by Horton (1976) as: *"the loss incurred when a brand or product does not perform as expected".* Codes supporting the construct are:

1. System performance risk
2. Service reliability risk

Participant talk associated both the technical system and the physical delivery component as inter-connected parts of the overall service. Whilst there was perceived risk in both system failure and broken delivery promises, additional risk was perceived to the end-customer (e.g. the recipient of the delivered items) and the resultant end-customer ability to influence future sales as a result of poor performance (e.g. eBay feedback). Consideration was given as to whether the performance risk construct should be removed from the domain specification since functional value constructs address performance issues for both system and service reliability (e.g. reliability/fulfilment, system availability), however functional value constructs do not encompass the risks associated with the end customer and consequently the construct has been preserved at this stage of the analysis. Risks associated with the end customer include phenomenon such as eBay feedback, whereby the end customer rates the seller (i.e. the focal firm) on delivery performance. Poor delivery performance by the service provider can negatively impact the future sales performance of the focal company through negative feedback. Participant F draws out some of the key performance risk issues below.

> *"**It sounds to me (name) that your feedback on eBay is a risk to you doing business with Royal Mail. Can you talk a bit more about that?** If Royal Mail weren't to provide a good service then feedback would get eroded or even ruined and you'd lose sales. So it's hugely important that they fulfil their quality of service as part of the overall eBay solution".*
>
> Source: Participant F

Service recovery also came out strongly as a component of performance risk. When a performance issue arises, the user expectation is that the service provider will fix the problem in a timely manner. This aspect is again addressed by functional value constructs (responsiveness, contact). The extant definition is both brand and product orientated and requires refinement to reflect a service. In this case the technical system and service recovery are considered part of the overall service so the definition has been amended as follows: *"the loss incurred when a product or service does not perform as expected".* The term loss in this instance is specific to a loss incurred through product or service failure in use i.e. an operational or functional loss and could involve financial consequences or any other related loss.

5.2.4.3 Financial Risk

The financial loss construct has been defined in the literature by Horton (1976) as: "a *net financial loss to a customer, including the possibility that the product may need to be repaired, replaced or the purchase price refunded"*. The codes supporting the financial risk construct are as follows:

1. Financial risk assurance
2. Fraud loss risk
3. Financial accountability
4. Operational loss risk

Financial loss in the specific self-service channel context refers to losses associated with an under-utilised subscription, overpaid or lost postage, payment transaction loss, downstream fraud (e.g. identity fraud), and the financial consequences associated with end-customer item loss. Fraud risk has already been discussed under the security and privacy construct. Participant talk reflected financial risk associated with service operations. The financial risk involved with a single letter is considered small; however users sending high volumes of packets or parcels (higher value) that are potentially going to international destinations can soon accrue a significant financial risk. Weighing an item wrongly can lead to paying more than required for an item. The potential financial loss from operations is drawn out by Participant B below.

> *"Um risk can cover all different things. The risk of putting the wrong price in so you're printing out something - it can work both ways you can put the wrong details in you're either going to get a stamp which is well over what you need and then you've wasted the money".*
>
> Source: Participant B

Participant talk reflected a need to be financially assured that they would not lose money. In part financial loss is mitigated by the latest technology in payment mechanisms or third party

insurances, but ultimately the user expects the service provider to indemnify them against financial loss related to the service offer. This aspect is discussed by Participant E below.

> ***"When you're putting your credit card details in and you're charging your stamps are there any issues around that, that might concern you?*** *No, no there's, there's a secure key comes up, tells you you're protected, if something happened SmartStamp would pay* ***So*** *This is where I go back to - not being phased by a lot of things* ***Yeah*** *I wouldn't say that I trust implicitly but its there to do a job SmartStamp for Royal Mail have said that they're going to do the job then as far as I'm concerned they're doing the job and, and therefore I don't have any worries or issues it said its going to do what its says it does and if it doesn't then I'll deal with it.* ***What about your thoughts on security of the Internet piece in and around your credit card details and this kind of thing?*** *Well you see this is, is stems back again its got the secure net key code, its there to secure your details. I've got insurances on the credit cards, its all in place if it goes wrong".*
>
> Source: Participant E

The codes relating to financial accountability have already been discussed in the security and privacy risk section.

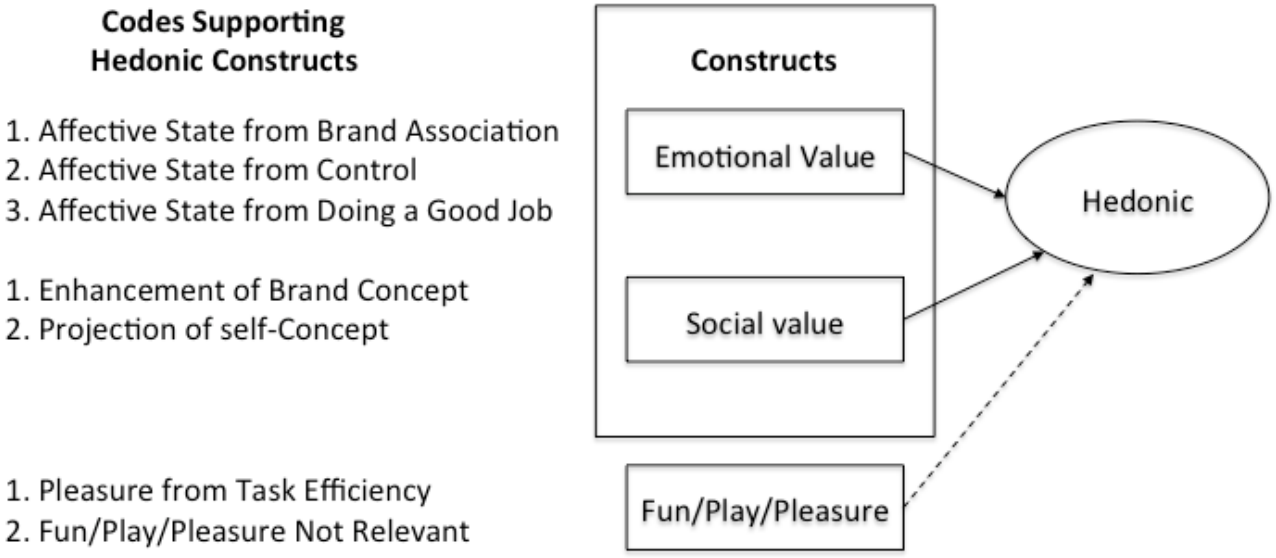
The extant definition refers to the losses potentially associated with a product. These losses are not relevant when a user is buying access (i.e. renting) to a service via an ongoing subscription with specific contractual terms and conditions. Ongoing payments to conduct daily business activity are made by sophisticated payment mechanisms over the Internet. The cost of maintenance, replacement and repair is borne by third party operators (e.g. the service provider itself and other infrastructure providers i.e. broadband). Arguably there is peripheral financial risk in the repair and maintenance of infrastructure associated with an office i.e. printer PC, software etc. The Horton (1976) extant definition does not effectively address an online subscription-based service and requires significant amendment to: "a *net financial loss to a customer, from participation in a service".* The qualitative findings identified that meaning associated with financial and performance risk overlaps in that performance risk leads to some form of financial penalty i.e. financial risk. Items from the Sweeney, Soutar and Johnson (1999) model are considered best suited to the online context and are included in the domain specification unchanged. The authors also combined performance and financial risk into one construct and this approach is replicated in this domain specification to reduce the number of constructs and to avoid potential dimensional overlap.

5.2.5 Hedonic Constructs

The literature review identified that hedonic components suitable for domain inclusion were emotional value and social value. Meaning attached to social value was expected to be unsuitable

for inclusion within the domain specification due to the nature of the self-service technology context, which precluded the projection of self-concept since the service is business and task orientated. An objective of the qualitative phase is to validate this deduction. Figure 17 summarises the codes supporting both hedonic constructs.

Figure 17: Codes Supporting Hedonic Constructs



Whilst the literature identified that play, fun and pleasure were unsuitable for inclusion in the domain specification; a foundational pillar in this thesis is the distinction between an experience that generates intrinsic value as opposed to one that is task orientated and repetitive. The literature review identified that the repetitive nature of task orientated online services rendered meaning associated with the majority of hedonic constructs unsuitable for inclusion in the domain specification. The qualitative section is designed to elicit meaning to validate this deduction.

5.2.5.1 Play, Fun and Pleasure

Intrinsic value is subjective and personal in nature and value perceptions result from the fun and playfulness derived from an experience, rather than from the completion of a task (Babin, Darden and Griffin, 1994). In order to understand this distinction within an online subscription service, the qualitative investigation is used here to provide contextual meaning and to validate whether the deductions in the literature review are robust. The codes supporting (or refuting) the fun, playfulness and pleasure constructs are as follows:

1. Pleasure from task efficiency
2. Fun/play not relevant (task orientated)

Substantive agreement from the majority of participants confirmed that use of an online subscription-based self-service technology could not be considered fun, playful or pleasurable. Users did not want to play with the software, although the term play is sometimes used in the sense of learning how the software works. In most cases the service was accessed from their work location and activity was considered a task to be executed as quickly and as efficiently as possible. However whilst still task orientated, the home user's (Participant F) software was located at home and used for personal intrinsic gratification e.g. family images placed on mail items for special occasions such as Christmas. Similarly further probing by the interviewer with participants that had clearly stated use was task orientated, uncovered that there was limited pleasure (which could not be categorised as fun or play) from executing a task efficiently i.e. being good at one's job. Participant C captures the meaning of pleasure and its relationship to executing tasks below.

> *"O**n the one hand it might be a task for you, on the other hand it may be fun for you** ((Laughter)) well I don't think it's fun, you get a certain amount of pleasure having everything done for you, and having these lovely stamps printing off and so on **So you are connecting fun to the visual?** Well fun is a funny word isn't it **Why do you think fun is funny?** We've all got a different opinion on what we consider fun. Do I consider coming to work fun? If I was really honest no because wouldn't it be lovely if we didn't have to go to work. But on the other hand it's fun because you are working with nice people and um you love your product and it gives you a lot of pleasure **OK that's an interesting thing to unpick there, yeah pleasure um how would you associate pleasure with SmartStamp?** ((Laughter)) well I don't know, well only in so far as it's efficient. It's a pleasure to use. OK it's a pleasure to have a gin and tonic **when your 'mum' opens that (points to mail item), you wanted to be there to see the pleasure on her face?** The end product i.e. the mum receiving it - is very pleasurable. You can't use the word pleasurable when you're actually using it mm it's not that sort of pleasure, it's a very, very satisfactory system which I enjoy using. So enjoy, pleasure, fun – I mean a party's fun, doing this isn't particularly fun, but it gives me a great deal of pleasure when I see what the result of that is".*
>
> Source: Participant C

Participant F provides the home user perspective of pleasure and entertainment below.

> ***"Do you ever play with SmartStamp? Is there anything about it you find enjoyable?** I do for the Christmas cards and newsletters that my family send out because that's a good chance to use the customisation features there **Oh right. Can you expand on that?** Well it's typically a good chance to put different pictures in there and that might be relatives, friends, babies, whatever is topical at the time. That's always quite good. I'm very much a focal point in the family for doing all the family parties and entertainment so it's always a good chance to get an amusing picture of one of the family and send it out to the rest of the family".*
>
> Source: Participant F

Note that Participant F is a hobbyist and uses the service from home. The majority of service users access and use the service from a workplace location, which obviates use of personal imagery to

generate feelings of personal fun or pleasure. Use of imagery in this context relates to business branding and marketing campaign messaging.

Participant A brings home the nature of repetitive task orientation and the limited hedonic content within the context. The quote is set within the context of preparing the company's post for that day, which includes multiple post items and the (previous) application of stamps.

> ***"Now that is very fascinating (name) - the relief of monotony - can you expand that a little bit?*** *I'm not very good at it - I have a very short attention span when it comes to something that's the same all the time* ***So how does SmartStamp help you relieve monotony then?*** *Again its just quicker - its quicker because its there and I can print it off - its there in front of me. If I run out ok I print something else off - its kind of like a little break from the stamping thing ((laughs))".*
>
> Source: Participant A

A significant amount of agreement between participants identified that the context was indeed task orientated and driven primarily by aspects of utilitarian value. However, whilst fun, play and much of the meaning associated with pleasure are unsuitable for inclusion within the domain specification, the findings indicated support for a degree of pleasure from task efficiency. Pleasure from task efficiency is captured by the emotional value construct, which is discussed next.

5.2.5.2 Emotional value

Sweeney and Soutar (2001) defined emotional value as the "*utility derived from the feelings or affective states that a product generates*". The codes supporting the emotional value construct are as follows:

1. Affective state from brand association
2. Affective state from being in control
3. Affective state from doing a good job

Participant C draws out some of the areas relating to feelings and affective states below. The context of the quote refers to the use of the slogan generation functionality, which enables the application of the company logo to mail items.

> ***"****Well our logo is stunning! Anyway its pretty, and its our logo, and it goes with our pots and it looks lovely on the envelope. It tells the recipient immediately that we're writing to them it's then a form of advertising I suppose but I didn't really do it for that. I did it because I love the (company) logo, and I thought it added a little bit of class to the envelope.* ***How important is personalisation to you?*** *Very important* ***Can you explain why that might be?*** *I just think it's a link, I think it's umm well personally um I like things to look nice. Anything that can spread the word is good. They say all publicity is good publicity. I don't know, It's just the way I like to leave my desk tidy, the way I like to leave my home in the morning - I don't like to have to go back and do anything, it's the same*

sort of thing when you're in business - and this system suits me, it suits my personality, it suits how I like things to be, because it looks smart, it looks efficient, and it looks as if you care, and I think that that is most important".

Source: Participant C

Participants achieved a positive affective state by perceiving they were doing a good job. These feelings manifested themselves through personal association with the company brand, making sure imagery was as good as it could be to convey credibility and quality to the end customer. Customer brand association was perceived to support sales through improved recognition by the customer. Positive affective personal states were also achieved by being in control of the process and their ability to control brand image and the quality of the final item sent to the customer. Ensuring the company brand was as good as it could be also generated feelings of personal care for the individual. These feelings extended to a perception that the end customer would notice and associate those feelings with company credibility and product or service quality i.e. brand. Participant C goes on to establish the link between brand and the end customer perception below.

"I did have an email from a friend of mine who I sent a birthday card to, and that had a (company name) thingy on the front…..and she phoned up and she said 'do you know what, I knew that was going to be from you' so I said 'did you' and she said 'because it just looked like you' now would you believe that? She knew I worked for (company name) but she said it was just that little touch that was sort of something that I would do, and that's why I enjoy it. And I suppose that is personalising it again isn't it?"

Source: Participant C

This perception is also supported by Participant E below but draws out the business motivations.

"When you have a perfect piece of mail land, what do you think they (customer) think? *Conscientious, know what they're doing, think that's done for that person is immaculate and they are buying something that's prestige, so whether they're buying a new outfit or a property off of us or whatever they're going off to buy, I would like to think that everything they've got is perfect - why have second best".*

Source: Participant E

The ability to use aesthetics to convey brand messaging on a mail item generated positive affective states within the majority of participants. The degree of agreement supports use of an emotional value construct within the conceptual model. Note that some users may not use the logo generator within the software. The extant definition remains robust for online subscription-based SSTs, however a minor refinement to reflect the service context is required: "*utility derived from the feelings or affective states that a product or service generates*".

Analysis of the codes relating to fun, play, pleasure and emotional value all capture the same meaning, which relates to pleasure from task efficiency. This meaning is already encapsulated

within the definition and operationalisation of the existing emotional value construct. The 'doing a good job' and 'control of the process' codes all reflect similar meaning in that pleasure from task efficiency reflects doing your job better and mastering the process of postage generation. The approach taken is to specify emotional value as an affective state accruing from the pleasure derived from task efficiency. The next section argues that social value is unsuitable for inclusion in the domain specification.

5.2.5.3 Social Value

Sweeney and Soutar (2001) defined social value as the *"utility derived from the product's ability to enhance social self-concept*".

In online subscription-based services, the literature review deduced that meaning attached to the social value phenomenon would not form part of the domain specification since it is unlikely there would be any opportunity for the projection of self concept within a business task orientated context. However, rather than dismiss the construct prematurely at the literature review stage, the qualitative analysis phase has been used to gauge the degree of support for inclusion within the domain specification. The codes supporting social value are as follows:

1. Enhancement of brand concept
2. Projection of self concept

Participant dialogue indicated that the vehicle for projection of self-concept was the company brand itself. Engaging with their customers to generate additional sales via brand advertising was the primary driver rather than the projection of self-image. Dialogue from Participant C in the section above on emotional value reflects how the 'self' can be projected via the brand through personal care and attention to detail in one's job. Dialogue from Participant A below captures how a small company would use the brand to engage with their customers (and potential customers) to create a perception of company credibility.

> ***"So when you say make it look professional can you just unpick that for me?*** *Well it comes through – its got a label on there – so people automatically realise oh I've got something from (company name). It looks better doesn't it rather than just sending something with a stamp on – not knowing who its from. You see most big companies don't you - they've got their logos on and stuff like that - it just looks nicer* ***Sure – so is the impression of other people important?*** *In this industry yes ((laughs))* ***Could you elaborate on why that may be****? Because pretty much all our business – its mostly people saying to other people so if you do a good job and it looks good you're more likely to get talked about and you're more likely to get more custom. You can't really advertise very well in this sort of business because its such a small group of people that want*

this sort of thing that it is generally just word of mouth…..People knowing that you're a good company to go to and all the small details – people might not pick up on it – but it does look more professional".

Source: Participant A

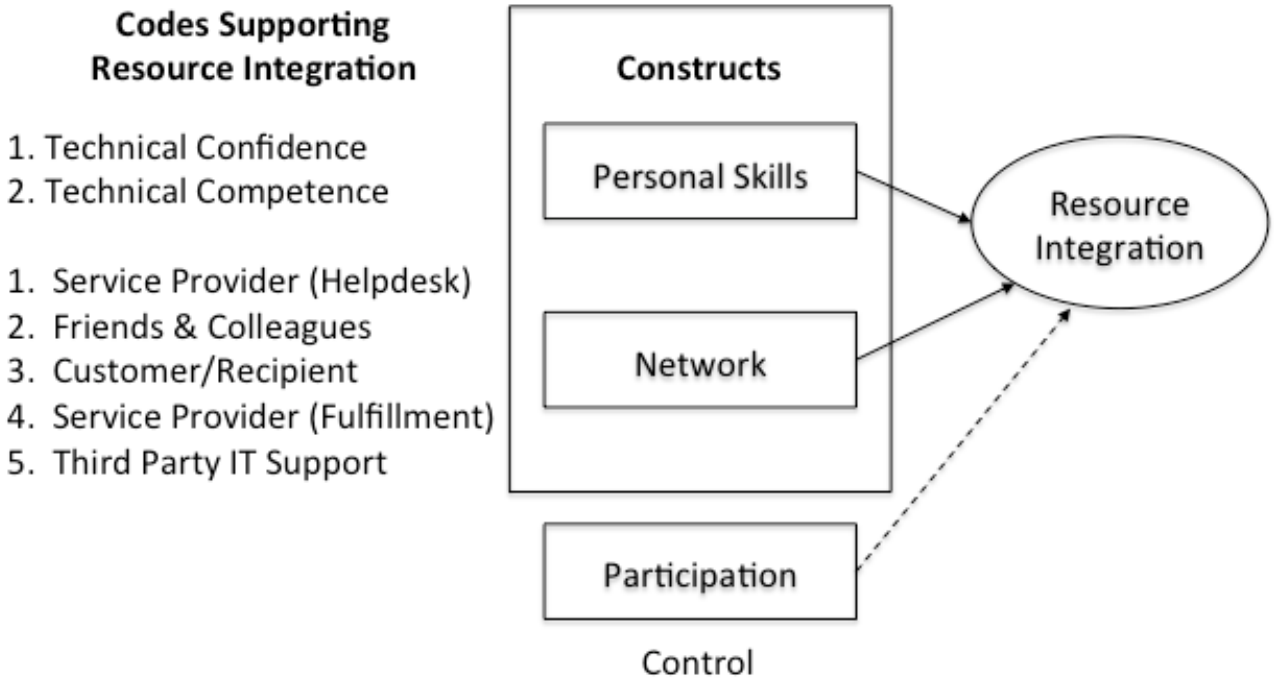
The qualitative analysis does not support a social value construct within the domain specification for the following reasons: a) rather than projection of the self, evidence suggests it is projection of the company image. The 'self' is not being projected in the way the extant definition is intended. b) the codes for social value overlap meaning with the codes for emotional value. Indeed similar sections of text were used to code both categories. Areas of overlap include company recognition, advertising and image.

Qualitative analysis results support the original deductions made in the literature review. The social value phenomenon is not generalisable to a business and task-orientated service since there is no credible opportunity for the projection of self-concept that is in-keeping with the extant definition. The construct remains better suited to retail products such as a cars or branded clothing. Consequently meaning associated with social value has not been included in the domain specification.

5.3 Resource Integration Construct Validation

All social and economic actors are resource integrators (Vargo and Lusch 2008). Customer resource integration effectiveness is defined as the '*customers' proficiency in deploying resources as they engage in value-generating processes'* (Hibbert et al., 2012, p.248). When the user has insufficient personal resources, they turn to resources afforded by organisations and other network actors (ibid, 2012). In this thesis resource integration is conceptualised using a combination of the user's personal skills and those of their network. The degree of personal skill (i.e. technical competence) the individual possesses regulates the degree of support required from their network. Note that for value co-creation to occur, actors engage in service-for-service exchange and in related interactions that lead to resource integration. Consequently, without actor engagement, no resource integration happens and no value can be co-created (Storbacka et al. 2016). Figure 18 outlines the codes supporting the constructs that form resource integration.

Figure 18: Codes Supporting Resource Integration Constructs



Participation is included as a control function. The literature review argued that participation in different levels of functionality would not form part of the users value-generating processes in online task orientated and repetitive use situations. The qualitative phase seeks to elicit meaning to support (or refute) this premise. Understanding the meaning attached to participation and how it affects the user's experiential value is important since basic use may be sufficient for the user to perform the required tasks. In fact users may not need to use complex functionality to derive sufficient value from the online service proposition. Identification of the specific functionality used by subscribers in this context is addressed via the questionnaire in the quantitative phase. This section now discusses the personal skills of the user before identifying the actors in the user's wider social network. The network of actors and each resource integration interface is described using a touch point diagram.

5.3.1 Technical Competence

Personal skill (referred to as technical competence in this context) is defined as *'possessing the required skills and confidence to complete the task*' (Meuter et al., 2005, p.64). The codes supporting the personal skills construct are as follows:

1 Technical Confidence

2 Technical Competence

Participant D provides support for the fundamental premise of resource integration in this thesis through one succinct statement.

> ***"OK do you ever play with applications or software and systems?*** *No I'm not a techy at all - I'm a get on the phone"*
>
> Source: Participant D

Personal skills do influence resource integration activity and when they are found to be lacking the user turns to third party actors within their network. Participant A draws this out below.

> ***"Right so you need to be training others?*** *He's not always very computer literate and I generally have to show him what to do".*
>
> Source: Participant A

Significant participant agreement supported the personal skills construct, which manifested itself in technical confidence and technical competence in line with the definition. These findings support labelling personal skills as technical competence. Participant confidence and technical competence were interlinked phenomena not only affecting how they used the software, but also influencing the way users accessed and used their network to accomplish resource integration activity and in turn how they themselves behaved as resource integrators for other individual actors. Again Participant A alludes to this below.

> ***"****If I can tell other people how to use it - there's no point in me saying oh yeah try that - I don't know how to use it - but try it. If I can say this is how you use it – you do it this way - I can show you….help with it as well if I need to****……you've got to be happy with your skill level if you like, would that be the right way of saying that?*** *I guess well happy that its simple enough for me to be able to show someone how to do it and know that they'll be able to grasp it quite easily as well****".***
>
> Source: Participant A

The same participant describes how a lack of technical competence amplified her lack of confidence in using the service, which in turn influenced the way she interacted with her network (in this case the service provider's helpdesk) and her expectations of how the encounter should be handled. The level of technical competence/confidence was also linked to business consequences i.e. making mistakes that would later have to be rectified. Lack of confidence manifested itself in feelings of inadequacy, in this case referred to as stupidity, and a need for their network to help them avoid those feelings. The implication for the service provider was clear; to remain part of the user's resource integrating activities, attention to preserving the user's feelings of confidence and level of technical competence was fundamental.

> *"There's nothing worse than phoning up someone and they're really rude to you and make you feel really*

stupid because then you sort of like don't want to phone them again and then you don't use them again ***Got it - so the fact that they're professional on the other end of the telephone is…?*** *Yeah professional but friendly. Obviously being too professional they can seem a bit kind of like stuck up and make you feel a bit stupid* ***Right*** *Professional but friendly* ***So when you say stupid how do you mean - is that from an IT point of view?*** *if some people you ring up will go well that's not possible or something like that - well that definitely isn't doing it so - they generally kind of just say things like - make you feel a bit stupid for ringing up - well that was a bit of a stupid question to ask - its like well no I thought I needed to ask a question because I didn't want to get it wrong - if that makes sense?* ***Right, so getting it wrong is an issue?*** *Well obviously - how do I say it - yeah getting it wrong is an issue, you don't know how fundamental it's going to be if you click on the wrong thing. It probably isn't going to be a huge deal but you may as well not waste your time making some big mess you've got to unsort when you could ask someone a simple question if that makes sense".*

Source: Participant A

The ability of other network actors to gauge the user's level of technical competence (particularly in service recovery encounters) and to support them in their resource integration activities at the right level of technical understanding, using the right language, is brought out by Participant B in further detail.

"What else is important when they do that? *Um that they answer the phone* ***Right*** *that they are accessible and also that they understand that when you are calling them it's because you have a problem.* ***Yes*** *And also I don't want 'techy' people on the other end. I want to be able to talk to someone you know on a basic level. I don't want someone - when they are talking about IT, they click things down and they expect a certain level of knowledge…Um everybody has their own level of knowledge of IT be it gained - however they gained it everybody has a certain level of knowledge. What I don't like is when you phone up a help desk, say the Royal Mail, is if they don't assess to start off with your level of knowledge and you can do that just by asking a few basic questions* ***Right*** *Because the person on the phone, when you phone up, you want the problem sorted then and there and a) you've just lost £5 on a letter and b) its got to go out - or whatever.* ***Yes*** *Which might not sound a lot to some people but to a small company it is a lot* ***It adds up doesn't it?*** *Yes it does. I'll phone up and I'll be frustrated because it's gone wrong and I don't want it to go wrong, I want it sorted and I want to know what to do. So I know that I'm going to be a bit with my back up* ***Right*** *What I want is a person at the other end – who is sympathetic, who is efficient but also has enough about them that they can say OK what were you trying to do, what happened do you understand this if I say that do you know what an IP address is – you know. If you don't know what an IP address is - that gives you a level of what people's understanding is about computers* ***So it's not just technical knowledge*** *No* ***It's also about people skills?*** *Yes you do definitely, you do need people skills"*

Source: Participant B

In some instances technical competence was also required to connect other software to the online subscription service to optimise resource integration activity. Technical competence not only affected the extent to which the functionality of the specific software was used, but also how it can

be integrated into their business process. Time restrictions were blamed for not engaging with the full value proposition provided by the service, when in fact the underlying reason was lack of technical competence (see also first quote in this section).

> ***"What stopped you?*** *The reason was - we were just always so busy to try and even set that up - mail merges aren't our strong point. We do do mail merges from Act, I think to get the 2 to talk to each other would have been fantastic had we have had the time. That's something we would have looked at doing and going forward.* ***So is time the main factor that stops you from exploring SmartStamp?*** *Yes time and we have 2 members of staff doing everything. We have a fantastic work experience student and she understands how everything talks to each other. She loves to play - If she doesn't know she loves to find out and that would have been a job we would have given her and she would have cracked it easily".*
>
> Source: Participant D

The next section identifies the actors in the user's wider social network and discusses how resource integration activity occurs. Support for the VITAE premise is also drawn out together with meaning to substantiate that future and imaginary experiences do in fact exist within the formation of current experience perceptions.

5.3.2 Network

There is no supporting literature to define the network for online subscription-based services, nor a precise definition available. Objectives of the qualitative phase include: a) identifying the network of actors that the user interacts with in their resource integrating activities b) the actor touch points where resource integration occurs in the network and c) to validate the conceptualisation of resource integration in this thesis. The codes supporting the network construct (and five different categories of network actors) are as follows:

1. Service provider helpdesk
2. Friends and colleagues
3. Recipient/customer
4. Service provider fulfilment channel
5. Third party technical/infrastructure support

The user draws upon the service provider (helpdesk) staff in service recovery situations. In a service recovery situation the user telephones the service provider helpdesk with the expectation of achieving a successful outcome to a business problem. Functional value (e.g. the responsiveness and contact constructs) is not only influenced by the ability of the service provider to resolve the issue; but also the timeliness and efficiency of the resolution and the way that the call is handled (i.e. content, sequencing and inter-personal skills) all have an important influence on the value

derived by the user from the encounter. A positive experience in each of these areas can positively influence VITAE. The user is seeking to maintain self-esteem during the encounter and to resolve their problem at a level that is compatible with their competences. The expectation is that the service provider staff will possess the necessary skills (both technical and inter-personal) to steer the encounter to a successful conclusion and defuse the frustration the user feels when initially making the service recovery call. These findings support the hypotheses developed for the resource integration construct (i.e. H_1a-j and H_2 a-j). Participant A and B identify the service provider helpdesk as part of the user's network and how they expect resource integration to occur. To avoid repetition, please refer to the earlier quotes in the last section.

The user also draws on friends and colleagues for resource integration. Participant C describes how she uses colleagues to help resolve technical issues. In the previous section Participant D also identified enlisting support from a colleague for technical issues that were either above and beyond the technical competences of the user, or activity that the user did not consider a priority or have time to resolve. Support from the network positively influences functional value (e.g. systems efficiency) and convenience since the user is able to accomplish tasks more efficiently in the future.

> ***"What motivates you to get to that tipping point where you go right, now I need to lift the phone and get some help?*** *Well I suppose its something I feel I can't solve myself, and I try and if I can't, then there's somebody there, and that's what they're there for* ***OK would you sit all day and try to work it out?*** *No, no good heavens no, I haven't got time to do that, you know I probably spend um I don't know ten minutes, fifteen minutes, but I've got some great guys round here that are far more learned than I am as far as IT goes and I'd say (name) could you just have a look at this for me please. I did yesterday actually when we were doing a task and I wasn't quite sure how to set something up, so I gave a colleague a shout and she sorted it, but next time I need to do it, I shall know how".*
>
> Source: Participant C

In the dialogue above Participant C also provides insight into the way her experience improved over time as the network helped her learn. An improved ability to operate the software influenced both confidence and technical competence, which reduces the future need for network actor intervention. Continued use of the network to learn also supports the premise of accumulated experience. Improved technical competence and confidence over time leads to a more positive experience (and a reduced dependency on the network) as the user becomes a more effective resource integrator, whereas failure to learn or to grasp how the software worked is likely to have the reverse effect.

Participant B describes the reciprocal nature of resource integration and how actors help each other to solve technical problems.

> ***"What's the distinction there?*** *Yeah when you're teaching someone something new or a piece of brilliance or something which we're working on or she's not quite sure, you know, we'll go and look at it together and have a look and see or something – you know or if she has a problem - a label won't print or something like that - we'll look at that"*
>
> Source: Participant B

The user can also draw upon the recipient or end customer. In an eBay selling situation, Participant F describes below how the feedback from the end customer can positively or negatively influence functional value e.g. reliability/fulfilment and hence the ability of the user or their business to generate future sales.

> *"A lot of feedback I've got is from parents of children who said Johnny got his Meccano set in time for his birthday, what a great service, thank you for sending the extra bits or including some items* ***How important are the views of people in regard to what you do with SmartStamp?*** *Again, I think very important, people judge your credibility as a seller based on the feedback of others so without that feedback ((pause for emphasis)). I've noticed that over the years I've been an eBay seller, as your ratings increase, your number of sales increase. People will check your ratings and by that you get a lot of return customers but then you get - particularly for international buyers, they take reassurance in that sort of thing. If they know you sell internationally using SmartStamp, I actually advertise SmartStamp on my eBay account. I say I use SmartStamp and part of my postage policy is to only send internationally and they pay exactly for the weight of the postage because it's accurately measured by SmartStamp. I publish that on my eBay shop page and that gives you good credibility as a seller".*
>
> Source: Participant F

The influence of the end customer was also evident on hedonistic value. Positive feedback from the end customer, particularly when the user is perceived to have gone 'above and beyond' the bare essentials that the sale required had a positive effect on the user in the form of pleasure from a 'job well done'. Participant F partially alludes to this phenomenon above, where a timely service and the additional product supplied positively contributed to the end customer experience. The resultant feedback caused Participant F to feel good (i.e. derived personal pleasure) about the transaction. Feelings of pleasure for the user can positively influence value.

The user also engages in resource integration activity with the service provider for the fulfilment components of the item (i.e. a parcel) to be sent through the post. The content and packaging elements of a parcel can be controlled by the user, however control of fulfilment (i.e. timely delivery of the item in good condition or efulfilment) then passes to the service provider. A poor

delivery experience can negatively influence the user's perception of functional value (e.g. fulfilment/reliability). The converse would positively influence value. Participant E draws out the importance of the 'delivery promise' between the user and the service provider below.

> *"At the end of the day Royal Mail are there to provide a service and a lot of information that goes out through our doors is very important, whether it be to a solicitor, to a purchaser to an estate agent, there's a lot of personal confidential criteria leaving my hands into the Royal Mail box and I know through bad experience that things go astray".*
>
> Source: Participant E

Participant E draws on her previous negative experiences when forming her current perception about service provider fulfilment and reliability. Again this dialogue supports the accumulated nature of experience formation, referring in this case to past performance. Participant F goes on to stress the dependency of the user's resource integration activities on the service provider's fulfilment performance, which has to be consistent over time.

> ***"What makes a good experience for you at a high level?*** *At a high level – I think eBay sums it up quite well they have 5 ratings a buyer can give a seller. Some of those include postage costs, speed of delivery, description, how well packed the item is. So 2 of those categories are highly dependant on Royal Mail for my feedback. So if things aren't delivered in a timely fashion it might not be because I didn't pack them up and get them into the network in time it might be down to delays and that can reflect badly on me and if the postage costs aren't competitive then again that can reflect badly on me as a seller. I'm beholden to my postal provider to at least help me with 2 of my key ratings".*
>
> Source: Participant F

Together with the previous quote from Participant F, support for accumulated experience residing in the user's value perceptions becomes clear. These accumulated experiences reflect not only the product sold but also the service provided by the user's network. An eBay seller's ratings are built up over time and customers provide feedback on multiple occasions, often across hundreds or thousands of encounters over many years. The user's value in the experience perception is based on the accumulated perspective over time.

The participation of the service provider in the user's resource integration activities is not only important to business users, but also to home users. Participant F draws out the influence of service provider fulfilment performance on functional value below.

> ***"It sounds to me (name) that your feedback on eBay is a risk to you doing business with Royal Mail. Can you talk a bit more about that?*** *If Royal Mail weren't to provide a good service then feedback would get eroded or even ruined and you'd lose sales. So it's hugely important that they fulfil their quality of service as part of the overall eBay solution* ***Can you talk to me about how important fulfilment is to you? And what***

> ***that means?*** *Yes it's all part of the end-to-end service as a seller. I think that's probably the area where I have the most criticism of Royal Mail in terms of an end-to-end service. SmartStamp was quite a revolution among the post offices so they're convenient drop off points. It took quite a few of the post offices a while to actually know what SmartStamp is, some of them even insisted on reweighing it and checking it for you. So I think generally post offices have a lot to do in terms of education on SmartStamp for that side of fulfilment. The actual delivery side no criticisms at all from what I know the usual sterling efforts by postmen to make sure your parcels get there and they contribute to the positive feedback I get as a seller because being able to get the items in the post on a Monday morning and have them delivered on Tuesday is as good as any professional seller".*
>
> Source: Participant F

Multiple actors (e.g. post office staff and postmen) can interact with the focal firm's resource integration activity within the service provider's fulfilment channel between acceptance and delivery (see Figure 19). Reliable and timely delivery has a positive effect on functional value (e.g. fulfilment/reliability), this is particularly so in the case of the eBay proposition, whereby functional value can be positively or negatively influenced by feedback. Indeed feedback can influence the ability of the user to generate future sales. Participant F highlights both negative (Post Office counter staff) and positive (delivery postman) interaction experiences with service provider staff, which can positively or negatively influence functional value. The user takes on significant risk (performance, financial and security, privacy) when their value proposition is transferred to the service provider. In turn the service provider's reputation (and brand value) is underpinned by service reliability. Numerous examples in the interview data indicated symbiotic resource integration activity where successful fulfilment was in the interests of both parties.

The final category of actors that form the network identified by the users was third party IT support companies. Any business or home office has an IT infrastructure that lies outside the responsibility of the service provider's performance guarantee (e.g. broadband links, printers and personal computers). Whilst the service provider software is required to interface to these third party assets (i.e. printer interfaces) and the service provider help desk staff are expected to understand how the online service proposition integrates to these assets, the responsibility of the correct functioning of these technical assets lies with the user. Users may not have the necessary technical competence to set up, configure, or resolve technical issues and often draw upon IT support companies to perform this role. Participant C highlights this reliance below.

> ***"Right, what about system crashes/failures?*** *I'd ring up HR or (name)* ***(name) are your support people?*** *They're our IT support company yeah, they're brilliant".*
>
> Source: Participant C

The ability of the support company to optimise the usage of the user's IT infrastructure can positively or negatively influence the value derived from the online service proposition.

Participant D talks in detail about how the network enables resource integration. In this case the context refers to the service provider's helpdesk staff.

> ***"Now what was that for?*** *I was unsure how to - when you've got the first page up to start printing your stamps, you already have in the top right corner an image of a stamp and I think when I was doing bulk printing, I was unsure how to get the stamps in the right sections. I just put one call in and it was just so easy - to have somebody on the other end of the phone and they said all you have to do is this, this and this and then you remember the drag and drop functions and I was unaware of that - that wasn't clear until I put the call in and they said what you need to do is hold the shift key down. For example when you use a sheet of labels, say you've only used 3 labels, there's some wastage so obviously you don't want to waste the sheet of labels but obviously those places are blank. Anyway I put the call in and I think if you hold down shift and drag drop you can ignore the places where the labels have already been used once - so things like that are quite handy - and I'm quite a lazy person whereas rather than look it up I'll get helpdesk - I'll get online".*
>
> Source: Participant D

Dialogue from the same participant supports the contention that future and imaginary thoughts are part of the accumulated experience within an online subscription context. Participant D understood the online service proposition enough to extrapolate what would be of future use to her business.

> *"If SmartStamp were to develop as a tool, if it were able to recognise trends of that individual business, if it were to have the functionality and the stuff going on in the background saying hey this company works like this, so rather than each time that they log on - or it recognises that they use X amount per month - lets update lets give them £50 per month because that's what they use etc. Then yeah it would make our lives easier. "*
>
> Source: Participant D

Participant F indicated the importance of future or imaginary ideas and points out the service provider already has a mechanism to capture these ideas and expressed an expectation that these ideas would be implemented.

> ***"How important is it for you, for your business to be able to influence Royal Mail and what they do with SmartStamp in the future?*** *I think it's very important, I think the user feedback and user forms they should find a lot of common ideas, I would have thought that they could implement in updates to the product and improvements. So I would see that as being very valuable to them".*
>
> Source: Participant F

5.3.3 Participation

The participation literature argues that an increased use of software functionality leads to an improved experience (Mohd-Any, Winklhofer and Ennew, 2015). The literature review deduced that in repetitive task orientated online environments this might not be the case. Consequently, participation is used as a control mechanism in this thesis.

A significant amount of agreement indicted that use of the more complex functionality within the software proposition made no difference to the users' experience. Across the majority of cases basic functionality only was used. Participants A, C and D draw out this meaning very clearly.

> ***"So are you satisfied that you've explored the functionality of SmartStamp to the point that you need to?*** *Yeah well it does what I need it to, I can't see anything else that I need to do with it to be honest with you".*
>
> Source: Participant A

> ***Do you fiddle with it much are you inquisitive about what it will do in the functionality?*** *What with the SmartStamp?* ***Mm*** *No I've not really gone down that road, I must admit I mean it does for me what it says on the tin, it very efficiently and neatly, is a service for me* ***So you just use it's basic functionality*** *Yeah* ***And when you've cracked that do you look further?*** *No I haven't done so, no".*
>
> Source: Participant C

> ***"Do you customise SmartStamp at all?*** *No we use it on quite a basic level to be honest with you its literally - you asked me earlier to talk you through so: log onto SmartStamp; select whether its a single print or bulk print; select whether its first class or second class; we normally have this large letter its a 70p postage um we don't use the logo and slogans, we don't do mail merge, we use it on a very basic level".*
>
> Source: Participant D

However, whilst a low value repetitive activity may not require the use of complex functionality to perform its intended task, Participant E draws out that technical confidence and competence may be at the route of user behaviour around participation.

> ***"OK and do you use any of the other functionality?*** *No just purely for the stamps, I mean obviously if I got a large letter or a small letter, I'd obviously go change the postage size. I wanted to load the logo but the size of our logo that we've got on the computer, to minimise it to fit is a bit of a pain and I don't really know how to do that so I've given up with that for the moment."*
>
> Source: Participant E

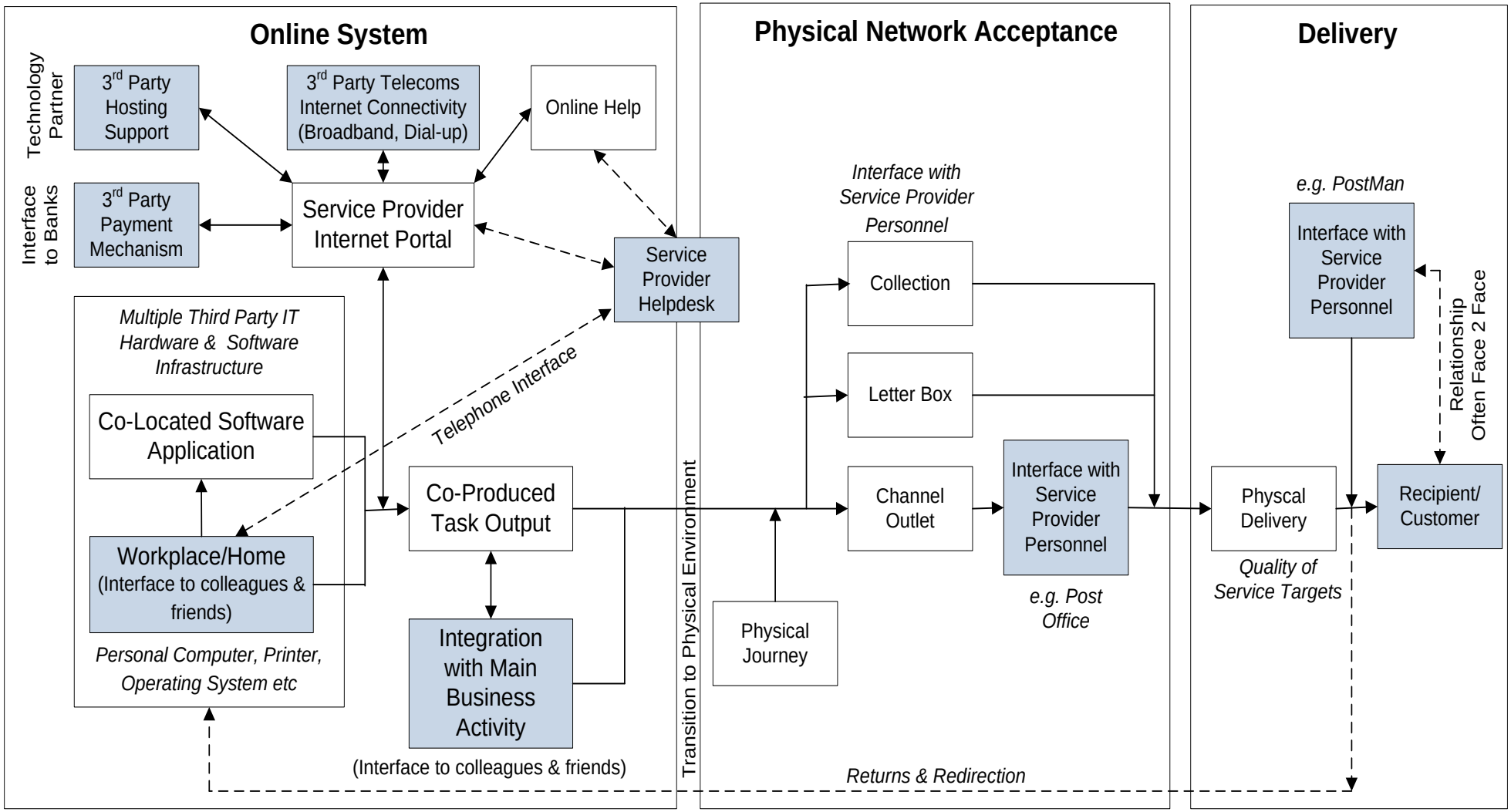
For this reason participation is retained as a control mechanism going forward into the quantitative phase. The questionnaire will control for the effect of the level of participation on VITAE. The next section draws together meaning from the qualitative interviews together with industry

knowledge to create an overview of the resource integration touch points between the user and the other network actors in the online service channel.

