An Investigation into Factors Affecting Value Co-creation between Businesses

A Thesis Submitted in Partial Fulfilment of the Requirements of the University of Reading for the Degree of Doctor of Philosophy

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Declaration

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

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Dedicated to my beloved Pitaji (dad); the best teacher I've ever known

Publications

- Pathak, B. (2015). A conceptual framework for service system interaction. DC, 28th Bled eConference, Slovenia, 7-10 June 2015.
- Pathak, B. & Tan, Y. (2016). Co-creation with customers: what affects the effective outcome?. In Proceedings of the AHFE 2016 International Conference on The Human Side of Service Engineering, July 27-31, 2016, Florida, USA.
- Pathak, B. (2016). Service Innovation in Business Ecosystem: The Role of Enablers and Formation Cycle. In Baranauskas, et al. (Eds.), Socially Aware Organisations and Technologies. Impact and Challenges, Campinas: Springer International Publishing, pp. 73-78.

Thesis Abstract

This thesis explores the phenomenon of value co-creation (VCC) in a business-to-business (B2B) context; VCC has received much attention by scholars in recent years, especially with the emergence of service science in which VCC is one of the core concepts for investigating exchange among service systems from the perspective of service dominant logic (SDL) perspective. Successful organisations co-create products and services with their customers and also their business partners. Nonetheless, the VCC literature within the B2B context provides little insight into factors affecting VCC between businesses. This study thus examines value co-creation aiming to investigate (1) factors affecting VCC between an organisation and its business customers, and (2) factors affecting VCC between an organisation and its business partners.

To achieve this aim, a conceptual framework of factors affecting VCC between an organisation and customers identified through a systematic literature review was first developed. This resulted in the Customer-Organisation-Technology-Environment (COTE) framework, which is used to guide the empirical investigation. Interviews with executives in nine information-intensive organisations to explore their VCC practices were then conducted to refine the final COTE framework. The final framework captures sixteen COTE-related factors of VCC: Customer-related factors are identified as culture, motivation, perceived value, competence, trust and relationship, and peer influence; Organisation-related factors are motivation, perceived value, competence, policy and governance and organisational culture; Technology factors consist of digital infrastructure, new technology and security and privacy; and Environmental factors are recognised as government policy and regulations, market structure, trends and competition. The findings also reported a new form of co-creation called co-conception of competition, i.e. business customers, often in long-term relationships, helping firms to beat competition.

To uncover factors affecting VCC between organisations and their business partners, a framework of factors affecting value co-creation in an alliance (FAVCA) was developed from the literature. A case study research method was adopted. The case chosen is VCC practice between an AlphaVendor and its partners with a global presence and reputation in hardware technology, using multiple sources of evidence: 12 interviews, audio recording and documents were used. The FAVCA consists of four key factors: an alliance governance mechanism, and technology-related collective strengths; these were found to enable actors' efforts in co-creating value, whereas, actors' practice of power and politics, and opportunistic behaviours were found to contribute to inhibiting VCC in sales ecosystems. The FAVCA framework represents the nature of multiple actors' collaboration, and contributes to the debate on co-creation as well as co-destruction of value. The results were further validated with five informants. Overall the FAVCA argues that transaction cost theory (cf. Williamson, 1985) should be considered in the development of service science and SDL to understand the effect of actors' troublesome behaviours in value co-creation.

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Chapter 1 Introduction

1.1 Chapter Introduction

This study explores factors affecting value co-creation (VCC) in business-to-business (B2B) partnerships from the perspectives of the various industry. This chapter explains the research background and motivation, and theoretical background for the study. It presents the research problems, aim and objectives and outlines the research methodology adopted for the research. The chapter is structured as follows:

Section 1.2 presents research background and motivation

Section 1.3 presents significance of value co-creation to industry

Section 1.4 reviews theories relevant to the research

Section 1.5 presents the pilot study results to explore the research problems

Section 1.6 explains research problems identified from literature

Section 1.7 presents research questions, aims and objectives

Section 1.8 presents overview of research methodology

Section 1.9 outlines the thesis structure

Section 1.10 summarises the chapter.

1.2 Motivation to Study Value Co-creation: practical relevance of Value co-creation

Intensive competition between organisations in the market and the need to reduce operational costs demand that organisations constantly develop new products and services. This means that organisations cannot rely solely on the knowledge of their employees to undertake innovation; and have to find a way to utilise the wisdom of users, customers, partners and other actors in the market (von Hippel, 2005; Ramaswamy and Gouillart, 2010).

Involving outsiders in developing new products, and the need for complex collaboration, have highlighted the importance of the concept of value co-creation (VCC).VCC is appropriate for envisaging possible business partners and customers, reconfiguration of latent resources, and re-evaluating strategic position in the market (Vargo and Lusch, 2008; Zwass, 2010; Maglio, 2017, Ramaswamy and Ozcan, 2018). This process can have several benefits, including business model innovation and service innovation at firm level. Therefore it is worth thoroughly exploring and considering the features and nature of the VCC concept.

The customer can be a customer (payer), a consumer, a competence provider, a controller of quality, a co-producer, and/or a co-marketer (Storbacka and Lehtinen, 2001), or a co-creator of value (Vargo and Lusch, 2008: 2016) regardless of the B2B or business-to-consumer (B2C) context. A study by IBM (2010; p.9) revealed that the most successful organisations co-create products and services with customers, and integrate customers into core processes. Procter & Gamble is a prime example, which has explored co-creation opportunities with its customers to innovate household cleaning products, integrating customers' ideas in core processes. It has produced many successful brands, e.g. Febreze air freshener, through co-creation programmes (Bughin, 2014). The co-creation opportunities are not limited to end users/end customers but also include business customers. Bughin's study showed that Loncin, a Chinese motorcycle maker, brought suppliers rather than end customers to its co-creation initiative and in doing so, it helped Loncin cut their manufacturing cost by 70 percent (Bughin, 2014).

The benefits of involving customers in co-creating products or services are evident in a number of studies (e.g. Fuller, 2009; Roser et al., 2009; Ind et al., 2013; Frow et al., 2015; Ramaswamy and Ozcan, 2018), and many firms are participating in the concept or are considering doing so. According to a global CEO survey by PWC in 2015, 69 percent of those participating in the survey are partnering or have considered partnering suppliers, whereas, half or more of CEOs are partnering, or have considered partnering, business partners, e.g. customers, partners or competitors (PWC, 2015). Nonetheless, this process can be challenging. Mckinsey's (2014) study of 300 companies found that 90 percent of executives were eager to integrate customers' opinions and resources into their core processes, although only 12 percent had actually done so. From the customer side, Bughin's study revealed that only a quarter of customers were aware of the co-creation concept, while an additional 5 percent knew about co-creation but not how it actually worked (Bughin, 2014).

Given the increasingly important roles that customers and partners play in an organisation and the challenges that it posed, VCC concepts have attracted much attention from scholars (Maglio and Spohrer, 2008; Grnroos, 2008; Chan et al., 2010; Edvardsson et al., 2011; Sarker et al., 2012; Gronroos and Voima, 2013; Greer, 2015; Kohtamaki and Rajala, 2016; Makkonen and Olkkonen, 2017; Maglio, 2017; Best et al., 2018). Ostorm et al. (2010: 2015) stressed that it is important for researchers to understand the value co-creation concepts as an evolving and crucial body of knowledge and as a rich research avenue. Both empirical practices (e.g. McKinsey, 2014; PWC, 2015) and the academic literatures (e.g. Vargo and Lusch, 2008: 2016; Ostorm et al., 2015; Marcos-Cuevas, 2016; Leclercq et al., 2016; Maglio, 2017; Ramaswamy and Ozcan, 2018) also suggest VCC as one of the top priorities in service research. This study thus set out to explore the practice of value co-creation with the focus on information intensive industry in the context of a B2B relationship.

The next presents the importance of VCC to information intensive industry.

1.3 Significance of value co-creation to industry

The concept of co-creation is widely applied across all industry from agriculture to the social sector, and from fast-moving consumer goods to industrial goods and services (Ramaswamy and Gouillart, 2010). However, this study focuses on information-intensive industry, which is defined as the degree to which firm's products and operations are based on the information collected and processed as part of the exchanges between the firm and its customers (Glazer, 1991). Examples of information-intensive industry are software, consulting, professional services, and information and communication technology (Neirotti et al., 2016). The levels of information intensive represent the various types of information associated with products and services and exhibit distinct emphasis on the role of ICT in their core business processes and, the degree to which "knowledge" components are embedded in product/service offerings (Glazer, 199; Neirotti et al., 2016). The knowledge component is also one of the core parts of the service-dominant logic described in the next section.

Table 1.1 Co-creating enterprise (Ramaswamy and Gouillart, 2010)

Company	Co-creation practices	Source
Apple iPhone	iPhone App Stores create an engagement platform among the company, independent software developers and its customers	https://www.apple.com/uk/ios/app-store/

Intuit	Design for delight: customer and community contributions in product development	http://www.intuitlabs.com/design-for-delight
SAP	SAP Developer Network; the largest SAP's online community; SAP saves substantial money in customer support using SDN	https://www.sap.com/community.html
IBM	Worldwide partner innovation centres to facilitate collaborative innovation	https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/pw_com_prb_innovation_centers_overview
IKEA	Customer can design their own kitchen in interaction with a trained sales representative	https://www.ikea.com/gb/en/ikea/kitchens/
Dell	User are able to submit new product/service ideas through engagement platform	http://www.ideastorm.com/
Quirky	Anyone can involve in new product ideation, creation, design and can become a partner to share revenue	Quirky.com

Examples of co-creation at information intensive enterprise are listed in Table 1.1 which shows that companies have benefited from co-creation initiative in generating new business ideas, learn directly from the customer, experiment new ideas, build trust with the customer among other benefits. The payoff of co-creation initiative has been impressive for the companies which Ramaswamy and Gouillart, (2010; 12) called *strategic capital* of the firm. Given these payoffs there is still much to learn about the concept of VCC the next section presents the value creation and co-creation in details.

1.4 Value Creation versus Value Co-creation

Value creation in the value chain model (Porter, 1985) is defined as a linear sequence of events; value –adding activities, e.g. logistics, operations and marketing, in an engineered and predictable way contribute to the creation and distribution of value from "producer" to "customer", i.e. the firm produces the value and the customer destroys it. However, Normann and Ramirez (1993) argue that successful companies do not just add value, they reinvent it. To reinvent the value, the strategic task of the company is to reconfigure the roles and relationships among actors: suppliers, partners, and customers. Normann and Ramirez's idea of reconfiguring the roles of other stakeholders (e.g. customers) and utilising their competences in the value creation process, make customers into co-creators of value, the main force of Prahalad and Ramaswamy's (2000: 2004) conceptualisation.

The role of other actors, such as customers, emerged in value creation, because, a proportion of major economies were changing from manufacturing-based to *tartarisation* (Miles, 2002), resulting in a growing number of service interactions in our daily lives (Spohrer and Kwan, 2008). To study the changing nature of value creation and innovation, Vargo and Lusch (2004), proposed Service-Dominant Logic (SDL), which was supported by industrial and academic initiatives to establish an interdisciplinary approach called Service Science Management and Engineering, service science in short. SDL and service science aim to study complex service systems, to establish common understanding and to develop system thinking, to solve innovation issues and to develop the skills that are required to understand complex service systems (Spohrer et al., 2010).

Service dominant logic (Vargo and Lusch, 2004: 2008: 2016) is a theoretical approach that describes a paradigm shift from goods dominant logic (GDL) (manufacturing) to SDL. A dominant logic according to Prahalad and Bettis (1986: 490) can be both a mind set or worldview and a set of elicited management processes. SDL is a logic based on service as the underlying basis of exchange, as depicted in one of SDL's foundational premises "Service is the fundamental basis of exchange" (Vargo and Lusch, 2008: 2016). SDL conceptualises service as the application of resources to benefit another (Vargo et al., 2010). Goods in SDL are seen as an appliance for service provision, whereas service is considered as the main basis for interactions and transactions (Vargo and Lusch, 2008). Thus, organisations are also considered as service providers in service science and SDL.

SDL proposes foundational premises (FPs) that centre on the theme of the value co-creation process, network relationships (increasingly referred to as service ecosystems in SDL), resource integration and operant knowledge. Service science also incorporates value co-creation in its ten foundational concepts as a possible win-win outcome between entities (Spohrer et al., 2010).

Although SDL is primarily focused on involving customers in an organisation's value creation process, it also conceptualises that value is increasingly co-created by multiple participants including firms, customers, suppliers, partners and other stakeholders (Akaka and Chandler, 2011; Vargo and Lusch, 2011). The concept of many actors creating value together is referred to as a service ecosystem (Mele et al., 2010). The central point of the service ecosystem is to enhance value co-creation (Mele et al., 2010; Vargo and Lusch, 2016).

Value co-creation involves a process of integrating, applying and transforming resources between actors (Spohrer et al., 2008) and the VCC is also defined as dynamic and complex (Vargo and Lusch, 2011; Neghina et al., 2015). To study a complex domain, scholars (e.g. Zikmund, 2003; Bryman, 2016) have suggested conducting a small-scale exploratory pilot study that will help to define an appropriate scope of the research project. A pilot study was accordingly conducted to explore organisations' VCC practices and scope down the research project. The next section presents the details on this study.

1.5 The Pilot Study

The purpose of this pilot study is to explore value co-creation practices and challenges associated with them, which will provide the context for this research in devising the research aim. The exploratory study was conducted during the summer of 2015 with three information intensive (e.g. ICT) companies that claimed to be inviting their customers to co-create their products and services. Table 1.2 presents the companies' profiles and their co-creation activities in various forms.

Table 1.2 Pilot study details

Company	Market served	Product & service	Co-creation activities	Actors involved
PS_C1	Worldwide	Software development; cyber security, monitoring, vulnerability assessment	Product development, Customisation, Idea sharing, Feedback, Marketing	Banks. Commercial organisations, government agencies, (B2B & B2G)
PS_C2	North America, Europe and North Africa	Software development for cable television and network industry; ad insertion software	Customisation, Ideation, Marketing,	TV & cable network operators (B2B)
PS_C3	Worldwide	Device detection service through software/database, smart devices analytics	Ideation, Marketing, Feedback	Commercial organisation (B2B)

Three companies, PS_C1, PS_C2, and PS_C3, supplied the data, collected from interviewees who were the co-founders of their respective companies. A semi-structured interview guideline was designed from the literature review, all topics covering co-creation, the business background, actors involved in VCC, their activities, other VCC-associated factors and challenges to VCC. The interviews averaged over half an hour.

The results of the pilot study showed five activities involved in the firms inviting customers to co-create: idea generation, product development, customisation, feedback and marketing activities. Various factors were identified as significant in co-crating value with customers; as the first two enabled VCC, and the third contributed to inhibiting VCC between organisation and customer in the B2B context:

- Organisational competence to understand customers' business needs (C1, C2, C3), and the direction of the overall business environment (C1, C2, C3); e.g. the changing culture of innovation was found to be affecting VCC (C1, C2).
- Organisational processes that support customer participation (C1, C3), the enabling role of technology (C1, C2), and the customer's willingness and trust in the organisation (C1, C3).
- Time constraints in involving customers in various activities of co-creation (C1, C3), challenges in reconfiguring limited resources, such as various organisational procedures on co-creation (C2, C3), and lack of customer skills (C3).

The researcher then further surveyed the VCC literature to find studies that corresponded with and complemented the pilot study results, such as identifying the motivation, enablers and inhibitors of VCC. The next section presents the results of literature review as a gap in VCC research.

1.6 Literature Review Gap: Research Opportunity

The pilot study results identified topics including *motivation for co-creation, the B2B context of co-creation, factors and conditions enabling co-creation, the role of technology and business environment, and the outcome of co-creation* as of particular interest. The pilot study and literature review therefore suggest the following:

Topics. These vary from studying customer participation on virtual forums using technology (e.g. Fuller et al., 2009; Nambisan and Baron, 2009; Fuller, 2010; Galvagno and Dalli, 2014), service experience co-creation (e.g. Rowley et al., 2007; Jaakkola et al., 2015), and brand co-creation (e.g. Pongsakornrungsilp and Schroeder, 2011; Hsieh and Chang, 2016) to identifying dimensions and antecedents (e.g. Neghina et al., 2015). Many studies also focus on the motivation of customers to co-create value (e.g. Prahalad and Ramaswamy, 2000; Boyle, 2007; Moller et al., 2008; Campbell et al., 2011; Coviello and Joseph, 2012; Bharti et al., 2014; Sweeney et al., 2015). However, *the organisation motivation to co-create value was identified in very few papers* (e.g. Frow et al., 2015).

Study context. Mustak et al.'s (2013: 352) investigation found that customer participation in firms had mostly been *studied in a business-to-consumer context*, and that participation by *business customers was largely been unexplored*. Thus, there is a need for research in the B2B context, in particularly, *business customers' motivations to participate and firms' efforts to facilitate such participation,* given the crucial roles business customers play in co-creating value (Aarikka-Stenroos and Jaakkola, 2012; Mustak et al., 2013; Kohtamaki and Rajala, 2016).

Research methods/methodology. The dominant literature on methodology in the VCC domain is conceptual papers (e.g. Gronroos, 2012; Mustak et al., 2013; Galvagno and Dalli, 2014; Geemser and Perks, 2015; Leclercq et al., 2016), other papers are based on quantitative surveys (Chan et al., 2010; Morosan, 2015), but fewer papers on qualitative enquiry (e.g. Echeverri and Skalen, 2011; Cova et al., 2015). In terms of methodological choice, Neghina et al. (2015: 236) suggest "qualitative studies could shed more light on complex dynamics of value co-creation research."

SDL and service science also identified the ecosystem context of co-creation, where firms, their partners, customers, suppliers and other stakeholder co-create value (Akaka & Chandler 2011; Vargo and Lusch 2011; Tsujimoto et al., 2018), referred to here as the multi-actor network co-creation context or ecosystem context (Tsujimoto et al., 2018). The discourse of value co-creation in B2B multi-actor (ecosystem) studies is limited. This claim is also supported by the study of Mustak et al. (2013) and Kohtamaki and Rajala (2016), which found *limited research in the area of co-creation of value from the ecosystem perspective* where many actors collaborate to co-create value.

The review of the literature revealed several influential papers (e.g. Zwass, 2010; Grover and Kohli, 2012) that stated current insights and future research agendas in their work relevant to the results of the pilot study. However, to the best of our knowledge they all focus on offering conceptual frameworks and highlighting research gaps. This opens up an avenue for further research.

This study thus aims to explore how organisations' and customers' willingness, motivation and skills affect the co-creation process, as describes by Gronroose (2012), and which types of value are generated as a result of the co-creation process (Leclercq et al. 2016), with a focus on the B2B context (Mustak et al., 2013; Kohtamaki and Rajala, 2016; Oertzen et al., 2018) from the qualitative research perspective (Neghina et al., 2015).

The findings of the pilot study, i.e. the motivation of co-creators in the B2B context and factors enabling and inhibiting VCC in this context, are supported by suggestions from Grover and Kohli (2012) on the process and outcome of the multi-actor context of VCC and from Leclercq et al. (2016) on motivations, multiple profiles, engagement platforms, complexity and value generation in multi actor environments. This research thus aims to explore the process, nature and mechanism of value cocreation in the B2B context. The research aim, research objectives and questions are presented in the following section.

1.7 Research Questions, Aims and Objectives

This research project is divided into two parts; the first explores only the VCC activities between organisations and their business customers (O&C) in the B2B context. The second explores VCC practices between multi-actors (ecosystem), i.e. between organisations and their various partners attempting to co-create products and services together (O&P).

To study these two contexts, O&C and O&P, two separate research aims are proposed.

Aim 1**: *to explore factors affecting value co-creation between organisations and customers.*** Two research questions (RQ1a & RQ1b) and six research objectives (RO1a, RO1b, RO1c, RO1d, RO1e and RO1f) are proposed, as presented in Table 1.2.

The overall purpose of research aim 1 is to present a comprehensive list of factors from the customer and organisation affecting VCC through the literature review and also to assess and validate these factors through empirical VCC practices. The outcome of research aim 1 is a framework of factors affecting value co-creation between organisation and customer. This framework could serve as the basis for studying both constraints and opportunities for customer value co-creation and is expected to be useful in incorporating various co-creation related factors in the enterprise, so as to better manage or mitigate these factors.

Aim 2: ***to uncover factors affecting the underlying co-creation mechanism of an organisation and its partners*** by proposing the following question:

RQ2- What factors affect the underlying co-creation mechanism of an organisation and its partners?