5.4 Actor and Network Touch Points

The network of actors identified from participant dialogue includes a) the service provider helpdesk (for service recovery encounters) b) friends and colleagues c) recipient/customer d) the service provider's fulfilment channel and e) third party technical/infrastructure support companies. Note that use of online communities did not surface as part of the wider social network in the qualitative interview phase and nor did their use surface in questionnaire responses. Figure 19 describes the touch points within the online service channel, which is divided into three areas: the online proposition itself; the acceptance process for a mail item; and delivery. The online service is located at the user's office (or home). The proposition is software-based and the user installs the software on their personal computer, creates and manages an account using the service provider's Internet portal. Postage is then printed via a standard office printer. These activities require interactions between the user and an extensive network of actors. For example: the service provider portal which involves security and interfaces to the banking network; the service provider helpdesk (for service recovery); third line software supplier support; telecoms providers for broadband connectivity etc. Note that the meaning elicited from the qualitative interviews identified that not all network actors are considered part of the user's wider social network and consequently are not perceived to perform resource integration activities. The user integrates resources from their office location using the service provider's software. Where their technical confidence/competence is found lacking the user then accesses their network to complete the task at hand. Typically colleagues and/or friends are used in the first instance before accessing a third party IT company, which is typically used (by some users) for technical support as a last resort. During this phase of resource integration the user only contacts the service provider help desk to resolve service recovery issues. The user's mail item (i.e. a parcel) then begins the physical fulfilment phase. The first stage of physical fulfilment is an acceptance phase in which the service provider acknowledges receipt of the item. Acceptance is carried out either by the user posting the item into a public letterbox, collection by the service provider or by going directly to a post office. Interaction with post office staff can occur during the acceptance phase and value-generating (or destructive) activity can take place. Culmination of this phase occurs with the service provider accepting responsibility for the mail item. The service provider then sorts and delivers the mail. Value-generating (or destructive) activity can also occur with postmen or through feedback via the end customer (both direct e.g. by telephone or indirect e.g. via eBay feedback) during this phase.

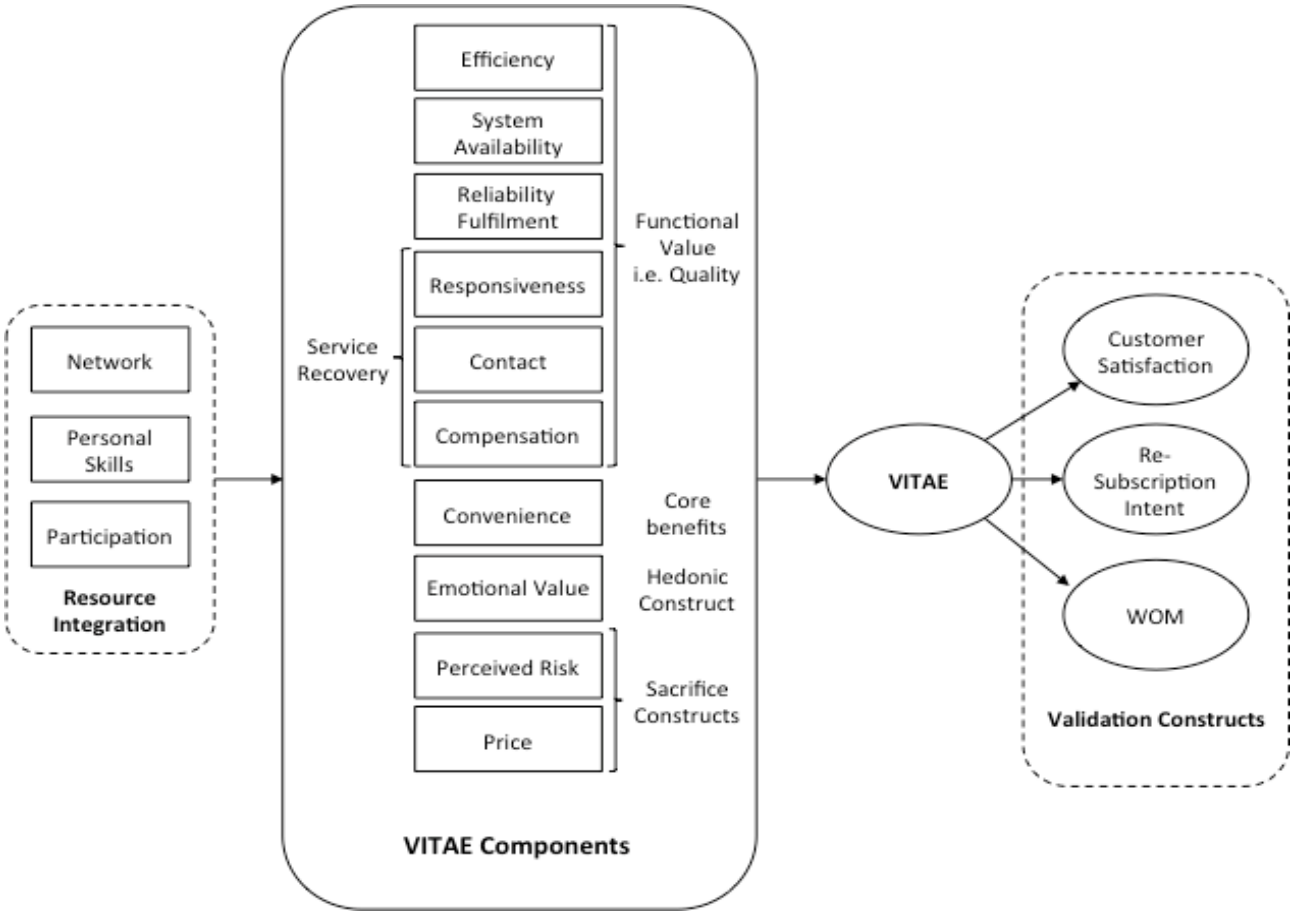
Figure 19: Network Context and Touch Points



5.5 Discussion

Meaning from the qualitative analysis has been used to validate the domain of VITAE. Findings supported the conceptual model deducted from the literature review with the exception of social value, which is no longer included in the domain specification. Financial and performance risk have been combined into one perceived risk construct in line with the Sweeney, Soutar and Johnson (1999) approach. Figure 20 represents the refined conceptual model, which now forms the basis of the quantitative analysis.

Figure 20: Refined Conceptual Model of VITAE



The qualitative phase also provided meaning to a) enable the validation and refinement of construct definitions in the online subscription service context and to refine questionnaire items accordingly and b) validation of the resource integration construct, identification of the actors in the user's wider social network and development of an overview of the touch points in the actor network within the context of interest. Refinements to construct definitions and items are included in Appendix 12: Construct and Item Refinements. The expectation of this thesis is to use the meaning generated by the qualitative phase in the discussion chapter to support the interpretation of quantitative findings.

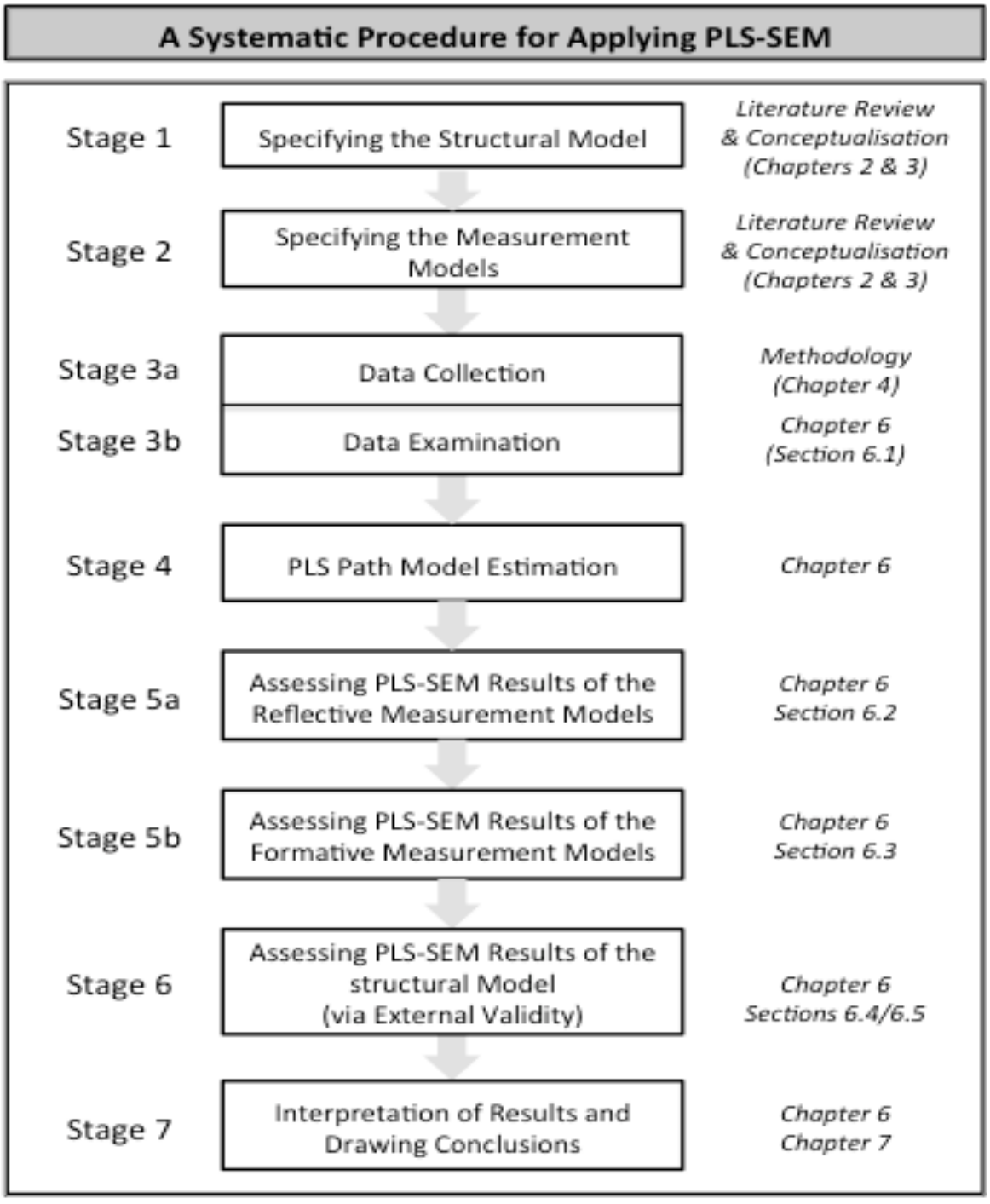
Chapter 6

Quantitative Findings

6 Quantitative Findings

The objective of this chapter is to assess the psychometric properties (i.e. validity and reliability) of the VITAE model and to test the hypotheses set out in the conceptualisation (Chapter 3). The required analysis was performed via PLS-SEM (Partial Least Squares Structural Equation Modelling) and followed the procedure set out by Hair et al. (2014).

Figure 21: Data Analysis Strategy



(Adapted from Hair et al., 2014, P.25)

In this thesis the process for establishing a robust measure of VITAE began with the literature review (Chapter 2) and conceptualisation (Chapter 3) chapters, which combined specified both the measurement and structural models of VITAE. These chapters address stages 1 and 2 in Figure 21. Data collection was discussed in the methodology (Chapter 4), which addresses stage 3a. Validation and refinement of both structural and measurement components of VITAE began in the qualitative findings (Chapter 5) phase, which validated the deductive conclusions made in the literature review/conceptualisation within the context of interest, before producing a refined conceptual model for quantitative evaluation. This chapter presents stages 3b to 7 of the procedure set out by Hair et al. (2014) and addresses data evaluation (stage 3b), the PLS path model estimation (stage 4), the reflective measurement model assessment (stage 5a), and the formative measurement model assessment (stage 5b). Evaluation of the structural model (stage 6) is completed within the external validity section in stage 5b. Interpretation of results and conclusions occurs both in this chapter and in the discussion and conclusions (Chapter 7).

6.1 Data Examination

The section presents the data examination (stage 3b) of the assessment framework shown in Figure 21.

6.1.1 Preliminary Data Analysis

In preparation for data analysis, each individual record within the data set was examined to identify irregular answering patterns that could disproportionately affect downstream results. The examination included an investigation of: suspicious response patterns i.e. straight lining and/or inconsistent answers; outliers; and missing values (Hair et al., 2014). No suspicious answering responses, straight lining or outliers were detected.

Missing or incomplete data requires examination and cleansing prior to the data analysis phase to avoid potentially serious downstream issues with the analysis (Tabachnick and Fidell, 2001; Hair et al., 2014). Missing data analysis was undertaken to examine patterns in the missing data. 136 responses were received, 10 questionnaires were incomplete (either partially complete or prematurely logged out of the online survey system) and subsequently discarded, leaving 126 usable responses. Within the useable responses there were a small number of missing values and a larger proportion of responses that were not applicable due to use of a branching question. The branching question was used to filter respondents that had

used the service recovery process from those that had not. A detailed missing value analysis in presented in Appendix 17: Missing Value Analysis.

The resultant sample size for the core value model (i.e. the main give/get dimensions) is 126. After removal of the not applicable cases across all service recovery dimensions as a result of the branching question, the resulting sample size was 80. At this juncture it is important to point out that a significant proportion of the sample had not experienced a service recovery encounter and consequently the Response, Contact and Compensation constructs cannot therefore form part of their accumulated experience, which necessitates division of the analysis into two models (i.e. effectively two samples) to fully explore the domain of VITAE, which are shown in Table 19.

Table 19: Core and Extended Models

Core Model	Extended Model	
System Efficiency	System Efficiency	
System Availability	System Availability	
Fulfilment/Reliability	Fulfilment/Reliability	
Convenience	Convenience	
Emotional Value	Emotional Value	
Risk	Risk	
Price	Price	
	Responsiveness	Service Recovery Constructs
	Contact	
	Compensation	
Sample Size 126	*Sample Size 80*	

The core model consists of the seven primary constructs that form VITAE (e.g. System Efficiency, System Availability, Fulfilment/Reliability, Convenience, Emotional Value, Risk and Price) and draws on a sample size of 126. The extended model, which is now an extension of the core model integrates the three service recovery constructs (e.g. Responsiveness, Contact and Compensation) with the core model in a separate analysis. The extended model draws on a sample size of 80, which is a subset of the 126.

The original decision to use one integrated model was based on the qualitative findings, which identified (with some prompting) that all participants had experienced a service recovery encounter. For example, participant F talked about spoilt stamps being commonplace requiring use of the refund (e.g. Compensation) process below:

> *"If something does go wrong, print it on the wrong side of the label or the label gets jammed in the printer then Royal Mail will refund that value to you without a lot of argument".*
>
> Source: Participant F

Printer jams, or printing to the wrong label location on a sheet happens frequently and at the very least over multiple years of usage, the expectation was that the refund process would have been used on more than one occasion by all participants. Prompting was required during the qualitative interviews because some participants either did not remember or did not equate calling the service provider for advice or using the refund process as a service recovery encounter. Consequently the branching question was used in the online questionnaire to account for these possibilities. The branching question identified that a significant proportion of the sample had not had a service recovery encounter, which could be the result of forgetting, not recognising it as such, or indeed because they genuinely had not. Consequently the revised approach now replicates the stance taken by Parasuraman et al. (2005), in which the E-S-QUAL instrument was separated from the E-RecS-QUAL scale for precisely the same reasons. Note that E-RecS-QUAL purely considers service recovery as previously discussed.

The next section discusses whether the sample sizes of 126 (core model) and 80 (extended model) are sufficient to use the PLS-SEM approach for later analysis.

6.1.2 Sample Size

According to Goodhue, Lewis and Thompson (2012) and Marcoulides and Saunders (2006), small sample size is probably the most often abused argument associated with the use of PLS-SEM. However, the complexity of a structural model has little influence on sample size requirements for PLS-SEM, since the algorithm does not calculate all relationships in the structural model at the same time (Hair et al., 2014). Indeed early studies supported the strong performance of the PLS-SEM technique with smaller samples (Chin and Newsted, 1999; Hui and Wold, 1982) and more recently Reinartz et al. (2009) also concluded that PLS-SEM was a good choice for small sample sizes. A useful guide to appropriate sample size is the 10 times rule (Barclay, Higgins and Thompson, 1995) although its application has been

criticised when used without consideration of the background of the model and data characteristics (Hair, Ringle and Sarstedt, 2011). The rule can be summarised as: the minimum sample size should be 10 times the maximum number of arrowheads pointing at a latent variable anywhere in the PLS path model (Hair et al., 2014). In response to this criticism Hair et al. (2014) state that the required sample size should be determined by a power analysis based on the part of the model with the largest number of predictors.

Establishing sample size legitimacy in this thesis is based on two approaches:

1. The 10 times rule (Barclay, Higgins and Thompson, 1995)
2. The Power Analysis (Cohen, 1992; Hair et al., 2014).

The maximum number of arrows pointing to a construct in the core model is 7. The 10 times rule would therefore require a minimum sample size of 70. The core model therefore meets the 10 times rule criteria required for sampling adequacy with 126 responses. However, the extended model has 10 arrows (i.e. 7 from Model 1 + 3 further service recovery arrows) requiring a minimum sample size of 100. Consequently the extended model has an insufficient sample size to meet the criteria required for the 10 times rule and should be treated with caution.

Table 20 shows the sample size required for both models to meet the guidelines set by the Power Analysis (Cohen, 1992; Hair et al., 2014). Sample size reflects the ability of PLS-SEM to detect minimum R^2 values of 0.1, 0.25, 0.5 and 0.75 in any of the endogenous constructs in the structural model, whilst achieving significance levels of 1%, 5% and 10% using the benchmark 80% statistical power against a specific level of complexity in the PLS path model.

Table 20: PLS-SEM Sample Size Recommendations for 80% Statistical Power

Maximum Number of Arrows Pointing at a Construct	Significance Level											
	1%				5%				10%			
	Minimum R^2				Minimum R^2				Minimum R^2			
	0.10	0.25	0.50	0.75	0.10	0.25	0.50	0.75	0.10	0.25	0.50	0.75
7 *(Core Model)*	228	109	69	56	166	80	51	41	136	66	42	35
10 *(Extended Model)*	256	123	79	64	189	91	59	48	156	76	49	41

Sample Size Required

Source: Cohen, J, A Power Primer, Psychological Bulletin, 112, 155-519

Sample Size Legitimacy												
Core Model (126)	X	✓	✓	✓	X	✓	✓	✓	X	✓	✓	✓
Extended Model (80)	X	X	✓	✓	X	X	✓	✓	X	✓	✓	✓

The power analysis shows that the sample size for the core model is sufficient to conduct PLS-SEM analysis for significance levels of 5% with minimum R^2 values of 0.25 and above. The sample size is potentially too small to detect significant relationships for R^2 values ≤0.10. The sample size for the extended model is adequate to detect significance levels of 5% with minimum R^2 values of 0.5 and above. Therefore the extended model will be inherently conservative in that evaluating results at the 5% significant level will need a higher R^2 (i.e. 0.5 and above). This reduced ability to detect significant relationships between constructs in the structural model may reduce the model's ability to reject the null hypothesis despite a robust conceptualisation.

The next section discusses purification of the reflective measurement models using Exploratory Factor Analysis (EFA). EFA is a first generation analytical technique (Fornell, 1982, Fornell and Larcker, 1987) used in this study to confirm a priori established theory and to refine the measurement model before conducting Confirmatory Factor Analysis using PLS-SEM. Items cross loading with other dimensions are identified, assessed, and removed where necessary.

6.1.3 Exploratory Factor Analysis

EFA was used to check whether the reflective measurement models derived from theory are conceptually distinct in an online subscription service context (Pallant 2007). The following guidelines are provided in the literature:

- The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy should range from 0 to 1 with a minimum value of 0.6 (Pallant, 2007)
- Bartlett's test for Sphericity should be significant ($p \leq 0.05$) (Pallant 2007)
- Each factor should have an Eigenvalue >1 and in total have a minimum explained variance of 60% (Hair et al., 2014).

Principal Components Analysis with Varimax rotation was used to extract each factor and its accompanying loadings. Eigenvalues were set to a minimum of 1. Assessment of Cronbach Alpha will be conducted via PLS later in the analysis.

To avoid violating the case to item ratio (minimum 5:1, Hair et al., 2014), the EFA has been divided into three parts to optimise results, as follows:

1. First order constructs of value:
    a. Core model, which includes the primary constructs that form VITAE (e.g. System Efficiency. System Availability, Fulfilment/Reliability, Convenience, Emotional Value, Risk and Price)
    b. Extended model, which encompasses the service recovery constructs only (e.g. Responsiveness, Contact and Compensation)
2. Resource Integration (i.e. Technology Competence)
3. Endogenous constructs (e.g. Customer Satisfaction, Word of Mouth Recommendation, Re-Subscription Intent and Value).

The guidelines specified for EFA are applied to each of the above sections in turn.

6.1.4 First Order Construct Assessment

The primary use for EFA in this thesis is to prepare the way for the PLS-SEM analysis. This preparation evaluates firstly whether the constructs derived from the literature, and which form the VITAE conceptual model, are indeed present in the expected shape within the dataset (and to refine each construct as necessary); secondly to gain an early view of item cross-loading between different constructs and to identify (and remove) likely issues that will affect convergent validity later in the analysis. EFA results for constructs comprising the core model are included in Table 21.

Table 21: Exploratory Factor Analysis Results for Core Model

Item Code	Item Description	First Order Construct Standardised Factor Coefficients									
		System Efficiency	System Availability	Fulfillment Reliability	Convenience	Emotional Value	Security Privacy	Risk	Price	*Variance Explained	Eigen Value
SysEff1	It's easy to find what I need on SmartStamp®	0.738								14.4%	11.86
SysEff3	Information is well organised on SmartStamp®	0.798									
SysEff4	SmartStamp® loads pages fast	0.633									
SysEff5	SmartStamp® is simple to use	0.785									
SysEff7	SmartStamp® is well organised	0.810									
SysAv1	SmartStamp® is always available for business		0.729							12.8%	3.15
SysAv2	SmartStamp® launches and runs straight away		0.847								
SysAv3	SmartStamp® does not crash		0.879								
SysAv4	Pages on SmartStamp® do not freeze after I enter my information		0.828								
FulRel1	Delivery promises are kept			0.853						11.0%	2.89
FulRel2	Items are delivered within a suitable time frame			0.893							
FulRel3	Items are delivered quickly			0.895							
FulRel4	Royal Mail is truthful about its SmartStamp® offering			0.745							
FulRel5	Accurate promises are made about service delivery			0.860							
ConVen2	Using SmartStamp® is convenient for me				0.717					10.0%	2.29
ConVen3	Using SmartStamp® allows me to save time				0.853						
ConVen4	Using SmartStamp® makes generating postage less time consuming				0.843						
EmVal1	I enjoy using SmartStamp®					0.786				8.9%	1.99
EmVal2	Having SmartStamp® makes me want to use it					0.833					
EmVal3	I feel relaxed about using SmartStamp®					0.568					
EmVal4	Using SmartStamp® makes me feel good					0.786					
SecPriv1	Royal Mail protects information about my online behavior						0.837			7.6%	1.65
SecPriv2	Royal Mail does not share my information						0.854				
SecPriv3	Royal Mail protects information about my credit card						0.815				
Risk1	There is a high chance that SmartStamp® will not work properly							0.752		6.5%	1.31
Risk2	There is a high chance that SmartStamp® items would not be delivered as promised							0.639			
Risk3	There is a high chance that I will lose money because SmartStamp® won't work properly							0.785			
Price1	You feel that that SmartStamp® is expensive								0.949	6.1%	1.18
Price2	You think you paid too much money for SmartStamp®								0.935		

* Rotated Sums of Squared Loadings

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.856 and assessed within acceptable bounds (Pallant 2007). Bartlett's test for Sphericity was significant at ≤ 0.01 (Chi-Squared 3591.763 with 561 *df*) (Pallant 2007). The EFA identified 8 factors with Eigenvalues >1 and a total explained variance of 77.34%, which exceeds the guidelines set

by Hair et al. (2010). EFA results confirm the presence and shape of the VITAE constructs identified in the literature review. However the EFA identified two separate risk constructs.

The EFA separated the Risk construct into a combined Performance/Financial Risk component and a distinct Security/Privacy component. The literature review highlighted a lack of clarity concerning the way to appropriately handle Security/Privacy in online use situations. The debate centred on whether Performance/Financial Risk and Security/Privacy was one combined construct (e.g. Parasuraman et al., 2005; Lin et al., 2005), or whether Security/Privacy is as a discrete construct (e.g. Chen and Dubinsky, 2003). The point of departure for this conceptualisation was to use a combined risk construct initially and then to allow the EFA to separate out the various components in line with the context. Consequently the decision was taken to separate the Risk construct into 2 dimensions: Risk, which captures the Performance/Financial risk and Security/Privacy risk, which supports the Parasuraman et al. (2005) and Lin et al. (2005) perspective. Note that the items Risk5, 6 and 7 items have been re-labelled SecPriv1, 2 and 3 and have been recoded so that they represent a Security/Privacy risk perception.

Items SysEff2, SysEff6, ConVen1, ConVen5 and Risk4 returned cross loadings of 0.4 or above with other constructs and have consequently been removed from further consideration, since they would be unlikely to achieve convergent validity during the PLS-SEM purification procedure (Hair et al., 2014). A more in-depth explanation of why these items were removed is contained in Appendix 14: Measurement Model Purification. The next section discusses EFA results for first order service recovery constructs, shown in Table 22.

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.852 and assessed within acceptable bounds (Pallant, 2007). Bartlett's test for Sphericity was significant at $\leq$ 0.01 (Chi-Squared 968.979 with 91 *df*) (Pallant, 2007). The total explained variance across the factor grouping was 79.0% exceeding the guidelines set by Hair et al. (2014).

Table 22: Exploratory Factor Analysis Results: Extended Model Only

First Order Service Recovery Construct Standardised Factor Coefficients						
Item Code	**Item Description**	**Responsiveness**	**Contact**	**Compensation**	***Variance Explained**	**Eigen Value**
Respon1	Royal Mail resolved my issue promptly	0.810			37.0%	7.09
Respon4	The behavior of Royal Mail staff gave me confidence	0.913				
Respon5	Royal Mail staff communicated with me at the right technical level	0.898				
Respon6	Royal Mail personnel were courteous with me	0.727				
Respon7	Royal Mail staff had the knowledge to answer my questions	0.912				
Contact1	Royal Mail provides an easy to find contact telephone number		0.891		23.2%	2.45
Contact2	SmartStamp® has online help available if there is a problem		0.802			
Contact4	Royal Mail answers the telephone quickly		0.742			
Comp1	Royal Mail provides a refund when there is a problem			0.946	18.8%	1.53
Comp2	Royal Mail refunds me when I spoil stamps			0.938		

* Rotated Sums of Squared Loadings

The items Respon2, Respon3, Contact3 and Comp3 recorded cross loadings of 0.4 or above with other constructs and have consequently been removed from further consideration since they would be unlikely to achieve convergent validity during the PLS SEM purification procedure. A more in-depth discussion on why these items were eliminated is included in Appendix 14: Measurement Model Purification.

6.1.5 Antecedent Constructs Relating to Resource Integration

Constructs capturing Resource Integration include Technology Competence, Participation and Network. Each construct is conceptually antecedent to the first order value constructs in both the core and extended models. The Technology Competence construct has been formed from a priori literature using four reflective items and a seven point likert scale, however the Participation and Network Constructs are formed from dichotomous variables (i.e. 1 and 0) and have been subsequently transformed (i.e. summated) into composite continuous variables for use in the PLS-SEM analysis. Consequently they are not suitable for EFA. Therefore, to

ascertain whether the Technology Competence construct is sufficiently robust to stand alone as an individual construct in this analysis, EFA has been conducted by including the construct as an extension to the core model analysis. EFA results confirmed that Technology Competence is a discrete construct, achieving an Eigen value of 3.7 and individually explaining 9.7% of variance. Inclusion of the construct within the core model analysis increased the overall variance explained from 77.3% to 78.2%. The 4 Technology Competence items returned factor scores ranging from 0.816 to 0.859. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.852 and within acceptable bounds (Pallant 2007). Bartlett's test for Sphericity was significant at ≤ 0.01 (Chi-Squared 4126.508 with 703 *df*) (Pallant, 2007). The next section discusses the EFA results for the endogenous constructs.

6.1.6 Endogenous Construct Assessment

The results of the EFA for the endogenous constructs are detailed below in Table 23.

Table 23: Exploratory Factor Analysis Results for Endogenous Constructs

Endogenous Construct Standardised Factor Coefficients						
Item Code	**Item Description**	**Customer Satisfaction**	**Loyalty Intent**	**Perceived Value**	**% Variance Explained**	**Eigen Value**
CusSat1	You are satisfied with your decision to purchase SmartStamp®	0.903				
CusSat2	Your choice to purchase SmartStamp® was a wise one	0.926				
CusSat3	You think you did the right thing to purchase SmartStamp®	0.920				
Resub1	You consider SmartStamp® your first choice to buy postage		0.667		50.7%	7.51
Resub2	You will continue to subscribe to SmartStamp® when the service is reactivated		0.688			
WOM1	You would say positive things about SmartStamp® to other people		0.816			
WOM2	You would recommend SmartStamp® to someone who seeks your advice		0.798			
WOM3	You would encourage friends, relatives or business associates to purchase SmartStamp®		0.738			
Value 1	Compared with the price you paid SmartStamp® provides good value			0.921	30.0%	1.36
Value 2	Compared with the cost and effort involved, using SmartStamp is worthwhile			0.814		
Value 3	You think you are getting good value for the money you spend using SmartStamp®			0.925		

Sample size: N=126

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.906 and assessed within acceptable bounds (Pallant, 2007). Bartlett's test for Sphericity was significant at ≤ 0.01 (Chi Squared 1716.5 with 55 *df*) (Pallant 2007). Total explained variance across the factor groupings was 80.66% exceeding the guidelines set by Hair et al. (2010).

The EFA reduced four factors down to two: Value and a combination of Customer Satisfaction, Word of Mouth Recommendation (WOM) and Re-subscription Intent. Respondents did not recognise a distinct difference between the latter three constructs. Based on the literature review, this study originally conceptualised Re-subscription Intent and WOM as discrete reflective outcome constructs (Lin et al., 2005; Petrick, 2002). The intention was to include both as distinct constructs forming a nomological net to validate the prediction of value. However the online value literature also supports the Conceptualisation of WOM as a component part of the Loyalty Intention construct (Parasuraman et al., 2005). Indeed the construct analysis undertaken as part of the literature review identified that Re-subscription Intent and Loyalty Intent had identical meaning with any differences explained as re-labeling only. Although the EFA could not distinguish between the three constructs, conceptually satisfaction represents an attitudinal construct while WOM and Re-subscription Intent can be seen as behavioral intentions. The decision was taken to combine both WOM and Re-subscription Intent into one factor called Loyalty Intent and to retain Customer Satisfaction as a distinct endogenous construct to assist in predicting the validity of value. Discriminant validity analysis also supports this decision (see Appendix 15: Final Measurements and Summary Statistics).

The EFA results require refinements to some of the hypotheses in this thesis. The original hypotheses relating to the endogenous constructs are provided below:

H_3a: VITAE has a positive effect on Re-subscription Intent
H_3b: VITAE has a positive effect on Customer Satisfaction
H_3c: VITAE has a positive effect on WOM.

Whilst H_3b remains unchanged, H_3c and H_3a are combined into:

H_3a: VITAE has a positive effect on Loyalty Intent

The EFA formed a distinct factor for Value (global). Value2 recorded a cross loading of 0.401 with the Loyalty Intent combined factor, which is marginally above the threshold of 0.400 imposed in this study. The items attached to the value construct are well recognised in the literature and are included here to assist the validation of the measurement model. Rather than discard the item, Value2 has been retained to test for convergent validity.

6.2 Reflective and Formative Measurement Model Assessment

The next sections evaluate the reflective and formative aspects of the measurement model before evaluating the structural model. The established procedure (Hair et al., 2014) is outlined in Table 24. Given the nature of the measurement models, the criteria used to assess the robustness of a formative measurement model differ from those for reflective measurement models. In this study only one formative measure constitutes VITAE, which is a second order formative measure; all first order components are reflective. In the following sections, reflective measurement models will be assessed for internal consistency, indicator reliability, convergent validity and discriminant validity. The formative measure will be assessed based on convergent validity, collinearity among indicators, significance and relevance of outer weights and for external validity.

Table 24: Systematic Evaluation of the Measurement Models and Structural Model

Evaluation of the Measurement Model	
Reflective Measurement Models	*Formative Measurement Models*
• Internal Consistency (Composite Reliability) • Indicator Reliability • Convergent Validity (Average Variance Extracted) • Discriminant Validity	• Convergent Validity (MIMIC Model) • Collinearity Among Indicators • Significance & Relevance of Outer Weights • External Validity
Evaluation of the Structural Model	
• Coefficients of Determination (R^2) • Predictive Relevance (Q^2) • Size & Significance of Path Coefficients • F^2 Effect Sizes • q^2 Effect Sizes	

Source: Adapted from Hair et al., (2014) p.97

To evaluate the structural model, estimation empirically measures relationships between indicators and constructs (i.e. measurement model) and also between the constructs (i.e. structural model). The objective is to determine the extent to which theory fits the real world sample data. Techniques such as Covariance-Based Structural Equation Modelling (CB-SEM) use a goodness-of-fit criterion; however PLS-SEM uses an alternative approach. Whereas CB-SEM derives fit statistics from the difference between empirical and the theoretical covariance matrix; PLS-SEM examines the difference between observed (for manifest variables) or approximated (for latent variables) values of the dependent variables and the values predicted by the proposed model. Consequently PLS-SEM relies on measures

that indicate the predictive capability of the model to assess quality through the use of non-parametric evaluation criteria such as bootstrapping and blindfolding. The use of several individual variables to measure a concept is considered more accurate since they are more likely to represent all the different aspects of that concept, and is also more likely to deliver a more valid measurement (Hair et al., 2014).

The literature would typically suggest that when using PLS-SEM, structural model assessment would include an evaluation of Predictive Relevance (Q^2) and Effect Sizes (F^2). However, these procedures examine the incremental effect of adding an additional predictor. Value is the sole predictor in this analysis; therefore these techniques are not applicable.

6.2.1 Reflective Measurement Model Assessment

Reflective and formatively measured constructs are based on different concepts and therefore require different measures to determine measurement model quality. Reflective models are evaluated on their internal consistency reliability and validity (Hair et al., 2014). The specific measures required to accomplish this are: composite reliability (to assess internal consistency reliability), convergent validity and discriminant validity.

6.2.1.1 Internal Consistency

Cronbach Alpha provides an estimate of reliability based on the inter-correlations of the observed indicator variables. The test assumes all indicators are equally reliable whereas PLS-SEM prioritises indicators according to their individual reliability. Cronbach Alpha has been criticised as it is sensitive to the number of items in the scale; and generally underestimates internal consistency reliability. However it can still be used as a conservative measure of internal reliability (Hair et al., 2014). Due to these limitations the composite reliability test is also used, which evaluates the outer loadings of each indicator variable. Guidelines for acceptable Cronbach Alpha values differ; Nunnally et al. (1967) argued that reliability measures between 0.5 and 0.6 would suffice and anything over 0.8 was probably wasteful. Field (2009) posits that values of alpha if an item is deleted should be 0.8 or higher. Results for Cronbach Alpha and Composite Reliability are reported together in Table 25. Alpha results ranged from 0.69 to 0.98. All alphas were above 0.84, with the exception of Risk (α 0.697) and within the acceptable range to establish internal reliability. Cronbach Alpha values have been calculated using PLS. Guidelines for composite reliability range from 0 to 1 with higher values indicating higher levels of reliability.

Table 25: Core Model Reflective Measure Internal Consistency

Construct	Cronbach Alpha	Composite Reliability	Internal Consistency
Systems Efficiency	0.8988	0.9255	✓
Systems Availability	0.8487	0.9097	✓
Fulfilment/Reliability	0.9482	0.9603	✓
Price	0.9605	0.9806	✓
Risk	0.6976	0.8312	✓
Convenience	0.9099	0.9429	✓
Security/Privacy	0.8429	0.9045	✓
Emotional Value	0.8701	0.9099	✓
Customer Satisfaction	0.9768	0.9848	✓
Behavioural Loyalty	0.9205	0.9412	✓
Value	0.9389	0.9610	✓

Composite reliability values of 0.6 to 0.7 are acceptable for exploratory research; more advanced research requires 0.7 to 0.9 which can be regarded as satisfactory (Nunnally and Bernstein, 1994). Table 25 shows that the results for composite reliability ranged from 0.8 to 0.9 which are within acceptable guidelines and sufficient to establish internal reliability. Table 26 shows internal consistency for the extended model i.e. when the service recovery constructs are integrated into the core model.

Table 26: Extended Model Reflective Measure Internal Consistency

Construct	Cronbach Alpha	Composite Reliability	Internal Consistency
Systems Efficiency	0.9081	0.9314	✓
Systems Availability	0.8493	0.9104	✓
Fulfilment/Reliability	0.9517	0.9631	✓
Responsiveness	0.9353	0.9486	✓
Contact	0.9250	0.9528	✓
Compensation	0.9540	0.9762	✓
Price	0.9681	0.9843	✓
Risk	0.6281	0.8415	✓
Convenience	0.9275	0.9486	✓
Security/Privacy	0.8360	0.8846	✓
Emotional Value	0.8747	0.9134	✓
Customer Satisfaction	0.9791	0.9863	✓
Loyalty Intent	0.9179	0.9394	✓
Value	0.9304	0.9558	✓

Alpha results ranged from 0.62 to 0.98. Similarly, except for Risk (α 0.628) all alphas were

above 0.83 and within the acceptable range to establish internal reliability. Results for composite reliability ranged from 0.84 to 0.98 and are sufficient to establish internal reliability.

6.2.1.2 Convergent Validity

Convergent validity is the extent to which a measure correlates positively with other measures of the same construct (Hair et al., 2014). Higher loadings on a construct show that the associated indicators have much in common. This is called indicator reliability and as a minimum all indicator outer loadings should be significant. The general guideline is that outer loadings should be ≥0.70 (Hair et al., 2014). This guideline is based on each latent variable explaining a minimum of 50% of each indicator's variance (i.e. the square of an indicator's loading ($0.708^2 = 0.50$), which is also referred to as the communality of an item).

Results for each indicator in the core model showed outer loadings that ranged from 0.733 to 0.983. The extended model returned similar results with outer loadings for each indicator ranging from 0.718 to 0.988. All indicators successfully met the necessary threshold to establish convergent validity.

Convergent validity at the construct level is also established through average variance extracted (AVE), defined as the sum of the squared loadings divided by the number of indicators. AVE is equivalent to the communality of a construct and uses the same logic in that AVE values of ≥0.50 indicate that on average the construct explains more than half the variance of its indicators. Therefore AVE values ≥0.50 are a necessary condition to establish convergent validity (Hair et al., 2014). AVE results for the core model ranged from 0.62 to 0.96 and are considered sufficient to establish convergent validity. AVE values for the extended model ranged from 0.72 to 0.96 and are also well above the specified 0.5 threshold. Both models meet the requirements necessary to establish convergent validity. AVE results are reported in Table 27 and Table 28.

6.2.1.3 Discriminant Validity

Discriminant validity is the extent to which a construct is distinct from other constructs. Therefore the establishment of discriminant validity implies a construct is unique and captures distinct and separate phenomena from other constructs in the model. There are two recognised methods to establish discriminant validity: evaluation of cross-loadings and the Fornell-Larcker criterion (Hair et al., 2014). An indicator's outer loadings on the associated

construct should be greater than all of its loadings on other constructs (i.e. the cross-loadings). The evaluation of cross-loadings approach has been criticised. It is considered liberal and very likely to show that two constructs exhibit discriminant validity (Hair et al., 2011). Cross-loadings were evaluated and the loadings associated with each construct significantly exceeded cross-loadings with any other construct in the model. Discriminant validity was established using the cross-loading method; results are reported for the more conservative Fornell-Larcker approach only.

The Fornell-Larcker approach is considered a more conservative way of evaluating discriminant validity. It compares the square root of the AVE values with the latent variable correlations and the square root of each construct's AVE should be greater than its highest correlation with any other construct. In other words a construct must share more variance with its associated indicators than with any other construct (Hair et al., 2014). Results for the discriminant validity evaluation are shown in Table 27 and Table 28.

Table 27: Core Model Reflective Measure Discriminant Validity

Construct	AVE	Max Cross Loading	√ AVE	Discriminant Validity
Systems Efficiency	0.7143	0.5894 Convenience	0.8452	✓
Systems Availability	0.7716	0.5241 Customer Satisfaction	0.8784	✓
Fulfilment/Reliability	0.8288	0.5081 Behavioral Loyalty	0.9104	✓
Convenience	0.8464	0.5982 Behavioral Loyalty	0.9200	✓
Emotional Value	0.7167	0.5395 Systems Efficiency	0.8466	✓
Price	0.9620	-0.6626 Value	0.9808	✓
Risk	0.6216	- 0.4744 Behavioral Loyalty	0.7884	✓
Security/Privacy	0.7598	-0.2907 Emotional Value	0.8717	✓
Behavioral Loyalty	0.7632	0.8199 Customer Satisfaction	0.8736	✓
Customer Satisfaction	0.9558	0.7987 Behavioral Loyalty	0.9777	✓
Value	0.8914	- 0.6545 Price	0.9441	✓

All constructs across both the core model and the extended model meet the necessary criteria to establish discriminant validity. The √ AVE measure for each construct exceeded the maximum cross loading with any other construct in both models. Note that in both models Customer Satisfaction and Behavioural Loyalty are highly correlated but still met the condition to confirm discriminant validity. These results reflect the decision made at the EFA stage to retain each as a discrete construct for validation purposes. In conclusion, the

reflective measurement models all meet the necessary conditions to claim internal consistency, convergent validity and discriminant validity.

Table 28: Extended Model Reflective Measure Discriminant Validity

Construct	AVE	Max Cross Loading	√ AVE	Discriminant Validity
Systems Efficiency	0.7314	0.6699 Customer Satisfaction	0.8552	✓
Systems Availability	0.7734	0.5546 Customer Satisfaction	0.8794	✓
Fulfilment/Reliability	0.8394	-0.5030 Risk	0.9162	✓
Convenience	0.8221	0.6513 Systems Efficiency	0.9067	✓
Emotional Value	0.7254	0.6441 Convenience	0.8517	✓
Price	0.9691	-0.6498 Value	0.9844	✓
Risk	0.7267	- 0.5030 Fulfilment/Reliability	0.8525	✓
Security/Privacy	0.7216	-0.3750 Fulfilment/Reliability	0.8495	✓
Behavioral Loyalty	0.7572	0.8231 Customer Satisfaction	0.8702	✓
Customer Satisfaction	0.9599	0.8231 Behavioral Loyalty	0.9797	✓
Value	0.8783	0.6687 Behavioral Loyalty	0.9372	✓
Responsiveness	0.7555	0.4089 Systems Efficiency	0.8692	✓
Contact	0.8708	0.1102 Emotional value	0.9332	✓
Compensation	0.9534	0.2814 Systems Efficiency	0.9764	✓

The next section assesses the formative measurement model i.e. the second order formative nature of VITAE.

6.3 Validating the Second Order VITAE Construct

This section now assesses the second order formative construct (i.e. VITAE). Only one second order formative construct exists in this conceptualisation. The evaluation criteria used to assess reflective models cannot be directly transferred to formative measurement models since: formative indicators are expected to fully capture the content domain of the construct; formative measures do not necessarily co-vary; and indicators are assumed to be error free (Diamantopoulos, 2006; Edwards and Bagozzi, 2000). In addition techniques used for assessing reflective measurement models are not meaningful where formative indicators and their weights are concerned (Chin, 1998). The following sections assess the formative measure using the techniques previously outlined in Table 24, which include: convergent validity, collinearity, significance and relevance of the outer weights, and external validity through the use of a MIMIC model.

Prior to evaluating formative measurements, the establishment of content validity is important. Given that formative indicators form a construct and are not necessarily

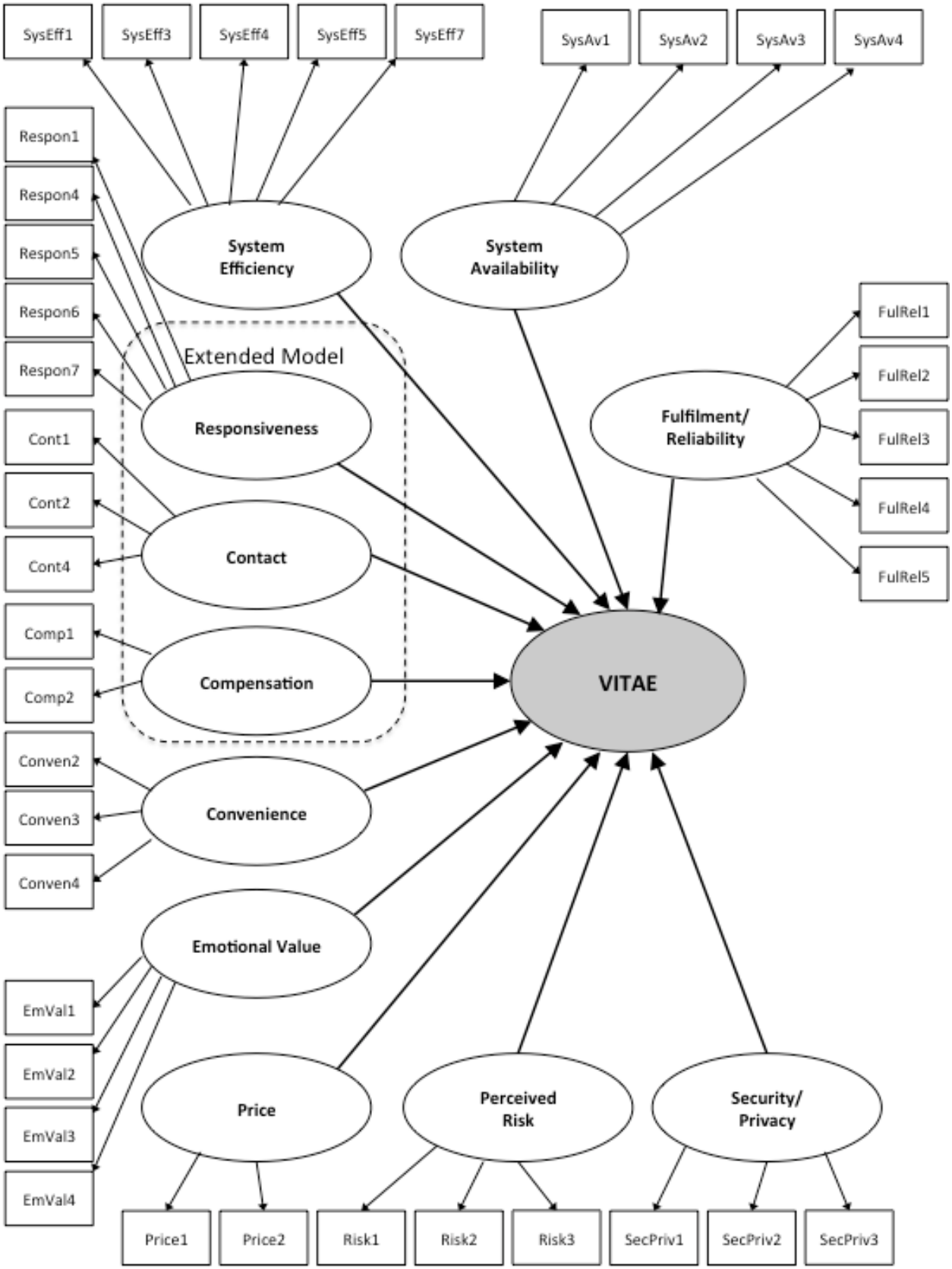
interchangeable, it follows then that formative indicators must capture the majority (if not all) of the components of a construct. Content validity is addressed by accurate content specification, which requires clear articulation of the domain of the content the indicators are required to measure. Failure to compile a comprehensive set of indicators could exclude important inherent parts of the construct. The following safeguards support the establishment of content validity (Diamantopoulos and Winklhofer, 2001; Jarvis et al., 2003):

1. Expert assessment to validate an appropriate set of formative indicators have been used
2. A specific rationale for operationalising the construct as formative
3. Establish a theoretical grounding for measure development by conducting a thorough literature review.

The theoretical grounding of the first order components of VITAE was established by a thorough literature review accompanied by a separate conceptualisation chapter. The review established that the appropriate way forward was to use a first order reflective, second order formative model in line with the guidelines specified by Jarvis et al. (2003). This model specification is consistent with other models in the value field (e.g. Lin et al., 2005; Ruiz et al., 2008). Reflective measurement models were derived from established scales e.g. E-S QUAL and E-RecS-QUAL (Parasuraman et al., 2005); PERVAL (Sweeney and Soutar, 2001); and SERV-PERVAL (Petrick, 2002). The reflective measurement models have been purified according to the standard assessment procedure outlined by Hair et al. (2014), see Table 24. The output of this process is the refined conceptual model included in Figure 22, which captures the domain of VITAE in an online subscription-based service context.

Expert assessment to support the establishment of content validity was conducted by engaging with the service provider's review process. The questionnaire (including all items) was reviewed by Royal Mail subject matter experts to ensure domain applicability. Reviewers included the head of the SmartStamp® channel and representatives from the Marketing, Communications, Branding and Legal teams. Three rounds of review were completed before the Royal Mail team confirmed approval to test the questionnaire. The review process confirmed content validity. Minor changes to language were made with no material changes to the instrument required. The full VITAE instrument containing both the core model and the extended model emerging from the measurement purification procedure is presented in Figure 22. The extended model components are highlighted accordingly.

Figure 22: The VITAE First Order Reflective Second Order Formative Model



Note that the arrows pointing from the first order constructs to VITAE denote the formative nature of the construct. Arrows pointing from the first order constructs to the items denote

their reflective nature. In line with the procedure set out by Hair et al. (2014), the following sections evaluate:

1. Convergent validity of the formative measurement model, linking it to another measure of the same construct
2. An examination of collinearity amongst indicators. An indicator's meaning may be redundant if it exhibits a high correlation with any other indicator of the same construct
3. Evaluate the significance and relevance of the formative indicators. This assessment is designed to establish whether an indicator contributes to the construct both relatively and absolutely.

The section concludes by evaluating the formative model external validity through the use of a nomological net (i.e. Customer Satisfaction and Loyalty Intent).

6.3.1 Formative Measurement Model Convergent Validity

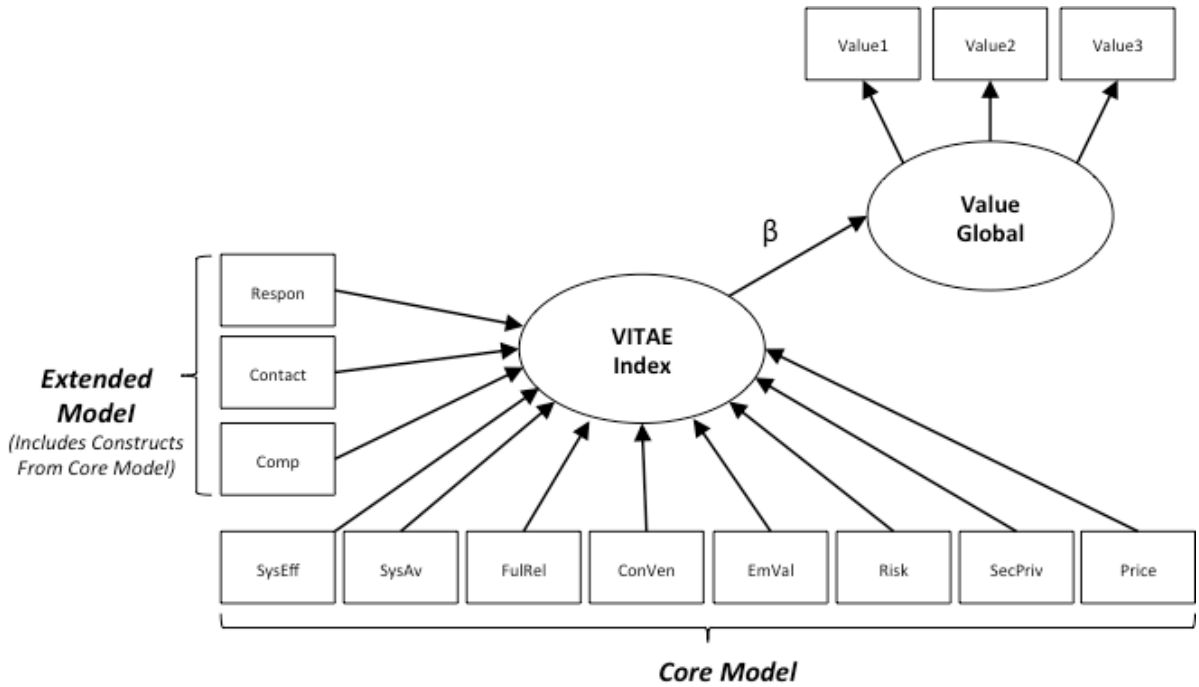
The establishment of convergent validity ensures that the domain of the formative construct and all of its component parts are represented by the selected indicators. The assessment is also known as redundancy analysis and establishes the extent to which an indicator correlates positively with other indicators (Chin, 1998). Indicator meaning is considered redundant if it is included in the formative construct and again in the reflective one. The technique uses a formatively measured construct as an exogenous latent variable predicting an endogenous latent variable operationalised through one or more reflective indicators. The strength of the path coefficients linking the two constructs indicates the validity of the specified group of formative indicators in explaining the construct of interest (Hair et al., 2014).

Chin (1998) established guidelines to determine convergent validity, as follows: for the pathway $Y_1^{\text{formative}}$ and $Y_1^{\text{reflective}}$ a minimum of 0.8 and ideally 0.9 is required which equates to a minimum R^2 value of 0.64 or ideally 0.81. If R^2 for $Y_1^{\text{reflective}}$ <0.64 then the formative indicators of the construct $Y_1^{\text{formative}}$ do not contribute sufficiently to the intended construct and require theoretical/conceptual refinement by adding or removing indicators. Initial results for the core model provided an R^2 value of 0.57, which is slightly below the 0.64 threshold. Further scale purification was required and removal of indicators: SysEff1, SysEff3, SysAv1, SecPriv1 and EmVal4 increased the R^2 value to 0.60, which is considered sufficiently close to the threshold to establish convergent validity. The extended model

produced an initial R^2 value of 0.62, similarly removal of items SysEff1, SysEff3, ConVen2 and SecPriv1 increased R^2 to 0.64, which met the specified threshold value.

Evaluation of the measurement model thus far has been undertaken using a known or global measure of value (i.e. the reflective value construct). External validity requires linking the formative construct to the known value (global) measure and assessing the significance of the link (via R^2). This procedure evaluates the degree to which value is actually being measured by the proposed formative model and enables a comparison against the known reflective value measure. Evaluating convergent validity requires the creation of a MIMIC (Multiple Cause Multiple Indicator) model in PLS-SEM as shown in Figure 23. Composite formative constructs were created from their associated reflective items (i.e. those surviving previous measurement purification) to form a value index. R^2 is then derived for the pathway (β) between the VITAE index and the value global construct (i.e. the reflective measure of value).

Figure 23: Convergent Validity Evaluation - MIMIC Model



Results for the MIMIC model are provided in Table 29. There were no material differences in construct weights, t-values or significance levels in either of the two models. The measurement path between VITAE index and value global is significant.

Table 29: MIMIC Model Convergent Validity Results

Core Model	Weights	*t*-Value	*Sig. Level*	Extended Model	Weights	*t*-Value	*Sig. Level*
Measurement Path: Construct → VITAE Index (formative)				*Measurement Path: Construct → VITAE Index (formative)*			
Systems Efficiency	0.27	2.09	**	Systems Efficiency	0.22	1.63	**
Systems Availability	0.05	0.62	n.s.	Systems Availability	0.04	0.35	n.s.
Fulfilment/Reliability	0.08	0.82	n.s.	Fulfilment/Reliability	0.01	0.81	n.s.
Price	-0.68	2.56	***	Price	- 0.65	6.54	***
Risk	-0.18	1.54	*	Risk	-0.16	1.50	*
Convenience	-0.09	0.93	n.s.	Convenience	0.08	0.63	n.s.
Security/Privacy	-0.08	1.02	n.s.	Security/Privacy	-0.18	1.79	**
Emotional Value	0.24	1.95	**	Emotional Value	0.18	1.39	*
				Responsiveness	0.06	0.53	n.s.
				Contact	0.11	0.91	n.s.
				Compensation	0.03	0.51	n.s.
	Loading	***t*-Value**	***Sig. Level***		**Loading**	***t*-Value**	***Sig. Level***
Measurement Path: Value Index → global (Refective)				*Measurement Path: Value Index → global (Refective)*			
Value 1	*0.95*	*11.72*	***	Value 1	*0.95*	*70.78*	***
Value 2	*0.91*	*11.61*	***	Value 2	*0.90*	*38.24*	***
Value 3	*0.97*	*11.78*	***	Value 3	*0.97*	*171.17*	***
	***Std. Path Coefficient* β**	***t*-Value**	***†R^2***		***Std. Path Coefficient* β**	***t*-Value**	***†R^2***
Structural Path VITAE Index (formative) → Value Global (Reflective)	0.79	2.62	0.62	*Structural Path* VITAE Index (formative) → Value Global (Reflective)	0.80	24.63	0.64

Notes

t-value obtained from 5000-sample bootstrap procedure in SmartPLS 2.0.(Henseler *et al,* 2009; hair et al., 2014), The threshold *t*-values: *Significant at $p < 0.10$ (t=1.282); **Significant at $p < 0.05$ (t=1.645); ***Significant at $p < 0.01$ (t=2.326); n.s. =not significant

† R^2 Correlation coefficient of the endogenous latent variable (i.e. the reflectively measured customer perceived value construct). Since there is only one-to-one relationship between the independent (formative measure) and dependent (reflective measure) variables, Cohen (1977, p. 75-80) explained that the effect size (f^2) will be the value of this correlation.

The structural path results between VITAE index (formative) and value global (reflective) demonstrated a significant relationship in both models. The standard path coefficient (β) for the core model was 0.79 and significant (t-value 2.62) at the 0.01 level. R^2 was 0.62 (marginally below the 0.64 threshold as discussed previously). Results for the extended model were similar. The standard path coefficient (β) was 0.80 and significant (t-value 24.63) at the 0.01 level. R^2 met the accepted threshold at 0.64. These results provide strong evidence of convergent validity i.e. the proposed formative model constitutes value.

Further inspection of the results show significant loadings for the three item measure of global value for both models. In terms of the indicators of VITAE, each indicator is required to contribute to the formative index by carrying the intended meaning. For both models, the weights for the first order reflective measures that constitute the indicators of the second order formative measure showed a positive significant weight for system efficiency and emotional value, indicating that they positively contribute towards VITAE, price and risk negatively contribute, with price having the strongest absolute impact on VITAE. System availability, fulfilment/reliability and convenience do not seem to contribute to VITAE, as indicated by insignificant weights. For the extended model, responsiveness, contact and compensation did not have significant weights, thus potentially not contributing to VITAE. Only security/privacy showed inconsistent results across the two models, with a significant negative weight in the extended model and a non-significant one for the core model. Note that the basis of the global measure of value is price/quality, which is a limited measure of value. Consequently, both quality and price related constructs returned significant results whereas other constructs that also contribute to value did not. This situation is also exacerbated in larger models like VITAE by an inherent limit to the number of formative indicators that can obtain a statistically significant weight. This phenomenon is explained in more detail in the next section.

6.3.2 Formative Measurement Model Collinearity Assessment

Whereas reflective indicators are interchangeable, high correlations between items in formative measurement models are not anticipated. High correlations are termed collinearity, the occurrence of which is problematic from both methodological and interpretational standpoints (Hair et al., 2014). Multi-collinearity can occur when more than two indicators are involved. For purposes of this study, the terms multi-collinearity and collinearity are considered interchangeable. The term ‘collinearity’ will be used in subsequent discussions.

Hair et al., (2014) state that high levels of collinearity between formative indicators are a crucial issue, since they affect weights and their statistical significance across two areas:

1. Collinearity increases standard error, which reduces the ability to demonstrate that the estimated weights are significantly different from zero. This can be problematic for PLS-SEM, which is based on smaller sample sizes where standard errors are typically larger due to sampling error
2. Weights can be incorrectly estimated with the potential of sign reversal.

Under the guidelines specified by Hair et al. (2014), collinearity should be assessed by establishing Tolerance (the amount of variance of one formative indicator not explained by the other indicators in the same block); and the Variance Inflation Factor (VIF), which represents the extent to which standard error is increased by collinearity. Collinearity is considered high when the Tolerance is ≤0.20 or the VIF ≥5. These levels indicate that 80% of an indicator's variance is explained by the remaining formative indicators associated with the same construct.

Composite measures were calculated for each of the 11 formative (1st order) constructs in the measurement model of VITAE (i.e. both the core model and the extended model). Linear Regression using Customer Satisfaction as the dependent variable was used to establish Tolerance and VIF and the results are shown in Table 30.

Table 30: Collinearity Assessment Formative Measurement Model

Composite Indicator	Tolerance*	VIF*
System Efficiency	0.366	2.729
System Availability	0.588	1.701
Fulfilment/Reliability	0.537	1.863
Responsiveness	0.552	1.813
Contact	0.496	2.105
Compensation	0.791	1.265
Convenience	0.396	2.523
Emotional Value	0.513	1.951
Risk	0.615	1.627
Security/Privacy	0.721	1.387
Price	0.777	1.287

**VIF/Tolerance caluculated using Customer Satisfaction as the Dependent Variable*

Tolerance measurements range from 0.366 to 0.791. VIF values range from 1.265 to 2.729. Both checks for collinearity are well within the acceptable bounds specified by Hair et al. (2014) and

consequently it can be concluded that collinearity does not reach critical levels for any of the first order constructs of VITAE and is therefore not an issue for the estimation of the PLS path model.

6.3.3 Significance and Relevance of Outer Weights

This section assesses the contribution made by the first order components to the second order VITAE construct. To assess the contribution of a formative indicator (i.e. its relevance), outer weights require evaluation. Outer weights are calculated using a multiple regression with the latent variable scores as the dependent variable and the formative indicators as the independent variable. Given the construct is formed by its underlying formative indicators, which are a linear combination of the indicator scores and the outer weights in the formative measurement model, conducting a multiple regression analysis would provide an R^2 of 1 (i.e. no error variance and therefore 100% of the construct is explained by the indicators). It follows then that outer weight values can be compared and used to determine an indicator's relative contribution to the construct, or its relative importance (Hair et al., 2014). Note that the estimated values for outer weights in formative measurement models are often smaller than the outer loadings of reflective indicators. The Bootstrapping procedure is used to test whether the outer weights in formative measurement models are significantly different from zero, which determines whether the formative indicators actually contribute to forming the construct in question.

Bootstrapping takes random samples from the data set and replaces them each time before the next observation is drawn to ensure that the sample population always contains the same elements. Each sub-sample is then used to estimate the model. The process is repeated until a large number of samples have been created. The underlying principle is to observe t-value changes until they stabilise and further sampling becomes unnecessary. The literature has settled on 5000 samples as the accepted norm (Hair et al., 2014).

There is an inherent limit to the number of formative indicators that can obtain a statistically significant weight (Cenfetelli and Bassellier, 2009). When indicators are assumed to be uncorrelated the maximum outer weight is $1/\sqrt{n}$, where n is the number of indicators. Therefore it becomes more likely that additional formative indicators in larger models will become non-significant (Hair et al., 2014). Non-significant indicator weights are not necessarily indicative of poor measurement model quality. It is also important to consider the formative indicator's absolute (i.e. the sole meaning provided by an indicator irrespective of other indicators) contribution to the construct. The absolute contribution is derived from the formative indicator's outer loading. Outer

loadings are a product of single regressions of each indicator on its corresponding construct. If an indicator's outer weight is non significant but its outer loading is high (i.e. >0.50), the indicator is absolutely important but not as relatively important. In this instance the indicator should be retained within the model (Hair et al., 2014). Table 31 below shows indicator weights and outer loadings.

Table 31: Indicator Significance and Relevance

Core Model	Weights	*t*-Value	*Sig. Level*	†Q^2	Composite Indicator Retained	Extended Model	Weights	*t*-Value	*Sig. Level*	†Q^2	Composite Indicator Retained
Measurement Path: Construct → Value Index (Formative)						*Measurement Path: Construct → Value Index (Formative)*					
Systems Efficiency	0.29	2.73	***	0.62	✓	Systems Efficiency[1]	0.25	1.72	**	0.63	✓
Systems Availability[1]	0.09	1.36	*	0.37	✓	Systems Availability	-0.05	0.51	n.s.	0.38	x
Fulfilment/Reliability	0.06	0.55	n.s.	0.47	x	Fulfilment/Reliability	0.11	0.82	n.s.	0.52	✓
Price	-0.67	9.97	***	-0.82	✓	Price	- 0.63	6.94	***	-0.81	✓
Risk[1]	-0.15	1.67	**	-0.47	✓	Risk	-0.16	1.40	*	-0.52	✓
Convenience	0.03	0.27	n.s.	0.60	✓	Convenience	0.12	0.86	n.s.	0.65	✓
Security/Privacy	0.05	0.67	n.s.	-0.19	x	Security/Privacy	0.21	2.03	**	-0.06	✓
Emotional Value	0.23	2.54	***	0.58	✓	Emotional Value[1]	0.38	1.38	*	0.57	✓
						Responsiveness[1]	0.16	1.67	**	0.35	✓
						Contact	0.02	0.28	n.s.	0.19	x
						Compensation	0.03	0.37	n.s.	0.08	x

Notes

*t-value obtained from 5000 sample bootstrap procedure in SmartPLS 2.0.(Henseler et al, 2009; Hair et al., 2014), Threshold t-values: *Significant at p < 0.10 (t=1.282); **Significant at p < 0.05 (t=1.645); ***Significant at p < 0.01 (t=2.326); n.s. =not significant*

† If an indicator's outer weight is non significant but its outer loading >0.50, the indicator is absolutely important but not as relatively important and should be retained (Hair et al., 2014).

[1] The individual sign change option in PLS was applied to eliminate the effects of arbitrary sign change in the bootstrap estimates of the coefficients. A small increase in t-value occurred across 2 constructs in the core model and 3 constructs in the extended model.

When using bootstrapping in PLS-SEM, an important consideration is that the signs of the latent variable scores are indeterminate (Wold, 1985). Sign indeterminacy can result in arbitrary sign changes in the bootstrap estimates of the coefficients, compared with the estimates drawn from the original sample. The effect of sign change can pull the mean value of the bootstrap results towards zero and inflate standard error, which decreases t-values. Hair et al. (2014) identify three methods for addressing sign change:

1. No sign change, which accepts the effect of negative sign changes on t-value results
2. Individual sign change, which reverses signs when they are different from the original sample
3. Construct level sign change, which considers a group of coefficients simultaneously and compares the signs in the original sample with those in any given bootstrap sample. If the majority of signs need to be reversed to match the original sample, then all (or zero) signs are changed.

The construct level sign change option is considered a compromise between the other two options, with the no sign change being the most conservative. Hair et al. (2010) point out that the results in practice do not change greatly unless the original estimates are close to zero, since sign reversal may reduce bootstrap standard error. The no sign change option was applied to both models in line with the standard conservative procedure. Both the construct level and individual sign change options were also applied to assess the effect of sign changes within the sample, since a number of constructs had t-values close to zero. In line with the Hair et al. (2014) view, no material change occurred using the construct level sign change option and the individual sign change procedure produced a small uplift in t-values for two constructs in the core model and for three in the extended model. The results are also reported in Table 31. The next section discusses indicator retention.

In the core model the following indicators (i.e. first order dimensions of VITAE) were both significant with outer loadings above 0.5 and are consequently retained: Systems Efficiency, Price, Risk and Emotional Value. Each indicator had both relative and absolute importance. The Risk indicator was an exception with an outer loading of -0.47, which is marginally below the threshold value for absolute importance. System Availability was also significant (after the individual sign change procedure). The Convenience indicator was not significant but is also retained since its outer loading was 0.60 inferring that the construct has absolute importance. The following indicators failed to achieve either the threshold significance level or outer loadings above 0.5: Fulfilment/Reliability and Security/Privacy.

In the extended model retained items include: Systems Efficiency, Fulfilment/Reliability, Price, Risk, Convenience, Security/Privacy, Emotional Value and Responsiveness. Indicators failing to achieve either the threshold significance level or outer loadings above 0.5 include: Systems Availability, Contact and Compensation.

Earlier in the discussion, Hair et al. (2010) noted that non-significant indicator weights are not necessarily indicative of poor measurement model quality. This is indeed the case for this measurement model, for the following reasons:

1. The small sample size in this study was expected to provide difficulties in detecting significance with small R^2 values. Detection of significant indicator weights <0.1 (see Power analysis in Table 20) was expected and each of the above constructs failing to meet the necessary criteria fall into this category. This situation is also the case in the extended

model. Therefore significance in smaller relative or absolute contributions has unsurprisingly been difficult to detect. A larger sample size is strongly likely to have demonstrated significant indicator weights across all constructs

2. This situation has also been exacerbated by an inherent limit to the number of formative indicators that can obtain a statistically significant weight (Cenfetelli and Bassellier, 2009). When indicators are assumed to be uncorrelated the maximum outer weight is $1/\sqrt{n}$, where n is the number of indicators. Therefore it becomes more likely that additional formative indicators in larger models will become non-significant (Hair et al., 2014). The core model has 8 pathways and the extended model has 11. Both models are considered relatively large and consequently formative indicators that have a lower relative importance but infer a small absolute meaning are more likely to be non-significant.

However, Hair et al. (2014) argue that formative indicators should never be discarded simply on the basis of statistical outcomes. Unlike reflective indicators, which can be removed without necessarily adversely affecting their associated higher order construct, formative indicators independently form discrete meaning attached to their associated construct. Removal of an indicator can potentially lose valuable meaning fundamental to explaining that construct. Prior to removal of an indicator in the formative measurement model, content validity of the indicator requires evaluation. Content validity (for items that failed both the significance threshold and achieved outer loadings <0.5) is assessed by evaluating the significance of the formative indicator's outer loading. In the event that an outer loading is both <0.5 and non significant, the indicator should be removed from the measurement model on the basis that the indicator contributes no significant relative or absolute meaning to its associated higher order construct. Conversely, if an indicator's outer loading is <0.5 but it is significant, further consideration is warranted before the indicator should be removed (Hair et al., 2014).

Formative indicator outer loadings and their accompanying significance levels are reported in Table 32. Outer loadings were all significant for the formative indicators requiring further evaluation in the core model (i.e. Fulfilment/Reliability and Security/Privacy). The Security/Privacy indicator was significant to 0.10 and marginally below the threshold required to achieve significance at the 0.05 level. In the extended model, outer loadings were significant for the Systems Availability formative indicator and non significant for both the Contact and Compensation indicators.

Table 32: Formative Indicator Outer Loading Significance

Core Model	Outer Loading	*t*-Value	*Sig. Level*	Extended Model	Outer Loading	*t*-Value	*Sig. Level*
Measurement Path: Construct → Value Index (formative)				*Measurement Path: Construct → Value Index (formative)*			
Systems Efficiency	0.62	8.28	***	Systems Efficiency	0.63	6.73	***
Systems Availability	0.37	3.74	***	Systems Availability	0.38	3.03	***
Fulfilment/Reliability	0.47	4.64	***	Fulfilment/Reliability	0.52	4.73	***
Price	-0.82	15.65	***	Price	-0.81	12.59	***
Risk	-0.47	4.61	***	Risk	-0.52	4.89	***
Convenience	0.60	9.05	***	Convenience	0.65	9.42	***
Security/Privacy	-0.19	1.61	*	Security/Privacy	-0.06	0.40	n.s.
Emotional Value	0.58	6.99	***	Emotional Value	0.57	5.43	***
				Responsiveness	0.35	3.05	***
				Contact	0.19	1.23	n.s.
				Compensation	0.08	0.46	n.s.

Notes

*t-value obtained from 5000 sample bootstrap procedure in SmartPLS 2.0.(Henseler et al, 2009; Hair et al., 2014), Threshold t-values: *Significant at p < 0.10 (t=1.282); **Significant at p < 0.05 (t=1.645); ***Significant at p < 0.01 (t=2.326); n.s. =not significant*

On the basis that outer loadings are low and non significant there is no empirical support to infer that the Contact and Compensation indicators contribute to the formative index and are discarded from the second order measurement model at this juncture (Cenfetelli and Bassellier, 2009).

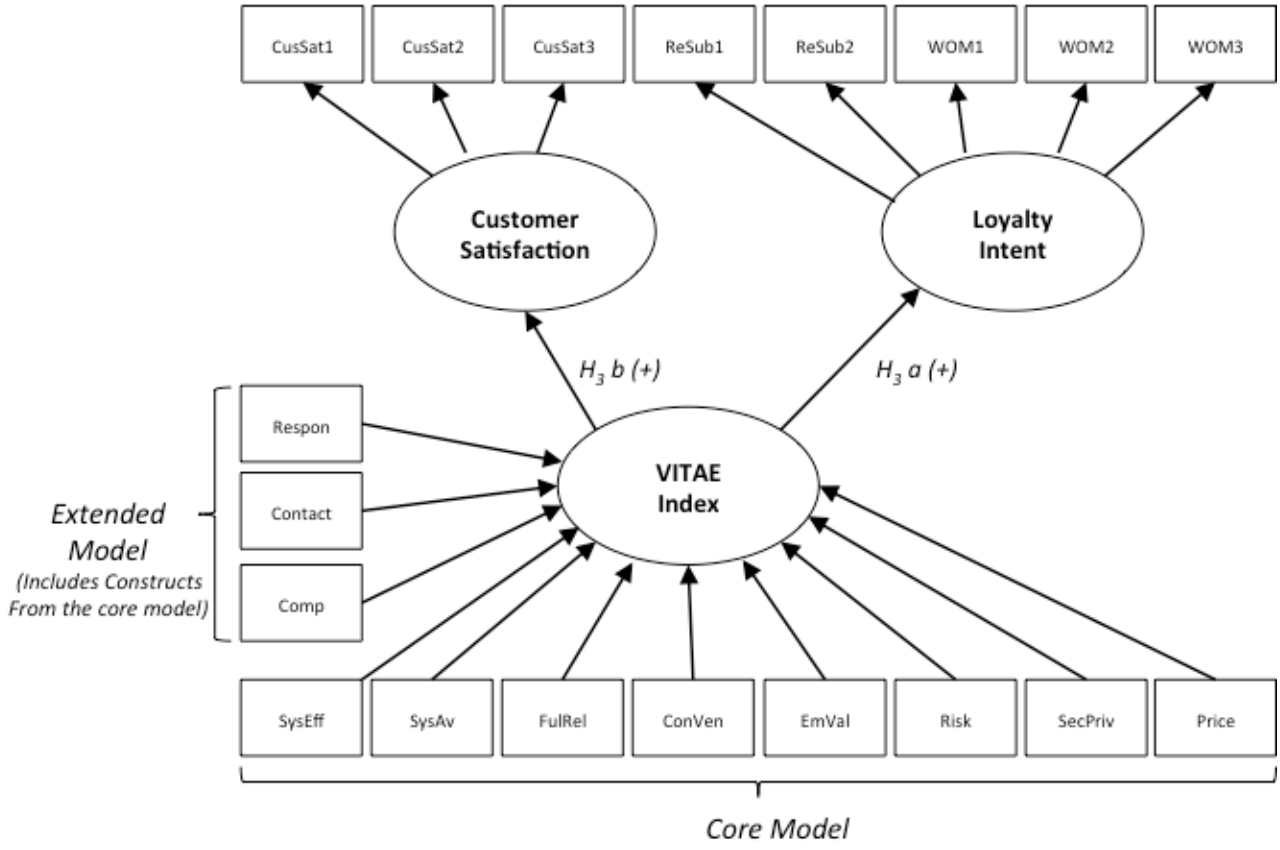
The justification to retain the Fulfilment/Reliability and Security/Privacy formative indicators in both measurement models is similar in each case. Both indicators can be considered hygiene factors in that they will increase in relative importance only when there is a service problem. For example, Fulfilment/Reliability in this context refers to delivery of the mail item. Royal Mail has met its quality of service targets consistently over the last decade, and exceeded its quarter one 2014 target for first class (93.4%) and second class (99%) mail. Users now expect a consistently high delivery performance from Royal Mail and only connect delivery with value perceptions of the SmartStamp® system when there is a service problem. Hence it is unsurprising that Fulfilment/Reliability has a lower relative importance but remains absolutely fundamental to operating a small business. The Security/Privacy formative indicator exhibits a similar pattern. Royal Mail has invested heavily in system security and has a mature and transparent privacy policy. It has one of the biggest brands in the UK and stringent policing of IT security and privacy is important to support ongoing brand equity. Instances of Royal Mail failing to provide adequate IT security or privacy are rare and users have become accustomed to both security and privacy issues being low risk. Consequently security and privacy has a low relative importance in predicting value

but the threat of a security breach or identity theft remains, therefore the indicator retains a small absolute importance. At this juncture both constructs are retained, establishing convergent validity. External validity assessment will determine whether retention of these constructs remains justified. The next section evaluates external validity.

6.4 External Validity

This section discuses validation results for the nomological net, shown below in Figure 24.

Figure 24: External Validity Evaluation - Nomological Net



The nomological net is included here as part of the validation process. The literature specifies that both Customer Satisfaction and Loyalty Intent are predicted by value. Therefore if the proposed formative model is a true measure of value it should strongly influence both endogenous constructs. The procedure for evaluation of external validity using the nomological net is identical to that used for the MIMIC model and results are reported in Table 33. Note that the coefficients and weights differ from the previous analysis where VITAE was linked to global value. This is due to the way PLS estimates the coefficients. PLS attempts to maximise R^2 in each instance, which results in minor changes to the numbers.

Table 33: Results for External Validity

Core Model	Weights	*t*-Value	*Sig. Level*	Estimated Model	Weights	*t*-Value	*Sig. Level*
Measurement Path: Construct → VITAE Index (formative)				*Measurement Path: Construct → VITAE Index (formative)*			
Systems Efficiency	0.33	2.66	***	Systems Efficiency	0.36	1.75	**
Systems Availability	0.28	2.00	**	Systems Availability	0.18	1.02	n.s.
Fulfilment/Reliability	0.20	1.89	**	Fulfilment/Reliability	0.12	1.09	n.s.
Price	-0.14	1.56	*	Price	-0.05	0.42	n.s.
Risk	-0.24	2.10	**	Risk	-0.23	1.68	**
Convenience	-0.01	0.03	n.s.	Convenience	0.30	1.61	*
Security/Privacy	0.01	0.13	n.s.	Security/Privacy	0.09	0.73	n.s.
Emotional Value	0.29	2.28	**	Emotional Value	0.17	1.23	n.s.
				Responsiveness	0.11	0.91	n.s.
				Contact	0.09	0.78	n.s.
				Compensation	0.01	0.08	n.s.
	Loading	***t*-Value**	***Sig. Level***		**Loading**	***t*-Value**	***Sig. Level***
Measurement Path: Customer Satisfaction (Refective)				*Measurement Path: Customer Satisfaction (Refective)*			
CusSat1	*0.97*	*110.30*	***	CusSat1	*0.97*	*92.33*	***
CusSat2	*0.98*	*121.12*	***	CusSat2	*0.99*	*114.73*	***
CusSat3	*0.99*	*221.18*	***	CusSat3	*0.99*	*192.54*	***
	Loading	***t*-Value**	***Sig. Level***		**Loading**	***t*-Value**	***Sig. Level***
Measurement Path: Loyalty Intent (Refective)				*Measurement Path: Loyalty Intent (Refective)*			
ReSub1	*0.74*	*11.43*	***	ReSub1	*0.75*	*9.62*	***
ReSub1	*0.82*	*21.72*	***	ReSub1	*0.82*	*17.63*	***
WOM1	*0.95*	*94.92*	***	WOM1	*0.94*	*60.69*	***
WOM2	*0.94*	*35.85*	***	WOM2	*0.93*	*21.22*	***
WOM3	*0.90*	*38.56*	***	WOM3	*0.90*	*24.24*	***
	***Std. Path Coefficient* β**	***t*-Value**	***R^2***		***Std. Path Coefficient* β**	***t*-Value**	***R^2***
Structural Path				*Structural Path*			
H_3b: VITAE (Index) → Customer Satisfaction	0.71	14.05	0.50	H_3b: VITAE (Index) → Customer Satisfaction	0.74	12.02	0.55
H_3a: VITAE (Index) → Loyalty Intent	0.74	16.76	0.54	H_3a: VITAE (Index) → Loyalty Intent	0.75	13.85	0.57

Notes

Consistent with Hesterberg *et al.* (2003), the *t*-value is obtained from 1000-sample bootstrap procedure in SmartPLS 2.0. Henseler *et al.* (2009, p. 305) suggested up to B=5000 resample/repetitions, however Efron and Tibshirani (1998, p. 52) argued that "very seldom are more than B=200 replications need for estimating a standard error". The threshold *t*-values: *Significant at $p < 0.10$ (t=1.282); **Significant at $p < 0.05$ (t=1.645); ***Significant at $p < 0.01$ (t=2.326); n.s. – not significant

Reflective measure loadings for Customer Satisfaction across both models ranged from 0.97 - 0.99, t-values ranged from 92.33 - 221.18 and all were significant at the 0.01 level. Loadings for Loyalty Intent ranged from 0.74 - 0.95, t-values ranged from 9.62 - 94.92 and again all were significant at the 0.01 level. The structural path results between VITAE index and Customer Satisfaction (H_3b) and VITAE index and Loyalty Intent (H_3a) were both significant. As expected all links were positive, the standard path coefficient (β) for the core model between VITAE Index and Customer Satisfaction was 0.71 and significant (t-value 14.05) at the 0.01 level. R^2 was 0.50 and when evaluated in conjunction with the significant t-value H_3b is supported. The standard path coefficient (β) for the core model between VITAE Index and Loyalty Intent was 0.74 and significant (t-value 16.76) at the 0.01 level. R^2 was 0.54 and when evaluated in conjunction with the significant t-value H_3a is supported.

The standard path coefficient (β) for the extended model between VITAE Index and Customer Satisfaction (H_3b) was 0.74 and significant (t-value 12.02) at the 0.01 level. R^2 was 0.55 and when evaluated in conjunction with the significant t-value H_3b is supported. Similarly the standard path coefficient (β) between VITAE Index and Loyalty Intent (H_3a) was 0.75 and significant (t-value 13.85) at the 0.01 level. R^2 was 0.57 and when evaluated in conjunction with the significant t-value H_3a is supported. In conclusion both models demonstrated significant links to Customer Satisfaction and Loyalty Intent and can be considered reliable and valid measures of value. Having established that the instrument is a reliable and valid measure, the next section discusses the wider contribution to knowledge.

The objective of specifying value as a second order formative model is to improve the construct's ability to predict customer satisfaction and loyalty Intent. A comparison between the proposed formative measure of VITAE and the theoretically established reflective measure of value is included in Table 34.

Table 34: Measurement Model Contribution to Knowledge

Paths	Core Model		Extended Model	
	Formative Index	Reflective Global	Formative Index	Reflective Global
VITAE → Customer Satisfaction				
Std. Path Coefficient (β)	0.71	0.54	0.74	0.54
t-Value	14.05	6.55	12.02	5.78
R^2	0.50	0.29	0.55	0.30
VITAE → Loyalty Intention				
Std. Path Coefficient (β)	0.74	0.68	0.75	0.67
t-Value	16.76	11.09	13.85	10.56
R^2	0.54	0.46	0.57	0.45

Results from the comparison show a clear improvement in the formative model's ability to predict both endogenous constructs. The core model shows a 21 percentage point increase in R^2 when predicting Customer Satisfaction and an 8 point increase in the prediction of Loyalty Intent over the reflective alternative. Similarly the extended model improves R^2 for Customer Satisfaction by 25 points and Loyalty Intent by 12 points.

The final core and extended VITAE models are considered valid and reliable measures. The reflective measurement models and their first order components for both instruments demonstrated internal consistency, indicator reliability, convergent and discriminant validity. The formative measurement models also demonstrated convergent validity; the outer weights were both significant and relevant. External validity was demonstrated via the MIMIC model. The final measures are presented in Appendix 15: Final Measurements and Summary Statistics.

In conclusion, given that the reflective model of global value used in the analysis is well established in the literature, the proposed formative model therefore makes a substantial contribution to knowledge by providing a measurement instrument that is a significantly better predictor of Customer Satisfaction in online subscription services than the current reflective approach. It also makes a positive contribution to the prediction of Loyalty Intent. The next section examines the second part of this study's contribution, which is to assess the effect of resource integration on the first order reflective constructs that form VITAE in online subscription services. The analysis uses both the core and extended models that emerged from the purification process.

6.5 The Effect of Resource Integration on VITAE

Learning how to be a capable resource integrator is a customer-controlled process by which they build their capacity to be effective resource integrators and when insufficient personal resources are available, users turn to resources provided by organisations and other network actors (Hibbert et al., 2012). Resource integration is conceptualised in this thesis via the Technical Competence and Network constructs. Participation functions as a control construct only. It has already been established that application of the individual's operant resources is antecedent to the service experience since contexts, practices, employees and customers all participate in the service system and consequently all exert a cumulative impact on the customer experience (Johnson and Clark, 2008; Meyer and Schwager, 2007). It has also already been established that value is experiential accumulating over time in a non-linear hermeneutic spiral (Helkkula et al., 2012), which involves the user engaging with the process of value creation and experiencing the outcomes multiple times. A key contribution made by this thesis is the different lens through which value is viewed. That is, value cannot be empirically evaluated without consideration of the process elements of value creation in conjunction with outcome components. Therefore the Resource Integration process must be part of any empirical study of value not just the outcome components, which the extant literature has previously focused upon. However, the effect of resource integration on VITAE or the individual components that capture VITAE remains unknown in an online subscription context.

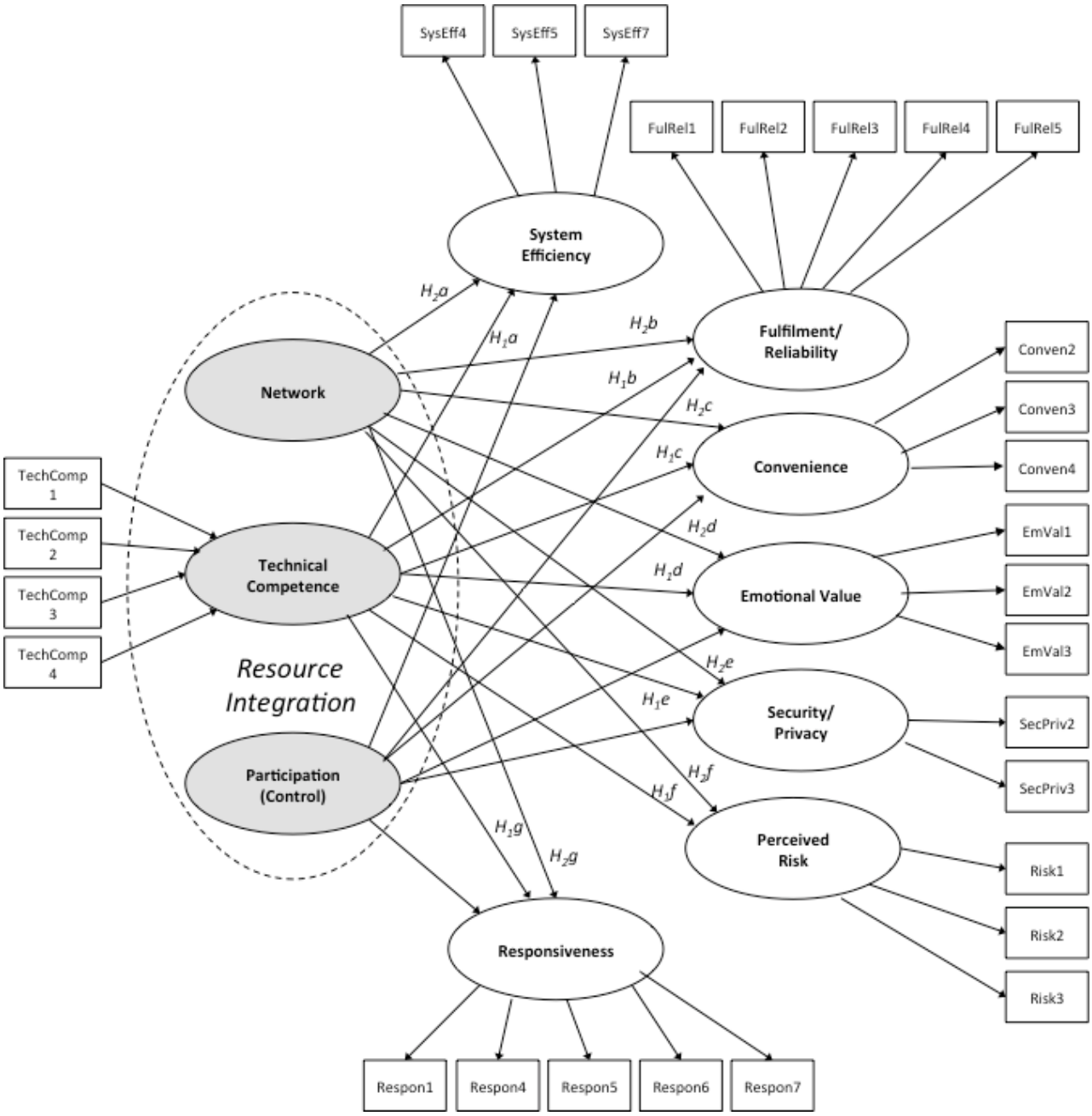
The conceptualisation chapter in this thesis argued that Technical Competence and Network would have a positive effect on user perceptions for the following constructs: Systems Efficiency, Fulfilment/Reliability, Convenience, Emotional Value, and reduce perceptions of Risk and Security/Privacy in the core model. The conceptualisation chapter also specified no link between Resource Integration and Systems Availability or Price. The specified links (and their accompanying hypotheses) to the core model are presented in Figure 25.