This second aim attempts to assess the process, nature and mechanism of value cocreation between an organisation and its partners (O&P). The overall purpose is to present a holistic view of factors enabling or inhibiting the VCC mechanism between B2B partners by developing a VCC framework for the factors affecting it, and conducting case study research. This framework is based on B2B partnerships that will illustrate the mechanism of VCC in the business alliance context. The research intends to explore the co-creation mechanism by uncovering such empirical practice and also by attempting to understand how such factors affect the co-creation activities. The outcome of research aim 2 (and RQ2, RO2a, RO2b, RO2c and RO2d) is a framework for Factors Affecting Value Co-creation in Alliance (FAVCA). This framework could serve as a basis for studying both constraints and opportunities for alliance value co-creation and is expected to be useful in understanding the mechanism that contributes to value co-creation occurrence in B2B partnerships. Table 1.3 presents an outline of the research aims, associated research questions and objectives. The following section presents an overview of the research method adopted.

Table 1.3 Research aims, research questions and research objective of this study

Research aim	**Research question**	**Research objective**
Aim 1: to explore factors affecting value co-creation between organisations and customers	RQ1a: What factors affect customer participation in value co-creation? RQ1b: What factors affecting organisation participation in value co-creation?	*RO1a* To re-examine the value co-creation concept *RO1b*. To review factors that have positive and negative effects on customers in VCC *RO1c*. To review factors that have positive and negative effects on organisations in VCC *RO1d*. To formulate a VCC framework of factors affecting O&C based on finding from (b) and (c) *RO1e*. To investigate the factors affecting VCC through qualitative interviews *RO1f*. To validate the framework
Aim 2: to uncover factors affecting the underlying co-creation mechanism of an organisation and its partners	RQ2: What factors affect the underlying co-creation mechanism of an organisation and its partners?	*RO2a*. To identify actors and mechanisms of VCC in alliance and to reveal factors facilitating (and inhibiting) VCC *RO2b*. To propose a framework comprising factors that have positive and negative effects on multi-actor context *RO2c*. To assess the framework through the case study *RO2d*. To validate the framework

1.8 Overview of Research Method Adopted

To achieve the research aims and objectives, this study adopted *a critical realist* and uses a qualitative research approach to study the practice of value co-creation between organisation and customer, and between an organisation and its partners. Scholars such as Ostorm et al. (2010: 2015), Echeverri and Skalen (2011) and Neghina et al. (2015) have also advocated the use of the qualitative research approach to explore VCC phenomena, given that the concept is still relatively new and evolving.

The other rationale for adopting a qualitative method to investigate the phenomenon in question is based on the noticeable research gap in the literature, i.e. limited qualitative research within the critical realist research tradition in studying VCC (e.g. Ma and Dube, 2011; Echeverri and Skalen, 2011; Neghina et al., 2015; Jaakkola et al., 2015).

The application of thematic content analysis (Braun and Clarke 2006; Clarke and Braun, 2013) is used to identify co-creation factors from the literature using Nvivo software. The software can support coding, analysing, linking data, and conceptual framework building (Bazeley and Jackson, 2013). The result of the thematic analysis of the literature is used to propose a *conceptual framework of value co-creation and factors influencing it*. With the help of this method, the study achieves the research objectives RO1c and RO2b.

To achieve the research aim 1 semi-structured interviews are conducted with executives in nine organisations to explore factors affecting value co-creation between organisation and customer. Then, the findings from the interview is validated from five informants to increase the accuracy of the findings and confirm the validity of the study (Yin, 2014), producing the framework.

A case study method (Yin, 2014) was used to investigate the second set of research questions to uncover factors affecting the underlying co-creation mechanism between an organisation and its business partners (aim 2) and to assess the corresponding conceptual framework:

> <u>RQ2- What factors affect the underlying co-creation mechanism of an organisation and its partners?</u>

Data were collected from 12 interviews, conference presentations audio recording and documentary sources. Informants review with five experts is sought to increase the validity of the research findings for factors affecting value co-creation between organisation and its partners.

The next section give an overview of the thesis structure.

1.9 Thesis Structure

The summary of this thesis is presented in Figure 1.1 is described as follows;

Chapter 1. Introduces the scope of the project by outlining research gaps in the literatures and presents the research aim, objectives and research questions.

Chapter 2. Reviews literature on value co-creation and presents relevant theories, service science, and service-dominant logic to define the concept of value co-creation.

Chapter 3. Presents the approach adopted to conduct the research project, identifying research philosophy and methods.

Chapter 4. Reviews literature on factors affecting VCC between organisation and customer and proposes the Customer-Organisation-Technology-Environment (COTE) framework that identifies factors affecting value co-creation in the organisation and customer context.

Chapter 5. Tests the conceptual framework proposed in chapter 4, i.e. COTE, in empirical settings and presents the empirical findings. It then, presents the discussion and implications of empirical findings by combining the literature reviewed in chapters 2 and 4.

Chapter 6. Reviews literature on factors affecting VCC between an organisation and its business partners and proposes a framework for this alliance (FAVCA).

Chapter 7. Tests the conceptual framework proposed in chapter 6 in the empirical settings of an alliance case study and presents the empirical findings to evaluate the FAVCA framework. It also discusses the implications of the research findings for the theory.

Chapter 8. Chapter 8 presents the outcome of the research validation process and revises the COTE and FAVCA frameworks. It also summarises the key findings from the research and synthesises their implications as theory.

Chapter 9. Discusses the research contribution to theory, methods and practices. It summarises the overall research project, outlines its research limitations and proposes directions for further work.

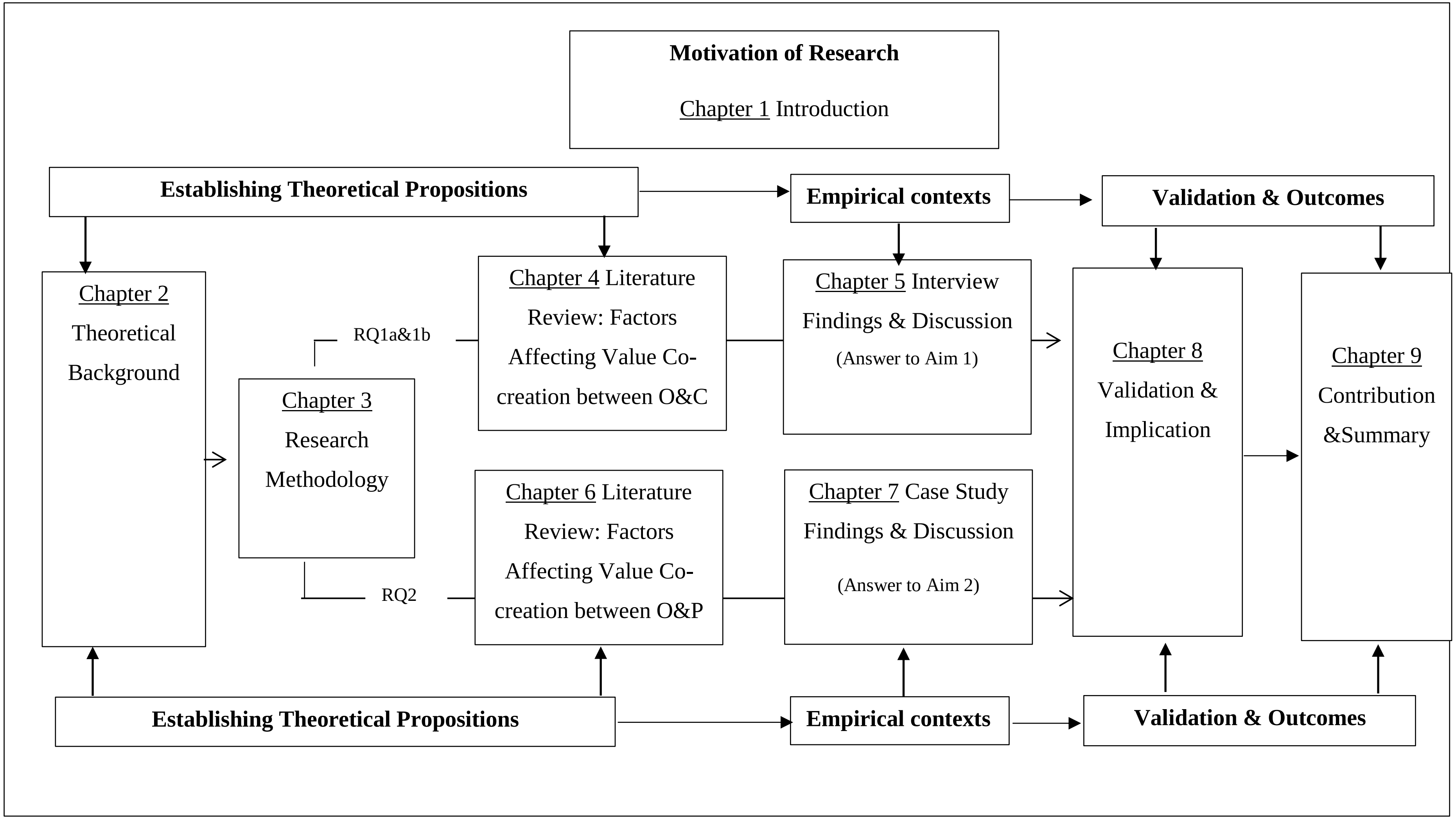

Figure 1.1 Structure of the thesis

1.10 Chapter Summary

This chapter explains the overall research project and presents the rationale for conducting it. The results from the pilot study and the gap in value co-creation identified from the literature review provide the foundation for further research. To respond to this gap, the chapter introduced two research aims:

Aim 1 is *to explore factors affecting value co-creation between organisations and customers.*

Aim 2 is *to uncover factors affecting the underlying co-creation mechanism between an organisation and its partners*

Three research questions and nine research objectives were proposed to achieve the aims. The chapter also summarised the research method adopted. It outlined the chapter structure; with the nine chapters summarised in Figure 1.1.

Chapter 2 explores and reviews up-to-date value co-creation literature.

Chapter 2 Theoretical Background

2.1 Chapter Introduction

The pilot study to explore the practice of value co-creation revealed many factors needing to be considered when co-creating value with customers. This research is motivated to explore these factors. The purpose of this chapter is to introduce and review the concept of value co-creation, including its definitions, and theoretical underpinnings. The chapter also reviews existing research focus and identifies research opportunities in relation to important co-creation factors, which need further investigation. The chapter is structured as follows:

Section 2.2 reviews definitions of value co-creation, to adopt one for the study

Section 2.3 presents service science theory and its relation to value co-creation

Section 2.4 presents service-dominant logic and its relation to value co-creation

Section 2.5 presents the concept of service ecosystems and their relation to value co-creation

Section 2.6 reviews and discusses existing literature in value co-creation

Section 2.7 proposes the research aim and objectives

Section 2.8 summarises the chapter.