Note that both Participation and Network are single item continuous measures, based on a sum of types of participation, or network partners, respectively. Note also that the specified links shown in Figure 25 are made between the constructs that capture components of Resource Integration and the individual constructs that form both the core and extended models, not only to avoid the situation explained by Cadogan and Lee (2013, p.233): *'when antecedents' relationships with endogenous formative variables are modelled at the formative latent variable level rather than the formative indicator level, theory construction can verge on the superficial and empirical findings can be ambiguous in substantive meaning'*, but also to provide meaningful insight to practitioners about the relative magnitude and nature of each link to direct budget and future marketing campaigns to areas with the greatest potential to improve the customer experience.

Technical Competence refers to the individual's own operant skills (i.e. inherent ability to operate information technology and to understand the necessary software to use it effectively within their business environment). The Network construct represents the diversity of actors that can be drawn upon by the individual for resource integration. In addition the software itself is multi-faceted and additional value can potentially be created by the ability to use the full range of functionality, which is controlled for using the Participation construct.

The process to purify the measure for each of the components of Resource Integration has been previously discussed in 6.1.5 and also identified that the Contact and Compensation constructs had no discernable effect on value. Both constructs have been removed from further consideration as shown in Figure 25. However, whilst both constructs do not contribute to VITAE, in order to test the hypotheses relating to resource integration both constructs have been retained in the model. These linkages are now only considered as antecedent to Contact and Compensation.

Figure 25: The Effect of Resource Integration on VITAE



The following sections now seek to examine whether Technical Competence and diversity of Network affect the specified components of VITAE and if so, to what extent. Technical Competence and Network have been conceptualised as antecedent to components of both the core and extended models and the hypothesised links between each of the specified first order constructs were tested. T-values and their associated significance levels are reported for each hypothesised path in Table 35. Note that the results for the Contact and Compensation constructs are reported for completeness only.

Table 35: The Effect of Resource Integration on the First Order VITAE Constructs

		Core Model			Extended Model		
Hypothesis	**Antecedent → 2nd Order Value Construct**	**Std Path Coefficent**	***t*-Value**	***Sig. Level***	**Std Path Coefficent**	***t*-Value**	***Sig. Level***
H_1a	Technical Competence → Systems Efficiency	0.40	5.38	***	0.43	4.94	***
H_1b	Technical Competence → Fulfilment/Reliability	0.39	5.88	***	0.35	4.05	***
H_1c	Technical Competence → Convenience	0.40	4.76	***	0.40	3.64	***
H_1d	Technical Competence → Emotional Value	0.41	5.61	***	0. 41	4.00	***
H_1e	Technical Competence → Security/Privacy	-0.08	0.79	n.s.	0.02	0.16	n.s.
H_1f	Technical Competence → Risk	-0.42	5.95	***	-0.47	5.87	***
H_1g	Technical Competence → Responsiveness				0.08	0.64	n.s.
H_1h	Technical Competence → Contact				0.27	2.06	**
H_1j	Technical Competence → Compensation				0.13	1.04	n.s.
H_2a	Network → Systems Efficiency	-0.19	2.10	**	-0.21	1.41	*
H_2b	Network → Fulfilment/Reliability	0.08	1.54	*	0.15	2.45	***
H_2c	Network → Convenience	0.01	0.86	n.s.	-0.04	0.33	n.s.
H_2d	Network → Emotional Value	0.04	0.51	n.s.	0.08	0.78	n.s.
H_2e	Network → Security/Privacy	-0.17	1.52	*	-0.19	2.12	***
H_2f	Network → Risk	-0.18	2.31	**	-0.21	2.44	***
H_2g	Network → Responsiveness				0.10	1.79	**
H_2h	Network → Contact				0.06	0.63	n.s.
H_2j	Network → Compensation				0.01	0.13	n.s.
	Participation → Systems Efficiency	0.03	0.38	n.s.	-0.06	0.52	n.s.
	Participation → Fulfilment/Reliability	0.00	0.01	n.s.	-0.04	0.36	n.s.
	Participation → Convenience	0.03	0.35	n.s.	-0.06	0.58	n.s.
	Participation→ Emotional Value	-0.01	0.09	n.s.	-0.06	0.61	n.s.
Control	Participation→ Security/Privacy	-0.11	1.44	n.s.	0.01	0.09	n.s.
	Participation → Risk	0.06	0.68	n.s.	-0.04	0.39	n.s.
	Participation → Responsiveness				0.08	0.49	n.s.
	Participation → Contact				0.04	0.36	n.s.
	Participation → Compensation				0.10	0.64	n.s.

Notes

Consistent with Hesterberg *et al.* (2003), the *t*-value is obtained from 1000-sample bootstrap procedure in SmartPLS 2.0. Henseler *et al.* (2009, p. 305) suggested up to B=5000 resample/repetitions, however Efron and Tibshirani (1998, p. 52) argued that "very seldom are more than B=200 replications need for estimating a standard error". The threshold *t*-values: *Significant at $p < 0.10$ (t=1.282); **Significant at $p < 0.05$ (t=1.645); ***Significant at $p < 0.01$ (t=2.326); n.s. – not significant

The Systems Availability and Price constructs have not been included in the analysis, as no theoretical basis was established to suggest a connection with Resource Integration.

Results for both the core and extended models showed strong positive relationships (p<.01). between Technical Competence and Systems Efficiency (β= 0.40 core/0.43 extended, H_1a), Fulfilment/Reliability (β 0.39/0.35, H_1b), Convenience (β 0.40/0.40, H_1c), Emotional Value (β 0.41/0.41, H_1d). As expected, Risk (β -0.42/-0.47, H_1f), displayed a strong significant negative relationship (p<.01). Security/Privacy (H_1e) was not significant in either model indicating that the individual's technical competence is not connected to these risk perceptions. In the extended model, only the Contact (β = -0.27, H_1h) construct from those associated with service recovery was significant (p<.05). Both the Responsiveness (H_1g) and Compensation (H_1j) hypothesized pathways were not significant. The following hypotheses are supported across both models:

H_1a Technical competence has a positive effect on systems efficiency perceptions

H_1b Technical competence has a positive effect on fulfilment/reliability perceptions

H_1c Technical competence has a positive effect on convenience perceptions

H_1d Technical competence has a positive effect on emotional value perceptions

H_1f Technical competence reduces the perceptions of perceived risk

The link between Technical competence and Contact was significant and despite the construct being removed during the measurement purification stage, the following hypotheses is supported:

H_1h Technical competence has a positive effect on contact perceptions

The following hypotheses exhibited non-significant relationships and are therefore not supported:

H_1e Technical competence reduces the effect of security/privacy perceptions

H_1g Technical competence has a positive effect on responsiveness perceptions

H_1j Technical competence has a positive effect on compensation perceptions

In the core model significant relationships occurred between the Network construct and Systems Efficiency ($p<.05$), Fulfilment/Reliability ($p<.10$), Risk ($p<.05$) and Security/Privacy ($p<.10$). A positive relationship was found between Network and Fulfilment/Reliability (β 0.08, H_2b,). Significant negative relationships occurred between Network and the Systems Efficiency (β -0.19, H_2a), Risk (β -0.18, H_2f) and Security/Privacy (β -0.17, H_2e) constructs.

In the extended model the same hypothesised pathways were more strongly significant for: Fulfilment/Reliability ($p<.01$), Risk ($p<.01$) and Security/Privacy ($p<.01$). Systems Efficiency was also significant ($p<.10$) alongside the Responsiveness construct ($p<.05$). Positive relationships were found between Network and Fulfilment/Reliability (β 0.15, H_2b), and Responsiveness (β 0.10, H_2g). Negative relationships were recorded between Network and Systems Efficiency (β -0.21, H_2a), Risk (β -0.21, H_2f) and Security/Privacy (β -0.19, H_2e).

There was no significant relationship between Network and Convenience (H_2c) or Emotional Value (H_2d) in either model. The small sample size is likely to have driven lower t-values due to the conservative nature of the measure, however despite this, all constructs still recorded t-values of 1.52 (core model) and 1.41 (extended model) or above and are considered close enough the 5% significance threshold of 1.64 (one-tailed) to warrant further inclusion.

In terms of the effect of Network, against expectations, the results show that drawing on a larger Network negatively impacts on Systems Efficiency perceptions (β -0.19 core/-0.21 extended, H_2a). As hypothesised, an increased Network showed a positive effect on Fulfilment/Reliability (β 0.08/0.15, H_2b); a negative effect on Security/Privacy risk perceptions (β -0.17/-0.19, H_2e) as well as Risk (β -0.18/-0.21, H_2f). Note that in the core model the link between network and Fulfilment/Reliability as well as Security Privacy was weak but still significant at the 10% level (one-tailed). In contrast, in the extended model, the effect of a larger Network on Fulfilment/Reliability, Security Privacy as well as Risk constructs was strong. These results are indicative of constructs becoming more important after a service recovery encounter. In the extended model, the positive link between Network and Responsiveness (β 0.10, H_2g) can also be confirmed. In the extended model, Contact (H_2h) and Compensation (H_2j) were not impacted by the size of the Network. In summary the following hypotheses were confirmed.

H_2b Network usage has a positive effect on fulfilment/reliability perceptions

H_2e Network usage reduces the effect of security/privacy risk perceptions

H_2f Network usage reduces the perceptions of perceived risk

H_2g Network usage has a positive effect on responsiveness perceptions

The link between Network and Systems Efficiency was significant, however the relationship was negative therefore the hypothesis below cannot be supported:

H_2a Network usage has a positive effect on systems efficiency perceptions

This result is the opposite from what was anticipated. Accessing the wider network for assistance was perceived to be a negative experience. The system was not perceived to be efficient (i.e. poor usability) if the network had to be consulted. The outcome was not perceived to add value rather the process was seen as cumbersome i.e. additional behavioural sacrifice to achieve the end result.

There was no significant relationship between Network and Convenience (H_2c) or Emotional Value (H_2d) in either model. The Contact and Compensation constructs had been previously removed as above and were also not significant; therefore the following hypotheses are not supported:

H_2c Network usage has a positive effect on convenience perceptions

H_2d Network usage has a positive effect on emotional value perceptions

H_2h Network usage has a positive effect on contact perceptions

H_2j Network usage has a positive effect on compensation perceptions

The Participation construct in this analysis was used to control for its effects on each of the first order VITAE constructs. The control variable behaved as expected. In both models each hypothesised pathway was not significant indicating that the degree of participation with the software had no effect on VITAE. Therefore Participation is deemed to have no discernible effect on VITAE.

In order to address research question 6 the findings for Resource Integration as an overall concept are required. Table 36 shows the combined effects of Resource Integration, which is represented by the R^2 result from Technical Competence + Network + Participation for each of the hypothesised VITAE constructs. Table 36 also shows each hypothesis again for completeness.

Table 36: The Effect of Resource Integration Components on VITAE

Core Model				
VITAE Construct	Resource Integration			R^2
	Technical Competence	Network	Participation	
System Efficiency	H_1a (+)	H_2a (-)	n.s.	0.190
Fulfilment/Reliability	H_1b (+)	H_2b (+)	n.s.	0.168
Convenience	H_1c (+)	H_2c (n.s.)	n.s.	0.193
Emotional Value	H_1d (+)	H_2d (n.s.)	n.s.	0.172
Security/Privacy	H_1e (n.s.)	H_2e (-)	n.s.	0.052
Risk	H_1f (-)	H_2f (-)	n.s.	0.208
Extended Model				
VITAE Construct	Resource Integration			R^2
	Technical Competence	Network	Participation	
System Efficiency	(+)	(-)	n.s.	0.211
Fulfilment/Reliability	(+)	(+)	n.s.	0.150
Convenience	(+)	n.s.	n.s.	0.207
Emotional Value	(+)	n.s.	n.s.	0.176
Security/Privacy	n.s.	(-)	n.s.	0.076
Risk	(-)	(-)	n.s.	0.292
Responsiveness	H_1g (n.s.)	H_2g (+)	n.s.	0.028
Contact	H_1h (+)	H_2h (n.s.)	n.s.	0.085
Compensation	H_1j (n.s.)	H_2j (n.s.)	n.s.	0.032

Not all VITAE constructs were affected by all Resource Integration components. Participation had no effect on any VITAE components. Technical Competence and Network jointly affected Systems Efficiency, Fulfilment/Reliability and Risk. Resource Integration explained a high proportion of all

three constructs: 19% of Systems Efficiency (R^2 0.19); 16.8% of Fulfilment/Reliability (R^2 0.168); and 20.8% of Risk (R^2 0.208), which represented the largest effect rising even higher in the extended model to 29.2% after users had experienced a service recovery incident. The largest contributor to all three constructs was Technical Competence (Systems Efficiency (β 0.40); Fulfilment/Reliability (β 0.39); Risk (β -0.42) with Network contributing a smaller influence in each case. Technical Competence was the sole (large) contributor to both Convenience (β 0.40) and Emotional Value (β 0.41) explaining 19.3% of Convenience (R^2 0.193) and 17.2% of Emotional Value (R^2 0.172) respectively. Network was the sole (small) contributor to Security/Privacy explaining 5.2% (R^2 0.052) and Responsiveness explaining only 2.8% (R^2 0.028) of the construct. Resource Integration explained only 8.5% (R^2 0.085) of Contact. Technical Competence was the sole positive contributor (β 0.27), both Network and Participation were non-significant. Resource integration components had no effect on Compensation. A full discussion concerning the effects of Resource Integration components on VITAE is provided in Chapter 7.

In conclusion the constructs associated with Resource Integration (Technical Competence and Network) do have an effect on the first order constructs that form VITAE, although the effect does not extend to all constructs. The final VITAE conceptual model is included in the next chapter as part of the discussion and conclusions. Note that constructs not contributing to the final formation of VITAE have been removed (i.e. Contact and Compensation). Note also that Systems Efficiency remains in the VITAE model and any further use of the instrument should accommodate the sign change. This concludes the quantitative analysis chapter. The discussion and conclusion chapter will provide context and consider each of the hypothesised links and their relationship to the VITAE model.

Chapter 7

Discussion and Conclusions

7 Discussion

This chapter first sets the scene for the theoretical and empirical contribution to knowledge made by this thesis, before re-stating the objectives and research questions. The final VITAE measure is presented and the performance and supporting context around each component is discussed and linked to both research questions and the propositions set out in the conceptualisation chapter. A comparison between the VITAE model and other multi-dimensional value measures is made to show the differences and to highlight the specific contributions made. Where contributions are made at the component level, these are linked back to the literature at the end of each section. The VITAE model performance in relation to outcome constructs is then presented before discussing the performance and supporting context for each resource integration component on the VITAE measure. Evidence to show that past, future and imaginary experiences do exist within a user's accumulated experience is discussed, before evaluating generalisability, managerial implications, limitations of the thesis and future research directions. The chapter concludes by linking the VITAE contribution with the main themes and relevant gaps in the literature.

This thesis set out to derive an improved empirical understanding of value as an experience concept, focusing on value in the experience (Helkkula et al., 2012), within an online subscription service context. Extant research has been predominantly theoretical and there have been calls for further empirical work in the field (Tynan and McKechnie, 2009). Evolution of the literature towards a more phenomenological approach that characterises value as experiential and therefore subjective to the individual exposed ontological and epistemological questions as to whether empirical approaches could legitimately make claims to knowledge about value. These questions manifested themselves in the criticism generated predominantly by the phenomenological school of thought (e.g. Helkkula et al., 2012). These criticisms were substantial and included the observations that traditional value measures: analyse the experiences of current customers; tend to focus on a specific perspective rather than a holistic view of customer value (Helkkula et al., 2012); are constrained to a judgement based on in-use experience; are limited by being anchored in some form of trade-off (e.g. Zeithaml, 1988); fail to incorporate a more longitudinal perspective (Flint, Woodruff, and Gardial, 2002; Holbrook, 1994; Zeithaml, 1988); do not adequately capture the perceptions of non-customers (Zeithaml et al., 2006); and focus on post-use service evaluations without examining how other related services or past, future or even imagined experiences may affect value judgments (Helkkula et al., 2012). In addition established customer value measures examine a linear process involving pre-service, in-service, and post-service consumption phases (Sweeney and Soutar, 2001),

when consumers approach sense making around their experience in a non-linear fashion (Helkkula et al., 2012). Experiential value is not only uniquely and phenomenologically determined it is also context specific. To date no empirical study has been able to fully overcome these criticisms or to reconcile a robust claim to knowledge.

This thesis argued that these challenges could be addressed by examining value through a new lens called Value In The Accumulated Experience (VITAE). Integral to this argument was the inclusion of routinized online services, and a holistic approach to evaluating the domain of value. Instead of examining value purely from an outcome-based perspective, importantly this new approach conceptualised value as encompassing both outcomes and the value creation process, which enabled resource integration (i.e. technical competence and the user's wider social network) to be integrated into the overall VITAE conceptual model. This holistic and integrated approach to assessing value allows the following contributions to knowledge:

1. A robust positivist claim to knowledge concerning the empirical measurement of value in the experience, which addresses both the ontological and epistemological criticisms made by the Phenomenological school of thought. To date the extant multi-dimensional models have failed to reconcile these issues and results from this thesis enable multiple gaps in the value literature to be addressed
2. A new theoretical contribution through the introduction of the VITAE concept together with a new definition
3. A new way of conceptualising value, which includes both processes and outcomes. This approach integrates resource integration within the conceptualisation and addresses the gap associated with including the user's wider social network.

The VITAE conceptualisation progresses the literature one step closer to answering the challenges laid down by Cronin (2016). His recent observation after reviewing thirty years of progression in the field was that the marketing literature still lacked a conceptualisation and measures that reflected the current theory. VITAE does claim a robust positivist conceptualisation of value and that it is a measure which adequately reflects the latest theory by embracing phenomenological theoretical advances and addressing the criticisms made about the extant multi-dimensional value models. These claims are substantiated in the next section, which discusses performance of the VITAE model.

7.1 VITAE Model Performance

In order to substantiate these knowledge claims, this thesis has the following objectives:

1. To conceptualise, measure and validate the domain of VITAE in an online subscription service context
2. To provide empirical insights into how the customer as a resource integrator co-creates VITAE in an online subscription service context.

These objectives are addressed though the following research questions:

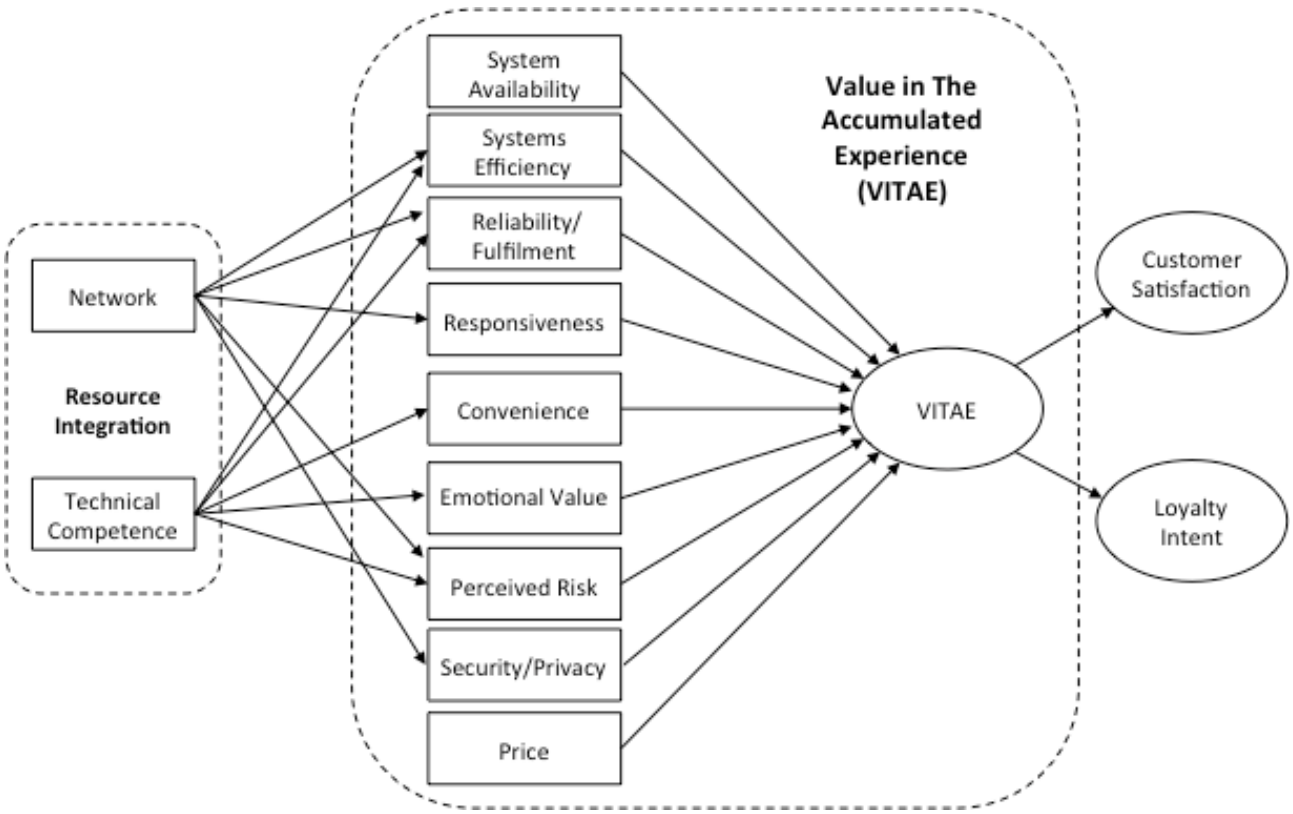
1. How is VITAE formed in an online subscription service context?
2. How do the individual components of VITAE contribute to the overall accumulated value experience?
3. How does the user's VITAE affect customer Satisfaction in an online subscription service context?
4. How does the user's VITAE affect Re-subscription Intent in an online subscription service context?
5. How does the user's VITAE affect word of mouth recommendation (WOM) in an online subscription service context?
6. How does Resource Integration affect VITAE in an online subscription service context?

Note that research questions 4 and 5 are combined into the following research question: How does the user's VITAE affect Loyalty Intent in an online subscription service context?

7.1.1 VITAE Measure Formation and Individual Component Contribution

This section addresses research questions one and two. Research question 1 is: how is VITAE formed in an online subscription service context? Figure 26 presents the final VITAE conceptual model to answer this research question.

Figure 26: VITAE Final Conceptual Model



This final model has been subjected to the measurement purification process in chapter six and has been proved to be a reliable and valid measure. Figure 26 shows each construct and linkage, which are discussed in detail to address research question 2.

Development of the VITAE model not only makes specific empirical contributions to knowledge, but also has a broader theoretical contribution to make. As the literature evolves towards the view that value is experiential, inherently subjective, uniquely and phenomenologically determined (Vargo and Lusch, 2008), empirical evaluation of the phenomenon faces significant ontological and epistemological challenges (as previously discussed). These challenges have been articulated predominantly from the phenomenological standpoint, and defended by the empirical perspective on the following grounds:

1. The phenomenological view is considered extreme (Gummerus, 2013)
2. The dominant approach to examining value perceptions is a multi-dimensional outcome incorporating cognitive and a range of sociopsychological value dimensions (Sheth et al., 1991; Sweeney and Soutar, 2001; Sánchez et al., 2006), which captures the experiential nature of

value and has conceptual support from the cognitive-affective-behaviour paradigm (Sánchez et al., 2006).

Whilst these arguments are valid, this stance is considered a weak defence by this researcher and does not fully embrace the direction of the current research. Unsurprisingly Sanchez-Fernandez and Iniesta-Bonillo (2007) criticise traditional measures as having limited conceptualisations of value and point out that further research is required to better understand the customer value construct. This view supports the Cronin (2016) observation that the value literature still lacks a conceptualisation and measures that reflect the current theory.

Integral to this issue is that previous literature has concentrated on value outcomes (i.e. a user perception of the result from exchange and/or use), when there should be a mechanism to account for how value is generated (i.e. value creation processes) in parallel. Value creation processes consider the actors, activities, and resources involved in value creation, whereas value outcome determination refers to the type of value outcomes customers (or any stakeholder) perceive (Gummerus, 2013). These value creation processes have remained under-researched for some time (Veloutsou et al., 2002). The VITAE model brings outcome and value creation processes together both to create a measure that reflects the current theory but also to answer many of the phenomenological challenges that have remained unanswered by the traditional empirical approach. As a reminder, the specific contributions made by VITAE to theory are included again in Table 37. A combination of the specific contributions presented in Table 37 enables the VITAE approach to argue that legitimate post-positivist contributions to knowledge can be made concerning value in the experience.

Table 37 also provides the platform for a critical examination of other key multi-dimensional value models that have been formatively specified (e.g. Lin et al., 2005; Ruiz et al., 2008; Mohd-Any, Winklhofer and Ennew, 2015), all of which suffer from the issues highlighted in the extant value model position column.

Table 37: Theoretical Contribution of the VITAE Model

Theoretical Challenges for Multi-Dimensional Value Models	Extant Value Model Positioning	VITAE Model Positioning
Value should be considered from a number of perspectives (Zeithaml, 2006): service customer; service provider (Payne, Storbacka, and Frow 2008; Smith and Colgate 2007); and the wider network from which the individual integrates resources (Vargo and Lusch 2004).	Service provider perspective (i.e. current customers)	Service customer; service provider and network perspectives
Value should be considered from an holistic perspective (Helkkula et al., 2012)	Focus on a specific perspective	Holistic
Consumers approach sense making around their experience in a non-linear fashion (Helkkula et al., 2012)	Examine a linear process involving pre-service, in-service, and post-service consumption phases	Non linear (taps into the hermeneutic spiral via Accumulated Experience)
Value in the experience requires consideration of how other related services and imagined experiences effect value judgments (Helkkula et al., 2012)	Constrained to a judgment based on in-use experience	Captures the affect of related services and imagined experiences via Accumulated Experience
Limited by being anchored in some form of trade-off (e.g. Zeithaml's 1988)	Trade-Off	Trade-Off
Fail to incorporate a more longitudinal perspective (Flint, Woodruff, and Gardial 2002; Holbrook 1994; Zeithaml 1988)	Non longitudinal	Longitudinal via Accumulated Experience
Value is uniquely and phenomenologically determined by the beneficiary (Vargo and Lusch, 2008)	Ontological and Epistemological challenges	Subjective nature of construct can be captured in an online routinized context when conditions of Accumulated Experience exist
Experiences are context specific (Helkkula, 2011) and cannot be operationalised or generalisations made	Operationalisation and Generalisation Challenges	Experience operationalised and generalisations justified for routinized subscription-based online services
Value outcomes should be considered in parallel with value creation processes (Gummerus, 2013)	Value outcomes	Value outcomes and value creation processes

These contributions align with current theory and include:

1. The inclusion of a broader perspective on value which includes service provider, service user and their wider social network (note that service provider and network perspectives are indirect)
2. Rather than focusing on a narrow research objective, VITAE takes a holistic approach to the evaluation of value in the experience

3. As with traditional multi-dimensional value models VITAE uses a trade-off approach but reconciles this with the phenomenological perspective (Palmer, 2010)
4. VITAE is able to capture experiential perspectives over time through Accumulated Experience, which provides a longitudinal perspective
5. Through the use of a combination of Accumulated Experience and a routinized online subscription-based context the VITAE approach argues that the subjective nature of the value phenomenon stabilises sufficiently to make robust generalisations and to address the ontological and epistemological challenges enabling a legitimate claim to knowledge concerning experiential value
6. VITAE combines outcomes and value creation processes by including resource integration within the conceptual model, which also includes the outcome-based components associated with more traditional multi-dimensional value models.

This section now discusses research question two, which is: How do the individual components of value contribute to the overall accumulated value experience?

The literature specifies value as a formative construct (e.g. Lin et al., 2005; Ruiz et al., 2008); therefore there are no antecedent links to VITAE and consequently no hypotheses. Formative models therefore have to report results differently. Consequently the conceptualisation chapter established propositions to formulate the effect of each construct that formed VITAE. The following discussion is organised around integrating these propositions with the VITAE model performance and relating them to research question 2. The propositions relating to each of the constructs that form VITAE are shown in Table 38 together with an overview of whether each was supported. Each proposition will be discussed by construct together with a justification for support (or non-support).

Table 38: The VITAE Formative Propositions

No	Constructs	Proposition	*Support*
1	Systems Efficiency	System Efficiency positively contributes to the formation of VITAE.	✓
2	Fulfillment/Reliability	Fulfillment/Reliability positively contributes to the formation of VITAE.	✓
3	Systems Availability	System Availability positively contributes to the formation of VITAE.	✓
4	Responsiveness	Responsiveness positively contributes to the formation of VITAE	✓
5	Contact	Contact positively contributes to the formation of VITAE	x
6	Compensation	Compensation positively contributes to the formation of accumulated value in the experience	x
7	Security/Privacy	Privacy/security negatively contributes to the formation of VITAE	✓
8	Convenience	Convenience positively contributes to the formation of VITAE	✓
9	Emotional Value	Emotional Value positively contributes to the formation of VITAE	✓
10	Social Value	Social Value positively contributes to the formation of VITAE	x
11	Price	Price negatively contributes to the formation of VITAE	✓
12	Risk	Perceived Risk negatively contributes to the formation of VITAE	✓

(Note that proposition 10 was removed at the qualitative stage).

The VITAE instrument has been demonstrated as a valid and reliable measure as specified by the Hair et al. (2014) guidelines. Within these guidelines, three sources of evidence support construct inclusion:

1. The significance and relevance of outer weights: this is the primary assessment procedure to establish whether a construct contributes to the formation of VITAE. This process evaluates construct outer weights and their significance to determine the formative indicator relevance; the absolute contribution to the construct is determined by evaluating the significance of the indicator outer loadings
2. Convergent validity: shown with the global (known) measure of value if VITAE is a true measure of value. The indicators are expected to make an individual contribution
3. External validity: tests the effect on external constructs, in this case Customer Satisfaction and Loyalty Intent. Table 39 presents a summary from the quantitative findings (chapter 6).

Table 39: Evidence for Construct Inclusion in the VITAE Model

Constructs	Evidence for Inclusion in the VITAE Model		
	Convergent Validity	*Significance & Relevance of Outer Weights*	*External Validity*
Systems Efficiency	✓	✓	✓
Fulfilment/Reliability	x	✓	✓
Systems Availability	x	✓	✓
Responsiveness	x	✓	x
Contact	x	x	x
Compensation	x	x	x
Security/Privacy	x (✓)[1]	✓	x
Convenience	x	✓	x (✓)[1]
Emotional Value	✓	✓	✓
Price	✓	✓	✓
Risk	✓	✓	✓

[1]Significant in the Extended Model only

The global measure of value is an inferior measure derived from a price quality trade-off; therefore the expectation is that price and quality related constructs would be strongly significant, whereas other constructs capturing the holistic nature of VITAE in the formative model may not be significant.

Table 40: Weight Comparisons and Rankings

Construct	Mean[2]	Core Model (N=126)		Extended Model (N=80)	
		Ranking Versus Satisfaction & Loyalty Intent[1]	Ranking Versus Value (Global)[1]	Ranking Versus Satisfaction & Loyalty Intent[1]	Ranking Versus Value (Global)[1]
Systems Efficiency	5.49	1	2	1	3
Fulfilment/Reliability	5.41	5	6	6	8
Systems Availability	5.56	3	5	4	9
Responsiveness	5.22			7	5
Security/Privacy	3.29	7	7	8	4
Convenience	6.10	7	8	2	7
Emotional Value	5.29	2	3	5	2
Price	5.30	6	1	9	1
Risk	2.33	4	4	3	5

1. Rankings based on weighting results
2. 1 = strongly disagree to 7 = strongly agree

When compared with the richer formative measure a different picture emerges, which is shown via the different rankings in Table 40.

Table 40 is also included to show that use of the global value model to assess how the individual components of value contribute to the overall accumulated value experience would lead to misleading conclusions. Reliance on the results from the global value model would lead to a deduction that price was the major contributor (weight -0.68, ranking 1) to VITAE, leading to the potential for practitioners wrongly using the pricing lever to influence Customer Satisfaction or Loyalty Intent. The formative measure identifies that the key drivers of Satisfaction and Loyalty Intent are in fact a set of evenly distributed constructs, including Systems Efficiency (weight 0.33, ranking 1), Emotional Value (weight 0.29, ranking 2), Systems Availability (weight 0.28, ranking 3), Risk (weight -0.24, ranking 4), and Fulfilment/Reliability (weight 0.20, ranking 5). Instead of representing the predominant contribution, the price construct was ranked 6th with a -0.14 weighting. Consequently the formative measure has to be evaluated against the phenomena it is trying to predict, which is Satisfaction and Loyalty Intent to answer research question 2. Both Table 39 and Table 40 will be used to support the following discussion, which considers the contribution of each construct in turn.

Systems Efficiency is the primary quality dimension, which evaluates performance of the software. The construct contributed significantly to convergent validity (weight 0.27, ranking 2) as expected against the inferior global value measure. The construct also displayed significant and positive relevant outer weights making a strong relative contribution to VITAE. Similarly Systems Efficiency was the strongest significant contributor to Satisfaction and Loyalty Intent (i.e. external validity) in both the core (weight 0.33, ranking 1) and extended models (weight 0.36, ranking 1). An assessment of the mean values (See Table 40) showed that users agreed that the system was efficient, fast and well organised recording a mean agreement of 5.49 in the core model and 5.45 in the extended model on a 7 point scale. Standard deviation was 1.12 (core) and 1.19 (extended). Mean values indicated that users were positioned between slightly agree and agree and answers ranged narrowly. Given that Systems Efficiency is the strongest contributor to Satisfaction and Loyalty Intent the mean values indicate that substantial improvement to the system can still be made (i.e. from 5.45/5.49 to 7). Interview participants supported the mean level of agreement from the questionnaire: "*I thought it was incredibly efficient, I was surprised actually just how simple it was…..its fast, its efficient, it looks good….I just think it's a great little system"* (Participant C). Speed, ease of use and the look and feel of the system were key to the value perceptions of users. Proposition 1 therefore has empirical support.

Proposition 1: System Efficiency positively contributes to the formation of VITAE

Results for the Systems Efficiency construct support the call by Parasuraman, Zeithaml, and Malhotra (2005) to extend the e-SQ dimensions into a pure service context. The e-SQ instrument had three dimensions: Systems Efficiency, Fulfilment/Reliability and Systems Availability. The following sections will review whether the entire e-SQ instrument can be extended.

Fulfilment/Reliability is the second quality related dimension that assesses the ability of the service provider to deliver on its promises in a timely and consistently reliable way i.e. deliver the mail or parcel on time. When assessed against the inferior global value model, the construct did not contribute to convergent validity recording a non-significant relationship and whilst quality related, did not appear to be a driver of VITAE. However, the construct displayed a significant outer loading (0.47) indicating a small absolute contribution to value with a ranking of 6. Without linking the formative measure to Satisfaction and Loyalty Intent, this result would have been interpreted as a hygiene factor coming to prominence only when delivery became problematic. However when the richer formative model is linked to Satisfaction and Loyalty Intent, the interpretation is very different. Fulfilment/Reliability showed a strong significant and positive contribution (weight 0.20, ranking 5) to Satisfaction and Loyalty Intent, indicating the construct was key to users. This result is not surprising since post is a vital communication and efulfilment channel for small businesses.

This issue is drawn out from the qualitative interviews by participant F: *"for me it's paying the right price for the postage in terms of the quality of service I'm getting and again I would gladly pay more money for SmartStamp or even the postage based on the quality of service that Royal Mail deliver, particularly their first class delivery is still absolutely excellent for me. I can send high volumes of small Meccano items out with a high degree of confidence that they will arrive the next day and get good feedback from UK sellers".* This result again shows that maintaining a consistently high delivery performance is vitally important for the service provider. The evidence also shows that price is not the dominant factor. An assessment of the mean values (See Table 40) showed that users agreed the service provider performed the delivery function consistently well, recording a mean agreement of 5.41 in the core model and 5.37 in the extended model on a 7 point scale. Standard deviation was 1.08 (core) and 1.13 (extended). Mean values indicated that users were again positioned between slightly agree and agree and answers ranged narrowly. Given that Fulfilment/Reliability is a strong contributor to Satisfaction and Loyalty Intent, the mean values again indicate that substantial improvements could still be made (i.e. from 5.41/5.37 to 7). Proposition 2 therefore has empirical support.

Proposition 2: Fulfilment/Reliability positively contributes to the formation of VITAE

Results for the Fulfilment/Reliability construct again support the call by Parasuraman, Zeithaml, and Malhotra (2005) to extend the e-SQ dimensions into a pure service context.

Systems Availability is the third quality related dimension that assesses the ability of the system to remain available for business at all times. The construct did not contribute to convergent validity recording a non-significant relationship and whilst a quality related construct did not appear to be a major driver of VITAE. The construct displayed a small significant (weight 0.09) and positive relevant contribution with a ranking of 5 when assessed against the inferior global value measure. Without linking the formative measure to Satisfaction and Loyalty Intent, this result would have been interpreted as advances in technology have stabilised technology platforms and performance today is more consistent, therefore Systems Availability has become a hygiene factor coming to prominence only when things eventually do go wrong. However when the richer formative model is linked to Satisfaction and Loyalty Intent, the interpretation is very different. Systems Availability showed a strong significant and positive contribution (weight 0.28, ranking 3) to Satisfaction and Loyalty Intent, indicating that a platform available for business 24/7/365 was key to users. This factor is highlighted in the qualitative interviews by participant F: *"Any systems outage is a bad experience. Thankfully they're very few".* This result shows that maintaining a high Systems Availability should be a continuous focus for service providers. An assessment of the mean values (See Table 40) showed that users agreed the system was readily available and performed well, recording a mean agreement of 5.56 in the core model and 5.49 in the extended model on a 7 point scale. Standard deviation was 1.28 (core) and 1.37 (extended). Mean values indicated that users were again positioned between slightly agree and agree and answers ranged narrowly. Given that Systems Availability is a strong contributor to Satisfaction and Loyalty Intent, the mean values indicate that substantial improvements can still be made (i.e. from 5.56/5.49 to 7). Proposition 3 therefore has empirical support.

Proposition 3: System Availability positively contributes to the formation of VITAE

Results for Systems Availability provide the final component to support the call by Parasuraman, Zeithaml, and Malhotra (2005) to extend the e-SQ dimensions into a pure service context. The

entire e-SQ model was generalisable into an online subscription-based service channel. Consequently a small contribution to knowledge is made by extending the E-SQual model into a different service context.

Responsiveness is a service recovery related dimension that assesses the ability of the service provider to resolve service recovery encounters quickly and in the right way. The construct did not contribute to convergent validity recording a non-significant relationship. However, Responsiveness did achieve a significant (weight 0.16) and positive relevant contribution with a ranking of 5 when assessed against the inferior global value measure. When the richer formative model is linked to Satisfaction and Loyalty Intent, the ranking slipped to 7 and the relationship to VITAE was non-significant, indicating that service recovery was not a driver of Satisfaction or Loyalty Intent. This conflicting result is potentially linked to the extended model sample size, which may have generated a smaller t-value. Evidence from the qualitative interviews can be used to provide context from participant B: *"when you phone up, you want the problem sorted then and there and a) you've just lost £5 on a letter and b) its got to go out…..which might not sound a lot to some people but to a small company it is a lot…..I'll be frustrated because it's gone wrong and I don't want it to go wrong, I want it sorted and I want to know what to do".* Qualitative evidence indicates that handling service recovery encounters is clearly important to users and should be a continuous focus for service providers. An assessment of the mean values (See Table 40) showed that users agreed that service provider call centre operatives were knowledgeable, courteous, communicated at the right level and dealt with the issue promptly. Responses showed a mean agreement of 5.22 in the extended model on a 7 point scale and a standard deviation of 1.34, indicating that users were again positioned between slightly agree and agree and answers ranged narrowly. Once again, the mean values indicate that substantial improvements can still be made (i.e. from 5.22 to 7). The conservative nature of the extended model is likely to have generated a lower t-value and hence recorded a non-significant relationship to Satisfaction and Loyalty Intent, which must be considered a limitation. However, the significant and relevant positive weight score provides empirical support for Proposition 4.

Proposition 4: Responsiveness positively contributes to the formation of VITAE

The Parasuraman, Zeithaml, and Malhotra (2005) E-RecS-QUAL (electronic service recovery) model is an extension to their E-SQual model and has three constructs: Responsiveness, Contact and Compensation. In similar circumstances (i.e. the absence of a service recovery experience for a

high proposition of the sample population) to the VITAE model, the E-SQual model was also split to include the extended E-RecS-QUAL model. The authors called for further refinements to their E-RecS-QUAL model (i.e. reliability and validity) and to extend it into a pure service context. The next sections evaluate whether Contact and Compensation are also generalisable.

Contact is the second service recovery related dimension that assesses the ability of the service provider to provide available telephone and online channels to resolve service recovery issues. The construct displayed a non-significant relationship to VITAE across all measures including convergent validity, outer weights and external validity. Outer loadings were also non-significant identifying that Contact made no relative or absolute contribution to VITAE. Evidence from the qualitative interviews can be used to provide context through participant A: *"I haven't phoned them in a long time - but yeah they're pretty good to be fair".* Together with the evidence used earlier (see Systems Efficiency) about ease of use, the system works well over a sustained period of time. Interview evidence from participant A indicates that it is not necessary to call the service provider with any frequency when the system works well. Once this pattern is routinized the contact dimension could cease to be part of the user's experience. When considered through the hermeneutic spiral lens (Helkkula et al., 2012), if the service provider continually provides an efficient and quick online and telephone response, the contact issue will fade to the background and become forgotten or eventually cease to be a significant contributor to the user's experience. Consequently in an online subscription service the Contact dimension should not be a point of focus for service providers. Note that a consistently poor service may generate different results. An assessment of the mean value showed that users neither agreed nor disagreed about the availability of the telephone or online channels (mean 4.60, standard deviation 1.14) and answers varied narrowly. Therefore there is no empirical support for Proposition 5.

Proposition 5: Contact positively contributes to the formation of VITAE

The results for the Contact construct do not support its extension into an online subscription-based environment. Therefore the full E-RecS-QUAL model (Parasuraman, Zeithaml, and Malhotra, 2005) is also unsuitable for extension into this context.