2.2 Defining Value Co-creation

Torraco (2005: 361) recommends deconstructing value co-creation into its basic elements: "Critical analysis often requires the author first to deconstruct a topic into its basic elements". This study therefore seeks to decompose value co-creation into its basic elements: "value" and "co-creation".

2.2.1 Defining "Value"

The term "value" has been studied extensively by many scholars. Holbrook (1994) perceived it as the "hedonic appreciation of the object of consumption", and others as "improvement in a system" (Spohrer et al., 2008). Hence, defining the concept of value can be challenging as it considers personal, situational and comparative contexts to conceptualise the concept.

However, this study only considers customer value that it puts value in the context of the customer. Value for the customer, according to Woodall (2003) is

> any demand-side, personal perception of advantage arising out of a customer's association with an organisation's offering, and can occur as reduction in sacrifice; presence of benefit (perceived as either attributes or outcomes); the resultant of any weighed combination of sacrifice and benefit (determined and expressed either rationally or intuitively); or an aggregation, over time, of any or all of these.

Customer value is significant because: (1) it has a direct impact on customer behavioural outcomes, e.g. customer loyalty, leading to better financial performance (Zeithaml, 1988; Khalifa, 2004; Sanchez and Iniesta, 2007); and, (2) understanding customer value enables an organisation to meet customers' needs and expectations, and manage its resources more effectively (Ulaga and Chacour, 2001). To study customer value, three major approaches have been suggested by Klanac (2013): benefit-sacrifice, means-end and experiential. Table 2.1 outlines these approaches to customer value.

Table 2.1 Approaches and definitions of customer value (Klanac, 2013)

Approach	Definition	Scholar
Benefit-sacrifice	Consumer's overall assessment of the utility of a product based on perception of what is received and what is given	Zeithaml (1988)
	Any demand-side, personal perception of advantage arising out of a customer's association with an organization's offering, and can occur as reduction in sacrifice; presence of benefits (determined or expressed	Woodall (2003)

	either rationally or intuitively); or an aggregation, over time, of any of all these	
Means-end	A customer-perceived view of what they want to happen in a specific use situation, with the help of a product and service orderings, in order to accomplish their desired purpose and goal	Woodruff and Gardial (1996)
	A customer-perceived preference for, and evaluation of, those product attributes, attribute performances, and consequences that arise from use and that facilitate or block the customers in achieving their goals and purposes in use situations	Woodruff (1997)
Experiential	An interactive, relativistic, and preference experience that results from using a product	Holbrook (1999)
	Value emerges out of the use of goods and service activities	Korkman (2006)
	Value as idiosyncratic, experiential, contextual and meaning-laden	Vargo and Lusch, (2008)
	Is a holistic phenomenon, which is subjective, event specific, personal, and individually and socially constructed	Helkkula and Kelleher (2010)

Each approach has its limitation as each concept reflects some features of customer value and neglects others. For instance, the benefit-sacrifice approach and means-end approaches treat the customer as a rational being and neglect negative aspects of consequences. Similarly, the experiential approach stresses a high-level of abstraction that is difficult to transfer into a practice, and it neglects the ways in which the attributes of an offering drive value (Klanac, 2013).

This study accepts all the three approaches, benefit-sacrifice, means-end and experiential, to understand customer value, as some customers calculates benefits and sacrifice, others look for attributes of the product and the rest enjoys the ultimate experience of activities that generate value for them.

The significance of value in a business context is its creation, emergence or formation process (e.g. Echeverri and Skalen, 2011; Gronroos, 2011). The following section reviews one of these value-creation processes referred to as “co-creation”.

2.2.2 Definitions of Co-creation

The word ‘co-creation’ is made up of two parts, co- and creation. According to Oxford dictionaries (2016) the former originally came from the Latin word com, meaning joint, mutual, common or together with another or others, as in co-driver or co-education. Creation is defined as the action or process of bringing something into existence (Oxford Dictionary, 2016). The etymology of the two words highlights the key features of co-creation as mutual action, bringing something into existence together with others.

Co-creation in the service literature is defined as collaborative practices between two parties, where they interact to share resources. Ramaswamy and Gouillart (2010: 2) highlight the collaboration, defining co-creation as:

> The practice of developing systems, products, or services through collaboration with customers, managers, employees, and other company stakeholders.

Prahalad and Ramaswamy (2004) define co-creation as inclusive, creative and meaningful engagement of all stakeholders to mutually expand value. The key here is to have an engagement platform which is purposefully designed environment of an artefact, interfaces, processes and most importantly people that enables value to be generated. Further, they identify four principles of co-creation as dialogue, risk-benefits, transparency and access (Prahalad and Ramaswamy, 2004).

Gronroos and Voima (2013: 143) stress that co-creation is interaction between two parties and sharing of resources between these parties. They define co-creation as

> Direct interaction between service provider and customer, where service provider's resources/processes/outcomes interact with the customer's resources/processes in a merged dialogical process. The customer's resources/processes interact with the service provider's resources/processes/outcomes in a merged dialogical process.

A more recent definition by Frow et at. (2016: 24) highlights co-creation as the resource integration process between various actors, e.g. customer, supplier, organisation, partners, distributors, universities and societies within a service ecosystem:

> Co-creation describes the resource integration process that occurs during practices between actors linked together within a service ecosystem.

The concept of the service ecosystem indicates the increasingly occurrence of VCC not only amongst customers and the firm but also multiple actors. An example is the case of Loncin, a Chinese motorcycle manufacturer, who brought in suppliers to co-create value (Bughin, 2014). The concept of the service ecosystem originated from ecology theory; it is defined as an interacting economic community that may involve the organisation, partners, suppliers, customers, government agencies and socio-economic environment (Moore, 1996). The concept will be discussed in detail in section 2.5.

This study considers both of the contexts of co-creation between organisation and customer, and co-creation between a service ecosystem's actors e.g. the organisation and its partners. Combining the words co-creation and value adds another meaning, of not only bringing something into existence together, but of creating something that has a value. The next section discusses definitions of value co-creation.

2.2.3 Definition of Value Co-creation

The concept of value co-creation (VCC) has attracted several domains, e.g. e-commerce, strategy and healthcare, resulting in a multiplicity of definitions, as presented in Table 2.2.

Table 2.2. Selected definitions of value co-creation used in different domain

Author	Definition	Discipline/Context of study
Kohli and Grover (2008: 28)	*VCC involves a symbiotic relationship between a firm and its primary stakeholders*	Information Systems
Zwass (2010: 13)	*The participation of consumers along with producers in the creation of value in the marketplace*	e-Commerce
Spohrer and Maglio (2010: 1)	*VCC as useful change that results from communication, planning, or other purposeful and knowledge-intensive interactions between distinct entities, such as individuals or firms*	Service Science
Vargo et al. (2010: 140)	*VCC incorporates the integration and application of resources from organisation (e.g. firms), by service beneficiaries (e.g. customers) but, because value is always based on the context and perspective, it is always determined by the beneficiaries*	Service Marketing
Witell et al. (2011: 143)	*VCC aims to provide an idea, share knowledge, or participate in the development of a product or service that can be of value for other customers*	Innovation/Service Management
McColl-Kennedy et al. (2012: 375)	*The benefit realized from integration of resources through activities and interactions with collaborators in the customer's service network*	Healthcare Service Management

Ind et al., (2013: 9)	*VCC is an active, creative, and social process based on collaboration between organizations and participants that generates benefits for all and creates value for stakeholders*	e-Commerce/Brand Management

Kohli and Grover (2008) highlight the symbiotic relationship between a firm and its stakeholders, and Zwass (2010) the participation of consumers in the process of achieving value. In comparison to Zwass (2010), Ramaswamy and Gouillart (2010)'s earlier definition and Kohli and Grover (2008) extend the boundary of involved stakeholders in VCC by highlighting a number of stakeholders related to the company, e.g. employees and partners.

Witell et al. (2011) proposes two approaches to co-creation: *co-creation for use* and *co-creation for others*. A specific customer for his or her own benefit performs the former, while the latter is oriented towards other customers. Co-creation for use is to enjoy the production process and its outcome, e.g. Local Motors' initiative to co-create cars with customers. Co-creation for others aims to provide ideas, share knowledge or participate in the development of a product or service that can be of value to other customers, e.g. writing product reviews on the Amazon website, so that prospective customer can benefit (Witell et al., 2011).

Thus, co-creation may not be limited to the stakeholders involved. This means that value produced in co-creation is not limited to the organisation and customers, but, can be enjoyed by other customers who are not involved in the co-creation.

The definition of McColl-Kennedy et al. (2012) emphasises integration of resources for the co-creation activities Ind et al. (2013) extends the definition of Witell et al. (2011) by widening the boundary of VCC to include active, creative and social processes. Gronroos and Voima (2013) highlight the direct interaction between organisation and customer. Their concept is similar to that of McColl-Kennedy et al. (2012) in terms of co-creation as an integration of resources through interaction.

However, Gronroos and Voima (2013) expand the integration of resources to include the integration of, process and outcomes. According to Gronroos (2011: 290), "co-creation of value can take place only if interactions between the firm and the customer occur. If there are no direct interactions, no value co-creation is possible". However, the presence of interactions is only a platform for positively persuading the customers' to practices and create value, prerequisites for VCC.

2.2.4 Proposing working definition of value co-creation for this study

A pilot study provides the context for this research to explore factors that are significant in co-creating value in the B2B context. The context of this is also influenced by earlier discussion on "co-creation" that defined the possibility of value co-creation practices between actors within a service ecosystem. Value co-creation practices between O&C means micro-level practices within a service ecosystem, requiring interaction and resources sharing between only two parties (Chandler and Vargo, 2011). Involving other actors such as partners or suppliers within a service ecosystem requires interactions and resources sharing between many actors.

Thus, this research aims to study both contexts, at the micro-level by aiming to **:** *to explore factors affecting value co-creation between the organisation and customers***,** and at the ecosystems level by aiming *to uncover factors affecting the underlying co-creation mechanism of B2B partnerships by studying the organisation and its partner as an ecosystem.* To represent both these contexts a new definition of value co-creation is proposed.

Building on the works of Zwass (2010), Ramaswamy and Gouillart (2010), Witell et al. (2011), Ind et al. (2013), Gronroos and Voima (2013) and Frow et al. (2016), we adopt a working definition for "co-creation" as the *participation of customer and organisation (or other actors within a service ecosystem) in the development of product or service through integration of resources and direct interaction*; and "value" is *an outcome resulting from such co-creation processes and activities*. And "value co-creation" is

> *An active, creative, and social interaction process based on the need or desire of actors linked together within a service ecosystem, who integrate their resource to support the various VCC activities such as idea generation, knowledge sharing, product development, solution implementation and to create win-win benefits for the involved actors.*

This definition incorporates five different ideas:

- *Active, creative and social interaction:* connections, and interactions between people, such as companies and customers, not interactions between consumers and products only, collaboration and co-creativity (Roser et al., 2009; Ind et al., 2013), direct interaction (Gronroos and Voima, 2013) and indirect interaction, e.g. word of mouth recommendations, reviews or advertisements (Helkkula et al., 2012).

- *Based on need or desire of actors:* the need for VCC arises from the actors' need or desire (Arnould, 2014; Hietanen et al., 2017); thus, the actors' need and their desire to co-create with other actors trigger the process of value co-creation.

- *Actors linked together within a service ecosystem:* it seeks active engagement of all parties, i.e. the organisation, customers or partner organisations involved in a service ecosystem (Vargo and Lusch, 2011), e.g. the Apple ecosystem comprises Apple Inc., hardware manufacturer, apps developer, developer community, retail/telecom partner, media, users, competitors, etc.

- *Integration of resources to support VCC activities:* combinations and constellations of resources enable value co-creation and innovation (Edvardsson et al., 2012)

- *To create win-win benefits:* the outcome of VCC should be a win-win proposition for actors (Spohrer and Maglio, 2010). Working together in a process of VCC that delivers benefits for participating individuals (such as fulfilment and socialisation) and for the organisation (such as idea generation and development, and marketing platforms) (Ind et al., 2013), and for the other actors in ecosystem (Vargo and Lusch, 2011).

The next section presents service science as theoretical lens through which to view the concept of value co-creation.

2.3 Service Science Theory and Value Co-creation

This section takes the service science theoretical perspective to define the concept of value co-creation. Service science (SS) is an interdisciplinary approach initiated by IBM that aims to study complex service systems, to establish common understanding and to develop system thinking, to solve innovation issues and to develop the skills that are required to understand complex service systems (Spohrer et al., 2010; Alter, 2010). According to Vargo et al. (2008: 150), service science explores value co-creation as occurring through "the integration of existing resources with those available from a variety of service systems that can contribute to system well-being as determined by the system's environmental context."

Service systems are considered the basic unit of analysis in service science; they are constantly interrelated with other service systems and range in size from an individual person to a world-wide exchange system (Maglio and Spohrer, 2008). The primary objective is to study service systems, defined as *value co-creating configurations of people, technology and value propositions* (Maglio and Spohrer, 2008), exploring how these configurations of people, processes and resources interact to co-create value in service systems (Vargo et al., 2008). Service science also suggests a macro-view of value co-creation by highlighting greater configurations of resources and interaction, and recognising the significant role of technology in enabling value co-creation (Spohrer et al., 2008; Alter, 2010; Saarijarvi et al., 2013).

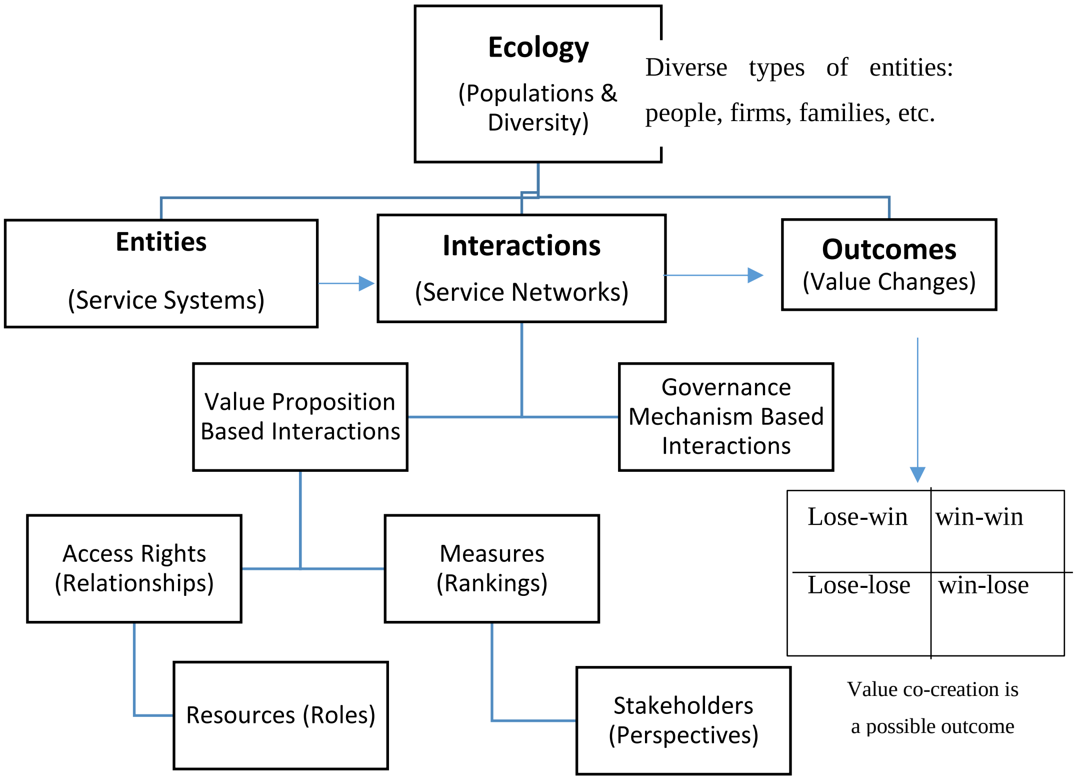

Figure 2.1Ten foundational concepts of Service Science (Spohrer and Maglio, 2010)

Figure 2.1 shows the ten foundational concepts of SS, where service systems are defined *as the cultured knowledge-value reason entities that interact amongst people, organisations and machines with the aim of co-creating value in the exchange of resources* (Spohrer and Kwan, 2008; Spohrer et al., 2010). The ten concepts of SS also indicate that entities' (stakeholders') interactions in service networks can have four possible win/lose outcomes, as depicted in Figure 2.1.

The next section presents service-dominant logic to strengthen the discussion on value co-creation.

2.4 Service-dominant Logic and Value Co-creation

Service-dominant logic distinguishes between goods-centric thinking and service-centric thinking. This section reviews SDL in relation to the VCC concept.

The traditional understanding of value creation is that the process is led by firms: firms produce value and consumers destroy value. However, in SDL and service science, customers are defined as proactive contributors to value creation, rather than merely acting as passive recipients of service. SDL and SS consider customers as active participants in the creation of value, and that goods are only transmitters of service and act as means for the customer to benefit from the firm's competences (Vargo et al., 2008). SDL describes value as idiosyncratic, experiential, contextual and meaning-laden (Vargo and Lusch, 2008). To realise the value, customers need to apply their competencies. Competence or skills in SDL are defined as *operant resources* which are heterogeneous and individual; the amount and quality of customer skills and knowledge affects the way value is created (Vargo and Lusch, 2008).

Service dominant logic (Vargo and Lusch, 2004: 2008: 2016) is a theoretical approach that describes the paradigm shift from goods-dominant (e.g. manufacturing) logic (GDL) to service-dominant logic (SDL), as shown in Table 2.3. Goods in SDL are seen as an appliance for service provision, whereas service is considered as the main basis for the interactions and transactions (Vargo and Lusch, 2008; Vargo et al., 2010). Additionally, SDL conceptualisation differs from traditional GDL and highlights the importance of the role of operant resources (e.g. skills and knowledge), communication and learning and long-term collaborative relationships between value creation network actors (Increasingly referred to as a service ecosystem in SDL).

Table 2.3 Contrasting G-D Logic and S-D Logic concepts (Vargo et al., 2010)

Core Constructs	**G-D Logic Concepts**	**S-D Logic Concepts**
Service	Goods and services	Serving & experiencing
	Transaction	Relationship & collaboration
Value	Value-added	Value co-creation
	Value-in-exchange	Value-in-context
	Price	Value proposition
System	Supply chain	Value-creation network
	Asymmetric information	Symmetric information flows
Interaction	Promotion/propaganda	Open source communication
	Maximising behaviour	Learning via exchange
Resources	Operand resources	Operant resources
	Resource acquisition	Resourcing

Furthermore, Vargo and Lusch (2004: 2008: 2016) propose eleven foundational premises (FPs) centred on the theme of *value co-creation process*, *network relationships*, *resource integration* and *interactions*. These 11 FPs are presented in Table 2.4. In more details two FPs explain the value co-creation process. FP6 and FP11 indicate that value co-creation involves multiple actors from the ecosystem and that the VCC process is governed by rules. This study is based on the Vargo and Lusch's (2016) conceptualisation of these two FPs.

FP6: Value is co-created by multiple actors, always including the beneficiary.

According to Vargo and Lusch (2016: 9),

> Value creation does not just take place through the activities of a single actor or between a firm and its customers but among a whole host of actors. Value is not completely individually, or even dyadically, created but, rather it is created through the integration of resources, provided by many sources, including a full range of market-facing, private and public actors.

The challenge is thus to co-ordinate the many actors involved in the VCC process. *FP11:* Value cocreation is coordinated through actor-generated institutions and institutional arrangements.

Table 2.4 Foundational Premise development of SDL (Vargo and Lusch 2016: 8)

Foundational Premise (FP)	2004	2008	Update (2016)
FP1	The application of specialized skills and knowledge is the fundamental unit of exchange.	Service is the fundamental basis of exchange	No Change
FP2	Indirect exchange masks the fundamental unit of exchange.	Indirect exchange masks the fundamental basis of exchange.	No Change
FP3	Goods are distribution mechanisms for service provision.	No Change	No Change
FP4	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.
FP5	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 cocreated by multiple actors, always including the beneficiary.
FP7	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.
FP8	Service-centered view is customer oriented and relational.	A service-centered view is inherently customer oriented and relational.	A service-centered view is inherently beneficiary oriented and relational.
FP9		All social and economic actors are resource integrators.	No change
FP10		Value is always uniquely and phenomenologically determined by the beneficiary.	No change
FP11			Value cocreation is coordinated through actor-generated institutions and institutional arrangements.