Compensation is the third service recovery related dimension that assesses the ability of the service provider/system to provide compensation for problems arising from using the system (in this case refunds for spoilt stamps). Similarly, the construct displayed a non-significant relationship to

VITAE across all measures including convergent validity, outer weights and external validity. Outer loadings were also non-significant identifying that Compensation made no relative or absolute contribution to VITAE. Evidence from the qualitative interviews can be used to provide context through participant F: *"**Have you ever spoiled a stamp?** Oh OK right, yes I have, yes…..There's 2 ways of doing that. You can return the spoils items as the physical evidence. That's very onerous because you've then got to produce another envelope even though it's freepost, put the spoil in, and send it. The far more convenient option is you just lodge your appeal electronically…..I would say I've got it down to probably 1 in 100 spoils now".* Participant F required prompting initially to remember that he had even used the refund process. He went on to stress that elements of the process could be onerous and that the relative loss was small (i.e. one item in 100). Mail in particular is a low value item (pence), parcels constitute slightly higher values, however other users pointed out that using the refund process was not worth the time for the money recouped and many accepted the loss. The qualitative evidence indicates that refunds were perceived as low volume and low value, which supports the empirical findings that Compensation was not considered a driver of VITAE. When considered through the hermeneutic spiral lens (Helkkula et al., 2012), if the user accepts this loss and trades it off against time saved, or indeed refines the process so that spoils are minimised and routinizes this behaviour over a long period of time, the initial sacrifice experienced using the compensation process will fade to the background and become forgotten or eventually cease to be a significant contributor to the user's experience. Consequently in an online subscription service the Compensation dimension should not be a point of focus for service providers. An assessment of the mean value showed users firmly agreed that the service provider compensated users for any issues (mean 5.98, standard deviation 1.45) and answers varied narrowly. Despite agreeing that the service provider's process for refunds worked both empirical and qualitative evidence identified that Compensation was not a driver of VITAE therefore there is no empirical support for Proposition 6.

Proposition 6: Compensation positively contributes to the formation of VITAE

The results for the Compensation construct do not support its extension into an online subscription-based environment. Of the three constructs that originally formed the E-RecS-QUAL model (Parasuraman, Zeithaml, and Malhotra, 2005), only Responsiveness was empirically proved to be generalisable. Therefore the E-RecS-QUAL model is only partially extendable into an online subscription-based service context. Consequently a small contribution to knowledge is made by

refining the E-RecS-QUAL model further and identifying components that were both extendable and non-extendable into a different service context.

Security/Privacy is a risk related dimension that assesses the ability of the service provider to safeguard personal information (including financial details) and not to share this data with third parties. The construct did not contribute to convergent validity recording a non-significant relationship. Security/Privacy did not achieve a significant weight in the core model but did in the extended model (weight -0.21, ranking 4). However outer loadings were significant in the core model and the construct did provide a small significant absolute contribution (-0.19). The negative relevant contribution in the extended model indicates that Security/Privacy increases in importance once a service recovery encounter has been experienced. Participant D provides some context: "*generally if it appears to be a secure site, PayPal or something like that, then I'll put my details on there. I think I should have more caution when I use the Internet with my account details….**How do you assess your caution?.....**I suppose I just look at things like PayPal…..I don't know enough about the background about it, what is safe and what isn't safe, I make assumptions…..I assess whether I feel that the site is an authorised, well known, valid site which is safe and secure. So if it was for example a brand name".*

Participant D highlights that users cannot quantify Security/Privacy easily and make assumptions to arrive at a risk perception, which includes word of mouth recommendation and whether the service provider is an established brand name. The risk only becomes meaningful when a problem occurs and until then Security/Privacy is a hygiene factor i.e. it won't happened to me and if it does a recognized brand will compensate my loss. Given that Security/Privacy is predominantly a hygiene factor, unsurprisingly the construct was not found to be a driver of Satisfaction or Loyalty Intent, when linked to the formative model. Both models displayed a non-significant relationship with low rankings i.e. weights close to zero. Whilst the results indicate that Security/Privacy is a hygiene factor, they also point to an escalation in importance to the experience after an incident. Mean values support the qualitative data in that cues to create an informed perception were not there and the service provider has not effectively communicated policy and/or procedures to effectively mitigate Security/Privacy Risk. The mean value was 3.29 showing that user responses were positioned between slightly disagree to neither agree nor disagree with answers varying narrowly (standard deviation 0.93). Questions were positively phrased and this result indicates that whilst substantial improvements can be made in this area (i.e. from 3.29 to 7), the service provider needs to balance the knowledge that Security/Privacy is not a key driver of VITAE with investing to avoid

Security/Privacy creating a strong negative effect on VITAE should an incident occur (e.g. a cyber attack). In the current business climate, one cyber security incident where the personal details from the subscription base were exposed could increase the importance placed on Security/Privacy negatively affecting the user's experience. Therefore the significant contribution made to VITAE empirically supports Proposition 7.

Proposition 7: Security/Privacy negatively contributes to the formation of VITAE

The literature review was unclear concerning the conceptualisation of the Risk construct in online subscription-based services. These findings clarify that the Security/Privacy construct is a distinct construct separate from other Risk dimensions, which are discussed further in a later section under Risk. These findings support the approach taken by Parasuraman, Zeithaml, and Malhotra (2005) and Lin et al. (2005) to conceptualise Security/Privacy as a separate construct and that it should not be included as part of one overarching Risk dimension. Consequently a small component-level contribution to knowledge is made by clarifying how the Risk construct should be conceptualised in an online subscription service context.

Convenience assesses the overall reason i.e. the core benefit of subscribing to the service i.e. did the system enable time savings and reduce sacrifice for the user. The Convenience construct did not contribute to convergent validity recording a non-significant relationship. Weights in both the core and extended models showed the indicators were also non-significant, however outer loadings (0.60/0.65) in both models were significant indicating that the construct had an absolute positive importance with a low ranking (core 8, extended 7) when assessed against the inferior global value measure. Linking the formative measure to Satisfaction and Loyalty Intent showed slightly different results. Results in the core model were consistent and non-significant with a ranking of 7, however the extended model recorded a significant positive weight (0.30) and a much higher ranking (2), indicating that Convenience comes to prominence after a service recovery encounter. Supporting context is provided by participant F: *"I'm a hobbyist so its not as though I'm running a business so I can't value time…..so its convenience and the choice of when I can apply the time".* The opportunity cost of time and its link to the convenience proposition is clarified further by Participant E: ***"Tell me what is a good experience****…..its convenience, its there, its ready, they're printed, your letter's gone - end of story. Its a function of being able to just produce that stamp, run out the door to go and do something else".*

Small business users place a monetary cost on their time. If the systems and processes are operating as they should and deliver the expected experience then the Convenience construct is again a hygiene factor (as evidenced by the responses from the core model). When viewed through the hermeneutic spiral lens (Helkkula et al., 2012), time savings and reduced effort become expected and fade over time with respect to driving the experience, however this is the case until a service recovery encounter is experienced when time and effort have to be applied to resolve the issue at hand. Cost (whether it be the financial opportunity cost of lost time or additional effort expended) moves to the top of the ranking (from 7 to 2) just behind Systems Efficiency as a driver of Satisfaction and Loyalty Intent. An assessment of the mean values (See Table 40) showed that users responded with a high degree of agreement (6.10 core, 6.13 extended; standard deviation 1.08 core, 1.14 extended), results were positioned between agree and strongly agree on a 7 point scale and answers ranged narrowly. These results indicate the service provider has positioned the benefits of the proposition well with limited scope for improvement, however the proposition has the potential to be significantly undermined if the service does not consistently perform to expectation. Proposition 8 therefore has empirical support.

Proposition 8: Convenience positively contributes to the formation of VITAE

The literature review identified that the measurement of core benefits within multi-dimensional value models is currently under-researched (see Heineken, 2010 for an exception) and there was a gap in the literature from a formative/reflective measurement perspective. This research contributes to knowledge by a) including the convenience construct within the holistic VITAE conceptualisation and b) empirically demonstrating the contribution of the Convenience construct to VITAE and c) its effect on Satisfaction and Loyalty Intent.

Emotional Value represents the hedonistic dimension within the VITAE conceptualisation and was previously defined as the "*utility derived from the feelings or affective states that a product or service generates*" (Sweeney and Soutar, 2001, p.211). In previous research the construct is typically associated with pleasure or fun. The qualitative findings identified that in online business related routinized services, emotional value relates to pleasure from executing a task efficiently and 'doing a good job'. The construct contributed consistently strongly across all measures. Results for convergent validity showed a significant positive contribution to VITAE (weight 0.24, ranking 3) when assessed against the inferior global value measure. The construct also displayed significant, positive and relevant weights in the core model (weight 0.23, ranking 3) with a high ranking, which

increased in the extended model (0.38, ranking 2). Similarly Emotional Value was the second strongest significant and positive driver of Satisfaction and Loyalty Intent in the core model (weight 0.29, ranking 2). An assessment of the mean values (See Table 40) showed that users liked, and felt relaxed using the system. Mean agreements were 5.29 in the core model and 5.22 in the extended model on a 7 point scale. Standard deviation was 1.13 (core) and 1.22 (extended), varying narrowly. Mean values indicated that users were positioned between slightly agree and agree. Emotional value is the second strongest contributor to Satisfaction and Loyalty Intent and the mean values indicate that substantial improvement can still be made in this area (i.e. from 5.29/5.22 to 7).

Participant C provides context to the hedonistic nature of the phenomenon: "*this system suits me, it suits my personality, it suits how I like things to be, because it looks smart, it looks efficient, and it looks as if you care, and I think that that is most important*"*."* She goes on to provide context around the different perceptions of fun and pleasure concerning system use in online routinized service use: *((Laughter)) well I don't think it's fun….we've all got a different opinion on what we consider fun. Do I consider coming to work fun? If I was really honest no……but on the other hand it's fun because…..you love your product and it gives you a lot of pleasure….**How would you associate pleasure with SmartStamp?**....((Laughter)) only in so far as it's efficient. It's a pleasure to use…..you can't use the word pleasurable when you're actually using it, it's not that sort of pleasure, it's a very satisfactory system which I enjoy using. So enjoy, pleasure, fun – I mean a party's fun, doing this isn't particularly fun, but it gives me a great deal of pleasure when I see what the result is".*

The initial response to asking whether the system was fun to use was laughter. User perception was that use of the system could not be considered fun or pleasurable, however, once prompted there was a realisation that a form of pleasure accrued from system use that related to executing the task effectively to save time for other more important tasks and the pleasure created from the aesthetics associated with a professional image or improving the small business's brand image. These findings are counter to previous empirical work in the literature which argued that experiential outcomes are irrelevant in online purchase contexts (Zeithaml, Parasuraman and Malhotra, 2002) and best reserved for recreational Internet use since goal-directed tasks do not create truly compelling experiences (Novak et al., 2000). Emotional Value contributed strongly even when assessed against a limited quality/price trade-off (i.e. convergent validity), where the expectation would have been a non-significant result. Indeed this study makes an original contribution to knowledge by identifying a different permutation of the Emotional Value construct

i.e. pleasure from efficient task completion, which has not previously been identified in routinized online subscription-based services. Practitioners in this context do not recognise the Emotional Value dimension either and ensuring that the user gets gratification from efficient task execution should become a key focus for managers since it is an important positive underpinning feeling, which drives both VITAE, Satisfaction and Loyalty Intent. Consequently Proposition 9 has empirical support.

Proposition 9: Emotional Value positively contributes to the formation of VITAE

Qualitative findings found that Social Value did not contribute to the domain of VITAE and was removed from further consideration. Therefore proposition 10 has no empirical support.

Proposition 10: Social Value positively contributes to the formation of VITAE

Price assesses perceptions about the online service subscription cost. Price was the predominant contributor to convergent validity with strong significant (weight -0.68) and negative relevant contribution when assessed using the inferior global value construct. Without linking the formative measure to Satisfaction and Loyalty Intent, this result would have been interpreted as the channel was heavily price driven influencing the service provider to reduce price to increase Satisfaction and Loyalty Intent. However when the richer formative model is linked to Satisfaction and Loyalty Intent, the interpretation is again different. Price still showed a significant contribution however its proportional contribution was greatly diminished (weight -0.14, ranking 6) indicating that users were not entirely driven by price and other factors were more important. Price perceptions are brought out in the previous quote and also in the statement below from Participant C: *"the only down side is cost because it costs 2p extra for every stamp that we use…..the time it saves me covers that cost…..in fact we're probably saving money".* This result shows that cost is still important for users, even pennies make a difference when a small business sends large mail volumes. At the current price point Participant C confirms the convenience (i.e. time for this user) proposition is sufficiently strong despite being disadvantaged by a two pence price differential over a franking machine. However pricing the service remains key and Participant F helps to bound price perceptions: *"I'd quite happily pay more money for it. I feel it delivers what I need it to deliver and the convenience factor for me still outweighs not using it. It would have to become more than a TV license and be more aggravating for me not to use it"*.

Evidence supports that other value dimensions in the formative model have a greater influence on Satisfaction and Loyalty Intent than price. A reliance on the global value model would have encouraged the service provider to make the wrong choices and potentially reduce subscription prices. Indeed, after a service recovery experience Price dropped further in relative importance (ranking 6 to 9) as service recovery dimensions came into play. An assessment of the mean values (See Table 40) shows contrasting findings. Users did think they paid too much money for their online subscription, recording a mean agreement of 5.30 in the core model and 5.28 in the extended model on a 7 point scale. Standard deviation was 1.67 (core) and 1.74 (extended). Mean values indicated that users were again positioned between slightly agree and agree however answers were slightly more wide-ranging. This type of answering pattern is to be expected as users always want to pay less than they currently do, however on the other hand the more wide-ranging answers indicate that the sample has both price sensitive and more convenience orientated users. Evaluation of the frequencies showed the following distribution: 69% of the sample thought they had paid too much for their subscription, 16.7% neither agreed nor disagreed and 14.3% disagreed. Given that users only pay £5.99/month or £59.99/year, which equates to just over £1/week, evidence would suggest the price point is correct and scope to increase the price would be limited. Proposition 11 has empirical support.

Proposition 11: Price negatively contributes to the formation of VITAE

Risk assesses the chances of the service not performing and the potential financial loss associated with non-performance. The construct had a significant relative and negative contribution to convergent validity (weight -0.18) with a ranking of 4 in the core model and 5 in the extended model, when assessed against the inferior global value measure. When the richer formative model is linked to Satisfaction and Loyalty Intent, Risk displayed similar rankings but a stronger significant and negative contribution (weight -0.24, ranking 4) to Satisfaction and Loyalty Intent, indicating that risk remains a consideration for users. This issue is drawn out from the qualitative interviews by Participant F: *If (the service provider) weren't to provide a good service then feedback would get eroded or even ruined and you'd lose sales. So it's hugely important that they fulfil their quality of service as part of the overall eBay solution".*

This result shows that the service provider has a significant influence on the user's business and maintaining system and delivery performance should be a continuous focus to avoid risk perceptions increasing. Indeed in the extended model, after a service recovery experience risk

perceptions increased in relative importance moving up the rankings from 4 to 3. An assessment of the mean values (See Table 40) showed the opposite result, users disagreed that the service was risky, recording a mean agreement of 2.33 in the core model and 2.41 in the extended model on a 7 point scale. Standard deviation was 0.72 (core) and 0.72 (extended) showing a consistent answering pattern with minimal variation. Mean values indicated that users were positioned between slightly disagree and disagree. Given that Risk is a contributor to Satisfaction and Loyalty Intent, the mean values indicate that substantial improvements can still be made (i.e. from 2.33/2.41 to 1). Results show that a reliance purely on frequency data would lead the researcher to the wrong conclusions. Whilst on the face of it users responded that they do not perceive the service to be risky, Risk continues to have an influence on Satisfaction and Loyalty Intent.

Further contextual support is required from Participant F to show why Risk remains a key driving factor of Satisfaction and Loyalty Intent: *"**What makes a good experience?** I think eBay sums it up quite well they have 5 ratings a buyer can give a seller. Some of those include postage costs, speed of delivery…..so 2 of those categories are highly dependent on Royal Mail for my feedback. So if things aren't delivered in a timely fashion…..that can reflect badly on me and if the postage costs aren't competitive then again that can reflect badly on me as a seller. I'm beholden to my postal provider to at least help me with 2 of my key ratings".* Participant F captures the symbiotic nature of the value proposition. Delivery is an integral component of eFulfilment, and choice of delivery partner is a significant risk taken by the user. Poor delivery performance can reflect negatively on the seller's sales and brand image (and vice versa). Consequently the user balances a risk perception about business performance, which is a key continuous driver of experience. These results would not have been visible from the sole evaluation of frequency data. Mitigating perceived risk should be a focus area for practitioners. Therefore proposition 12 has empirical support.

Proposition 12: Perceived Risk negatively contributes to the formation of VITAE

The conceptualisation chapter pointed out there were differing arguments on how the Risk construct should be formulated. Murphy and Ennis (1986) argued that perceived risk was multi-dimensional formed of: financial; performance; physical; psychological and social risks, however there was a gap in the literature concerning the nature of perceived risk in online subscription service contexts. This thesis makes a contribution to knowledge by identifying that the performance and financial risk dimensions form one combined construct, which is separate from the Security/Privacy risk

dimension. This now concludes the answer to research question two, which empirically quantifies how the individual components contribute to VITAE. The next section discusses the VITAE contribution to outcome components i.e. Satisfaction and Loyalty Intent.

7.1.2 The VITAE Measure Contribution to Outcome Components

This section addresses research question three, which is: How does the user's VITAE affect customer satisfaction in an online subscription service context? Research questions four and five were combined following the quantitative findings phase to: How does the user's VITAE affect Loyalty Intent in an online subscription service context? To answer both research questions the VITAE model was specified as a second order formative model to improve the construct's ability to predict Customer Satisfaction and Loyalty Intent.

Table 41: VITAE Measurement Model Contribution to Knowledge

Paths	Core Model		Extended Model	
	Formative Index	Reflective Global	Formative Index	Reflective Global
VITAE → Customer Satisfaction				
Std. Path Coefficient (β)	0.71	0.54	0.74	0.54
t-Value	14.05	6.55	12.02	5.78
R^2	0.50	0.29	0.55	0.30
VITAE → Loyalty Intention				
Std. Path Coefficient (β)	0.74	0.68	0.75	0.67
t-Value	16.76	11.09	13.85	10.56
R^2	0.54	0.46	0.57	0.45

The results from a comparison between the proposed formative measure of VITAE and the theoretically established reflective measure of value (global value) is provided again in Table 41 to demonstrate the significant contribution to knowledge made by the VITAE model.

Results from the comparison show a clear improvement in the formative model's ability to predict both endogenous constructs. The core model shows a 21 percentage point increase in R^2 when predicting Customer Satisfaction and an 8 percentage point increase in the prediction of Loyalty Intent over the reflective alternative. Similarly the extended model improves R^2 for Customer Satisfaction by 25 percentage points and Loyalty Intent by 12 percentage points. The VITAE model represents a significant contribution to knowledge by providing the large 21 percentage point

improvement in the empirical ability to predict Satisfaction. The 8 percentage point increase is less marked but still provides a creditable improvement in the ability to predict Loyalty Intent, which also contributes to knowledge. The practical applications of these improvements will be discussed further in the Managerial Implications section. This concludes the answer to research questions 3 and 4/5; the next section evaluates the effect of Resource Integration on the VITAE model.

7.2 The Effect of Resource Integration on VITAE Components

This section addresses research question six, which is: How does resource integration affect VITAE in an online subscription service context? Support for each hypothesis has already been established in chapter 6 and to answer research question six this section now discusses the findings for Resource Integration as an overall concept. Table 42 shows the combined effects of Resource Integration, which is represented by the R^2 result from Technical Competence + Network + Participation for each of the hypothesised VITAE constructs. Table 42 also shows each hypothesis for completeness.

Table 42: The Effect of Resource Integration on VITAE

Core Model				
VITAE Construct	Resource Integration			R^2
	Technical Competence	Network	Participation	
System Efficiency	H_1a (+)	H_2a (-)	n.s.	0.190
Fulfilment/Reliability	H_1b (+)	H_2b (+)	n.s.	0.168
Convenience	H_1c (+)	H_2c (n.s.)	n.s.	0.193
Emotional Value	H_1d (+)	H_2d (n.s.)	n.s.	0.172
Security/Privacy	H_1e (n.s.)	H_2e (-)	n.s.	0.052
Risk	H_1f (-)	H_2f (-)	n.s.	0.208
Extended Model				
VITAE Construct	Resource Integration			R^2
	Technical Competence	Network	Participation	
System Efficiency	(+)	(-)	n.s.	0.211
Fulfilment/Reliability	(+)	(+)	n.s.	0.150
Convenience	(+)	n.s.	n.s.	0.207
Emotional Value	(+)	n.s.	n.s.	0.176
Security/Privacy	n.s.	(-)	n.s.	0.076
Risk	(-)	(-)	n.s.	0.292
Responsiveness	H_1g (n.s.)	H_2g (+)	n.s.	0.028
Contact	H_1h (+)	H_2h (n.s.)	n.s.	0.085
Compensation	H_1j (n.s.)	H_2j (n.s.)	n.s.	0.032

Resource Integration explained 19% (R^2 0.19) of the Systems Efficiency construct. Technical Competence had a standard path coefficient (β) of 0.40 and a significant (t-value 5.38) positive relationship with Systems Efficiency. Network had a significant (t-value 2.10) negative effect (β -0.19) on Systems Efficiency. Participation was non-significant and had no effect. This result confirms that the more technically competent the user is the higher the perception that the system is efficient (and vice versa).

The literature does not frame Resource Integration as a positive or negative co-creation experience. Results for the Network construct show a negative relationship. When user's had to access their network to support aspects of Systems Efficiency this is perceived to be a negative experience i.e. the system is not intuitive enough or sufficiently efficient for the individual to resolve issues themselves. Requesting help from the network is perceived to be a last resort rather than a positive contribution to value creation activities. This finding makes an original contribution to knowledge. The literature argues that value emerges for the focal customer through interaction and co-creation with others. Many consumption experiences are shared rather than individual in nature (Tynan and McKechnie 2009; McKechnie and Tynan 2008; Gainer 1995). The literature also identified that there was an urgent and compelling need for both academics and practitioners to gain a better empirical understanding of experiential value and how the customer and other actors contribute to the value experience. This result provides empirical evidence that within online subscription-based services the operant skills (i.e. technical competence) of the individual strongly influence use and perception of the system and accessing the network has a value destructive effect.

Participant B provides some context "*I'll phone up and I'll be frustrated because it's gone wrong and I don't want it to go wrong, I want it sorted and I want to know what to do. So I know that I'm going to be a bit with my back up".* It has been previously established that small business users equate a monetary cost to time. Additional time spent trying to resolve a technical issue that should be straightforward requires additional time expenditures over and above the expected to access the network, which creates frustration. This negative experience is likely to occur prior to accessing the network (i.e. user frustration with their own poor technical skills) and afterwards if the service provider fails to recover the situation quickly and in the right way. Effective service recovery can create the opportunity to re-calibrate the encounter into a positive experience, Participant D provides context around the opportunity to turn a negative experience into a positive one: "*I was unsure how to get the stamps in the right sections. I just put one call in and it was just so easy - to*

have somebody on the other end of the phone and they said all you have to do is this, this and this and then you remember the drag and drop functions and I was unaware of that - that wasn't clear until I put the call in…..I'm quite a lazy person whereas rather than look it up I'll get helpdesk". When Participant D's poor level of technical competence required network access, the service provider was able to resolve the issue quickly with a simple solution that also educated Participant D and improved her operant skills, resulting in a positive experience.

Resource Integration explained 16.8% (R^2 0.168) of the Fulfilment/Reliability construct. Technical Competence had a standard path coefficient (β) of 0.39 and a significant (t-value 5.88) positive relationship with Fulfilment/Reliability. Network had a small significant (t-value 1.54) and positive effect (β 0.08). Participation was non-significant and had no effect. The symbiotic nature of the user and service provider's value proposition has been previously established. Users wanted to take control of as much of the delivery process as possible, preferring their own technical competence to those of the service provider to prepare items for delivery accurately and to inject the item into the delivery network in a timely fashion.

Participant E provides narrative to explain the context: *"I'm in control of the post in my eyes. I don't have to rely on somebody sitting behind a glass counter, apart from obviously to go and purchase things…..I just feel that now I've got the control of printing off what I need to print off, if anything goes wrong then I can ask myself the questions rather than think well I gave it to that one behind the counter now where's it gone".* The more technically competent the user, the more they perceived they could control the process, positively influence the delivery outcome, which in turn improved their own value proposition. Indeed the user's operant resources were used to exclude service provider involvement (i.e. eliminate mistakes made by service provider staff) where possible. Participant F provides more supporting context to elucidate this point: "*the good thing about it - there is very little interaction with (service provider) other than dropping the item off. The user journey is totally (service provider) free - it's a virtual network as far as I'm concerned".*

This result provides a similar contribution to knowledge to that made by the Systems Efficiency construct. The user actively tries to exclude the network to avoid detrimental impact to their own value proposition. The Network component includes: Post Office counter staff for item acceptance and postmen for collection and delivery. Once the mail item (or parcel) passes outside the control of the user, there is nothing further they can do to influence Fulfilment/Reliability. Network then

makes a small positive contribution, indicating that users do not perceive this component of Resource Integration as a large driver of Fulfilment/Reliability i.e. the service provider performs this component well. Participant F provides some narrative to explain the context: "*that's probably the area where I have the most criticism of (service provider).....It took quite a few of the post offices a while to actually know what SmartStamp is, some of them even insisted on reweighing it and checking it for you.....So I think generally post offices have a lot to do in terms of education on SmartStamp for that side of fulfilment. The actual delivery side no criticisms at all from what I know the usual sterling efforts by postmen to make sure your parcels get there and they contribute to the positive feedback I get as a seller".*

Initially the acceptance part of the service provider's process caused a negative experience but as experience accumulated (for both parties) this faded from the figure ground of the user's experience. The delivery component was expected to perform consistently and the service provider's track record has been consistently strong over many years, sufficient for Network from a delivery perspective to become a hygiene factor, which is confirmed by Participant D: *"**Do you just look at SmartStamp in isolation**? It is all connected but I suppose I don't look at it beyond SmartStamp unless we would have an issue where our post wasn't getting to its destination then I'd make that wider link of SmartStamp to (service provider); post office; post man woman".* Clearly delivery of the user's end product is important and whilst considered a hygiene factor, any future poor performance is strongly likely to raise the importance of the Network dimension.

Resource Integration explained 19.3% (R^2 0.193) of the Convenience construct. Technical Competence was the sole contributor with a standard path coefficient (β) of 0.40 and a significant (t-value 4.76) positive relationship with Convenience. Network and Participation were both non-significant and had no effect. The results indicate the more technically competent the user the more convenient the SmartStamp® proposition is perceived to be. Even for long-term users (with accumulated experience), a level of Technical Competence is still required to get the full benefit from the system. Participant D displayed a low level of technical competence and hid this behind a façade of workload and time pressure, preferring instead to hand technically challenging issues to more competent junior staff: *"**So is time the main factor that stops you from exploring SmartStamp?** Yes.....we have a fantastic work experience student and she understands how everything talks to each other. She loves to play - If she doesn't know she loves to find out.....So that would be fantastic for us to have our own CRM system and SmartStamp to speak to each other*

and I did notice it does do mail merge…..its not something I've ever explored, it would take too long. ***You mentioned she loves to find out?*** *she'll have a go and if she can't work it out then she'll read a manual and she'll get them working…..I'm not the type of person that would sit down and explore the functionality to see what else it could do for me because I just need to get the job in hand done".*

Participant D could also see the benefit to her business of linking technology together and using the full functionality to generate greater Convenience. Technical Competence held this participant back and was clearly a factor in her ability to improve the convenience of the offering. Contrast this with a technically competent user like Participant F: *"as an eBay seller that you give your buyers full visibility of all the costs that they're going to incur and again it saves you time. I use the Ready Reckoner in SmartStamp as a means of giving the full postage options to all my buyers and that means you don't have to answer e-mails. One of the burdens of being an eBay seller is that if you don't publish all the postage options you're bound to get that person in Fiji saying how much does it cost to send this item to me and you don't want to be spending all your time answering e-mails".* The high degree of Technical Competence displayed by Participant F allowed the full functionality of the system to be deployed in a proactive way to generate greater convenience (or in this case less sacrifice). Note that many of the users interviewed only used the basic functionality of the system e.g. stamp and label printing due to a lack of Technical Competence, however the requirements of their business did not necessarily require complex technology usage and basic functionality use was perceived to be sufficient.

Resource Integration explained 17.2% (R^2 0.172) of the Emotional Value construct. Technical Competence was the sole contributor with a standard path coefficient (β) of 0.41 and a significant (t-value 5.61) positive relationship with Emotional Value. Network and Participation were both non-significant and had no effect. The results indicate the more technically competent the user the more Emotional Value the SmartStamp® proposition is perceived to generate. Even for long-term users (with accumulated experience), a level of Technical Competence is still required to get the full gratification from efficient task execution. Participant D highlights that a user with a low level of Technical Competence can still experience Emotional Value through ease of use and a system that works (i.e. Systems Efficiency and Systems Availability), put another way, the fact that Participant D could actually use it generated Emotional Value: ***"****SmartStamp does give me an element of joy in that fact that its made our lives much easier…..its very simple to use which makes me happy…..Its*

just the fact that its simple to use and 99.9% of the time it works. It's very rare that it breaks down…..its very rare that I have to get on the phone because the system isn't working. 9 times out of 10 its because I've lost my password". Emotional Value was also generated in different ways by users with a higher level of Technical Competence. Again, contrasting the user with a higher level of Technical Competence (Participant F) shows Emotional Value is generated from use of the more complex customisation functionality: *"**Is there anything about it you find enjoyable?** I do for the Christmas cards and newsletters that my family send out because that's a good chance to use the customisation features".*

Resource Integration explained 5.2% (R^2 0.052) of the Security/Privacy construct. Technical Competence and Participation were both non-significant and had no effect. Network is the sole contributor with a standard path coefficient (β) of -0.17 and a marginally significant (t-value 1.52) negative relationship with Security/Privacy. The results indicate the more the Network is accessed the more risk perceptions around Security/Privacy are reduced. Narrative from Participant D was used previously to provide context around the Security/Privacy construct, and established that brand strength was key to establishing a risk perception, the same participant goes on to establish that the Network also influences this perception: "*this is an area which I am not so hot on and (name)'s very good about what details you can have out there and people can't abuse…..I don't know enough about the background about it - what is safe and what isn't safe - I make assumptions.* ***On what do you base those assumptions****? Kind of like word of mouth".* Users consult their network to support perceptions of whether a service is likely to be secure and that the service provider will safeguard the user's privacy. In this case the knowledge of a more technically competent friend and work colleague helped to support the formulation of Participant D's Security/Privacy risk perception.

Resource Integration explained 20.8% (R^2 0.208) of the Risk construct, rising even higher in the extended model to 29.2% after users had experienced a service recovery incident. Technical Competence had a standard path coefficient (β) of -0.42 and a significant (t-value 5.95) negative relationship with Risk. Network also had a significant (t-value 2.31) and negative effect (β -0.18) on Risk. Participation was non-significant and had no effect. Results showed that the higher the user's level of Technical Competence the more risk perceptions were reduced, the same results were found for Network, the more the user accessed their network the more risk perceptions were reduced. Participant C displayed a lower level of Technical Competence and provides context around how Risk is perceived: *"**what is a risk to you?** Just the fact that you're putting in*

information about your personal finances and your bank accounts and all that sort of stuff, I know we're all on probably every computer in the country, which government or whatever can get from wherever".

A lower Technical Competence fuelled greater uncertainty around the risks involved in subscribing to the service. The lack of tangibility to gauge this risk arguably led to a level of paranoia in this case. In contrast Participant B had previously worked in a risk orientated industry and displayed a higher level of Technical Competency, which enabled a more measured approach to Risk perceptions: *"I don't like stuff out in the open…..**what is driving that risk assumption**? Because I know how easy it is to get people's details…. you can use people's credit limit and stuff like that, you can create a dummy person…..I have a perception of what they should know".* The risks associated with Network have already been addressed using the narrative from Fulfilment/Reliability and Security/Privacy. Resource Integration explains a very high proportion of the Risk Construct. Users perceive the service provider to be a potential weak link in their own business model through the delivery component, which should be mitigated where possible. In addition, users doubt that the service provider will keep their personal details safe, which potentially exposes their businesses to financial loss. Risk remains a key driver of VITAE, which forms a daily component of the user's experience. These results empirically position the way Resource Integration is framed in online subscription services and define whether these relationships are positive or negative. Instead of users positively co-creating value with their wider social network, results indicate that everything possible is done to mitigate risk to their business by keeping as much of the value creating activity within the user's span of control. Use of the Network is a fall back when there are insufficient operant skills or where there is no choice i.e. delivery.

Resource Integration explained only 2.8% (R^2 0.028) of the Responsiveness construct. Technical Competence and Participation were both non-significant and had no effect. Network had a standard path coefficient (β) of 0.10 and a significant (t-value 1.79) positive relationship with Responsiveness. Results showed that the higher the user's level of network access the more positive the effect on Responsiveness. Participant D has already provided the context to explain user perceptions around the Responsiveness construct (see Systems Efficiency), which concluded with the comment *"I'll get helpdesk".* These results demonstrate that the Service provider's helpdesk works. The results also indicate that the user accesses their network to resolve the issue prior to contacting the service provider i.e. asks friends or colleagues before calling the helpdesk.

The Contact and Compensation constructs did not contribute to the VITAE instrument and were removed from further consideration during the measurement purification stage in Chapter 6. Both constructs have been included to check whether Resource Integration had any effect on either construct since it is a separate consideration. Resource Integration explained only 8.5% (R^2 0.085) of the Contact construct. Technical Competence had a standard path coefficient (β) of 0.27 and a significant (t-value 2.06) positive relationship with Contact. Network and Participation were both non-significant and had no effect. Resource integration had no effect on Compensation with Technical Competence, Network and Participation all being non-significant.

At the beginning of this chapter it was identified that value creation processes have been under-researched for some time (Veloutsou et al., 2002) and should be considered in parallel with outcomes (Gummerus, 2013). The VITAE model makes an original contribution to knowledge by linking value creation processes (i.e. Resource Integration) to outcomes in the same conceptual model. Empirical results show the importance of including value creation processes to improve the understanding of experiential value. Relatively large proportions of each construct were explained by Resource Integration including: 19% of Systems Efficiency; 16.8% of Fulfilment/Reliability; 19.3% of Convenience; 17.2% of Emotional Value; and 20.8% of Risk. Smaller contributions were made to Security/Privacy (5.2%) and Responsiveness (2.8%). This concludes the answer to research question 6: the effect of Resource Integration on VITAE. Further insights from this section will be presented in Managerial Implications. The next section discusses whether past, future and imaginary perceptions are contained within perceptions drawn from accumulated experiences.

7.3 Past, Future and Imaginary Perceptions of Value

A significant weight of criticism has been aimed at multi-dimensional value models for focusing on post-use service evaluations without examining how past, future and imagined experiences may affect value judgments (Helkkula et al., 2012). Indeed, researchers in the multi-dimensional value modelling field themselves also call for the consideration of future expectations of, as well as current perceptions of benefits and sacrifices in any conceptualisation of value (Sweeney et al., 1999). The VITAE conceptualisation argued that when viewing experiential value through an accumulated experience lens, these past, future and imagined experiences were already present and part of experience perceptions. Evidence provided in this section supports this premise and includes narratives from the qualitative interviews and respondent feedback resulting from an open follow-up request to respondents after they had completed the questionnaire.

Predominantly past experiences revolved around some aspects of the online service that performed poorly, whilst future and imagined experience perceptions considered how these poor experiences could be improved, Participant F provides context from the perspective of a technically competent user: "*the developers of the eBay SmartStamp solution haven't really taken the end-to-end customer journey through. They've modelled it in the pure sense but I think they haven't done enough user trials to see. I would think I'm not an untypical eBay seller in that I don't have power accounts or any of those tools but I sell a dozen items a week during some peak months of the year and just want the convenience of being able to quickly get those addresses into SmartStamp and those features just aren't there to do that. So the end-to-end integration isn't good".* These perceptions represent realistic thoughts and incremental changes that could be made relatively easily by the service provider. Participant D provides some more imaginary perceptions from a less technically competent user: "*intuitive as in SmartStamp recognising the way that we run our business and picking up on trends and then maybe automatically offering us solutions to our business rather than us having to key in stuff all the time…..that one on one personalised service would make our business run more efficiently and therefore would be welcomed".*

The request for additional comments was sent as part of the follow-up process to generate additional questionnaire take-up. 33 respondents provided feedback, which is presented (verbatim) in Appendix 8: Past, Future and Imaginary Experiences. Extracts supporting the existence of past, future and imaginary perceptions are provided by respondent 3 and 29 and shown in Table 43. Respondent 3 identifies that past poor experiences are remembered and form part of current experience perceptions. The respondent then goes on to articulate future desired changes to the system and the impacts on their business. Consideration of past experiences and unfulfilled future experiences created frustration for the respondent. Indeed many of the 33 respondents expressed a frustration that the service provider was not 'listening' to user feedback on system improvements. Respondent 29 highlights displeasure with the current pricing disparity in the process, which has been in place for over a decade. These past experiences are still part of figure ground attitudes and influence current experience perceptions. Respondent 29 goes on to imagine a future state of existence for the service, which also forms part of current experience perceptions.

Evidence from both the qualitative and quantitative phases supports the premise that past, future and imagined experiences affect value judgments (Helkkula et al., 2012) in routinized online subscription-based services. Where conditions of accumulated experience are in place, these experiences form part of current value judgements and influence perceptions of VITAE.

Table 43: Evidence of Past, Future and Imaginary Perceptions Within VITAE

Respondent 3	Historically whenever The Post Office have attempted to make changes to this software the whole thing has collapsed in a big untidy heap, we had such an occasion approx 12 months ago when the system was unusable for almost 7 days and they were forced to compensate users for the lack of service. As a small business posting several parcels per day, outages are not acceptable. **I have some suggestions as follows:-** 1. When doing the first label of the day, if you are not logged in the username and password box pops up. The natural thing to do is start typing the username. The problem is the username/password box pops up but does not have focus so whatever you type is not entered. You have to click the box to give it focus then enter the details.
	2. Parcels to overseas destinations that are 0 rated for VAT require a certificate of posting for our records. There is a certificate of posting option but all it does is links to a PDF of the blank form. It would be better if the software picked up the data from the postage history and filled the form in so all that has to be done is print it and get it validated at the PO Counter. 3. Extend the logo option to be able to include a CN22 form on the right side of the label next to the address for overseas mail. 4. when topping up the prepay account being able to enter any amount would be good and also if the system would remember the users payment details based on the users username/password like Amazon & Play.com do
Respondent 29	Hi, just like to make the following comments on this 'package' 1) As a customer buying credits 'upfront' from Royal Mail why is this mail not treated the same as 'franked mail' considering we are paying a premium for the postage against franked mail costs. 2) Can the printing software be updated to allow a dedicated printer to print direct to standard DL envelopes creating in effect a virtual franking machine. As Royal Mail is now a PLC I see a future where franking machines will no longer exist..Perhaps Smart Stamps can be updated bridge this gap?????

Rather than a hedonic imagined experience, respondents imagined more mundane service improvements that would make their businesses more effective. The act of imagining a future service state and then making improvement suggestions to the service provider links co-production activity to future and imagined experiences. Consequently this thesis argues that there is support for the premise that past, future and imagined experiences are present within the accumulated experience and therefore within respondent perceptions when the questionnaire was answered. Past, future and imagined experiences must therefore form part of the empirical evidenced offered by the VITAE measure. In making this claim, the VITAE instrument contributes to knowledge by incorporating past, future and imagined experiences into a multi-dimensional experiential value model. These findings also support the Arnould, Price and Malsche (2006) argument that historic and imaginary elements do reside within the user's cultural operant resource stocks. The next section expands on the initial commentary provided around generalisability in chapter 4.

7.4 Generalisability

The potential generalisation of the VITAE instrument across other online subscription-based contexts was discussed in the methodology chapter prior to the data collection phases. This section summarises that content and augments it with the qualitative/quantitative findings together with a more expansive view of where generalisation would be possible across key areas of the literature.

The VITAE instrument was designed to incorporate all of the components necessary to evaluate subscription-based online services, which are routinized. These components are deemed interchangeable in the majority of online (self-service) subscription channels for businesses e.g. accounting software (e.g. Kashflow); payment management solutions (e.g. Tipalti); expenses management (e.g. Xpenditure, Certify, AppsForOps); field services management (e.g. HouseCall pro); or online grocery shopping (e.g. Tesco, Waitrose). Different online subscription-based applications emerge by the day to the extent that a new term called 'subscription fatigue' (Digital Media 2014; Murph, 2014) has been coined, which reflects the prominent role these services play in consumers' lives and the importance to both academics and practitioners of understanding what makes a good user experience.

The VITAE instrument has been designed in a holistic way to capture all components of the online experience to enable generalisation across a broader range of services rather than focusing on one limited area of interest. Self-service technologies typically offer the consumer a (perceived) time saving, additional convenience (or reduced behavioural sacrifice), often through location or time related benefits. To be of benefit to the consumer an online service should be available at a time convenient to the customer i.e. 24/7/365 to perform any given task. The service must be capable of being performed at a location convenient to the customer i.e. from an Internet connected device at their home/office or increasingly from mobile locations. Design of the overall proposition in this research is therefore generalisable across many business-related online subscription services that are routine, are paid for and have a fulfilment component. VITAE is modular and formed from the following generalisable components:

1. The overall proposition: is the subscription convenient and does it make my business more efficient and save me time? This is captured by the Convenience construct
2. The software or web interface: any online service proposition inherently has to have a technology component whether on a PC or a mobile device. Usability of the technology has standard components that are generalisable and relate to functional value. For example the user must be able to find information, navigate round the software and find it easy to use (i.e. captured by Systems Efficiency)
3. Does the software operate consistently well for the user to maintain a consistent level of business performance (i.e. captured by Systems Availability)

4. A fulfilment component e.g. delivery, which is generalisable across many efulfilment contexts since they all require delivery of a physical item. Note that removal of the fulfilment component for pure services is also possible
5. A support component to handle service recovery issues e.g. a help desk, captured in VITAE by the Responsiveness construct. Any paid online service requires a support facility when it is technology-based for service recovery purposes, which captures how the service provider conducts the encounter. Note that access to the service provider (Contact) and the compensation process (Compensation) do not contribute to the user experience and where removed from VITAE. From a support and service recovery perspective the design of this measurement instrument is generalisable across any subscription-based online service
6. A cost component: by their very nature a subscription service is chargeable, which is captured via Price
7. A risk trade-off: in an online era symptomatic of viruses, identity theft, loss and misuse of personal data or the risk of the service compromising the user's existing assets (i.e. telephone, PC or printer) two aspects are generalisable across any online proposition: financial/performance risk i.e. an ongoing perception of the degree to which the service could compromise the user's business performance or financial position (Risk); and also a perception of whether the service provider has systems/process and the necessary motivation to safeguard the user's personal and financial details, which could expose them to fraud or unwanted third party contact (e.g. Security/Privacy)
8. A hedonic or feeling component that reflects personal pleasure from effective task completion when using a service. If there were no feeling that the service supported improved task efficiency, it is unlikely the user would continue to subscribe. Consequently the emotional value component is also generalisable.

Each of these basic components would exist in any business related online offer that a customer is required to pay for and can be generalised across numerous routinized subscription-based services that are business orientated. VITAE can also be extended to home user subscription contexts where the activity is routinized (e.g. online grocery shopping).

When evaluating the potential for generalisation above the component (or construct) level, VITAE has the potential to support generalisations across a number of gaps in the literature. The literature review identified that an understanding of how value is co-created over a technology interface remains poorly understood (e.g. Meuter et al., 2005). Integral to this poor understanding is: the lack

of an holistic approach to multi-dimensional experience modelling, which has failed to provide the full picture for consideration. Within this multi-dimensional modelling picture, value has been considered purely from an outcome-based perspective, and has not empirically provided a framework to consider value creation processes (Gummerus, 2013), which required the identification of Resource Integration components. Indeed, firms must now consider the customers' wider network of actors when they seek to offer value propositions (Lusch et al., 2010). From the firm's perspective there is now an imperative for wider engagement in: dialogue with both customers and members of their network; the total value proposition; resource integration; and the process of learning to offer solutions, which are achieved by jointly and flexibly working with customers (Vargo and Morgan 2005). The VITAE model begins to fill these gaps though its holistic experiential conceptualisation and incorporation of co-creation processes. VITAE joins outcome to process within the boundary of a holistic experience, which allows meaningful generalisations to be made across multiple online subscription-based contexts that are routinized to support the creation of flexible solutions and value propositions between firms and customers.

The VITAE model not only provides the start point for a better understanding of how value is co-created over a technology interface, it also provides the start point for understanding how to build online relationships within a subscription context. Stockdale (2007) pointed out that development of competitive advantage in an online context would require the development of customer relationships within the self-service culture as a necessity. The VITAE model identifies the key drivers of the online experience, separates them from hygiene factors and provides the start point to identify the drivers of how and by whom value is co-created across a technology interface and within a self-service context. VITAE effectively provides the generalisable platform and levers through which both practitioners and academics can begin to develop these much-needed relationships. This aspect will be discussed further in the Management Implications section.

In conclusion then, VITAE has been designed to evaluate all of the components integral to forming the user's experience in a subscription-based online service. Removal of postal connotations would enable re-use of the instrument across a wide range of online services.

7.5 Managerial Implications

The literature review identified a divergence in approach between academics and practitioners (Holbrook, 2006, 2007). Practitioner use of the term customer experience had been abused and consequently became widely criticised (Palmer, 2010), leading to a partial understanding of the

customer experience concept (Tynan and McKechnie, 2009) and an uncertain future for an important construct due to the ambiguous manner in which it has been applied (Palmer, 2010). Whilst academics had been openly critical, this researcher identified a paucity of empirical research in the area and criticised academia for failing to provide supporting frameworks and theory to guide practitioners to a better understanding of the experience construct. The VITAE approach set out to provide a model upon which both academia and practitioners could build and to develop a better empirical understanding of the experience construct, since resolving this issue was recognized as being of the utmost importance for both academics and practitioners (Tynan and McKechnie, 2009).

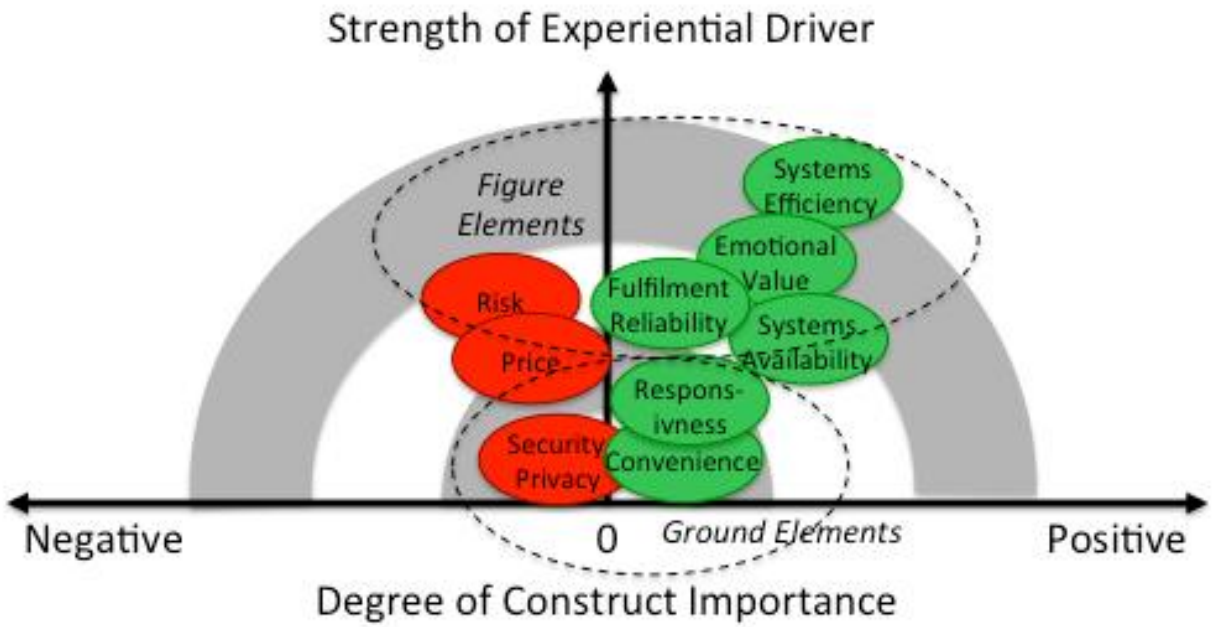
Practitioner interest in the online experience construct is primarily driven by the necessity to create competitive advantage both to attract new customers (i.e. service adoption) and to keep those customers over time (i.e. reduce churn rates). Understanding Value, Satisfaction and Loyalty Intent is integral to these objectives. It has already been established that the VITAE instrument out-performs traditional multi-dimensional value models, providing a 21 percentage point increase in R^2 when predicting Customer Satisfaction and an 8 point increase in the prediction of Loyalty Intent over the reflective alternative. The extended model improves R^2 for Customer Satisfaction by 25 points and Loyalty Intent by 12 points. At a basic level, testing and re-testing the VITAE model contributes to practitioner interests by enabling an improved measure of Satisfaction and Loyalty Intent, with a view to supporting improved customer adoption and reduced subscription churn. However the VITAE model can provide a much richer vehicle for practitioners, building on the way VITAE can be generalised, which was set out in the last section. VITAE could be used by practitioners to understand the following:

1. The individual effects of each experiential component on value and the ability to identify which constructs are the most important drivers. This insight would allow marketing strategies (and budget) to be directed at the individual components of the user experience likely to provide the highest return on investment
2. A platform that combines the process components of experiential value creation with the more traditional outcome components (Gummerus, 2013), enabling a better understanding of how co-creation influences the experience across a technology interface. Insight into the effect of resource integration (from both an individual user and multi-actor perspectives) on experiential value would enable marketers to understand whether specifically designed campaigns to enhance the wider co-creation of value would be worthwhile e.g. educational campaigns for the user or offers targeted at friends and family

3. The technology literature has primarily focused on SSTs that are located either at the firm's premises, or where usage cost is borne by the organisation. These encounters are inherently transactional with limited opportunity to develop online relationships. The ability to experiment with each individual VITAE lever to understand which experiential components drive the online relationship (Stockdale, 2007), provides the platform to begin understanding how these relationships can be developed.

Each of these practitioner implications are interlinked and contribute not only to improving the user's experience from a software and service process perspective but would also contribute to a more fine tuned approach to improving both Satisfaction and Loyalty Intent. Figure 27 shows how this can be done via a VITAE practitioner dashboard, which requires linking back to the literature in order to explain how this could work.

Figure 27: VITAE Practitioner Dashboard



The practitioner dashboard brings together the empirical evidence from chapter 6 to provide a perceptual scale that provides insight into the degree to which each VITAE construct influences the user's experience. The scale is based on the construct weights that drive Satisfaction and Loyalty Intent, influences are both positive and negative and the further the bands are from zero the greater the relative influence the construct has on the experience. The largest relative and positive contributor to experience is the Systems Efficiency construct, followed closely by Emotional Value, Fulfilment/Reliability and Systems Availability. By investing in marketing strategies to improve

each of these drivers, VITAE can measure the improvement in each experiential construct and in turn the contribution made to Satisfaction and Loyalty Intent. Conversely negative constructs cannot be overlooked, strategies and investment to mitigate consumer perceptions of Risk to their business in particular are important to develop a balanced development of the user experience. The dashboard is intended to be semi-automated to provide ongoing metrics to guide practitioners. The VITAE dashboard also supports the Customer Experience Modelling approach (Teixeira et al., 2012) by identifying the key drives of the customer experience to enhance future SST service design.

The practitioner dashboard also enables the marketing manager to understand which of the VITAE constructs are 'figure element' i.e. constant drivers of the experience and which are ground elements i.e. components that fade over time. Both aspects are important in understanding how attitudes adjust over time to form the experience (Palmer, 2010) and to understand which components of the total experience persist as long-term attitude adjustment (O'Neill and Palmer, 2001), which subsequently influences behaviour (Palmer, 2010). The dashboard shows which constructs are figure and which are ground and can be used to promote and de-select constructs as they change in relative importance to attitude formation. Note that ground constructs such as Security/Privacy would undoubtedly come into prominence in the event of a cyber security breach in which users' personal details were lost or compromised as a result of service provider actions. The VITAE dashboard could be used to understand the impact of this and to devise strategies to mitigate the effect.

An emergent and important story can be deduced from the top five construct weights. Unsurprisingly, key to the experience are aspects that relate to functional value i.e. Systems Efficiency, Systems Availability and Fulfilment/Reliability. These drivers are fundamental to the user's business and are important areas for marketing mangers to focus investment and to improve continuously. Improving these visible components is where practitioners would typically focus investment and effort. However, the emergent story lies in the inter-linked role that Risk and Emotional Value play, which are hidden trade-offs that practitioners are less aware of. Behind the obvious figure elements there is a continuous trade-off between the user feeling good about the overall online service, feeling that they are more efficient and doing a job well and the negative risk-based connotations about how the online service might compromise their business offer with the associated financial consequences, whether they be direct i.e. loss of money from their bank account, or indirect i.e. lost sales from dissatisfied customers due to poor service provider

performance. These hidden feelings and perceptions do not fade to ground elements and continue to drive the experience and any strategy or investment in components relating to functional value must consider Risk and Emotional Value in parallel.

The literature review argued that whilst academia lagged behind practitioners calling for further research, the market had matured to the point of 'subscription fatigue' (Murph, 2014). The VITAE model provides a significant step forward both in theory development and in providing an empirical framework to help guide practitioners. This author argues that VITAE provides a tangible step forward in closing the academic/practitioner gap in online routinized subscription-based services.

7.6 Limitations and Future Research Directions

In line with the limitations of many other similar studies this research is limited by virtue of being conducted within one context. The VITAE instrument would benefit from being tested in other online routinized subscription-based contexts to ensure that claims to generalisability can be substantiated. The Network component is considered a preliminary resource integration construct. The actors within the users' network had not previously been identified, which necessitated identification via a yes/no question. These responses were then summated to produce a continuous variable for inclusion in VITAE. Whilst the preliminary variable was sufficient to demonstrate the effect of Network on the VITAE components, the nature of the variable inherently produces limited variance, which may influence results.

Now that the actors within the wider social network contributing to co-creation have been identified, a future research direction would include developing this preliminary construct into a more robust measure and re-testing the VITAE model. The final limitation relates to sample size. The VITAE core model is based on a sample size of 126 across the total population rather than a sample. This could be considered small to establish sufficiently robust results, particularly in larger instruments. However, by using PLS-SEM the complexity of the VITAE structural model has little influence on sample size requirements since the algorithm does not calculate all relationships in the structural model at the same time (Hair et al. 2014). Indeed the strong performance of PLS-SEM with smaller sample sizes has broad support in the literature (Chin and Newsted, 1999; Hui and Wold, 1982; Reinartz et al., 2009). The core VITAE model also meets both sample size criteria for PLS-SEM including the 10 times rule (Barclay, Higgins and Thompson, 1995) and the Power Analysis (Cohen, 1992; Hair et al., 2014). The power analysis showed that the sample size for the

VITAE core model was sufficient to conduct PLS-SEM analysis for significance levels of 5% with minimum R^2 values of 0.25 and above. However, the sample size was potentially too small to detect significant relationships for R^2 values ≤ 0.10. Rather than the small sample size being viewed as a limitation, this potential inability to detect lower significant R^2 results means that the VITAE results remain robust and are arguably conservative in nature.

The limitations discussed above all lend themselves to future research avenues. In addition, the VITAE approach can be used to provide future research directions in the following areas:

1. Theory development: the VITAE lens was developed primarily as a component of the underpinning theory to justify the empirical measurement of experiential value. The VITAE focus was constrained to an online routinized subscription service. Future research could extend the theory of accumulated experience into non-routinized contexts
2. Model extensions: an important focus for S-D Logic theoretical development is the service ecosystem, which is defined as: "*a spontaneously sensing and responding spatial and temporal structure of largely loosely coupled value proposing social and economic actors' interactions through institutions and technology to (1) co-produce service offerings (2) exchange service offerings; and (3) co-create value"* (Lusch et al., 2010, p.31). Mirroring this, efulfilment supply chains are evolving from a linear model to a network approach involving multiple partners, which could include businesses or individuals using different technology platforms (e.g. Uber) in a more loosely coupled model. Increasingly the delivery component has both become integral to the customer experience (e.g. Amazon Prime) and embedded within business value propositions. Delivery is often outside a business's control. The future direction of experiential value research should take these developments into account. Rather than evaluate software or a service in isolation, future research should bring in the wider fulfilment component and the different participating actors, including C2C. The VITAE model can be extended to evaluate other service systems with an efulfilment component to empirically support the development of S-D Logic. As previously discussed in the last section, and within the context of S-D Logic, the VITAE model could be extended to understand how each of the VITAE components could be used to better understand how online co-creation relationships could be improved across technology interfaces (Stockdale, 2007)
3. To extend the VITAE model into the Customer Experience Modelling domain (Teixeira et al., 2012) to enhance future SST service design

4. In addition to developing the preliminary Resource Integration measure, which was based on actual usage of network actors, the model could be expanded by including dedicated perceptual measures.

7.7 Conclusions

Mohd-Any, Winklhofer and Ennew (2015) identified that the customer experience journey was evolving at pace, but conceptualisations and operationalisations of value had predominantly taken place in interpersonal contexts (e.g., Lin et al., 2005; Ruiz et al. 2008) and less attention had been paid to self-service contexts, despite their increasing importance. Whilst academia identified gaps and called for further research, the market has matured to the point where consumers were experiencing 'subscription fatigue' (Digital Media 2014; Murph, 2014). The VITAE model not only makes an important contribution to the understanding of experiential value within an SST context, but also for online subscription services, which is also under-researched.

Tynan and McKechnie (2009) also identified an urgent and compelling need for both academics and practitioners to gain a better empirical understanding of experiential value and how the customer and other actors contribute to the value experience. This call specifically requested further empirical work to apply new understandings and approaches that are experiential in both the real and virtual worlds, which are interactive, progressive, evolving and flexible in nature. To answer this call, The VITAE conceptualisation and empirical testing has provided an original contribution to knowledge. To date no empirical investigations have provided a holistic measure of experiential value; identified the participants in the user's wider social network; or examined the effect of personal skills or the effect of the user's network on the components of experiential value in online subscription-based services. Within this context, VITAE provides a better understanding of the experience phenomenon and how other actors contribute to the value experience via the Resource Integration conceptualisation and subsequent testing. VITAE also provides a new lens through which to view experiential value (alongside a new definition of value) and also contributes additional empirical insight, aligned to phenomenological theory development, which has not only been under-researched to date but answers the calls from Cronin (2016) to develop a conceptualisation and measure that reflects the current theory.

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Appendices

Appendix 1: Value Construct Analysis

Higher Order Construct /Outcome	Determining Construct	Source	Item Description
Perceived Quality	Efficiency	E-S-QUAL Parasuraman, Zeithaml & Malhotra, 2005	1.This site makes it easy to find what I need 2.It makes it easy to get anywhere on the site 3.It enables me to complete a transaction quickly 4.Information at this site is well organised 5.It loads pages fast 6.The site is simple to use 7.This site enables me to get onto it quickly 8.This site is well organised
	System Availability	E-S-QUAL Parasuraman, Zeithaml & Malhotra, 2005	1.This site is always available for business 2.This site launches and runs straight away 3.This site does not crash 4.Pages at this site do not freeze after I enter my order information
	Ease-of-Use of Website	Szymanski & Hise, 2000	In general how good a job are Internet store fronts doing on the following dimensions: 1.Presenting uncluttered screens 2.Providing easy-to-follow search paths 3.Presenting information fast
	Perceived Ease-of-Use	Weijters et al., 2007	1.Self-scanning will be effortless 2.Self-scanning will be user friendly
	Fulfilment	E-S-QUAL Parasuraman, Zeithaml & Malhotra, 2005	1.It delivers orders when promised 2.This site makes items available for delivery within a suitable time frame 3.It quickly delivers what I order 4.It sends out the items ordered 5.it has in stock the items the company claims to have 6.It is truthful about its offerings 7.It makes accurate promises about the delivery of products
	Fulfilment	Chien-Hsin, Sher & Hsin-Yu 2005	1.The product (a good or service) that came was represented accurately by the website 2.You get what you ordered from this site 3.The product (a good or a service) is delivered by the time promised by the company

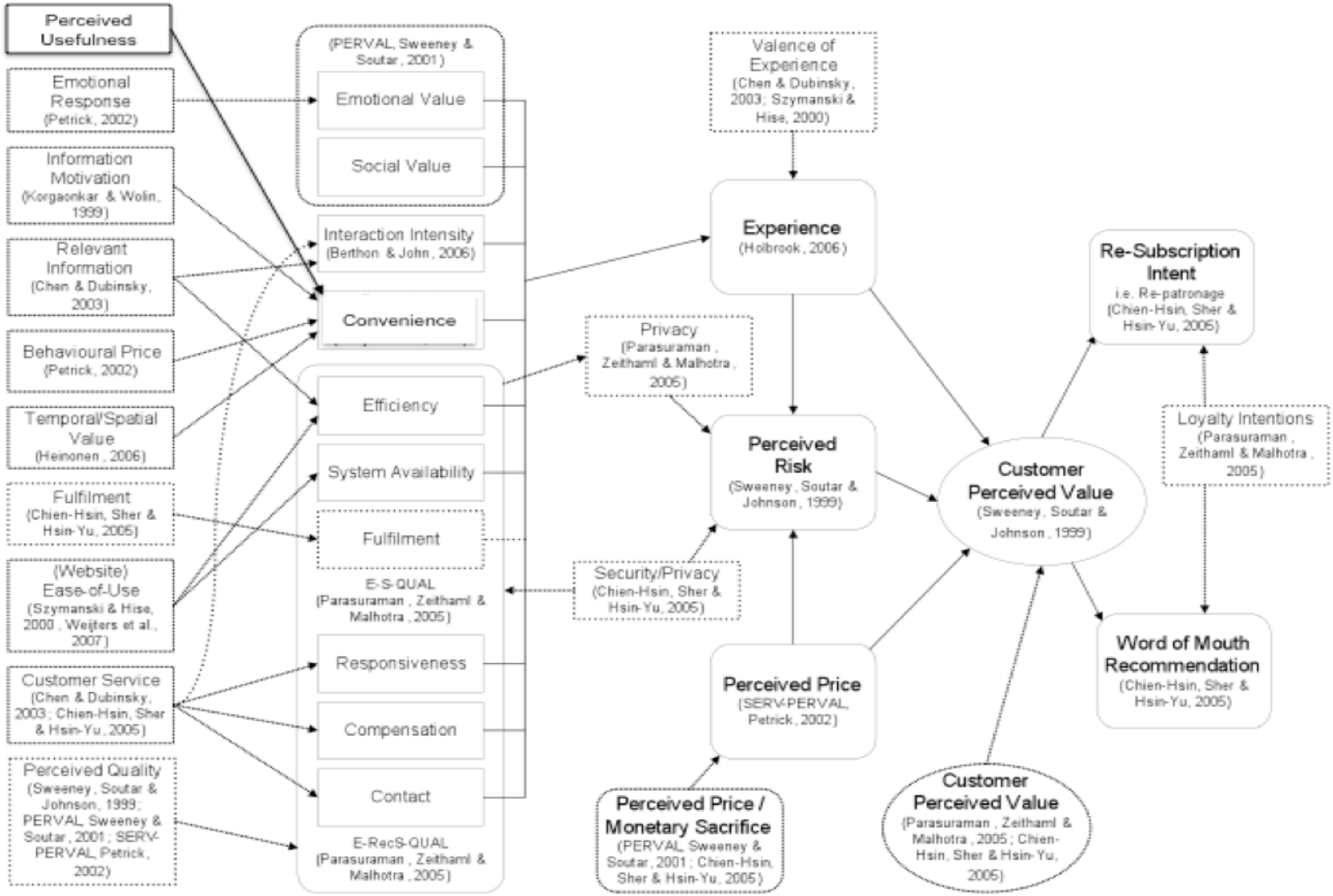
Higher Order Construct /Outcome	Determining Construct	Source	Item Description
Perceived Quality	Responsiveness	E-RecS-QUAL	1.It provides me with convenient options for returning items 2.This site handles product returns well 3.This site offers a meaningful guarantee 4.It tells me what to do if my transaction is not processed 5.It takes care of problems promptly
	Compensation	E-RecS-QUAL	1.This site compensates me for problems it creates 2.It compensates me when what I ordered doesn't arrive on time 3.It picks up items I want to return from my home or business
	Contact	E-RecS-QUAL	1.This site provides a telephone number to reach the company 2.This site has customer service representatives available online 3.It offers the ability to speak to a live person if there is a problem
	Quality	PERVAL Sweeney and Soutar, 2001	1.Has consistent quality 2.Is well made 3.Has an acceptable standard of quality 4.Has poor workmanship (reverse scored) 5.Would not last a long time (reverse scored) 6.Would perform consistently
	Quality	Sweeney, Soutar & Johnson, 1999	1.This product would be reliable 2.This product would be dependable 3.This product would be durable 4.The workmanship on this product would be good
	Quality	SERV-PERVAL Petrick, 2002	1.Is outstanding quality 2.Is very reliable 3.Is very dependable 4.Is very consistent
	Customer service	Chien-Hsin, Sher & Hsin-Yu 2005	1.Overall I'd say the quality of my interaction with XYZ's customer support was poor/excellent 2.The company is willing and ready to respond to customer needs 3.When you have a problem, the website shows a sincere interest in solving it 4.Enquires are answered promptly

Higher Order Construct /Outcome	Determining Construct	Source	Item Description	Conclusions
Customer Perceived Value (CPV)	Perceived Value	E-S-QUAL Parasuraman, Zeithaml & Malhotra, 2005	1.The price of the products and services available at this site (how economical it is) 2.The overall convenience of using this site 3.The extent to which the site gives you a feeling of being in control 4.The overall value you get from this site for your money and effort	Generalisable to online pure service use situation, item 1 requires modification to reflect service task usage. Site references require modification to software task. Situated low in means end chain.
	Perceived Value for Money	Sweeney, Soutar & Johnson, 1999	1.This product is good value for money 2.At the price shown this product is economical 3.This product is a good buy	Requires minor modification to service context - suitable for generalisation to online use context
	Perceived Value	Chien-Hsin, Sher & Hsin-Yu 2005	1.Compared with the price you paid, this website provides good etail service value 2.Compared with the tangible and intangible costs you paid, purchasing from this website is worthwhile 3.You think you are getting good value for the money you spent	Purchase phase focus - better alternatives available. Also situatied too low in means end chain
Loyalty Intentions	Loyalty Intentions	E-S-QUAL Parasuraman, Zeithaml & Malhotra, 2005	1.Say positive things about this site to other people? 2.Recommend this site to someone who seeks your advice? 3.Encourage friends and others to do business with this site? 4.Consider this site to be your first choice for future transactions? 5.Do more business with this site in the coming months	Items 1-3 overlap with the WOM construct. Item 4 requires modification to a use context and item 5 is generalisable
	Repatronage	Chien-Hsin, Sher & Hsin-Yu 2005	1.you consider this website your first choice to buy the same kind of product (a good or a service) 2.You will consume more at this web site in the next few months 3.You will continue to purchase from this website even though other websites provide a similar etail service	All items generalisable to a use situation. Repatronage and loyalty utilise almost identical scales. The meaning of loyalty intent is clearly re purchase intent which can be modified to re-subscription intent for validity purposes
Positive Word of Mouth Rec'd'n (WOM)	Positive WOM	Chien-Hsin, Sher & Hsin-Yu 2005	You would say positive things about this website to other people You would recommend this website to someone who seeks your advice You would encourage friends and relatives to purchase from this website	Minor modifications only required to a use context, all items generalisable

Higher Order Construct /Outcome	Determining Construct	Source	Item Description
Experience	Valance of Experience	Szymanski & Hise, 2000	1.When shopping on XYZ, I have a/an (unpleasant/pleasant) experience 2.Two items missing
	Relevant Information	Szymanski & Hise, 2000	Evaluate Internet store fronts on each of the following dimensions: 1.Quantity of information 2.Quality of information 3.The quality of product information on XYZ's website is (not valuable/valuable)
	Information Motivation	Korgaonkar & Wolin, 1999	1.Because it gives me quick and easy access to large volumes of information 2.Overall, I learn a lot from using the web 3.So I can learn about things happening in the world 4.Overall, information obtained from the web is useful 5.Because it makes acquiring information inexpensive
Perceived Price	Monetary sacrifice	Chien-Hsin, Sher & Hsin-Yu 2005	1.You feel that the product (a good or a service) you purchased is expensive 2.You think you paid too much money
	Price	PERVAL Sweeney and Soutar, 2001	1.Is reasonably priced 2.Offers value for money 3.Is a good product for the price 4.Would be economical
	Behavioural Price	SERV-PERVAL Petrick, 2002	1.Is easy to buy 2.Required little energy to purchase 3.Is easy to shop for 4.Required little effort to buy 5.Is easily bought
	Monetary price	SERV-PERVAL Petrick, 2002	1.Is a good buy 2.Is worth the money 3.Is fairly priced 4.Is reasonably priced 5.Is economical 6.Appears to be a good bargain
Perceived Risk	Performance/ Financial Risk	Sweeney, Soutar & Johnson, 1999	1.There is a chance that there will be something wrong with this product or that it will not work properly 2.There is a chance that I will stand to lose money either because it won't work at all or costs more than it should to maintain it 3.This product is extremely risky/not risky in terms of its long term costs
	Security/ Privacy	Chien-Hsin, Sher & Hsin-Yu 2005	1.You feel like your privacy is protected at this site 2.You feel safe in your transactions with this website 3.The website has adequate security features
	Privacy	E-S-QUAL Parasuraman, Zeithaml & Malhotra, 2005	1.It protects information about my web-shopping behaviour 2.It does not share my information with other sites 3.This site protects information about my credit card

Higher Order Construct /Outcome	Determining Construct	Source	Item Description
Perceived Usefulness	Perceived Usefulness (SST in-store retail)	Weijters et al., 2007	1.Self-scanning will allow me to shop faster 2.Self-scanning will make me more efficient while shopping 3.Self-scanning reduces the waiting time at the cash register
Emotional	Emotional value	PERVAL Sweeney and Soutar, 2001	1.Is one that I would enjoy 2.Would make me want to use it 3.Is one that I would feel relaxed about using 4.Would make me feel good 5.Would give me pleasure
	Emotional Response	SERV-PERVAL Petrick, 2002	1.Makes me feel good 2.Gives me pleasure 3.Gives me a sense of joy 4.Makes me feel delighted 5.Gives me happiness
Social	Social value	PERVAL Sweeney and Soutar, 2001	1.Would help me to feel acceptable 2.Would improve the way I am perceived 3.Would make a good impression on other people 4.Would give its owner social approval
Aesthetics	Entertainment	Experiential Value Scale (EVS) Mathwick, Malhotra and Rigdon, 2001)	1. I think XYZ's Internet site is very entertaining 2. The enthusiasm of XYZ's Internet site is catching, it picks me up 3. XYZ doesn't just sell products - it entertains me
	Visual Appeal		1.The way XYZ displays its products is attractive 2. XYZ's Internet site is easthetically pleasing 3. I like the way XYZ's Internet site looks
Playfulness	Escapism		1. Shopping from XYZ's Internet site "gets me away from it all" 2. Shopping form XYZ makes me feel like I am in another world 3. I get so involved when I shop from XYZ that I forget everything else
	Enjoyment		1. I enjoy shopping from XYZ's Internet site for its own sake, not just for the items I may have purchased 2. I shop from XYZ's Internet site for the pure enjoyment of it

Example of Value Construct Overlaps



(Constructs delineated in dotted lines have been eliminated or replaced by later work, or the constructs are more extendable into use situations).

Appendix 2: Cultural Operant Resources

Perceived Control

Perceived control construct is frequently discussed in the technology literature and remains relevant to contexts with higher online participation. Consumer characteristics of users that preferred self-service included a propensity for: greater control and efficiency (Langeard et al. 1981; Bateson 1985); and improved service quality (Dabholkar, 1996). However, a review of the literature on perceived control identifies different perspectives. The technology services and SST perspectives highlight the importance of perceived control derived from a customer's participation in a service (Bateson, 1985; Meuter et al., 2000). Whereas the technology adoption and diffusion literature argues that greater controllability of a service by a user will lead to a higher intention to adopt (or use). Therefore perceived control can either be a driver or an outcome of the consumer's use of technology (Mohd-Any, Winklhofer and Ennew, 2015). One of the key features of interactive technology such as the Internet is user control (e.g., Meuter et al., 2000), since the performance of online services is independent of employees' involvement, location, and time. Perceived control and freedom in the context of Internet-based SST environments has been defined as the *"subjective assessment of control over a task"* (Zhu et al., 2007, p. 494). Studies within the SST literature have highlighted that users regard being in control as one of the benefits when using, for example, mobile services (e.g., Kleijnen, et al., 2007) or completing transactions on the Internet (e.g. Wolfinbarger and Gilly 2001).

Perceived behavioural control has been defined as '*the perceived ease or difficulty of performing the behaviour of interest* (Ajzen, 1991 p.183). For example Davis et al. (1989) found ease of use an important factor in decisions to use computer software and Dabholkar (1996) similarly found both ease of use and perceived control to be important determinants of consumer evaluations concerning self-service technology. In an Internet environment it has been referred to as how easy or difficult it will be to shop through the Internet, which is related to consumer confidence in their ability to perform the behaviour and therefore can be interpreted as a confidence construct (Hoffman and Novak, 1996). For example if two consumers have equally strong intent to shop over the Internet, the consumer with greater confidence in their ability is more likely to translate intent into outcome. Hoffman and Novak (1996) found that perceived behavioural control is also important in determining consumer usage of technology since the computer controlled environment itself acts as the basis of control due to the interactive interface.

In an online subscription context, the construct analysis identified potential overlap across a number of dimensions including: convenience (in the sense that removal of behavioural sacrifice and time constraints are an outcome of improved control); participation (which is addressed separately in the next section); technology readiness and self efficacy (in the sense that technical mastery gives the user feelings of control); and ease of use is addressed using the E-S Qual model. Consequently perceived control is removed from further consideration. This stance is supported by Mohd-Any, Winklhofer and Ennew (2015) in a recent study on evalue. Their findings identified a lack of discriminant validity between the perceived control, freedom and utilitarian value constructs. Although the literature differentiates between these dimensions, the authors concluded that control and freedom should be considered part of utilitarian value and not as a distinct value dimension.

The technology literature also identifies participation as being an important factor in the individual actor's ability (or motivation) to engage with the value proposition. The next section reviews participation.

Appendix 3: Online Subscription Service Context



Appendix 4: Semi-Structured Questionnaire

1. What method did you use for your post before using service XYZ? Why did you switch?
2. Can you talk me through how you use service XYZ and how it fits into your routine?
3. When you use service XYZ, can you describe what you think makes a good experience? What do you think makes a bad experience?
4. When you use service XYZ, which aspects of the online interaction are important to you? What makes the interaction work well? What makes the interaction go badly?
5. How much do you customise service XYZ to your own needs? Can you tell me how you do this? Would you like to be able to customise service XYZ more? How would you like to do this?
6. Please could you tell me about your relationship with company ABC. What is good about it? What is bad about it?
7. When you use service XYZ, is there anything you find enjoyable?
8. When you use service XYZ - what do you believe other people think?
9. Do you intend to re-subscribe to service XYZ? If yes what factors will be important to you?
10. Have you or would you recommend service XYZ to a friend? What factors are important in influencing you to do this?
11. Finally, please could you tell me about what the term value means to you?

Appendix 5: Royal Mail Request to Participate in Survey

SmartStamp®



Please help us improve our service

For some time now Royal Mail has been on a journey to improve our systems and services. As we modernise, we are doing our best to help you do business more effectively. As we shape the future of the SmartStamp® service, we think it is important to get a better understanding of what you value.

Have your say

We will be working closely with Nottingham University to take a more in-depth look at what you value about SmartStamp®. So, if you want to help influence the future development of SmartStamp®, please click on the following link to email a request for an invite to the survey or, email lixac4@nottingham.ac.uk. Nottingham University will then email you separately with a link to their web survey. It is estimated that this will take you 15 minutes to complete. Getting SmartStamp® right is really important to us – so we hope that you will see this project as a worthwhile investment of your time. We look forward to hearing your views.

Regards,

Paul Simpson
Head of SmartStamp®

Appendix 6: Nottingham University Survey Request

Nottingham University Business School

Dear Smartstamp® Customer

Thank you for taking the time to help us improve Smartstamp®.

Nottingham University is working with Royal Mail to develop a model to help understand what you value from using the Smartstamp® service. This model will help Royal Mail tailor future services to your business needs and will also help shape the future development path of Smartstamp®.

Please click on the link below, which will take you to the Smartstamp® online survey.

https://www.survey.bris.ac.uk/nottingham/smartstamp2

Nottingham University analyses data in aggregate form so any responses you provide are anonymous.

If you have any questions please contact Andy Callaghan, Doctoral Researcher on lixac4@nottingham.ac.uk.

Getting Smartstamp® right is important to Royal Mail so once again thank you for your assistance.



Dr Heidi Winklhofer
Professor of Marketing
Nottingham University Business School

Appendix 7: Survey Request Reminder

Nottingham University Business School

Dear SmartStamp® customers

We would like to take this opportunity to thank everybody that completed the questionnaire. It really is appreciated; we could not run the value model without you.

Every response counts to help us show Royal Mail what you value. The more responses we have, the stronger the case for change.

If you have not yet completed the questionnaire, please could we remind you to click on the link below to take part.

https://www.survey.bris.ac.uk/nottingham/smartstamp2

Some of you have pointed out that the structure of the questionnaire does not allow you to tell Royal Mail exactly what you think. We want to make sure your opinions are heard. So if you would like to send any additional comments to Andy Callaghan on lixac4@nottingham.ac.uk, we will make sure Royal Mail gets to hear about them.

Once again thank you for your assistance.



Dr Heidi Winklhofer
Professor of Marketing
Nottingham University Business School

Appendix 8: Past, Future and Imaginary Experiences

Respondent	Comments
Respondent 1	One area that your questionnaire did not cover was the occasional user like myself. I mainly use SmartStamp twice a year to send out magazines and each time I purchase around £700 worth of stamps in one day. The most frustrating thing is that SmartStamp does not allow me to purchase more than £100 of stamps in one go. The costs of curse oare on my side, with ink and paper
Respondent 2	Need to use smart stamp with i mac
Respondent 3	Historically whenever The Post Office have attempted to make changes to this software the whole thing has collapsed in a big untidy heap, we had such an occasion approx 12 months ago when the system was unusable for almost 7 days and they were forced to compensate users for the lack of service. As a small business posting several parcels per day, outages are not acceptable. **I have some suggestions as follows:-** 1. When doing the first label of the day, if you are not logged in the username and password box pops up. The natural thing to do is start typing the username. The problem is the username/password box pops up but does not have focus so whatever you type is not entered. You have to click the box to give it focus then enter the details.
	2. Parcels to overseas destinations that are 0 rated for VAT require a certificate of posting for our records. There is a certificate of posting option but all it does is links to a PDF of the blank form. It would be better if the software picked up the data from the postage history and filled the form in so all that has to be done is print it and get it validated at the PO Counter. 3. Extend the logo option to be able to include a CN22 form on the right side of the label next to the address for overseas mail. 4. when topping up the prepay account being able to enter any amount would be good and also if the system would remember the users payment details based on the users username/password like Amazon & Play.com do
Respondent 4	I am at a loss to understand why Smart Stamp has told me and I quote “we have on plans to recognise Mac computers”. For this reason, I have to keep an old PC just to print stamps. Yes, I know it’s possible to put a virtual PC on my MAC but why should I go to that trouble and expense, if Royal Mail can’t be bothered to come into this century?
Respondent 5	RM should not charge for this service as it is merely a facility for purchasing stamps it adds no additional worthwhile functionality that should be charged for Franking service attracts a discounted postage charging scale and I see no reason why SmartStamp customers should not be given the same or similar discounts as we are paying for our stamps in advance same as franking, but without the need for additional hardware over and above our standard computer equipment Questions 12 & 13 are ridiculous I have no feelings or choice the price is the price where is the control or feeling of control and who the hell cares
Respondent 6	I’ve just completed my survey for you, and I know you are not looking for suggestions via email but there was nowhere on the survey to put this and it’s something which is easy to implement and would really help improve SmartStamp. I find it difficult sometimes to know what the size limits are for Small Parcel, Medium, etc. A pop up beside each just showing the limits would save me time, as at the moment when you look for the information on SmartStamp it just forwards you to the Royal Mail homepage where it’s a nightmare to find! A pop up would save time over the year searching for this I know I could print these off and stick them to the wall but I don’t like to waste paper and a pop up is easy all round, plus these limits often change and I wouldn’t want old information on my wall and to be sending parcels out stamped incorrectly! Thanks and good luck improving SmartStamp, it’s already a great system and I don’t know why more small business I know don’t use it!
Respondent 7	The sort questions I expected to see were how the software could be improved. E.g. interactive post code use. How to make the software more user friendly. How to make printing easier. How to make paying for the service more seamless. By the way, thank you for pointing out that in future I will have to pay for the service. If that happens, I will almost certainly pull out. The whole point of a service like Smartstamp is to make it easier for the customer and reduce costs. From my point of view, the concept of SmartStamp is spot on. But the execution is poor. The software is not intuitive. It is clunky and slow to use. There is a steep learning curve to understand it. It ought to guide you stage by stage easily. It should automatically support post code address usage. By printing labels myself, it should be easier for staff to read the address causing less errors. It ought to be cheaper than using the local post office as I the customer is doing a lot of the work that is presently done by counter staff. I use Interparcel for my larger parcels. Their web based system is easy to use and guides me through from start to finish. If you have not already done so, please check it out and see how it could be done.
Respondent 8	The main problem with smartstamp is that automatic top-up payments don`t work so, every time I want to print stamps I have to go through the credit card - top up pain-in-the-butt procedure. The main problem with smartstamp is that automatic top-up payments don`t work so, every time I want to print stamps I have to go through the credit card - top up pain-in-the-butt procedure. Tell the cloth eared Royal Mail to get their fingers out of their backsides and employ a software engineer who knows what he is doing to fix the problem

Respondent 9	I have just completed the online survey about Smart Stamp and I feel it gave me no opportunity to describe the aspects of Smartstamp that I was unhappy with when I was using it – I have been unable to use it since our work place computers were upgraded to Windows 8 last autumn. **Several features that I found exasperating about Smart stamp were:** 1. A colleague originally set up the account using his email account – I was told that the only way to change that log in information was to start up a new account – ie there was no way to change the user details within the system 2. It was very difficult to print off a regular statement of use for use for matching against our Post Book – eg I needed a" use from- to" option – I think it was easier before the interim upgrade version 3. How could anybody be happy about using Smartstamp when you can't even access it with Windows 8 – that question made us howl in the office! Really! Anyway hope these additional comments will be taken on board
Respondent 10	When speaking with Smartstamp please ask them to enable customers to use Smartstamp on the Mac as, if this continues to be overlooked, I will stop using postage altogether and switch to email only marketing.
Respondent 11	Get it to connect with Outlook 2010 64bit version.
Respondent 12	We urgently need Smartstamp to support Windows 8.1 - surely not a major task after 3 years or so of the operating system???
Respondent 13	I just want it to be Mac compatible!
Respondent 14	If Smart Stamp now works with Windows 8 I would be happy to take part. If not then I am not interested.
Respondent 15	I would like to see a facility to print postcards. Typically standard 6x4 and 5x7 with the address on the right hand half of the postcard. I mail-merge lots of postcards and currently either print labels for them or put them in envelopes. Also I would like to see if the mail-merge could be better streamlined and simplified. A facility to quickly resend to an address stored in the history list.
Respondent 16	I have had problems with setting up specific label sizes where it says something like "the minimum label height allowed is 297 mm" (not sure exactly what it said but specifically I could not set it up for label printer with label 80 wide and 35mm high.
Respondent 17	I would like to add that, for me, a drawback of the SmartStamp service is that once a postage label has been printed the item must be posted within a short time limit or it becomes void. I cannot see any good reason for this, and feel they should remain valid once purchased, as are standard postage stamps
Respondent 18	Please reduce subscription of smartstamp, we pay enough for postage already. More control for layout of labels, eg mixing fonts or using normal and bold type. Discount for the more postage printed. Make prog full screen
Respondent 19	Do you know when Smartstamp will be available for Windows 8?
Respondent 20	We think that SS is a well-designed bit of software, user-friendly and robust, in that it has never fallen over in our experience. But if there is one respect in which we'd wish for an improvement, it would be in the printing side of things. Printing a standard DL envelope is easy as can be. But that apart, we're a bit miserable and usually end up printing onto an A4 sheet of paper and then, after cutting out the frank and address, sticking that onto the large size envelope with sellotape. Could one include, in the standard list of printing options, an A5 envelope size ? As for adhesive labels in sheet form, these don't like going through a laser printer more than once, because of the heat generated. The answer would seem to be a dedicated (or not) label printer, using a roll of self-adhesive labels. Such printers are not expensive and if the interfacing were made easy, that would seem an optimum solution. The label size would have to be large enough to accommodate frank and recipient address. and sender details ? We look forward to learning what changeswill be made
Respondent 21	one thing I would like to mention is that when you print the postage it says "post by dd/mm/yy", usually by the following day. I don't understand why they put this on; if I go to the post office and purchase stamps I can use put this on; if I go to the post office and purchase stamps I can use them as and when I need to, there is no "use by" date on them, so why put it on the Smart Stamp postage? That is the only problem I find with it.
Respondent 22	My biggest issue with Smartstamp is that it limits money credits to just £200.00 and only in fixed prescribed amounts. This means that I frequently have to go through the pain of crediting money at least twice on days when we are sending out parcels. I should like to see this arbitrary limit raised significantly and we should be able to credit whatever amount we want to. This wasn't such a problem prior to Royal Mail updating its web site.
Respondent 23	Most of the franking systems offer a discount on stamps it's a shame smart stamp can't do the same

Respondent 24	O.K here are a few things. a/ I use the Smartstamp system/website to buy things from Royal Mail ie postage. They charge me a fee per year to buy things from them* That is the equivalent of any Shop charging you to enter their premises. Not a concept you will find on the high street or in my experience anywhere on line. *b/ well they used to, it is currently suspended , whilst they sort out a bit of their website that went wrong in i think 2012 ! The main consequence of that fault is that every time i want to top up my prepay i have to enter all my credit/debit card details from scratch. Previously it was possible to store most of the information. I have asked when that will be fixed ; no useful reply received. *c/ should they reintroduce the charge i will probably buy my postage via my Amazon uk seller account ; at no charge as far as i can see. d/You can only use the "add postage in bulk "facilty once per print run. For example if i specify 10 stamps at £1.10 each they appear on my onscreen label display. If i then specify 4 stamps at £2.60 it deletes the earlier 10 stamps and i am left with just 4 X £2.60 on the display. This means i have to add any additional stamps 1 by 1. This is meant to be a labour/time saving device ! e/ It certainly is not a money saving scheme. I have to pay face value for all stamps. If i went back to a Franking machine i would be getting discounts to face value. f/ there are others but that's enough of my time for now. P.S Oh yes re b/ If when entering all your credit card details you make a mistake and press "enter" it tells you where your error is and asks you to correct it. ...having erased all the other data so you have to start again from scratch. Is it designed to annoy us?
Respondent 25	Thank you for the opportunity to give you more information about my opinions on SmartStamp. 1. I think the service should be subscription-free or the postage charges less than stamps. After all, we are providing the labels 2. SmartStamp does not seem fully compatible with Windows 7 in that I cannot scroll down the Postage History, so can only view/print the top 14 items. I contacted the Royal Mail SmartStamp helpdesk, but they simply advised reinstalling the software, which did not solve the problem. 3. When the Pint popup window appears, the focus is not automatically on the printing password box: you have to click in the box for the program to accept your typing 4. The ability to save mailmerge address lists would be helpful - eg just 'Dentists' from a Microsoft Access database of 'all customers'. At the moment you either have to manipulate the data in Access, delete unwanted entries and save the data in a new table, or else select (say) Dentists every time.
Respondent 26	The question not asked but might have been is regarding price. It is possible that the answer would be so obvious as not to be worth answering. However those ef us who use Smart stamp are disadvantaged pricewise, with franked post. I cannot understand why this should be so. Why is franked post allowed such a price benefit when compared to smart stamps? Retailers are paid are margin for selling stamps. A percentage of the cost of sale should be passed on to Smart Stamp users. The cost advantages to the Royal Mail must be broadly similar.
Respondent 27	OK. The problem is that a measurement of value is meaningless without the accompanying reasons for the results. I suspect Royal Mail is looking for a justification to shut the service down, probably as a result of commercial pressure from the franking machine industry. This would explain why they are not interested in the reasons for any customer dissatisfaction. In the general I like SmartStamp. It is easy to use and if implemented properly could offer excellent value to Royal Mail's business customers. Its shortcomings in my view are: **Not all Royal Mail services are supported** It is not possible to use SmartStamp for all Royal Mail services. Eg Special Delivery – Saturday. This means that such shipments need to be taken to the Post Office counter – I don't have the time to do this. I normally pass all registered packages through the side door without joining the queue. This system works well for my business. **SmartStamp Validity is too short** Currently the SmartStamp is only valid for 2 days (not even working days!). Sometimes this is very inconvenient – especially as I often do not have time at the end of the working day to visit the Post Office. Why have this restriction? **Automatic Upload of Shipping Information** It would save a lot of time if SmartStamp had the ability to upload the shipping address directly onto its computer system. This would avoid the Post Office having to do any processing. Often I have noticed that the Post Office do not seem to enter package details if they do not have time to do so at the end of the day. This means that my customers are not able to track their packages – not at all desirable! **Franking Machine customers unfairly benefit from lower postage costs** I am really annoyed that Royal Mail charge us a reasonably large fee for using SmartStamp and do not offer a postage discount. Franking Machine customers choose to pay for unnecessarily complicated and expensive Franking Machines (which should have been phased out years ago) and Royal mail subsidises this inefficiency. This is crazy. SmartStamp is far more ecological and does not require expensive hardware. Furthermore it has revenue protection features that I would expect Royal mail to need. **No API** Unlike other courier services and Royal Mail's other online shipping software there is no API for integrating Ecommerce Systems with SmartStamp
Respondent 28	Just a bit of feedback from me. Smartstamp is great for the way we work but the bit I would like to see improved is topping up the credit. It's a bit of a pain to have to pay by credit card online. There's a £100 limit and card details have to be entered each time. When we're busy this is a bit of a waste of time and it would be great if there was a simpler, quicker way.