As actors exist in social contexts, so do institutions. Actor practices include norms, symbols, and law. Institutions, on the other hand, have their own rules and regulations. Vargo and Lusch (2016: 18) suggest that "Institutions work as building blocks for the ongoing formation and reformation of increasingly complex assemblage (of ecosystem actors)". On this formation and reformation of an ecosystem, rules and regulations developed by ecosystem actors play key role to facilitate VCC process. As noted by Vargo and Lusch (2016:18),

> We use "institution" to refer to a relatively isolatable, individual "rule" (e.g., norm, meaning, symbol, law, practice) and "institutional arrangements" to refer to interrelated sets of institutions that together constitute a relatively coherent assemblage that facilitates coordination of activity in value-co-creating service ecosystems.

Other FPs which also centred on interaction, value and resources are presented in Table 2.4. SDL and SS also conceptualise resource types, their integration and value co-destruction, which the following sub-section explains.

2.4.1 Resources and their Integration to Co-create Value

Resource based view (RBV) of the firm describes importance of organisation's valuable, rare, inimitable, and non-substitutable (VRIN) resources that are the genesis of the competitive advantage (Barney, 1991). However, it's the nature of its integration that determines its success (Das and Teng, 2000). Resource and its integration process is one of the concepts that is studied in service science and SDL. SDL recognises resources as anything an actor can draw on for support, categorised into two types: operand and operant (Vargo and Lusch, 2004: 2008). However, there are other views such as the work of Hunt and Derozier (2004) which identified five different types of resources: physical, human, organisational, informational and relational.

Nevertheless, considering the significance of knowledge and skills in services, Vargo and Lusch (2008) argue that knowledge is the central basis of value creation and competitive advantage, and that knowledge and skills represent *operant resources*, whereas natural resources and goods or tangible resource which must be acted on to be beneficial represent *operand resources*.

Actors interact with and exchange resources in their efforts to create value for themselves and for others. It is argued that co-creation depends on actors' integration of and operation on the available resources in a service system (Gummesson and Mele, 2010; Edvardsson et al., 2011); resources are not about knowledge and skills per se, but about using knowledge and skills in a specific context with a specific aim (Edvardsson et al., 2012). The process of resource integration is continuous. The reason behind this is that no one actor can access all the resources it needs. Another reason is that once resources are integrated and value is created, this situation is temporal; therefore, value co-creation is a continuous process because the usefulness of resources changes over time (Akaka et al., 2012).

2.4.2 Value Co-destruction

Co-creation as a positive outcome emphasised in SDL is also questionable. Echeverri and Skalen (2011) argue that overemphasised optimism of SDL ignores negative interaction between firm and customer. They introduced the concept of co-destruction whereby an interaction between the firm and customer can have negative outcome:

> While co-creation refers to the process whereby providers and customer collaboratively create value, co-destruction refers to the collaborative destruction, or diminishment of value by providers and customers (Echeverri and Skalen, 2011: 355).

The concept of value co-destruction has recently gained increasing scholarly interest (e.g. Prior and Marcos-Cuevas, 2016; Chowdhury et al., 2016; Makkonen and Oikkonen, 2017). As processes and resources are central to value co-creation, so the misuse of resources and misalignment of process are central to value co-destruction.

The next section presents the service ecosystem concept.

2.5 Service Ecosystems and Value Co-creation

The concept of the business ecosystem was introduced in 1993 by Moore as a metaphor originating from ecology. Moore’s (1996) argument was that a firm operates between upstream (e.g. supplier) and downstream (e.g. customer), and it also make use of complementary firms, government agencies and other stakeholders; therefore, its value creation capability is not linear but is affected by all of its interaction with the community, which Moore termed *a firm’s ecosystem*.

Moore (1996: 26) defines the business ecosystem as "an economic community supported by a foundation of interacting organisations and individuals - the organisms of the business world". This economic community, according to Adner (2006), is the system of actors involved in delivering service, bound by relationships and interdependencies between them.

Service science, which considers SDL as a theoretical departure point, uses *service* instead of *businesses* and defines the service (eco) system as interaction amongst actors (e.g. people, machines, and organisation) who use resources to co-create value (Vargo et al., 2010; Vargo et al., 2017). The central point of the service ecosystem is to enhance value co-creation; increasingly the value is co-created in densely complex networks of actors referred to as service ecosystem (Mele et al., 2010). In service science and SDL, service ecosystem is defined as

> A relatively self-contained, self-adjusting system of mostly loosely coupled social economic actors connected by shared institutional logics and mutual value creation through service exchange (Lusch and Nambisan 2015: 162).

The concept of ecosystem has been developed further over the last two decades. Scholars have used various terminologies to portray the ideas of ecosystem in business community, e.g. innovation ecosystem, technology ecosystem (platform), and service ecosystem, as shown in Table 2.5 (Thomas and Autio, 2012). The main ideas of these concepts are that ecosystem members co-evolve capabilities around a shared set of technologies and cooperate and compete to support new products and innovations (Moore, 1996; Vargo et al., 2010; Thomas and Autio, 2012; Vargo et al., 2017). Thus, Autio and Thomas (2014: 4) suggests,

> Instead of thinking about ecosystem as an industry, it is more useful to think about ecosystems as an evolving community that specialises in the development, discovery, delivery and deployment of evolving applications that exploit a shared set of complementary technologies and skills.

This means that ecosystems may include participants not only from traditional value chain, e.g. suppliers and distributors, but also include a wider range of participants such as customers, government agencies, technology provider, financial institutions, universities, outsourcing companies and competitors (Autio and Thomas, 2014). Table 2.5 summarises the various ecosystem constructs used in business community.

Table 2.5 The timeline of different ecosystem constructs

Author	***Concept***	***Method/ contexts***	***Contribution***
Moore (1993; 1996)	Business Ecosystem	Conceptualisation and case study /Information technology & Retail industry	Firm should be viewed as a part of a business ecosystem; Introduces the concept of Business ecosystem: identification of evolutionary stages of ecosystem
Cusumano & Gawer (2002), Gawer & Cusumano (2008)	Technology Ecosystem/ Platform	Case study/Information technology	Technology ecosystem use the platform as the locus of coordination; value that stems from the network externalities and distributed innovation that drives value creation
Iansiti and Levien (2004)	Business Ecosystem	Conceptualisation and Case study /Information technology & retail	Strategy as ecology; the benefits of ecosystem management; assessment of ecosystems' health using productivity and robustness
Adner (2006) and Adner & Kapoor (2010), Adner et al. (2013)	Innovation Ecosystem	Quantitative study/New Technology generations in Semiconductor lithography equipment industry	Innovation ecosystem; Value co-creation in ecosystem; the effect of external innovation challenges depend not only on their magnitude, but also on their location in the ecosystem relative to the focal firm
Spohrer & Maglio (2010), Maglio & Spohrer (2008), Spohrer (2011)	Service ecology	Conceptualisation /Information Technology	Service ecology includes diverse types of entities such as people, firms, family; service systems as a basic unit of analysis in Service Science
Vargo and Lusch (2008; 2011; 2016)	Service ecosystem	Conceptualisation	Significance of service ecosystem in value co-creation and resource integration
Cambridge Service Alliance (CSA) (Miraglia and Visnjic, 2012)	Ecosystem Strategy Framework	Case study/Various industries; animal health, spare parts, airlines industry, sports and manufacturing	Eight factors that firms need to consider if they want to formulate and implement successful ecosystem strategies such as defining customer, identifying traits of ecosystems, building ecosystem vision and change culture and nurture trust between ecosystem partners
Thomas and Autio, (2013)	Ecosystem creation	Case study/Digital services; online retail, social media, B2B sales	Activities in ecosystems; resource, technological, institutional and contextual activities need to be performed in the ecosystem creation process

2.6 Review and Discussion on Existing Value Co-creation Literature

Earlier sections presented definitions and key theoretical concepts in the VCC domain. This section aims to identify and investigate the priorities and highlights in the current literature to understand and outline future research opportunities. To do so, we follow Torraco (2005) and Kitchenham's (2007) systematic literature review approach, where, we search scholarly works published since 2000 on the *theory of value co-creation* in academic databases including EBSCO, ProQuest and Emerald, and selected journals e.g. *Journal of Service Research, MIS Quarterly, Marketing Theory* which list value co-creation as a core research priority.

An initial review reveals that there are two broad research avenues in the area:

- The practice of value co-creation between organisation and customer. This study refers to this as O&C context, covered in detail in Chapter 4.
- The practice of value co-creation between multi-actors (ecosystem) comprising organisations, customers, business partners, suppliers, etc. see Chapter 6.

As discussed in earlier sections, organisation and customer represent a micro-level representation of service ecosystem. However, an ecosystem may involve interaction between many actors including suppliers, manufacturers, partners, customers or even competitors, in multi-actors interactions. This refers to the SDL concept of value in context, which emphasises the co-creation of value at varying levels (micro, meso, and macro) of interaction (Chandler and Vargo, 2011). The micro-level consists of two actor (e.g. O&C) and who draw on their resources and competences to directly serve the other actor, making it a reciprocal dyad. The fact that both actors serve each other is an important aspect of value co-creation since both actors are active participants in the resource exchange process. It must be recognised that each micro-level interaction is nested within a broader, meso-level context (Chandler and Vargo, 2011), which includes additional actors as listed above. The macro-level consists of both micro and meso-levels framing service exchange among triads, e.g. at national, regional, and global levels (Akaka et al., 2013).

Therefore, two demarcations, the O&C and multi-actor contexts (this study focuses only on organisation partnership ecosystems), based on the work of Chandler and Vargo (2011), are used to identify the context of research and its strengths and limitations. Based on the reviews of research in the O&C context, the following section presents the findings and research limitations. Section 2.6.2 indicates the research gap in the multi-actor context.

Table 2.6 Summary of the research opportunities in VCC

Scholars	The area of research/Research Aim	Research Methodology	Key findings and future research suggestions
Gronroos 2012	Co-creation *activities and resource* categories	Literature reviews of past service models from 1970s onward	-How actors' willingness, motivation and skills affect co-creation process
Mustak et al. 2013	Customer participation in value creation/To synthesise extant research to enhance conceptualisation and value outcomes of the customer participation	Literature reviews of 163 journal papers in Business, Marketing, Management domains	-What are the business customers' motivations to participate in firms' offerings? -Why do firms put efforts into facilitating customer participation in co-creation? - How do customers interact with co-created offerings to create value?
Galvagno and Dalli 2014	Theory of value co-creation/to summarise the extant research in VCC	Literature reviews of 421 journal papers published between 2000 and 2012 in the domain of service marketing, collaborative innovation, and new product development	-How does co-creation works in business-to-business between providers and customers and between customers and/or other stakeholders?
Gemser and Perks 2015	Co-creation with customers/ To reflect on the shifts in research orientations and thinking about customer co-creation	Literature reviews of articles on JPIM between 2001 and 2014	-What are the factors that make "ordinary" customers accept co-creation? -What are the conditions for successful co-creation?
Jaakkola et al. 2015	Service experience co-creation / to conceptualise service experience co-creation and to examine its implications for research and practice	Literature reviews of articles on service experience, together with invited commentaries by distinguished scholars in the domain	- What are the profiles of actors involved in co-creation? - How do technology, systems, and mechanisms assist co-creation?
Neghina et al. 2015	Value co-creation in service interactions/to develop the conceptualisation of value cocreation by discussing its dimensions and antecedents	Literature reviews	-What are the effects of customer and organisational motivators on value co-creation?
Leclercq et al. 2016	Value co-creation/ to provide an overview of 10 years of research and to provide a clear conceptualisation	Literature reviews of 181 journal papers between 2004 and 2015	-Which type of value is generated across the consecutive value co-creation experience?