Respondent 29	Hi, just like to make the following comments on this 'package' 1) As a customer buying credits 'upfront' from Royal Mail why is this mail not treated the same as 'franked mail' considering we are paying a premium for the postage against franked mail costs. 2) Can the printing software be updated to allow a dedicated printer to print direct to standard DL envelopes creating in effect a virtual franking machine. As Royal Mail is now a PLC I see a future where franking machines will no longer exist..Perhaps Smart Stamps can be updated bridge this gap?????
Respondent 30	A useful feature would be able to print a stamp that could be used as "stamped address envelope". At the moment this can't be done because the stamp as a post by date on it, but a facility to be able to do this would be very useful.
Respondent 31	I would further like to comment that as a long term user of SmartStamp I am 1. disappointed that now I have switched to mac I am unable to use the software. I have to switch back to windows just to print. Time consuming! 2. Am unable to download a copy of the software within windows of my mac or pc, the links do not work correctly. You think you are den and then unable to activate! Other than that like the software.
Respondent 32	I have 3 comments that I would like Royal Mail to address 1. When doing SmartStamp software updates, please don't start them from Midnight. I normally prepare my stamped labels during the evening. I wait until after midnight to print them so that I get a full TWO days to get them posted. However on numerous occasions shortly after midnight, SmartStamp is updating and I get an error telling me to try again later. I suspect these updates are automatic and would ideally be better running anytime after 2am 2. With other companies offering online stamp printing such as eBay and indeed the Royal Mail website, it makes me wonder where the value is having SmartStamp. The only extra feature I use is the PDF Certificate Of Posting, so I am wondering if SmartStamp is really worth the annual fee. 3. Finally I think with every other Royal Mail business service, discounts are given to make the service more cost effective. Postage paid by a business is less than what a domestic household would have to pay due to the business subscription. SmartStamp is a subscription service but has no preferential rates for using it. It would be good to see SmartStamp customers having lower postage fees… even if just given on 1st & 2nd class letter service. Or even delay postage price rises or 6 months. There seems to be no advantage or incentive to using the service, with no recognition of customer loyalty.
Respondent 33	1. I would like the facility of printing stamps which do not show the face value (ie just 'FIRST' or 'SECOND') 2. SmartStamp does not work on Windows 8.1, why not? It is most inconvenient having to have a second PC using Windows XP just to use the programme.

Appendix 9: Questionnaire

Section 1: Service

	Agree Strongly	Agree	Agree Slightly	Neither Agree nor Disagree	Disagree Slightly	Disagree	`Disagree Strongly
1. To what extent do you agree with the following statements about online system efficiency?							
It's easy to find what I need on SmartStamp	❑	❑	❑	❑	❑	❑	❑
SmartStamp enables me to complete activities quickly	❑	❑	❑	❑	❑	❑	❑
Information is well organised on SmartStamp	❑	❑	❑	❑	❑	❑	❑
SmartStamp loads pages fast	❑	❑	❑	❑	❑	❑	❑
SmartStamp is simple to use	❑	❑	❑	❑	❑	❑	❑
I can access SmartStamp quickly	❑	❑	❑	❑	❑	❑	❑
SmartStamp is well organised	❑	❑	❑	❑	❑	❑	❑
2. To what extent do you agree with the following statements about online system availability?							
SmartStamp is always available for business	❑	❑	❑	❑	❑	❑	❑
SmartStamp launches and runs straight away	❑	❑	❑	❑	❑	❑	❑
SmartStamp does not crash	❑	❑	❑	❑	❑	❑	❑
Pages on SmartStamp do not freeze after I enter my information	❑	❑	❑	❑	❑	❑	❑
3. To what extent do you agree with the following statements about Royal Mail's ability to reliability deliver your SmartStamps?							
Delivery promises are kept	❑	❑	❑	❑	❑	❑	❑
Items are delivered within a suitable time frame	❑	❑	❑	❑	❑	❑	❑
Items are delivered quickly	❑	❑	❑	❑	❑	❑	❑
Royal Mail is truthful about its offerings	❑	❑	❑	❑	❑	❑	❑
Accurate promises are made about service delivery	❑	❑	❑	❑	❑	❑	❑

Have you ever contacted the SmartStamp helpdesk (either by email or telephone) to resolve a problem with the service?

❑ Yes ❑ No

Have you ever used the SmartStamp refund process ?

❑ Yes ❑ No

Service Experience Continued

	Agree Strongly	Agree	Agree Slightly	Neither Agree nor Disagree	Disagree Slightly	Disagree	`Disagree Strongly
4. To what extent do you agree with the following statements about Royal Mail's helpdesk or online help responsiveness?							
Royal Mail resolved my issue promptly	❑	❑	❑	❑	❑	❑	❑
Resolution of my issue was important to Royal Mail	❑	❑	❑	❑	❑	❑	❑
Royal Mail was not too busy to respond to my requests	❑	❑	❑	❑	❑	❑	❑
The behaviour of Royal Mail staff gave me confidence	❑	❑	❑	❑	❑	❑	❑
Royal Mail staff communicated with me at the right technical level	❑	❑	❑	❑	❑	❑	❑
Royal Mail personnel were courteous with me	❑	❑	❑	❑	❑	❑	❑
Royal Mail staff had the knowledge to answer my questions	❑	❑	❑	❑	❑	❑	❑
5. To what extent do you agree with the following statements about contacting Royal Mail when you have a problem with SmartStamp?							
Royal Mail provides an easy to find contact telephone number	❑	❑	❑	❑	❑	❑	❑
SmartStamp has online help available if there is a problem	❑	❑	❑	❑	❑	❑	❑
Royal Mail directs me to the right person quickly when I call the helpdesk with a problem	❑	❑	❑	❑	❑	❑	❑
Royal Mail answers the telephone quickly	❑	❑	❑	❑	❑	❑	❑
6. To what extent do you agree with the following statements about the SmartStamp refund process for spoilt stamps?							
Royal Mail provides a refund when there is a problem	❑	❑	❑	❑	❑	❑	❑
Royal Mail compensates me when I spoil stamps	❑	❑	❑	❑	❑	❑	❑
The SmartStamp refund process for spoilt stamps is efficient	❑	❑	❑	❑	❑	❑	❑

Section 2: Service Proposition

	Agree Strongly	Agree	Agree Slightly	Neither Agree nor Disagree	Disagree Slightly	Disagree	Disagree Strongly
1. To what extent do you agree with the following statements about convenience?							
Using SmartStamp is an efficient way to manage my time	❑	❑	❑	❑	❑	❑	❑
Using SmartStamp is convenient for me	❑	❑	❑	❑	❑	❑	❑
Using SmartStamp allows me to save time	❑	❑	❑	❑	❑	❑	❑
Using SmartStamp makes generating postage less time consuming	❑	❑	❑	❑	❑	❑	❑
SmartStamp allows me flexibility of location	❑	❑	❑	❑	❑	❑	❑
2. To what extent do you agree with the following statements about the price of the SmartStamp subscription (£5.99 per month or £59.99 per year)?							
You feel that that SmartStamp is expensive	❑	❑	❑	❑	❑	❑	❑
You think you paid too much money for SmartStamp	❑	❑	❑	❑	❑	❑	❑
3. To what extent do you agree with the following statements about risk?							
There is a high chance that SmartStamp will not work properly	❑	❑	❑	❑	❑	❑	❑
There is a high chance that items would not be delivered as promised	❑	❑	❑	❑	❑	❑	❑
There is a high chance that I will lose money because SmartStamp won't work properly	❑	❑	❑	❑	❑	❑	❑
SmartStamp is extremely risky in terms of its long term costs	❑	❑	❑	❑	❑	❑	❑
I think that Royal Mail protects information about my online behaviour	❑	❑	❑	❑	❑	❑	❑
I believe that Royal Mail does not share my information	❑	❑	❑	❑	❑	❑	❑
I think that Royal Mail protects information about my credit card	❑	❑	❑	❑	❑	❑	❑

Section 3: Online Interactivity

1. To what extent do you agree with the following statements about how much you like using SmartStamp?							
I enjoy using SmartStamp	❑	❑	❑	❑	❑	❑	❑
Having SmartStamp makes me want to use it	❑	❑	❑	❑	❑	❑	❑

Section 3: Online Interactivity

	Agree Strongly	Agree	Agree Slightly	Neither Agree nor Disagree	Disagree Slightly	Disagree	`Disagree Strongly
I feel relaxed about using SmartStamp	❑	❑	❑	❑	❑	❑	❑
Using SmartStamp makes me feel good	❑	❑	❑	❑	❑	❑	❑
2. To what extent do you agree with the following statements about feeling in control when you use SmartStamp?							
Using SmartStamp for my postage allows me to make my own decisions	❑	❑	❑	❑	❑	❑	❑
I can control what happens when I use SmartStamp	❑	❑	❑	❑	❑	❑	❑
Using SmartStamp gives me flexibility of options	❑	❑	❑	❑	❑	❑	❑
I have control over my postage when using SmartStamp	❑	❑	❑	❑	❑	❑	❑
3. To what extent do you agree with the following statements about your confidence in using technology?							
I feel apprehensive about using SmartStamp beyond its basic functionality	❑	❑	❑	❑	❑	❑	❑
Technical terms sound like confusing jargon	❑	❑	❑	❑	❑	❑	❑
I have avoided using SmartStamp's full functionality because it is unfamiliar to me	❑	❑	❑	❑	❑	❑	❑
I hesitate to use some of SmartStamp's functionality for fear of making mistakes I can't correct	❑	❑	❑	❑	❑	❑	❑

Section 4: Your Opinions

1. To what extent do you agree with the following statements about your satisfaction with SmartStamp?							
You are satisfied with your decision to purchase SmartStamp	❑	❑	❑	❑	❑	❑	❑
Your choice to purchase SmartStamp was a wise one	❑	❑	❑	❑	❑	❑	❑
You think you did the right thing to purchase SmartStamp	❑	❑	❑	❑	❑	❑	❑

Section 4: Your Opinions

	Agree Strongly	Agree	Agree Slightly	Neither Agree nor Disagree	Disagree Slightly	Disagree	`Disagree Strongly
2. To what extent do you agree with the following statements about your future intentions?							
You consider SmartStamp your first choice to buy postage	❑	❑	❑	❑	❑	❑	❑
You will continue to subscribe to SmartStamp in the next few months	❑	❑	❑	❑	❑	❑	❑
3. To what extent do you agree with the following statements about recommending SmartStamp?							
You would say positive things about SmartStamp to other people	❑	❑	❑	❑	❑	❑	❑
You would recommend SmartStamp to someone who seeks your advice	❑	❑	❑	❑	❑	❑	❑
You would encourage friends, relatives or business associates to purchase SmartStamp	❑	❑	❑	❑	❑	❑	❑
4. To what extent do you agree with the following statements about how you value SmartStamp?							
Compared with the price you paid SmartStamp provides good value	❑	❑	❑	❑	❑	❑	❑
Compared with the cost and effort involved, using SmartStamp is worthwhile	❑	❑	❑	❑	❑	❑	❑
You think you are getting good value for the money you spent using SmartStamp	❑	❑	❑	❑	❑	❑	❑

Section 5: Support Network

	Yes	**No**
Have the following parties helped you make better use of SmartStamp or the wider Royal Mail proposition? *E.g. helped you to resolve problems; provided advice; optimised your system use; or helped you improve your sales proposition).* Please tick all that apply		
Friends and /or work colleagues	❑	❑
Royal Mail staff *(e.g. postman, post office counter or SmartStamp helpdesk staff)*	❑	❑
Recipient or customer *(e.g. eBay feedback).*	❑	❑
Third party technical or infrastructure support (*i.e. IT companies that help you, or your own internal IT department, which are not related to Royal Mail)*	❑	❑
Other (Please identify)	❑	❑

Section 6: Classification Data

Please complete the classification data. All information is completely confidential and used in aggregate form only.

Type of User

- ❑ Company
- ❑ Home User
- ❑ Both
- ❑ Other

Connection

- ❑ Broadband
- ❑ Dial up
- ❑ Other

Technology Competence

(To what extend do you consider yourself to be technically competent. Please rate yourself by ticking one box on the scale below)

Novice ❑ ❑ ❑ ❑ ❑ **Expert**

Gender

- ❑ Male
- ❑ Female

Age

- ❑ ≤ 20
- ❑ 21-25
- ❑ 26-30
- ❑ 31-35
- ❑ 36-40
- ❑ 41-45
- ❑ 46-50
- ❑ 51-55
- ❑ 56-60
- ❑ ≥ 61

Service Location

- ❑ Home/Home Office
- ❑ Office
- ❑ Multiple locations
- ❑ Other

How Long Have You Subscribed to SmartStamp?

- ❑ ≤ 3 Months
- ❑ 4-6 Months
- ❑ 7-12 Months
- ❑ 1-2 years
- ❑ 3-4 Years
- ❑ ≥ 5 Years

Mail Volumes

- ❑ ≤5 items/day
- ❑ 6-10 items/day
- ❑ 11-25 items/day
- ❑ 26-50 items/day
- ❑ 51-100 items/day
- ❑ ≥ 101 items/day

Functionality Usage (✓ Tick all that apply)

- ❑ Mail Merge
- ❑ Logo/slogan generator
- ❑ International postage calculator
- ❑ Print to labels
- ❑ Print direct to envelope
- ❑ Other

Mail Types (✓Tick all that apply

- ❑ Letters
- ❑ Large letters (e.g. magazines)
- ❑ Packets (e.g. books or DVDs)
- ❑ Parcels
- ❑ Other

Company Years in Operation

- ❑ ≤1 Year
- ❑ 2-3 Years
- ❑ 4-5 Years
- ❑ 6-10 Years
- ❑ ≥ 11 Years
- ❑ Not Applicable

No. of Employees

- ❑ 0
- ❑ 1
- ❑ 2-5
- ❑ 6-10
- ❑ 11-19
- ❑ ≥ 20

Company Turnover (Last Year)

- ❑ ≤ £50,000
- ❑ £50,001 - £100,000
- ❑ £100,001 - £500,000
- ❑ £500,001 – 1,000,000
- ❑ £1,000,001 - £5,000,000
- ❑ ≥ £5,000,001

SmartStamp Payment Authorisation

- ❑ You authorise subscription purchase
- ❑ You ask permission to purchase the subscription
- ❑ Not Applicable

Your Role

- ❑ Owner/Director
- ❑ Employee
- ❑ Other

Appendix 10: Extract From Interview Codes

Higher Order Constructs	Antecedent Constructs	Definition	Interview Dialogue	Code Meaning
Functional Value	Efficiency	The ease and speed of accessing and using the site (Parasuraman, Zeithaml & Malhotra, 2005)	**..**I think part of the convenience factor of SmartStamp is you can very quickly, within a small number of key presses, get the address, postage, value onto your labels and print it out without having to go through I would say a lot of verification steps **…We talked about configuration? What else is important?** It's really the usability in terms of finding the information I want quickly, minimal number of key presses, being able to complete the transaction quickly and reliably with out having to reconfirm a lot of things and re-enter things.	Speed of system use Ease of system access Speed of system access Ease of system use (flow) System control
	System Availability	The correct technical functioning of the site (Parasuraman, Zeithaml & Malhotra, 2005)	**We talked through what was a good experience. What about a bad experience - what does that mean to you?** From a SmartStamp perspective? **Yes** Any systems outage is a bad experience. Thankfully they're very few. I tend to use a system on a Sunday night, which is fairly low volume transactions. I've never noticed any delays or time outs. I've only had one outage I think of the system in the two and a half years I've been using it. Obviously that is a bad experience because it means that I couldn't get the items posted the next day	System availability Site functions correctly
	Fulfilment/ Reliability	The extent to which the site's promises about order delivery and item availability are fulfilled (Parasuraman, Zeithaml & Malhotra, 2005)	…As an e-Bay seller you're rated on speed of delivery. So I found the convenience factor was that I could pre-package the items, weigh them and it was then simply a case of printing out the SmartStamps on Sunday night and then dropping the packages off at the local Post Office on the Monday. **What else is important about Royal Mail and responsiveness to you when you have a need?** They provide an excellent service. SmartStamp's just a part of the overall service. I can post items on a Monday morning and all the UK items that are first class will be undoubtedly with my buyers on Tuesday morning. I've only ever had one item go astray out of nearly 500 sales now and that was an international item, which eventually	Co-produced delivery promise Actor co-creation Service provider fulfilment channel Service reliability System reliability Delivery promise

		Note: definition needs amending e.g. not a product purchase, rather reliability of access to a service	did get returned. So in terms of responsiveness I've never really had to use their "I've lost an item" help desk in terms of SmartStamp so the two occasions where I've had to use their help desk they've fixed the problem within hours. For me that's very important, if anything they've got to keep that level of support going. **…Can you talk to me about how important fulfilment is to you? And what that means?** Yes it's all part of the end-to-end service as a seller. I think that's probably the area where I have the most criticism of Royal Mail in terms of an end-to-end service. SmartStamp was quite a revolution among the post offices so they're convenient drop off points. It took quite a few of the post offices a while to actually know what SmartStamp is, some of them even insisted on reweighing it and checking it for you. So I think generally post offices have a lot to do in terms of education on SmartStamp for that side of fulfilment. The actual delivery side no criticisms at all from what I know the usual sterling efforts by postmen to make sure your parcels get there and they contribute to the positive feedback I get as a seller because being able to get the items in the post on a Monday morning and have them delivered on Tuesday is as good as any professional seller **Oh I see so it's minimum use on the system by yourself?** Yes usability. **Oh OK, I thought you meant interaction with Royal Mail?** No the good thing about it there is very little interaction with Royal Mail other than dropping the item off. The user journey is totally Royal Mail free - its a virtual network as far as I'm concerned. **Is it important to you to minimise the role of Royal Mail in what you do?** It's not something you conscientiously do but it would be better for me if there were more drop-off points that took SmartStamp. I could as easily drop off my packages at Tesco as I could go into a Post Office system. I've even resorted to bringing small packages into Lockheed to use the internal mail to get them out, in which case I bypass any interaction with Royal Mail completely	Service provider fulfilment channel Actor functional value *(in sense of lack of)* Actor control (*in sense of trust and knowledge control)* Bilateral resource integration Actor reliability Actor value multiplier Actor participation Service provider fulfilment channel Actor elimination Actor elimination

Appendix 11: Cross Case Analysis

Cross Case Analysis											
Category	**Constructs**	**Extant Definition**	**Codes**	**Interviews**							**Meta Code (Code Patterns)**
				A	**B**	**C**	**D**	**E**	**F**	**G**	
Functional Value	Efficiency	The ease and speed of accessing and using the site (Parasuraman, Zeithaml & Malhotra, 2005)	Speed of system use	✓	✓	✓	✓	✓	✓	✓	Systems Efficiency
			Ease of system access	✓	✓	✓	✓	✓	✓	✓	
			Speed of system access	✓	✓	✓	✓	✓	✓	✓	
			Ease of system use	✓	✓	✓	✓	✓	✓	✓	
			System control	✓	✓	✓	✓	✓	✓		
	System Availability	The correct technical functioning of the site (Parasuraman, Zeithaml & Malhotra, 2005)	System availability	✓	✓	✓	✓	✓	✓	✓	Systems Availability
			Site functions correctly	✓	✓	✓	✓	✓	✓	✓	
	Fulfilment/ Reliability	The extent to which the site's promises about order delivery and item availability are fulfilled (Parasuraman, Zeithaml & Malhotra, 2005)	Service reliability	✓	✓	✓	✓	✓	✓	✓	Fulfilment/ Reliability
			Delivery promise	✓	✓	✓	✓	✓	✓	✓	
			System reliability				✓		✓	✓	
			Co-produced delivery promise		✓				✓		
	Responsiveness	Effective handling of problems and returns through the site (Parasuraman, Zeithaml & Malhotra, 2005)	Interaction time	✓		✓	✓	✓	✓	✓	Timely issue resolution
			Interaction efficiency			✓	✓	✓	✓	✓	
			Interaction routing	✓		✓	✓			✓	
			Interaction resolution	✓		✓	✓	✓	✓	✓	
			Interaction opportunity cost	✓		✓			✓	✓	
			Telephone Interaction	✓		✓	✓	✓	✓	✓	
			Interaction emotion	✓		✓		✓		✓	Interaction empathy
			Interaction empathy	✓		✓		✓	✓	✓	
			Interaction assurance	✓		✓	✓	✓		✓	Interaction control
			Interaction control	✓		✓	✓	✓	✓	✓	
			Cost effective support				✓			✓	
			Co-produced service recovery				✓	✓	✓	✓	Co-produced service recovery
			Response resource integration *(service provider shared assets)*				✓			✓	
			Actor network co-produced knowledge				✓		✓	✓	
			Online Interaction	✓		✓			✓	✓	
	Compensation	The degree to which the site compensates customers for problems (Parasuraman, Zeithaml & Malhotra, 2005)	Fulfilment compensation				✓	✓		✓	
			Compensation process efficiency	✓			✓	✓	✓	✓	
			Compensation process control	✓					✓		Compensation control
			Compensation control	✓			✓		✓	✓	
			Compensation trust						✓	✓	
	Contact	The availability of assistance through telephone or online representatives (Parasuraman, Zeithaml & Malhotra, 2005)	Online availability (system not person)			✓				✓	Online contact availability
			Online representation (System)	✓		✓			✓	✓	
			Contact Access Speed	✓		✓	✓	✓	✓	✓	Telephone contact availability
			Contact Availability	✓		✓	✓	✓	✓	✓	
			Contact Routing	✓		✓	✓			✓	

Cross Case Analysis

Category	Constructs	Extant Definition	Codes	Interviews							Meta Code (Code Patterns)
				A	B	C	D	E	F	G	
Convenience	Time	Consumers' perceived expenditures of time to create transaction convenience (Berry, Seiders and Grewal, 2002)	Comparative cost of time	✓		✓	✓	✓	✓	✓	
			Opportunity cost of time *(note personal and work time allocations)*	✓		✓	✓	✓	✓	✓	Time cost hierachy
			Time Creation *(for other things)*	✓		✓	✓	✓	✓	✓	
			Time hierarchy				✓	✓	✓	✓	
			Time efficiency	✓		✓	✓	✓	✓	✓	Time efficiency
			Time to outcome	✓		✓	✓	✓	✓	✓	
			Information timeliness			✓	✓	✓	✓	✓	
	Location	The location flexibility relating to where the service interaction occurs (Heinonen 2004)	Location fixed *(Home or workplace)*	✓		✓	✓	✓	✓	✓	
			Location flexibility			✓	✓	✓	✓		Avoidance of location sacrifice
			Location sacrifice	✓		✓	✓	✓	✓	✓	
			Location opportunity cost (interaction at post office)	✓		✓	✓	✓	✓	✓	
	Behavioural Sacrifice	What is given up or sacrificed to use a product or service (extension of Zeithaml 1988, p.10).	<Process sacrifice	✓		✓		✓	✓	✓	Less task inefficiency
			Minimum interaction						✓		
			<Role sacrifice	✓		✓	✓	✓	✓	✓	
			<Time sacrifice	✓		✓	✓	✓	✓	✓	Less inconveneince
			Technology sacrifice							✓	
			> Convenience			✓	✓	✓	✓	✓	
			<Location sacrifice	✓		✓	✓	✓	✓	✓	
			<Financial sacrifice				✓	✓			
			<Emotional sacrifice					✓	✓	✓	Less irritation
			< Boredom	✓							
			< Resource integrator sacrifice	✓		✓	✓		✓	✓	
Comparative Price	Price	What is given up or sacrificed to obtain a product (Zeithaml 1988, p.10). *Money given up to use a product or service*	Money vs. time trade-off	✓		✓	✓		✓	✓	
			Financial opportunity cost trade-off (resource intgr)	✓		✓		✓	✓		Cost/hour trade-off
			Cost/hour trade-off	✓		✓		✓	✓		
			Price elasticity (narrow)	✓		✓			✓	✓	Pure price
			Monetary trade-off	✓		✓	✓	✓	✓	✓	
			Efficiency trade-off	✓		✓	✓	✓	✓	✓	Efficiency trade-off
			Convenience trade-off						✓		
Perceived Risk The subjective expectation of a loss (Store & Gronhaug, 1993)	Security/ Privacy Risk	The degree to which the site is safe and protects customer information (Parasuraman, Zeithaml & Malhotra, 2005)	Security risk business	✓		✓	✓	✓			Security risk hierarchy
			Security risk owner	✓		✓	✓		✓		
			Security risk employee	✓		✓	✓				
			Security risk role	✓		✓	✓				
			Site safety (third party)	✓		✓	✓	✓	✓	✓	Site safety
			Site safety (Identity)	✓		✓	✓	✓	✓		
			Site safety (brand)	✓		✓			✓	✓	
			Security risk reputation	✓		✓	✓		✓		
			Personal information protection	✓		✓	✓	✓	✓	✓	Personal information protection
			Security risk identity				✓	✓	✓	✓	
			Internal security risk			✓	✓				Security control
			Security control (internal business related)			✓	✓	✓	✓		
			Security assurance			✓	✓	✓	✓	✓	
			Security risk actor network	✓		✓	✓	✓	✓	✓	
	Performance Risk	The loss incurred when a brand or product does not perform as expected (Horton, 1976)	System performance risk	✓		✓	✓		✓	✓	System performance risk
			Payment availability risk	✓							
			Development risk	✓							
			Service reliability risk			✓	✓	✓	✓	✓	Service reliability risk
			Service recovery risk (outcome)	✓		✓	✓	✓	✓	✓	
			Service recovery risk (system repair)	✓		✓	✓				
			Performance risk (in-house IT)	✓		✓	✓		✓		Actor network performance risk
			Performance risk actor (end customer)				✓		✓	✓	
			Performance risk actor (service provider staff)				✓	✓	✓	✓	
			Co-created brand risk						✓	✓	
			Actor network symbiotic risk						✓	✓	
			Performance recommendation risk				✓		✓		

Cross Case Analysis

Category	Constructs	Extant Definition	Codes	Interviews							Meta Code (Code Patterns)
				A	B	C	D	E	F	G	
Perceived Risk	Financial Risk	A net financial loss to a customer, including the possibility that the product may need to be repaired, replaced or the purchase price refunded (Horton, 1976)	Internal audit	✓		✓					Financial Accountability
			Financial accountability	✓		✓	✓	✓	✓	✓	
			Payment mechanism fraud risk (company)			✓	✓	✓		✓	Fraud loss risk
			Identity fraud risk			✓	✓		✓		
			Payment mechanism fraud risk (personal)	✓		✓	✓		✓		
			Financial risk assurance				✓	✓	✓	✓	Financial risk control
			Risk mitigation via actor network				✓	✓	✓		
			Service financial loss	✓			✓		✓	✓	Operationsal loss risk
			3rd party IT costs	✓			✓				
Hedonic Value	Play/Fun/ Pleasure	Intrinsic value is subjective and personal in nature and value perceptions result from the fun and playfulness derived from an experience, rather than from the completion of a task (Babin, Darden and Griffin, 1994).	Pleasure from efficiency			✓	✓	✓	✓	✓	Pleasure from task efficiency
			Fun from task execution				✓				
			Actor network fun (colleagues/friends)			✓	✓		✓		Actor network pleasure
			Actor network pleasure (recipient)			✓			✓	✓	
			Co-created pleasure			✓	✓	✓	✓	✓	
			Fun/play relevant						✓		
			Fun/play not relevant – task orientated	✓		✓	✓	✓		✓	
	Social value	*The utility derived from the product's ability to enhance social self-concept'* (Sweeney and Soutar, 2001, p.211).	Social recognition	✓		✓	✓	✓	✓	✓	Enhancment of Brand concept
			Social recommendation	✓		✓			✓		
			Social credibility			✓	✓	✓	✓		
			Social advertising	✓		✓	✓	✓	✓	✓	
			Social identity	✓		✓	✓	✓		✓	Projection of self concept
			Social image	✓		✓	✓	✓	✓	✓	
			Social interaction				✓		✓		
			Social actor co-created value			✓	✓	✓	✓	✓	Actor network utility
			Actor network assistance				✓		✓	✓	
	Emotional value	The utility derived from the feelings or affective states that a product generates' (Sweeney and Soutar, 2001, p.211).	Emotional recognition	✓		✓	✓	✓	✓	✓	Affective state from brand association
			Emotional advertising	✓		✓	✓	✓	✓	✓	
			Emotional personal care			✓		✓	✓		
			Emotional image	✓		✓	✓	✓	✓	✓	
			Emotional control			✓	✓	✓	✓		Affective state from being in control
			Emotional security			✓					
			Emotional satisfaction	✓		✓	✓		✓	✓	Affective state from doing a good job
			Emotional role satisfaction			✓	✓	✓	✓		
			Emotional actor network value			✓	✓	✓	✓	✓	
Resource Integration	Personal Ability	'Possessing the required skills and confidence to complete the task' (Meuter et al., 2005, p.64)	Technology anxiety	✓		✓	✓	✓	✓	✓	Technical Confidence
			Technology competence	✓		✓	✓	✓	✓	✓	Technical Competence
			Control value proposition				✓	✓	✓	✓	
			Service recovery outcome	✓		✓			✓	✓	
			Content control	✓		✓	✓	✓	✓	✓	
			Interaction sequencing	✓		✓	✓	✓	✓	✓	
			Interaction timing	✓		✓	✓	✓	✓	✓	
			Technology control (set up)			✓		✓			
	Network	"All social and economic actors are resource integrators" (Vargo and Lusch 2008)	Actor service recovery role (third party)	✓		✓	✓	✓		✓	Service provider help desk
			Actor anxiety assurance			✓		✓			
			Actor value multiplier (Systemr)				✓		✓		Friends & colleagues
			Actor opportunity cost	✓		✓		✓	✓	✓	
			Actor functional value	✓		✓	✓		✓	✓	
			Actor value multiplier (colleagues)	✓			✓				
			Actor recommendation	✓			✓		✓		Recipient/ Customer
			Actor participation	✓			✓	✓	✓	✓	
			Actor elimination					✓	✓		Service provider fulfimment channel
			Bilateral resource integration			✓			✓		
			Actor reliability				✓		✓	✓	
			Actor control	✓				✓	✓	✓	
			Actor security assurance			✓			✓		
			Actor co-production/creation				✓		✓	✓	
			Actor value multiplier (Service provider)			✓		✓	✓		
			Third party technical/infrastructure support	✓		✓	✓	✓			Third party technical/ infrastructure support

Cross Case Analysis												
Category	Constructs	Extant Definition	Codes	Interviews							Meta Code (Code Patterns)
				A	B	C	D	E	F	G	
Validation Constructs	Resubscription Intent	An aim to pay fees that recur over time to access an online service	RSI VFM	✓		✓		✓	✓	✓	RSI VFM
			RSI Equivalent value proposition	✓		✓			✓	✓	
			RSI Price	✓		✓	✓	✓	✓	✓	
			RSI Satisfaction	✓		✓			✓	✓	
			RSI convenience	✓		✓		✓	✓		
			RSI Hedonic			✓			✓	✓	
			RSI permission	✓		✓					RSI Resource integration
			RSI Resource integration	✓			✓		✓	✓	
			RSI co-creation				✓		✓		
	Word of Mouth Recommendation	Verbally endorsing a product or service within a network of actors	WOM Reactive	✓		✓	✓	✓			
			WOM functional value	✓		✓	✓		✓	✓	
			WOM CPV	✓		✓	✓		✓		
			WOM resource integration	✓		✓	✓		✓		
			WOM incentive				✓	✓			
			WOM coproduction				✓		✓		
			WOM control	✓							
			WOM Price	✓							
			WOM Hedonic	✓							
	Customer Perceived value	Customer value is a customer's perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer's goals and purposes in use situations (Woodruff, 1997, p.5)	Comparative Price	✓		✓	✓	✓	✓	✓	
			Functional value	✓		✓	✓	✓	✓	✓	
			Efficiency	✓		✓	✓		✓	✓	
			Availabiity	✓							
			Fulfilment/reliability	✓		✓	✓		✓	✓	Functional value
			Responsiveness	✓							
			Service recovery	✓							
			Contact	✓							
			Satisfaction			✓			✓		
			Convenience	✓		✓				✓	Convenience
			Time	✓		✓			✓	✓	
			Aesthetics/brand			✓					Hedonic
			Hedonic	✓		✓					
			Resource integration	✓		✓	✓		✓	✓	
			Perceived control				✓		✓	✓	
			Performance risk						✓		
			Co-production						✓		
			Interaction	✓							

Appendix 12: Construct and Item Refinements

Qualitative Refinements To The Instrument						
Higher Order Constructs	**Antecedent Constructs**	**Definitions**	**Refined Definitions**	**Extant Items**	**Qualitative Findings Amendments**	**Refined Items**
Functional Value	Efficiency	The ease and speed of accessing and using the site (Parasuraman, Zeithaml & Malhotra, 2005)	The ease and speed of accessing and using the site and/or system	1.This site makes it easy to find what I need 2.It makes it easy to get anywhere on the site 3.It enables me to complete a transaction quickly 4.Information at this site is well organised 5.It loads pages fast 6.The site is simple to use 7.This site enables me to get onto it quickly 8.This site is well organised	Amendments to reflect system context only	1. It's easy to find what I need on SmartStamp 2. SmartStamp enables me to complete activities quickly 3. Information is well organised on SmartStamp 4. SmartStamp loads pages fast 5. SmartStamp is simple to use 6. I can access SmartStamp quickly 7. SmartStamp is well organised
	System Availability	The correct technical functioning of the site (Parasuraman, Zeithaml & Malhotra, 2005)	The correct technical functioning of the site and/or system	1.This site is always available for business 2.This site launches and runs straight away 3.This site does not crash 4.Pages at this site do not freeze after I enter my order information	Amendments to reflect system context only	1. SmartStamp is always available for business 2. SmartStamp launches and runs straight away 3. SmartStamp does not crash 4. Pages on SmartStamp do not freeze after I enter my information
	Fulfilment/ Reliability	The extent to which the site's promises about order delivery and item availability are fulfilled (Parasuraman, Zeithaml & Malhotra, 2005) Note: definition needs amending e.g. not a product purchase, rather reliability of access to a service	The extent to which the service provider's promises about delivery are fulfilled	1.It delivers orders when promised 2.This site makes items available for delivery within a suitable time frame 3.It quickly delivers what I order 4.It sends out the items ordered 5.it has in stock the items the company claims to have 6.It is truthful about its offerings 7.It makes accurate promises about the delivery of products	Remove purchase and stock holding references, amend for system content	1. Delivery promises are kept 2. Items are delivered within a suitable time frame 3. Items are delivered quickly 4. Royal Mail is truthful about its offerings 5. Accurate promises are made about service delivery
	Responsiveness	Effective handling of problems and returns through the site (Parasuraman, Zeithaml & Malhotra, 2005)	Effective handling of problems through the helpdesk (where helpdesk includes both telephone and online help channels)	1.They gave prompt service to me 2. They were willing to help me 3. They were not too busy to respond to my requests 4. The behaviour of the employees instilled confidence in me 5. I felt safe in my transactions with the bank 6. Employees were courteous with me 7. They had the knowledge to answer my questions *Iglesias 2009 (The Service Industries Journal) Taken from SERVQUAL (Parasuraman, Berry and Zeithaml 1991; Parasuraman, Zeithaml and Berry 1988, Journal of Retailing) and & SERVPERF (Cronin and Taylor, 1992, journal of Marketing) scales*	Amendments to reflect context: codes: 1. Timely issue resolution (of potentially complex technical problem) 2. Interaction opportunity cost 3. Telephone Interaction 4. Interaction empathy 5. Online Interaction	1. Royal Mail resolved my issue promptly 2. Resolution of my issue was important to Royal Mail 3. Royal Mail was not too busy to respond to my requests 4. The behaviour of Royal Mail staff gave me confidence 5. Royal Mail staff communicated with me at the right technical level 6. Royal Mail personnel were courteous with me 7. Royal Mail staff had the knowledge to answer my questions
	Compensation	The degree to which the site compensates customers for problems (Parasuraman, Zeithaml & Malhotra, 2005)	The degree to which the site efficiently compensates customers for problems	1.This site compensates me for problems it creates 2.It compensates me when what I ordered doesn't arrive on time 3.It picks up items I want to return from my home or business	Amendments to reflect system context & process efficiency	1. Royal Mail provides a refund when there is a problem 2. Royal Mail compensates me when I spoil stamps 3. The SmartStamp refund process for spoilt stamps is efficient
	Contact	The availability of assistance through telephone or online representatives (Parasuraman, Zeithaml & Malhotra, 2005) *Definition needs amending for routing*	The availability of both online assistance and timely telephone assistance from service provider representatives	1.This site provides a telephone number to reach the company 2.This site has customer service representatives available online 3.It offers the ability to speak to a live person if there is a problem	Amendments: 1. Timely assistance 2. Routing to the right technically qualified person 3. System-based online help	1. Royal Mail provides an easy to find contact telephone number 2. SmartStamp has online help available if there is a problem 3. Royal Mail directs me to the right person quickly when I call the helpdesk with a problem 4. Royal Mail answers the telephone quickly
Convenience	Time	Consumers' perceived expenditures of time to create transaction convenience (Berry, Seiders and Grewal, 2002)	Consumers' perceived expenditures of time to create activity convenience. Items taken from Kleijnen, Ruyter and Wetzels (2006) time convenience construct	1.Using mobile transactions is an efficient way to manage my time 2.Using mobile transactions would be convenient for me 3.Using mobile transactions would allow me to save time 4.Using mobile services would make transactions less time consuming	Amendments: 1. Interactions do not necessarily require a transaction 2. Change mobile to online services	1. Using SmartStamp is an efficient way to manage my time 2. Using SmartStamp is convenient for me 3. Using SmartStamp allows me to save time 4. Using SmartStamp makes generating postage less time consuming 5. SmartStamp allows me flexibility of location
	Location	The location flexibility relating to where the service interaction occurs (Heinonen 2004)	The location flexibility relating to where the service interaction occurs (Heinonen 2004)	No items	Amalgamate with convenience	NA
Price	Price	What is given up or sacrificed to obtain a product (Zeithaml 1988, p.10). *Money given up to use a product or service*	Money given up to use a product or service	1.You feel that the product (good or a service) you purchased is expensive 2. You think you paid much money (Lin et al., 2005)	Amendments for context only	1. You feel that that SmartStamp is expensive 2. You think you paid too much money for SmartStamp

Qualitative Refinements To The Instrument						
Higher Order Constructs	**Antecedent Constructs**	**Definitions**	**Refined Definitions**	**Extant Items**	**Qualitative Findings Amendments**	**Refined Items**
Perceived Risk The subjective expectation of a loss (Store & Gronhaug, 1993)	Security/ Privacy Risk	The degree to which the site is safe and protects customer information (Parasuraman, Zeithaml & Malhotra, 2005)	No amendments	1.It protects information about my web-shopping behaviour 2.It does not share my information with other sites 3.This site protects information about my credit card	Amendments to reflect system context. Pilot amendments to reflect perception of security rather than known fact	1. I think that Royal Mail protects information about my online behaviour 2. I believe that Royal Mail does not share my information 3. I think that Royal Mail protects information about my credit card
	Performance Risk	The loss incurred when a brand or product does not perform as expected (Horton, 1976)	The loss incurred when a product or service does not perform as expected	1.There is a chance that there will be something wrong with this product or that it will not work properly 2.There is a chance that I will stand to lose money either because it won't work at all or costs more than it should to maintain it 3.This product is extremely risky/not risky in terms of its long term costs	Amendments required to reflect a service	1. There is a high chance that SmartStamp will not work properly 2. There is a high chance that items would not be delivered as promised 3. There is a high chance that I will lose money because SmartStamp won't work properly 4. SmartStamp is extremely risky in terms of its long term costs
	Financial Risk	A net financial loss to a customer, including the possibility that the product may need to be repaired, replaced or the purchase price refunded (Horton, 1976)	A net financial loss to a customer, from participation in a service	Performance/ Financial Risk Combined by Sweeney, Soutar & Johnson, 1999 into one dimension		
Hedonic Dimensions	Emotional value	The utility derived from the feelings or affective states that a product generates' (Sweeney and Soutar, 2001, p.211).	Utility derived from the feelings or affective states that a product or service generates	1.Is one that I would enjoy (Sweeney & Soutar 2001) 2.Would make me want to use it 3.Is one that I would feel relaxed about using 4.Would make me feel good 5.Would give me pleasure	Amendments to reflect an online service only	1. I enjoy using SmartStamp 2. Having SmartStamp makes me want to use it 3. I feel relaxed about using SmartStamp 4. Using SmartStamp makes me feel good
Resource Integration	Technical Competence	'Possessing the required skills and confidence to complete the task' (Meuter et al., 2005, p.64)	Unchanged	1. I feel apprehensive about using technology 2. Technical terms sound like confusing jargon to me 3. I have avoided technology because it is unfamiliar to me 4. I hesitate to use most forms of technology for fear of making mistakes I cannot correct *Source: Keh and Pang 2010 (Journal of Marketing)*	Amendments: 1. Mastery over technical proposition 2. Reflect current technology user rather than generic technology avoidance 3. Ability to perform a behaviour 4. Reflect context specific items	1. I feel apprehensive about using SmartStamp beyond its basic functionality 2. Technical terms sound like confusing jargon 3. I have avoided using SmartStamp's full functionality because it is unfamiliar to me 4. I hesitate to use some of SmartStamp's functionality for fear of making mistakes I can't correct
	Network	"A spontaneously sensing and responding spatial and temporal structure of largely loosely coupled value proposing social and economic actors' interactions through institutions and technology to (1) co-produce service offerings (2) exchange service offerings; and (3) co-create value" (Lusch et al., 2010, p.31)	Unchanged	No previous literature	Representation of the following codes: 1. Service provider help desk 2. Friends & colleagues 3. Recipient/customer 4. Service provider fulfilment channel 5. Third party technical/infrastructure support - Infrastructure providers not relevant removed at pilot stage	Changed to a dichotomous variable at pilot stage 1. Friends and colleagues 2. Service provider staff (e.g. postman, helpdesk staff) 3. Recipient or customer (e.g. eBay feedback). 4. Third party technical/infrastructure support (i.e. IT companies that help you that are not related to the service provider)
Outcomes	Resubscription Intent	"An aim to pay fees that recur over time to access an online service"	Unchanged (Outcome Dimension)	1.you consider this website your first choice to buy the same kind of product (a good or a service) 2.You will consume more at this web site in the next few months 3.You will continue to purchase from this website even though other websites provide a similar etail service (Lin et al., 2005)	Amendments to reflect an online service context only	1. You consider SmartStamp your first choice to buy postage 2. You will continue to subscribe to SmartStamp in the next few months
	Customer Satisfaction	The extent to which the user is satisfied with the online service	Unchanged (Outcome Dimension)	1. You are satisfied with your decision to purchase from this website 2. Your choice to purchase from this site was a wise one 3. You think you did the right thing to purchase at this site (Lin et al., 2005)	Amendments to reflect an online service context only	1. You are satisfied with your decision to purchase SmartStamp 2. Your choice to purchase SmartStamp was a wise one 3. You think you did the right thing to purchase SmartStamp
	Word of Mouth Recommendation	"Informal person-to-person communication between a perceived non-commercial communicator and a receiver regarding a brand, a product, an organisation or a service" (Harrison-Walker, 2001, p.63).	Unchanged (Outcome Dimension)	1. You would say positive things about this website to other people 2. You would recommend this website to someone who seeks your advice 3. You would encourage friends and relatives to purchase from this website (Lin et al., 2005)	Amendments to reflect an online service context only	1. You would say positive things about SmartStamp to other people 2. You would recommend SmartStamp to someone who seeks your advice 3. You would encourage friends, relatives or business associates to purchase SmartStamp
Customer Perceived Value	Customer Perceived Value	*"Perceived value is the consumers' overall assessment of the utility of a product based on perceptions of what is received and what is given"* (Zeithaml, 1988, p.14)	Global Value (Qualtiy/Price trade-off)	1.compared with the price you paid this website provides good etail value 2. Compared with the tangible and intangible costs you paid, purchasing from this website is worthwhile 3. You think you are getting good value for the money you spent (Lin et al., 2005)	Amendments to reflect an online service context only	1. Compared with the price you paid SmartStamp provides good value 2. Compared with the cost and effort involved, using SmartStamp is worthwhile 3. You think you are getting good value for the money you spent using SmartStamp

Appendix 13: Transcript Participant F

Nº	Actor	Text	Run Tim
1	**AC:**	**OK (name) what method did you use for your post before you signed up for SmartStamp?**	
3	SD:	The traditional method of going down to the Post Office, handing over my item at the counter and asking for international or UK postage to send	
5	**AC:**	**OK and why did you switch over?**	
6	SD:	Two reasons really, there was a professional curiosity reason because of the involvement that Lockheed had with SmartStamp. I felt it would give me some domain knowledge to understand how SmartStamp operated in the real world, so when I was talking to our customer in the Post Office I had real world experience to relate and also a private reason. My hobby is to sell Meccano sets and components on e-Bay and although at that time it was fairly small volume, I felt that SmartStamp was a far more convenient way of preparing packages for postage	
13	**AC:**	**You mentioned convenient (name). Can you break that down a bit more, what do you mean by convenient?**	
15	SD:	OK I wouldn't say I'm a typical e-Bay seller but the pattern that seems to work well for my Mechano sales is to advertise on the e-Bay site such that the items complete on a Sunday night. It seems that Sunday night is Meccano anorak night and that's when most of the auctions finish. They finish typically in the evening and the last thing you want is then to be faced with having to pack up a lot of sets and take them to the post office early in the next week. As an e-Bay seller you're rated on speed of delivery. So I found the convenience factor was that I could pre-package the items, weigh them and it was then simply a case of printing out the SmartStamps on Sunday night and then dropping the packages off at the local Post Office on the Monday.	
24	**AC:**	**In quite a lot of that dialogue there (name) you were mentioning time. Can we have a look more closely at how important time is to you?**	
26	SD:	OK I'm a hobbyist so its not as though I'm running a business so I can't value time, but in terms of personal time, if I've got a number of items that are completing on e-Bay on a Sunday night, the time factor for me is being able to get the postage correctly identified on the item without then having to spend hours queuing up in the Post Office on a Monday morning, or Tuesday morning, which would obviously mean lunchtime for me at work. I'd have to devote a lunchtime to that or get in for a late start on a Monday morning, which my job wouldn't allow me to do. So I've got to invest some personal time or I'm losing work hours which have to be made up at a later time. So its convenience and the choice of when I can apply the time. So Sunday night's an ideal time to use.	
36	**AC:**	**You mentioned earlier weighing the items was important to you, can we just expand on what you mean by weighing?**	
38	SD:	OK as items are paid, particularly international items, by weight, about two thirds of my items go overseas, mainly to Canada or Australia. Ex colonial countries seem to be quite keen Meccano collectors, so they're going by airmail small packets most of the time, which the increment weights on that are down to 20 grams so you can save yourself a lot of money by ensuring that the correct postage is applied. So the idea is to package things up as lightly as possible - have them pre-weighed. I have my own digital scales so I mark on the item say 220 grams and then when it sells I see its going to Australia. The convenience factor again of SmartStamp is you just look up Australia 220 gram, air mail, small packet, the address and then print the stamp with the correct postage on	
47	**AC:**	**So the software looks all that up for you does it?**	
48	SD:	The SmartStamp software gives you exact payment for weight, for country, for type of package	
50	**AC:**	**OK you mentioned saving money earlier can you explain to me a bit more about how important saving money is and how SmartStamp helps you do that?**	
52	SD:	OK one of the benefits of SmartStamp is that you only pay for the exact postage that you use. As an eBay seller you have to publish your postage costs in advance and quite often what I do is, I estimate the packaging. I can't package everything up, sometimes items have to be combined so you make a rough estimate so say the postage to Australia for a	

56		220 gram item is £2.32. I would probably advertise it at £2.50 on eBay because I know	
57		that's roughly what its going to weigh and cost when its all packaged up and I do	
58		combine postage as well. So if a number of items go to Australia I have to be prepared	
59		to repackage items or combine them into a larger package but that combined postage is	
60		then less than the individual items. So I can also make money on eBay although you	
61		don't really make a lot of savings there, but you also can make sure that you don't	
62		overpay any postage which is sometimes a tendency to go for the next level of product.	
63		So something like a standard parcel for instance has increments of 2, 4, 6 kg. I might see	
64		if I've got an item that's coming out at 2.1kg. I'm not going to pay a 4kg standard parcel.	
65		I'm going to package it a bit lighter and send it as a 2kg	
66	**AC:**	**You mentioned publishing information Simon. This visibility of information**	
67		**presumably for yourself, your customers or whatever, can you talk to me about how**	
68		**important the visibility of information is to you?**	
69	SD:	It's hugely important as an eBay seller that you give your buyers full visibility of all the	
70		costs that they're going to incur and again it saves you time. I use the Ready Reckoner	
71		in SmartStamp as a means of giving the full postage options to all my buyers and that	
72		means you don't have to answer e-mails. One of the burdens of being an eBay seller is	
73		that if you don't publish all the postage options you're bound to get that person in Fiji	
74		saying how much does it cost to send this item to me and you don't want to be spending	
75		all your time answering e-mails. So it's very important that you have all the published	
76		information there. I go to the extent that I have an eBay shop so that means that you can	
77		also have things like a returns policy and publish everything up front. Such that if	
78		you've got somebody who's not happy, they know that they can return the item, you'll	
79		cover their postage and again I know what my cost exposure is because I know what the	
80		return postage is as well	
81	**AC:**	**You mention a returns policy there in respect of your eBay business. Have you ever**	
82		**used the returns policy on SmartStamp?**	
83	SD:	Um just explain what you mean by that.	
84	**AC:**	**Have you ever spoiled a stamp?**	
85	SD:	Oh OK right, yes I have, yes	
86	**AC:**	**How did that work?**	
87	SD:	There's 2 ways of doing that. You can return the spoils items as the physical evidence.	
88		That's very onerous because you've then got to produce another envelope even though	
89		it's freepost, put the spoil in, and send it. The far more convenient option, which is what	
90		I use, is you just lodge your appeal electronically and say that between this time this	
91		amount of value was spoilt. It's done on a trust basis today and Royal Mail just verifies	
92		that you did indeed print out that level of postage in those times and they have always	
93		refunded my SmartStamp account if I've made that claim. I would say I've got it down to	
94		probably 1 in 100 spoils now so I'm not making excessive claims. I'm sure if I went over	
95		some limit you'd start to get some investigation from the SmartStamp account team	
96	**AC:**	**OK Simon you mentioned trust there. Can you talk to me a bit more about what**	
97		**you mean by trust and how important it is to you?**	
98	SD:	In terms of product trust it is very important, because I wouldn't be using a product that I	
100		think required you to be completely hampered to the point that you couldn't do any	
101		transaction without having to go through lots of verification steps. I think part of the	
102		convenience factor of SmartStamp is you can very quickly, within a small number of key	
103		presses, get the address, postage, value onto your labels and print it out without having to	
104		go through I would say a lot of verification steps. And you've got the comfort factor that	
105		if something does go wrong, print it on the wrong side of the label or the label gets	
106		jammed in the printer then Royal Mail will refund that value to you without a lot of	
107		argument. Some of these can be high value items because if you print 7 stamps per label,	
108		they can be all sorts of values depending on the packets. But you know, they could be up	
109		to £20 for a small airmail label so you've only got to have one spoiled potentially and	
110		that's £140 if they are all high value. Typically the spoils tend to be say about £10 down	
111		to £5. That's the sort of range of postage I'm printing on one sheet of labels	
112		**You mentioned there that Royal Mail has always refunded. How responsive do you**	47.20
113	**AC:**	**think they are in terms of spoils and compensation?**	(remain)
114		I think they're responsive. I think the SmartStamp call centre's - I've always found them	
115	SD:	extremely responsive - even to the point at one stage where my credit card had expired	
116		and I hadn't re-registered a new card with them so they closed the account and then when	

117		I did register a new card they found that their system wasn't able to transfer any of the	
118		old account details to the new account. It was a bit inconvenience but as soon as I	
119		lodged the problem they very quickly fixed it and got me a new account up and running	
120		**Is a quick fix important?**	
121	**AC:**	Yes definitely. Even though I'm a hobbyist, being delayed by one or two days in terms	
122	SD:	of getting the items posted, particularly for me because I work away from home during	
123		the week - it corresponds to a weeks delay before I can get then back to where the items	
124		are to re-post them	
125		**What else is important about Royal Mail and responsiveness to you when you have**	
126	**AC:**	**a need?**	
127		They provide an excellent service. SmartStamp's just a part of the overall service. I can	
128	SD:	post items on a Monday morning and all the UK items that are first class will be	
129		undoubtedly with my buyers on Tuesday morning. I've only ever had one item go astray	
130		out of nearly 500 sales now and that was an international item which eventually did get	
131		returned. So in terms of responsiveness I've never really had to use their "I've lost an	
132		item" help desk in terms of SmartStamp so the two occasions where I've had to use their	
133		help desk they've fixed the problem within hours. For me that's very important, if	
134		anything they've got to keep that level of support going.	
135		**What about the people you speak to, what's important about the person on the**	
136	**AC:**	**other end of the phone?**	
137		I think they have to be understanding, efficient and more importantly they've got to come	
138	SD:	back with the answers that you want. Even if it's not the answer, they've got to be able to	
139		respond to you in a very quick fashion with the facts and that's all I would ask. I've got	
140		nothing to complain about the SmartStamp helpdesk, they've always responded quickly,	
141		they've always fixed the problems. I've never been left unsatisfied.	
142		**OK, you mentioned that SmartStamp is only part of the process. How much do you**	
143	**AC:**	**separate SmartStamp from the whole process - or don't you?**	
144		I don't really ((interruption))	
145	SD:	**What were we talking about?**	
146	**AC:**	I think it was responsiveness and help desks	
147	SD:	**Yes and how SmartStamp was part of the process and how it gets fulfilled. Can you**	
148	**AC:**	**talk to me about how important fulfilment is to you? And what that means?**	
149		Yes it's all part of the end to end service as a seller. I think that's probably the area where	
150	SD:	I have the most criticism of Royal Mail in terms of an end-to-end service. SmartStamp	
151		was quite a revolution among the post offices so they're convenient drop off points. It	
152		took quite a few of the post offices a while to actually know what SmartStamp is, some	
153		of them even insisted on reweighing it and checking it for you. I said you don't need to	
154		do that because there are manual revenue protection mechanisms in place in mail centres,	
155		you just have to accept the item. And then more interestingly the Post Office in Hayling	
156		Island. I took a large number of items and the postmaster said you're the reason they're	
157		shutting post offices because nobody's coming and buying postage from us. I said I'm	
158		sorry, I'm actually using Royal Mail for my postage, I have to use Royal Mail and last	
159		week I did have items that were too heavy for SmartStamp and I did come in and paid	
160		over £90 in international postage to send two items to Canada through you so I expect	
161		you to provide both levels of service for me. So I think generally post offices have a lot	
162		to do in terms of education on SmartStamp for that side of fulfilment. The actual	
163		delivery side no criticisms at all from what I know the usual sterling efforts by postmen	
164		to make sure your parcels get there and they contribute to the positive feedback I get as a	
165		seller because being able to get the items in the post on a Monday morning and have	
166		them delivered on Tuesday is as good as any professional seller	
167		**When you mentioned education Simon, of whom and what do you expect?**	
168	**AC:**	I would expect the SmartStamp team to be able to educate their 14,000 post offices on	
169	SD:	SmartStamp products and how to handle them when they are handed over at the counters	
170		- that you don't have to reweigh them and check them - they are prepaid postage. They	
171		should get a credit for handling that item obviously the revenue is not going through that	
172		post office, but they are actually, they all receive a credit in terms of number of items	
173		handled. I don't think they correctly record them is my understanding, they just tend to	
174		take the SmartStamped items, throw them in the sack whereas what they should do is	
175		record that they have handled that number of items through the post office and that way	
176		they would just offer a more SmartStamp friendly service to people who go into the	

177		branches. So yeah I think the education is probably like any new product in the post	
178		office or Royal Mail they have to make sure that the counters are fully trained	
179		**So when you say friendly, what do you mean by friendly?**	
180	**AC:**	Well just really repeating the experience on the Hayling post office where they view any	
181	SD:	prepaid postage as taking revenue away from their counter, and the way that the closures	
182		are working for the post office seems to be judged on the revenue that each counter's	
183		taking. So the hostility came around the fact that I was accused of being the reason that	
184		post offices are being closed because I was printing out the postage myself. Even right	
185		in front of a queue of people, I was asked: 'was that really a more convenient way than	
186		coming in here to get the postage paid'?	
187		**Right a little hostile?**	
188	**AC:**	Yeah	
189	SD:	**Presumably that's not what you expect from contact with a Royal Mail person**	
190	**AC:**	Of course not, no. I'd say that's an isolated case most of the other post offices that I've	
191	SD:	taken SmartStamp items to have just been in a position of not understanding how to	
192		handle the item so I wouldn't say they were hostile but they were just - not unfriendly but	
193		probably unhelpful due to poor training	
194		**You mentioned experience earlier Simon. If you think about SmartStamp the**	
195	**AC:**	**software package first and the wider process second, what makes a good experience**	
196		**for you at a high level?**	
197		At a high level – I think eBay sums it up quite well they have 5 ratings a buyer can give a	
198	SD:	seller. Some of those include postage costs, speed of delivery, description, how well	
199		packed the item is. So 2 of those categories are highly dependant on Royal Mail for my	
200		feedback. So if things aren't delivered in a timely fashion it might not be because I didn't	
201		pack them up and get them into the network in time it might be down to delays and that	
202		can reflect badly on me and if the postage costs aren't competitive then gain that can	
203		reflect badly on me as a seller. I'm beholden to my postal provider to at least help me	
204		with 2 of my key ratings	
205		**Is that a problem to you being beholden?**	
206	**AC:**	Yes I think it is because if Royal Mail for some reason were to drop their quality of	
207	SD:	service I don't have many other options in terms of convenience and alternative postal	
208		carriers.	
209		**OK, so it sounds like quality is important?**	
210	**AC:**	Definitely	
211	SD:	**Throughout the whole process, what constitutes quality for you?**	
212	**AC:**	It is timeliness of delivery, handling from a receipt perspective. If somebody's not in, its	
213	SD:	being able to conveniently have the item re-delivered or know when you can collect it in	
214		a timely fashion. It's having multiple delivery and receipt points. The post office branch	
215		network is excellent so having a choice of location and also a choice of re-delivery	
216		mechanism all constitute quality for me	
217		**You mentioned location there. By the sound of it you meant location of post office,**	
218	**AC:**	**is that what you meant?**	
219		That's right or delivery offices for collection of items	
220	SD:	**What about location of the SmartStamp software itself is that important?**	
221	**AC:**	Yes the SmartStamps came through an evolution, it started off as a client based	
222	SD:	subscription package. Now we're moving to an online postage version. The client based	
223		software that you load onto your PC is still far more convenient than the online postage	
224		version mainly because it can handle multiple items whereas the online postage version	
225		you have to print out the postage individually today. I think the point for me where the	
226		cut overcomes moving from a client based to a web-based online system will be when	
227		the online system provides exactly the same features as the client system. I know the	
228		road that Royal Mail have is to, from my professional viewpoint, is to merge those	
229		systems in about one or two years time. Until then I will still pay my £5 a month	
230		because the client-based SmartStamp version is still far more convenient, its got more	
231		features	
232		**A couple of things there Simon, you mentioned first of all price. How important is**	
233	**AC:**	**price to you in this situation?**	
234		In terms of paying the price of SmartStamp you're asking?	
235	SD:	**Yeah**	
236	**AC:**	I find the £50 a year hugely convenient. Would I pay more - probably yes. I'd say that	

237	SD:	the postage costs I'm putting through because of the international sales probably runs into	
238		- getting up towards a £1000 a year. If I had to take all those heavy items down, stand in	
239		a queue, getting them weighed in the post office, I would be spending one or two hours a	
240		week out of my time so, what would I pay for the convenience of SmartStamp at home?	
241		It would be the price of a TV license I guess, I would go up to given the volume of traffic	
242		I'm putting through. Certainly if I was running a small business and handling many	
243		thousands of items I would be prepared to pay a lot more I would think for the	
244		convenience	
245		**OK, so you're not just trading off price against your subscription?**	
246	**AC:**	Its convenience	32.11 rem
247	SD:	**You mentioned time?**	
248	**AC:**	Yes for me the main thing is the time it saves without a doubt	
249	SD:	**OK, I just want to go back a second. We talked about location very quickly there I**	
250	**AC:**	**only got half way through the question. Do you use SmartStamp from home and**	
251		**the office or is it one fixed location.**	
252		Just from home or the lap top, same thing	
253	SD:	**We talked through what was a good experience. What about a bad experience -**	
254	**AC:**	**what does that mean to you?**	
255		From a SmartStamp perspective?	
256	SD:	**Yes**	
257	**AC:**	Any systems outage is a bad experience. Thankfully they're very few, I tend to use a	
258	SD:	system on a Sunday night, which is fairly low volume transactions. I've never noticed	
259		any delays or time outs. I've only had one outage I think of the system in the two and a	
260		half years I've been using it. Obviously that is a bad experience because it means that I	
261		couldn't get the items posted the next day	
262		**OK, when you use SmartStamp I want you to think now about on-line interaction**	
263	**AC**	**and the experience you get using SmartStamp online. Which components of the**	
264		**online interaction are important to you and why?**	
265		The two versions of SmartStamp are subtly different. I've used both versions. The	
266	SD:	client-based version's got some features that could be improved. If you're doing multiple	
267		sales it would be really good to be able to transfer all the addresses and postage values	
268		onto the labels in one go. So having some better integration features with the label	
269		software would be better. What I find I have to do is individually cut and paste each	
270		address from the eBay system into the SmartStamp system. You can export addresses	
271		but eBay doesn't force good addressing rules. A good example of that is most people are	
272		very lazy at putting in capitals and leading cases so I think we've all got into a text	
273		mentality and that includes entries into data systems on the Internet. So you get people,	
274		particularly young buyers, give you a very poor address quality in their eBay address. So	
275		although I manually copy - cut and paste from eBay into SmartStamp I also use that as	
276		the editing function to check that the address is correctly formatted, spaced, no	
277		abbreviations. An example is eBay. Any blank bills it leaves the word default in there.	
278		So when you use the export function you get addresses with the word default in it	
279		**It sounds like configuration is quite a big issue for you?**	
280	**AC:**	Yes what it shows is that the developers of the eBay SmartStamp solution haven't really	
281	SD:	taken the end-to-end customer journey through. They've modelled it in the pure sense	
282		but I think they haven't done enough user trials to see. I would think I'm not an untypical	
283		eBay seller in that I don't have power accounts or any of those tools but I sell a dozen	
284		items a week during some peak months of the year and just want the convenience of	
285		being able to quickly get those addresses into SmartStamp and those features just aren't	
286		there to do that. So the end-to-end integration isn't good	
287		**You mention there the end-to-end customer journey. At a high level what would**	
288	**AC:**	**you say that is? Which bits of that are important to you?**	
289		I think for me it's the initial part of the journey. You can probably live with any delays	
290	SD:	in fulfilment or problems downstream but the important thing is when you first go into	
291		the SmartStamp system - to know that it is well integrated, reliable, it's going to do what	
292		you want with a minimum of interaction. I think that for me is the important part of the	
293		customer journey. I would live with problems further down the journey if I knew that	
294		everything up front had been well managed and captured	
295		**OK you said minimum interaction. Who's that with and what do you think that**	
296	**AC:**	**interaction might consist of?**	

297		For me that's data entry, I like minimal key presses so if there is data to be transferred	
298	SD:	then that's one key press rather that cutting and pasting or retyping.	
299		**Oh I see so it's minimum use on the system by yourself?**	
300	**AC:**	Yes usability.	
301	SD:	**Oh OK, I thought you meant interaction with Royal Mail?**	
302	**AC:**	No the good thing about it there is very little interaction with Royal Mail other than	
303	SD:	dropping the item off. The user journey is totally Royal Mail free - its a virtual network	
304		as far as I'm concerned.	
305		**Is it important to you to minimise the role of Royal Mail in what you do?**	
306	**AC:**	It's not something you conscientiously do but it would be better for me if there were	
307	SD:	more drop-off points that took SmartStamp. I could as easily drop off my packages at	
308		Tesco as I could go into a Post Office system. I've even resorted to bringing small	
309		packages into Lockheed to use the internal mail to get them out, in which case I bypass	
310		any interaction with Royal Mail completely	
311		**OK. Simon you mentioned better integration features. What do you mean by**	
312	**AC:**	**better integration features? I'm trying to get you to explore what is important**	
313		**about the electronic interaction now - to you. We talked about configuration?**	24.30 rem
314		**What else is important?**	
315		It's really the usability in terms of finding the information I want quickly, minimal	
316	SD:	number of key presses, being able to complete the transaction quickly and reliably with	
317		out having to reconfirm a lot of things and re-enter things. The good thing about	
318		SmartStamp is the payment side is well integrated so once your account is loaded with	
319		money you've got one password and that enables you to do everything you need. And	
320		you know the security is good because the payment side now has all the latest security	
321		features so you know your money's safe and the only thing you've got to worry about is	
322		just your local connection. If you are working from home and things time out that's fine	
323		so you know that no one's going to be using your account fraudulently	
324		**OK. I've picked up a range of issues there. Way back you mentioned your credit**	
325	**AC:**	**card and you've brought it back again now saying security and safety of your**	
326		**money. That all speaks to me about risk. How do you see the risks that lie in using**	
327		**Smart Stamp?**	
328		Obviously the money side is always going to be the risk. I'm doing quite high value	
329	SD:	transactions because of the foreign postage which means that I tend to pre-load my	
330		SmartStamp account using my credit card with £100 a time. Royal Mail has only	
331		recently gone over to the Berry Sign payment methods so you've got 3 independent	
332		forms of identity. I think before that came I was concerned about that having worked on	
333		secure payments in the past. I knew that SmartStamp pre-payment channel was not as	
334		secure as it could be so that was a worry and I still think that will always be a worry and	
335		they will need to constantly reassure customers that their money is safe and their credit	
336		card transactions are being handled with the latest security software. For me that's the	
337		biggest risk I see.	
338		**OK, you mentioned identity as part of the risk. How is that a risk?**	
339	**AC:**	Umm in terms of storing data and retrieving data then the identity is key because you	
340	SD:	don't want anybody going in and accessing your SmartStamp account and using it for	
341		other reasons. So having the necessary identity checks are good for accessing the	
342		account but then also the identity checks when it comes to topping up the account also	
243		have to be equally secure as well.	
344		**Is there anything wider that you might consider a risk in that area?**	
345	**AC:**	In terms of data protection as well, what I do as a matter of course is I shred all my eBay	
346	SD:	receipts and particularly the address and contact details of any of my buyers. If I was a	
357		buyer I would probably want a little bit of reassurance that the sellers were not misusing	
348		that data. Although it's only names and addresses it's still a potential source of data fraud	
349		and corruption. Everybody happily puts their delivery address, name and details on their	
350		eBay. So I think I'd like perhaps to see a few more security checks for sellers on eBay	
351		because anybody can set themselves up as a seller with zero feedback, sell something	
352		and a buyer will quite happily send all their address details and even payment to them.	
353		And you just don't know who that person is. So I think I'd like to see from an eBay	
354		perspective - to sellers identity better verified	
355		**So the point is - not just use of your own personal details but use of your customers'**	
356	**AC:**	**personal details as well. What would you expect Royal Mail to do in this situation?**	

357		**How do you expect Royal Mail to act in that area?**	
358		Because they are part of a trusted brand or that's the role they promote I think when they	
359	SD:	set up agreements with the likes of eBay they should be looking for assurances that eBay	
360		sellers are legitimate sellers. That eBay have done the due diligence to make sure that	
361		the identities of those people are correct. That would give me more confidence that	
362		Royal Mail are then fulfilling the trusted brand from end to end because I know that they	
363		will accept eBay clients, that there is some form of vetting that's gone on - to know that	
364		people using SmartStamp on eBay have gone through some additional vetting or security	
365		checks.	
366		**So am I reading this right Simon, is the trusted brand to you about protection of**	
367	**AC:**	**you and your customers?**	
368		Yes to me that's probably fairly key in this day of identity theft.	
369	SD:	**OK, what else does the Royal Mail brand signify to you in a SmartStamp context?**	
370	**AC**:	I think it's commitment to quality of service, I know they don't treat SmartStamp items	
371	SD:	any differently from any of their other payment channels. You know that Royal Mail as	
372		a group will deliver that item to the best of their ability. The fact that they're integrated	
373		with Parcel Force so international items leave the country promptly. I know that if I	
374		want to I can also use the online postage features to track international items so if I do	
375		want to trace a Parcel Force item I can use the tracking information. So all these things	
376		are important I think to sellers, that they've got confidence that the carrier network's	
377		doing everything it can to get your item there	
378		**You mentioned the word commitment Simon. What do you mean by commitment?**	
379	**AC:**	As a seller you commit to your buyers to get them an item by a certain time and they pay	
380		their postage to get that commitment from you so you ask the same commitment of	16.17rem
381	SD:	Royal Mail	
382		**OK, how much do you view that commitment as part of a relationship both**	
383		**upstream and downstream?**	
384	**AC**:	The scale of transactions I'm doing it's not a partnership or a relationship and if I was to	
385		ever run my own business and rely wholly on SmartStamp I would be looking for a lot	
386	SD:	more out of that commitment and that relationship.	
387		**Oh right, what would you look for?**	
388		I think I would look for a SmartStamp business partner or something within Royal Mail,	
389	**AC:**	somebody who'd probably be doing what you're doing, coming and sitting down once a	
390	SD:	year saying Simon; how have you found your SmartStamp experience, what should we	
391		be doing better?	
392		**Oh I see so you would actually like to sit down with a service provider once a year**	
393		**you said there and do what - improve what it is you do?**	
394	**AC:**	Yes get some feedback just as we are - going through these items, although there are	
395		discussions forums that you can use on SmartStamp and you can submit suggestions.	
396	SD:	Nobody really has the time to do that but I think if I was that reliant on SmartStamp as a	
397		small business I would value a one to one session or even a phone call	
398		**OK, we started to touch around some of the areas about customising the service for**	
399		**you. How important is it to you to be able to personalise this service then both now**	
400	**AC:**	**and potentially in the future?**	
401		The sort of transactions I'm doing it's not necessary to personalise it. I mean there's	
402		features in SmartStamp like logos and things that you could use but actually I prefer not	
403	SD:	to advertise that because if someone knows it's Meccano in this package then that might	
404		be attractive so I'm not going to put my Meccano set logo on the SmartStamp so I	
405		deliberately don't use those features of SmartStamp for the fear that someone might	
406		recognise it as a high value item or a desirable item because some of them are. They are	
407		collectors' items so I wouldn't want to use that customisation feature. In terms of	
408		electronic customisation - probably a few extra features around the address book and	
409		things like that would be fine to decide which fields and where to place them on the	
410		labels those sort of features would be fine but that would be the extent of customisation	
411		I'm looking for	
412		**OK, you said the words 'making suggestions' and 'customer forums' - presumably**	
413		**there to influence Royal Mail. How important is it for you, for your business to be**	
414	**AC:**	**able to influence Royal Mail and what they do with SmartStamp in the future?**	
415		I think it's very important, I think the user feedback and user forms they should find a lot	
416		of common ideas, I would have thought that they could implement in updates to the	

417	SD:	product and improvements. So I would see that as being very valuable to them	
418		**So how important is it to you that Royal Mail is able to learn from you and people**	
419		**like you?**	
420	**AC:**	I think it's very important. They do offer a very good quality of service but they	
421		shouldn't get complacent because I'm sure competition will be offering similar products	
422	SD:	before long. I think that Royal Mail - if they want to really retain customers, particularly	
423		big key accounts like eBay, they even use Amazon now - I'm an Amazon reseller. My	
424		wife reads books, we watch films. What we tend to do because of our remote location is	
425		we buy the DVDs and then if its a fairly current title, we'll watch them once and then	
426		resell them on Amazon. I'd like to see my SmartStamp integrated with Amazon in the	
427		same way as my eBay account	
428		**You mentioned logos a little while ago I want to go back there now Simon if we can?**	
429		**You preferred not to advertise. What I'm after here is how important is image to**	
430	**AC:**	**you for your business as you sell?**	
431		Image is obviously very important for a seller on eBay but eBay provides tools to	
432		promote your image and promote your feedback and that is very important and as we've	
433	SD:	already said the SmartStamp or Royal Mail contributes to at least two of the feedback	
434		areas on your eBay response. So my image, in simple terms, is to be a seller of Meccano	
435		items, high quality Meccano items to collectors and model builders with an emphasis	
436		also on young engineers that want to show an interest. So I provide a range of Meccano	
437		for high end collectors but I also respond to requests to young engineers who or model	
438		builders that don't want high quality items but just enjoy building the materials. A lot of	
439		feedback I've got is from parents of children who said Johnny got his Meccano set in	
440		time for his birthday, what a great service, thank you for sending the extra bits or	
441		including some items	
442		**How important are the views of people in regard to what you do with SmartStamp?**	
443		Again, I think very important, people judge your credibility as a seller based on the	
444	**AC:**	feedback of others so without that feedback ((pause for emphasis)). I've noticed that	
445	SD:	over the years I've been an eBay seller, as your ratings increase, your number of sales	
446		increase. People will check your ratings and by that you get a lot of return customers but	
447		then you get - particularly for international buyers, they take reassurance in that sort of	
448		thing. If they know you sell internationally using SmartStamp, I actually advertise	
449		SmartStamp on my eBay account. I say I use SmartStamp and part of my postage policy	
450		is to only send internationally and they pay exactly for the weight of the postage because	
451		it's accurately measured by Smart Stamp. I publish that on my eBay shop page and that	
452		gives you good credibility as a seller.	
453		**It sounds to me Simon that your feedback on eBay is a risk to you doing business**	
454		**with Royal Mail. Can you talk a bit more about that?**	
455	**AC:**	If Royal Mail weren't to provide a good service then feedback would get eroded or even	
456		ruined and you'd lose sales. So it's hugely important that they fulfil their quality of	
457	SD:	service as part of the overall eBay solution.	
458		**Can I ask you a quick question now? What does the term value mean to you?**	
459		Um for me it's paying the right price for the postage in terms of the quality of service I'm	
460	**AC:**	getting and again I would gladly pay more money for SmartStamp or even the postage	
461	SD:	based on the quality of service that Royal Mail deliver, particularly their first class	
462		delivery is still absolutely excellent for me. I can send high volumes of small Meccano	
463		items out with a high degree of confidence that they will arrive the next day and get good	
464		feedback from UK sellers or using international shipping options, which are more	
465		expensive in some cases. I'd probably say they are less value but again the number of	
466		items - you only need to have one item go astray using Royal Mail international postage	
467		compared to some of the forums I've seen where other international couriers have not	
468		been so reliable. So sellers - out of all the ratings that they give on eBay the ones they	
469		are most dissatisfied about are postage costs. I think it's not because of the costs that I'm	
470		charging, it's because of what Royal Mail's charging. So I'd say that rating is still very	
471		high because they know themselves that they're only getting charged what Royal Mail is	
472		asking - I'm not inflating that cost	
473	**AC:**	**Do you ever play with SmartStamp? Is there anything about it you find enjoyable?**	
474	SD:	I do for the Christmas cards and newsletters my that family send out because that's a	
475		good chance to use the customisation features there	
476	**AC:**	**Oh right. Can you expand on that?**	

477	SD:	Well it's typically a good chance to put different pictures in there and that might be	
478		relatives, friends, babies, whatever is topical at the time. That's always quite good. I'm	
479		very much a focal point in the family for doing all the family parties and entertainment	
480		so it's always a good chance to get an amusing picture of one of the family and send it	
481		out to the rest of the family	
482	**AC:**	**I'm getting this impression that other people are important from a social**	
483		**perspective?**	
484	SD:	Yes I think it is and that's using SmartStamp in a non-professional way but also from a -	
485		it's a good thing for me as it's not only a business account, I can also use it for a private	
486		account and get satisfaction from it that way	
487	**AC:**	**So where does the aesthetics of SmartStamp fit for you. I'm thinking here you put a**	
488		**logo on and the aesthetics are important there and there's also aesthetics on the**	
489		**screen as well. Can you talk around that a minute for me?**	
490	SD:	Yes the screen's I think good. I think obviously a lot of work put into the usability of the	
491		screen, the layout, the consistency of feel with the consistency of the rest of the Royal	
492		Mail site is apparent. They've got some good general policies in terms of minimising	
493		interaction, making sure that you quickly find the information you need and it's easy to	
494		use. So I take it as a product its well designed, there's always areas for improvement but	
495		I can say that from being a human factors expert in a previous life. There's always	
496		usability features that you can improve on but as a whole I'd say Royal Mail have done a	
497		good job in making the ...	
498	**AC:**	**When you say usability, do you mean your online experience?**	
499	SD:	Yes	
500	**AC:**	**How important is that to the value you get from the service?**	
501	SD:	I'm not sure what you're looking for from that one	
502	**AC:**	**I was thinking more about your overall experience. The experience as you've**	
503		**mentioned it to me is one of the fulfilment of the service, but also the use of an**	
504		**electronic software package called SmartStamp. So what I'm after there is the**	
505		**experience of using it - is that important to you when you measure value?**	
506	SD:	Yes I think it is in terms of a monetary answer to your value question. I think there is a	
507		degree of satisfaction as well that comes out of it. I wouldn't say it's high on my list at	
508		the moment	
509	**AC:**	**I've got a couple of quickie questions left for you. I know we're close on time**	
510		**(name). Have you ever recommended SmartStamp to a friend?**	
511	SD:	Yes.	
512	**AC**:	**Ok and what factors are important in influencing you to do that?**	
513	SD:	Convenience and that really comes down to saving them time. I've recommended them	
514		to small businesses mainly in the local community	
515	**AC:**	**And do you intend to re-subscribe to SmartStamp?**	
516	SD:	Yes - until the online solution is as good as the subscription solution	
517	**AC:**	**OK and lastly what factors will be important when you evaluate that decision to re-**	
518		**subscribe?**	
519	SD:	I'll be looking for them to take note of some of the areas of improvement. Better address	
520		integration with eBay possibly making some of the batching production of the stamps	
521		easier, just general improvements. There's nothing to say that I wouldn't renew even if	
522		the system didn't change today. I'd quite happily renew and I'd quite happily pay more	
523		money for it. I feel it delivers what I need it to deliver and the convenience factor for me	
524		still outweighs not using it. It would have to become more than a TV license and be	
525		more aggravating for me not to use it so...	
526	**AC:**	**OK (name) thank you very much.**	
527			
528			
529			
530			

Appendix 14: Measurement Model Purification

SysEff2 recorded loadings of 0.404 on the emotional value dimension. SysEff 2 relates to speedy task completion. Users taking part in the qualitative interviews identified a pleasure from being efficient (good) at their job. It is possible that this overlap in meaning captured some of the emotional value associated with task efficiency.

SysEff6 recorded a loading of 0.518 on System Availability. This can be explained as the item description relates to accessing the service quickly, which is synonymous with the meaning attached to availability of the system. SysEff4 also relates to accessing the service quickly and similarly cross-loaded with the Systems Availability construct (0.415). Rather than remove both items at the EFA stage the weaker item (SysEff6) was removed and SysEff4 retained for further evaluation.

Conven1 cross-loaded with a magnitude of 0.432 on system efficiency. This cross loading could potentially be explained by an overlap in the meaning associated with time i.e. the item description was 'using the service is an efficient way to manage my time' and the Convenience construct is underpinned by time. Consequently Conven1 is removed from further consideration.

Conven5 recorded a factor loading of 0.542, which is significantly lower than its accompanying items. The item relates to location convenience, which was identified at the qualitative stage as potentially being part of the Convenience construct. The item was added to the established items produced by Berry Sieders and Grewal (2002). The item returned a low factor loading since it is measuring a different theme i.e. time versus location and has been discarded accordingly.

Risk4 showed a factor loading of 0.543, which is within acceptable bounds according to Hair et al. (2014) but significantly lower than its accompanying items. Risk4 measures Finance Risk and the marginal factor loading could be explained by a confidence in the service provider to refund any loss. There is also a potential distinction in meaning between the potential financial loss associated with stamps on multiple items (i.e. Risk3) and the potential loss associated with the cost of the subscription (i.e. Risk4 longer term costs), which is potentially much smaller (i.e. £5.99 per month or £59.99 per year). Examination of the

correlation matrix showed that Risk4 had a strong correlation of 0.621 with Risk3 indicating an overlap in meaning, consequently the decision was taken to eliminate the Risk4 item.

Respon2 showed a cross loading of 0.421 with the Contact dimension. Whilst the service provider answered the telephone quickly and was responsive to resolving problems the question of whether the customer's problem was important to the service provider potentially created the overlap in meaning. It is likely that the item was trying to measure two themes i.e. the ability and ease of contacting the service provider and the importance of the issue to the service provider.

Respon3 recorded a cross loading of 0.410 with the Contact dimension. The overlap in meaning can potentially be explained by the speed of response (i.e. not being too busy to respond) overlapping with the ability to contact the service provider quickly.

Contact3 had a cross loading of 0.451 with the Responsiveness dimension. The meaning attached to directing the user to the right person to resolve a service recovery issue is potentially overlapping with the service provider's ability to be responsive. The item is not necessarily measuring just the ability of the user to contact the service provider.

Comp3 showed a cross loading of 0.408 with the Contact dimension. This can potentially be explained by respondents perceiving the interaction with the service provider's refund process as 'Contact', which is distinct from the propensity of the service provider to compensate the customer for spoilt stamps. Comp3 measures the former and has been eliminated from further analysis to avoid measurement of two different themes.

Appendix 15: Final Measurements and Summary Statistics

Final Measurements for Core Model: Summary Statistics and Evidence of Discriminant Validity (N = 126)

	Mean*	Std.dev.	AVE	√AVE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Convenience	6.10	1.08	.946	.972	1.000										
(2) Emotional Value	5.29	1.13	.753	.868	.509	1.000									
(3) Fulfilment/ Reliability	5.41	1.08	.829	.910	.378	.380	1.000								
(4) Loyalty Intentions	5.41	1.20	.763	.874	.533	.535	.493	1.000							
(5) Price	5.30	1.67	.962	.981	-.295	-.233	-.172	-.346	1.000						
(6) Risk	2.33	0.72	.622	.788	-.247	-.296	-.413	-.458	.214	1.000					
(7) Satisfaction	5.65	1.19	.956	.978	.505	.517	.499	.823	-.198	-.372	1.000				
(8) Security Privacy Risk	3.29	0.93	.760	.872	-.142	-.211	-.303	-.175	.112	.245	-.243	1.000			
(9) System Availability	5.56	1.28	.847	.920	.350	.298	.404	.525	-.128	-.294	.556	-.073	1.000		
(10) System Efficiency	5.49	1.12	.762	.873	.480	.541	.470	.555	-.147	-.333	.589	-.195	.502	1.000	
(11) Value	4.65	1.41	.891	.944	.408	.492	.377	.677	-.640	-.381	.534	-.154	.333	.473	1.000

*1 = strongly disagree to 7 = strongly agree

Final Measurements for the Extended Model: Summary Statistics and Evidence of Discriminant Validity (N = 80)

	Mean*	Std.Dev	AVE	√AVE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Compensation	5.98	1.45	.953	.976	1.000													
(2) Contact	4.60	1.30	.743	.862	.284	1.000												
(3)Convenience	6.13	1.14	.970	.985	.189	.270	1.000											
(4)Emotional Value	5.22	1.22	.750	.866	.033	.239	.579	1.000										
(5) Fulfilment/ Reliability	5.37	1.13	.835	.914	.179	.442	.350	.335	1.000									
(6) Loyalty Intentions	5.41	1.23	.758	.871	.151	.346	.591	.533	.444	1.000								
(7) Price	5.28	1.74	.968	.984	.186	-.176	-.281	-.286	-.242	-.346	1.000							
(8)Responsive-ness	5.22	1.34	.816	.903	.211	.487	.237	.138	.255	.256	-.096	1.000						
(9) Risk	2.41	0.72	.577	.760	-.181	-.312	-.318	-.267	-.490	-.459	.207	-.295	1.000					
(10) Satisfaction	5.61	1.26	.962	.981	.233	.325	.556	.510	.446	.815	-.186	.331	-.422	1.000				
(11) Security/ Privacy Risk	3.25	0.97	.717	.847	-.095	-.169	-.049	-.173	-.334	-.100	.123	-.297	.295	-.216	1.000			
(12) System Availability	5.49	1.37	.856	.926	.154	.412	.466	.339	.383	.527	-.140	.226	-.322	.581	.024	1.000		
(13) System Efficiency	5.45	1.19	.782	.884	.329	.479	.568	.527	.462	.601	-.169	.370	-.387	.655	-.112	.603	1.000	

Appendix 16: Final Instrument

Final Core Model		
Construct	**Item Code**	**Item Description**
Systems Efficiency	SysEff4	SmartStamp® loads pages fast
	SysEff5	SmartStamp® is simple to use
	SysEff7	SmartStamp® is well organised
Systems Availability	SysAv2	SmartStamp® launches and runs straight away
	SysAv3	SmartStamp® does not crash
	SysAv4	Pages on SmartStamp® do not freeze after I enter my information
Fulfillment/ Reliability	FulRel1	Delivery promises are kept
	FulRel2	Items are delivered within a suitable time frame
	FulRel3	Items are delivered quickly
	FulRel4	Royal Mail is truthful about its SmartStamp® offering
	FulRel5	Accurate promises are made about service delivery
Convenience	ConVen2	Using SmartStamp® is convenient for me
	ConVen3	Using SmartStamp® allows me to save time
	ConVen4	Using SmartStamp® makes generating postage less time consuming
Emotional Value	EmVal1	I enjoy using SmartStamp®
	EmVal2	Having SmartStamp® makes me want to use it
	EmVal3	I feel relaxed about using SmartStamp®
Security/ Privacy	SecPriv2	Royal Mail does not share my information
	SecPriv3	Royal Mail protects information about my credit card
Risk	Risk1	There is a high chance that SmartStamp® will not work properly
	Risk2	There is a high chance that SmartStamp® items would not be delivered as promised
	Risk3	There is a high chance that I will lose money because SmartStamp® won't work properly
Price	Price1	You feel that that SmartStamp® is expensive
	Price2	You think you paid too much money for SmartStamp®

Final Extended Model		
Construct	**Item Code**	**Item Description**
Responsiveness	Respon1	Royal Mail resolved my issue promptly
	Respon4	The behavior of Royal Mail staff gave me confidence
	Respon5	Royal Mail staff communicated with me at the right technical level
	Respon6	Royal Mail personnel were courteous with me
	Respon7	Royal Mail staff had the knowledge to answer my questions

Note: Conven2 is removed when testing the extended model in conjunction with the core model

Appendix 17: Missing Value Analysis

Only 8 missing values (i.e. one question not answered in a record across 8 responses) were recorded across the overall sample that could affect the measurement model. Further investigation revealed that three of the eight cases related to the Contact construct. Respondents had only used online help and had not physically contacted the service provider by telephone. As a result they could not answer questions specific to telephone contact. No further patterns were detected in the missing value data and the issue of non-response pattern bias was consequently ruled out (Hair et al., 2010; Pallant, 2007; Tabachnick et al., 2001). The remaining missing values were considered missing at random (Hair et al., 2010). Treatment of missing values in relation to PLS is discussed later. The next section examines missing values resulting from the branching and classification questions.

29 missing value cases occurred within the Company Turnover classification question accounting for 23% of the total sample. The Company Turnover category was designed with a 'prefer not to answer' option to account for the sensitivities associated with financial disclosure. Missing values in one category question do not affect analysis of the proposed measurement model. Not applicable values from the branching question relating to use of the service recovery process included: 19 cases recorded not applicable responses across the Compensation construct accounting for 15% of total cases. The Compensation construct is designed to measure user perception of the spoilt stamp refund process. Users that had not used the process were screened out through the branching question in the online survey and consequently could not answer questions specific to the Compensation construct

35 cases provided not applicable responses across both the Contact and Responsiveness constructs accounting for 27.8% of total cases. The former construct was designed to measure user perceptions of the ease and ability to contact the service provider when a service recovery encounter arose; and the latter to measure how responsive the service provider was in resolving user issues. Note that both Contact and Responsiveness act together i.e. the encounter consist of access via telephone followed by a human response to that contact, whereas the compensation process acts separately. Similar to the Compensation construct, users that had not been exposed to the service recovery process (either online or by telephone) could not answer questions specific to service recovery and were filtered out through the branching question in the online survey.