2.6.1 Review of literature in Organisation and Customer context

This section presents the review of extant literature in the O&C VCC context, the summarising the influential papers presented in Table 2.6.

First, Gronroos' (2012) review identifies the interactive context of value creation using service models, *Servucation* and *Interactive marketing model*, from the early 1970s to clarify and conceptualise the notation of value co-creation. The *Servuction model* of Eiglier and Leangeard (1975; 1976) highlights value-creating resources that appear in direct interactions between parties, and, the *interactive marketing model* of Gronroos (1978) is more interested in how such resources function in direct firm-customer interactions. Based on these models, Gronroos' conceptualisation of value co-creation includes both *co-creation activities and resource categories*. They latter are identified as physical resources, employees and customers, and the former as interactive communication, and accessibility of customer feedback.

Although Gronroos suggested that the co-creation process depends on the participants' willingness, motivation, and skills to perform tasks, but his reviews of the previous service models do not include ***how actors' willingness, motivation and skills affect the co-creation process.*** Instead, he suggests further studies on how the accessibility of resources and systems, interactive communication between service employees and customers affects service encounters through co-creation.

Mustak et al.'s (2013) paper reviews *163 articles on customer participation* in the creation of value. Their investigation found that customer participation in firms offering mostly has been ***studied in a business-to-consumer context***, and participation by ***business customers has largely been unexplored*** (Mustak et al. ,2013: 352). Thus, there is a need for research in the B2B context, in particularly, ***business customers' motivations to participate and firm's efforts to facilitate such participation,*** given the crucial roles business customers play in co-creating value (Aarikka-Stenroos and Jaakkola, 2012; Mustak et al., 2013).

Galvagno and Dalli's study (2014) focuses on the theory of value co-creation from their published between 2000 and 2012. Their study revealed three different theoretical perspectives in the VCC domain:

- *Service science* perspective highlights co-creation at the core of the theoretical development of a service systems science e.g. Vargo et al., 2008; Ostrom et al., 2010; Ballantyne and Varey, 2008.
- *Innovation and technology management* that focuses on the processes and structures of customer-company interactions such as in the virtual dimensions of customer-company interactions.

- *Marketing and consumer research* perspective which seen customers' role as co-creators; scholars examines customers' motivation, their engagement behaviours and empowerment, e.g. Prahalad and Ramaswamy, 2004; Fuller et al., 2009.

Nonetheless, Galvagno and Dalli (2014) stressed that these three perspectives are strictly tied to each other, given the fact that they underline the constitutive nature of co-creation for the development of all businesses (product, service, etc.) in which the customer creates value by means of resources that companies provide. The interactions between providers and customers are seen as the building blocks of mediating technological platforms, leading to innovation, customer participation, better service and empowerment (Galvagno and Dalli, 2014). They noted that there is ***limited research in understanding co-creating value through customer competence from the perspective of new service theory*** i.e. service science and SDL.

Within the innovation management domain, Gemser and Perks' (2015) study examined all *Journal of Product Innovation Management* issues from 2001 to 2014, revealing ***a lack of in-depth insight into what antecedents make "ordinary" customers effective co-creators***; there is a need *for a better understanding of the conditions under which customer co-creation leads to successful innovations* (Gemser and Perks, 2015: 664).

To study such conditions in the context of co-creation, Jaakkola et al. (2015: 196) suggest:

- Identification of relevant actors' involved in co-creation
- Facilitating the engagement of divergent actors in co-creation
- Technology, systems, and mechanisms assisting co-creation.

The study by Neghina et al. (2015) continues the debate on research priorities in the organisation and customer context; they suggest ***to investigating the differential effect of customer and organisational motivators on value co-creation***. Consumers are motivated to co-create by their personal needs and desires; providers also pursue different goals within co-creation activities. This can affect how provider and customer find common ground to engage and interact in co-creation activities (Neghina et al. 2015: 236) further suggest that,

> Qualitative studies could shed more light on these complex dynamics and answer questions such as what motivates customers or providers to co-create, is there a hierarchy of needs or motives, and how do these influence the co-creation activity?

They argue that qualitative methods such as in-depth interviews can highlight potential problems between the process and the outcome of value co-creation by analysing the co-creation process.

Leclercq et al. (2016) reviewed literature on value co-creation *based on 181 well-known journal published between-2004 and 2015*. They summarise existing knowledge in the form of a theoretical model that provides a basis for further empirical research. Their theoretical model structures themes including *value co-creation definition, types of created values, actors involved, engagement platforms used, antecedents, related processes, cocreation value consequences, and measurement*. Within this theoretical model of value co-creation they outline (p. 43) further empirical research avenues, arguing that the contributor's role in the VCC process is limited; it can be studied further by investigating:

- What are the motivations, the engagement nature, and the contributions of the different profiles of value co-creation process?
- How does the task complexity affect actors' motivation to become involved in the value co-creation process?
- Which type of value is generated across the consecutive value co-creation experience?

A synthesis of the research opportunities in the O&C context are presented in section 2.7; the next section reviews the research opportunities in the multi-actor context.

2.6.2 Review of literature in the multi-actor (ecosystem) context

The literature review revealed that the scholarly works on meso- and micro-levels of VCC practices (Chandler and Vargo 2011) provide limited insights, but with more influential papers investigating VCC in the meso-context.

First, three papers in the *MIS Quarterly* special issue on *Co-creating IT value* published in 2012 will be reviewed. That started to lay the foundations of value co-creation discourse between B2B partnerships and included the dynamic project-based nature of co-creation (i.e. spontaneously sensing and responding actors; Vargo and Lusch, 2011: 185). Although strategic alliance has long been studied, e.g. network organisation and outsourcing, it is *dynamic-project based* as opposed to *static-long term* value co-creation on which the service ecosystem literature focuses, that is highlighted in these MIS Quarterly papers.

The study by Sarker et al. (2012) explores the VCC practices between a vendor and their partners in dynamic B2B alliance of software firms. They identified three factors: *governance mechanism, technology-related collective strength, and power and political conditions* affecting co-creation.

Ceccagnoli et al. (2012) investigates how independent software vendors (ISVs) benefit by joining big enterprise software ecosystems (e.g. SAP). Based on a quantitative method, their study found that joining a major platform ecosystem is associated with an increase in sales and a greater likelihood of issuing an initial public offering (IPO). Similar to Sarker et al.'s (2012) study, they investigates the relationships between vendor-partners performance. They noted that their study examined one particular setting, the SAP platform ecosystem, and suggested further study on the other industrial environments.

Grover and Kohli (2012: 229) outline the significance of information technology in co-creation, suggesting that

> Co-creation is greatly enabled by technology platforms that provide infrastructure for new value creation and distribution. These platforms often create fertile ground for sharing of assets, development of digital capabilities, sharing of knowledge and facilitating governance.

They further proposed a conceptual framework for co-creating IT value where they identified four layers (i.e. assets, complementary capability, knowledge sharing, and governance layers) in which IT value co-creation originates in multifirm environments. Each of these four layers is enabled, expanded, or created by IT. They (Grover and Kohli, 2012: 231) briefly describe an agenda for research on the process of co-creating value:

- What are the incentives to co-create, particularly when firms are already successful in their traditional business?
- What are the criteria for equitable distribution of "value" among co-creators?
- What organisational governance should be in place?

This study is particularly interested in studying these incentives, criteria, governance of the co-creation process.

Although the special 2012 issue of MIS Quarterly offers some insightful discussion on value co-creation in the B2B context of large software firms, the study of Mustak et al. (2013) reviewing 163 papers in the VCC domain, have found the ***limited research in the area of co-creation of value from a network perspective*** where many actors collaborate and compete to co-create value. Galvagno and Dalli (2014: 651) also noted interesting research gaps in their review, with special reference to network approaches in B2B:

> It seems co-creation theory does not penetrate these fields (e.g. B2B network) as it does service science, product innovation, and marketing. However, the relationship, interaction, and network approaches are important to explain the basic elements of value co-creation's structure and process

They believe that network approaches could be useful in broadening service science and SDL toward long-term relationships, and multi-stakeholders context.

In line with the research gaps cited above, Gemser and Perks (2015: 665) noted that-

> To study effective customer co-creation, there is a need to examine not only the dyadic relationship between the company and its customers, but to take a network or ecosystem viewpoint.

Ostrom et al. (2015) agreed that understanding and coordinating value creation in multi-actor, network, and collaborative contexts is regarded as one of the highest-rated service research priorities found in their surveys and interviews with 200 service researchers worldwide. Their findings suggest that researchers should consider the fact that the complexity of value co-creation stems not only from the need to integrate employee, technology, and customer roles, but, also from ***the significant coordination effort necessitated by the nature of the co-creation context, where context is defined as multi-actors with extensive collaboration among the various parties***. This research opportunity is also noted by Leclercq et al. (2016) who argue that the contributor's roles in the VCC process from the multi-stakeholder's perspective is limited.

Building on the foundation of several influential papers discussed earlier (e.g. Sarker et al., 2012; Grover and Kohli, 2012), this study aims to investigate this multi-actor context by uncovering VCC practice between organisations and their partners. The section below presents the research proposition.

2.7 Research Proposition

Table 2.6 summarises potential research avenues in VCC as highlighted by earlier scholars. The research questions on the area of *motivation for co-creation, the B2B context of co-creation, factors and conditions for co-creation, the role of technology and systems, mechanisms and the outcome of co-creation* are of particularly interest. This study thus aims to investigate how organisations' and customers' willingness, motivation and skills affect the co-creation process, as in Gronroose (2012), and which types of value are generated as a result of the co-creation process (Leclercq et al., 2016) with a focus on the B2B context (Mustak et al., 2013), from the qualitative research perspective (Neghina et al., 2015).

According to Galvagno and Dalli (2014), and Gemser and Perks (2015), B2B co-creation is usually represented as vertical i.e. between providers (e.g. firms), although they suggest that many factors need to be considered in the value co-creation process.

To respond to these research gaps, the aims of this study are therefore

Aim 1**: *to explore factors affecting value co-creation between organisation and customers*** by proposing two research questions (RQ1a & 1b) and six research objectives (RO1a, 1b, 1c, 1d, 1e and 1f).

RQ1a-What factors affect customer participation in value co-creation?

RQ1b-What factors affect organisation participation in value co-creation?

RQ1a and RQ1b are presented by the following research objectives;

- RO1a To re-examine the value co-creation concept
- RO1b. To review factors that have positive and negative effects on customers in VCC
- RO1c. To review factors that have positive and negative effects on organisations in VCC
- RO1d. To formulate a VCC framework of factors affecting O&C based on finding from (b) and (c)
- RO1e. To investigate the factors affecting VCC through qualitative interviews
- RO1f. To validate the framework

This first aim, in the O&C context, is considered as study 1. The second aim, below, focuses on the multi-actor context of VCC and is considered as study 2.

Based on the findings of Grover and Kohli (2012) on the process and outcome of the multi-actor context of value co-creation, and those of Leclercq et al. (2016) on motivations, multiple profiles, engagement platform, complexity and value generation in the multi-actor environment, the current study thus aims to assess the process, nature and mechanism of value co-creation in the B2B context.

Aim: ***to uncover factors affecting the underlying co-creation mechanism of an organisation and its partners.***

RQ2- What factors affect the underlying co-creation mechanism of an organisation and its partners?

- RO2a. To identify actors and mechanisms of VCC in alliance and to reveal factors facilitating (and inhibiting) VCC
- RO2b. To propose a framework comprising factors that have positive or negative effects on multi-actor context
- RO2c. To assess the framework through case study research
- RO2d. To validate the framework

To achieve the stated aims, a systematic literature review is followed by the proposed frameworks which are then assessed by a qualitative study. Chapter 3 outlines the research methodology. Chapter

4 presents the conceptual framework of factors affecting VCC between O&C and Chapter 5 draws on qualitative interview findings. Chapter 6 presents the conceptual framework for value co-creation in the multi-actor context and factors influencing it, while Chapter 7 draws on case study findings to evaluate the framework. Chapter 8 presents the results of research validation process.

2.8 Chapter Summary

Chapter 2 has discussed the findings from the literature review on the theory of value co-creation. The chapter started with defining value co-creation as *an active, creative, and social interaction process based on the need or desire of actors linked together within a service ecosystem, who integrate their resource to support the various VCC activities such as idea generation, knowledge sharing, product development, solution implementation and to create win-win benefits for the involved actors.* By proposing working definition the chapter also responded to first research objective, RO1a to re-examine the value co-creation concept.

The chapter then identified theories related to value co-creation and discussed gaps and research opportunities in the literature with regard to motivation, skills, processes and outcomes of *VCC, first between organisation and customer* and *secondly between the organisation and its partners.*

To address this research opportunity, *two research aims, three research questions and nine research objectives* were proposed to explore the phenomenon of value co-creation from the perspectives of B2B.

Chapter 3 presents the research methodology, including the philosophical standpoint, research methods available and adopted, and an overview of the research process.

Chapter 3 Research Methodology

3.1 Introduction

The key issues identified in Chapters 1 and 2 are related to *the theory of value co-creation* and seeking to achieve the overall aim of *exploring the factors affecting value co-creation* by answering the following three research questions:

- *RQ1a-What are the factors affecting customer participation in value co-creation?*
- *RQ1b-What are the factors affecting organisational participation in value co-creation process?*
- *RQ2- What are the factors affecting underlying co-creation mechanisms of an organisation and its partners?*

This chapter identifies appropriate research approach to achieve the research aim. It is structured as follows:

Section 3.2 discusses various research paradigms appropriate for this research, and the paradigm adopted

Section 3.3 explores various research methods available in qualitative study

Section 3.4 presents the research design for this study

Section 3.5 presents the data analysis techniques

Section 3.6 presents the evaluation process of the research findings

Section 3.7 specifies ethical issues related to the research project, and

Section 3.8 summarises the chapter.

3.2 Research Paradigm: Ontological and epistemological assumptions in service systems

Service science studies the value co-creation through the integration of resources accessible from service systems (Vargo et al., 2008). Service systems, as discussed in Chapter 2, are defined as value co-creation configurations of people, technology, value propositions connecting internal and external service systems, and shared information, i.e. language, laws, measures, and methods (Sophrer et al. 2007: 72). Value is co-created *with*, rather than *for*, customers and takes place within service systems (Tronvoll et al., 2011). Understanding the nature of a service system requires investigation of the ontological and epistemological assumptions.

Both ontology and epistemology are derived from the Greek word. *Ontology* is *the theory of being* meaning, the theory of the nature of what is or the nature and knowledge of social reality (Delanty and Strydom, 2003). *Epistemology* is *the theory of knowledge*, a fundamental branch of philosophy that investigates the possibility, limits, origin, structure, methods and validity or truth of knowledge (Delanty and Strydom, 2003). It is through these assumptions that the study defines how it sees the service systems structure, value co-creation practices, the problem domain and methodological assumptions for proposed solutions.

Ontological assumptions of service systems help to understand whether an objective reality exists or whether reality is merely subjective. Researchers taking these different perspectives (objectivity or subjectivity) will study the same service systems, but draw different conclusions. The section below presents how the main ontological and epistemological assumptions differs when taking these perspectives to study service systems.

3.2.1 Positivism

The positivism (also called a priori perspective) highlights objective reality and identifiable knowledge, as shown in Table 3.1. It aims to identify and predict the causal regularities that are believed to exist in reality (Tronvoll et al., 2011). The assumptions made from the positivist perspective claims to find and forecast the underlying regularities that are believed to exist in reality. Researchers who follow this perspective portray the service systems as a given, nearly pre-defined structure and they outline value co-creation activities and resources as directed by objective, universal and known laws (Tronvoll et al., 2011). For example, the work of Sophrer et al. (2007) on service science and the value co-creation is drawn from the positivist ontological perspective.

Table 3.1 Summary of the ontological assumptions (Guba and Lincoln, 1994)

Item	Positivism	Post-positivism	Constructivism
Ontology	Naïve realism- "real" reality but apprehendable	Critical realism- "real" reality but only imperfectly and probabilistically apprehendable	Relativism- local and specific constructed realities
Epistemology	Dualist/objectivist; findings true	Modified dualist/ objectivist; critical tradition/community; findings probably true	Transactional/subjectivist; created findings
Methodology	Experimental/ manipulative; verification of hypotheses; chiefly quantitative methods	Modified experimental/ manipulative; critical multiplism; falsification of hypotheses; many include qualitative methods	Hermeneutical/dialectical

3.2.2 Constructivism

The constructivism (also called emergent) perspective highlights subjective reality, emphasising on the activities and interactions of human beings without any assumption of predefined regularities or objective reality (Tronvoll et al., 2011). The assumptions made are similar to other research schools such as interpretivism, subjectivism, phenomenology, and hermeneutics. Researchers taking constructivism ontology describe a service system as having no prior existence before its creation by interaction among actors, and they understand value co-creation as activities and interactions as directed by subjective, contextual and interpreted laws (Tronvoll et al., 2011). For example, Vafeas et al. (2016) takes an emergent stance in studying value destruction in the context of service-dominant logic.

3.2.3 Critical realism

Critical realism (CR) as a philosophical assumption was introduced by Bhaskar (1975) and can be seen as an alternative to positivism and constructivism. It argues that a real world exists, apart from our human experience and knowledge; human understanding and knowledge of the real world is socially constructed and fallible, resulting in a more interpretive epistemology (Easton, 2010). According to Mingers et al. (2013), critical realism shifts exciting prospects in shifting attention to the real problems that we face, and for this this reason methodological decisions are secondary to this aim. Critical realism is also flexible in regards to methodology, using a variety of methods to identify underlying mechanisms of observed events (Easton, 2010).

3.2.4 Choosing ontological and epistemological assumption

This study adopts *critical realism* to study service systems, because this approach supports identifying the real problem, as discussed above.

The aim of the research is to explore factors affecting value co-creation. Critical realism supports this aim by focusing on the real problem. There is nothing integral in critical realism, which directs researchers to theoretical, qualitative, or quantitative methods (Clark, 2008), where methodological decisions are secondary to this aim. This allows capturing factors affecting value co-creation between organisation and customer and in a multi-actor context. The study aims at creating a new axiology for understanding factors affecting co-creation practices in both these contexts, supported by critical realism's adequate conceptualisation, rigorous description, and convincing explanation is supportive. The argument is about the existence of particular processes, behaviours and actions independent of individuals in service systems; understanding the context and the factors in which these processes occurs is important in achieving the aim of the research, and CR is a suitable approach.

Constructivism or positivism approaches could also be used to study value co-creation in service systems. However, positivism is limited in its ability to represent people's actual perceptions of the world, and this research is not concerned with demonstrating generalisable trends over time related to measurable objective phenomena. Constructivism highlights subjective reality, as depicted in Table 3.1.

Scholars recommended using critical realism to study business relationships (Ryan et al., 2012), because it provides a way out of the sterile standoff between positivism and constructivism that has so dominated the business research (Mingers, 2015). For example, the current study of Uppstrom and Lonn (2017) used it to explaining value co-creation and co-destruction in e-government. Choosing the critical realism also determines the researcher's approach to the research method employed. The next section reviews the methods available from the critical realist perspective.

3.3 Research Methods in Qualitative Study

A researcher can take a qualitative, quantitative or mixed-methods stand. Because the phenomenon of value co-creation practices is still relatively new and still evolving (Ostrom et al., 2015), this study focuses on qualitative data. Hyde (2000) argues that under the post-positivist research tradition (Guba and Lincoln, 1994), adoption of formal deductive procedures using a quantitative method is quite general, although the deductive process is not incompatible with the use of the qualitative research method, representing an important step in assuring conviction in (Hyde, 2000).

With the quantitative or mixed-method approaches, however, the exploratory nature of this research means that the quantitative method will not achieve the aim of the study, as it describes the general characteristics of a populations, and ignores the details of each particular element. Hyde (2000: 83) noted

> Over-reliance on quantitative data [results in] a lack of richness in theorising, a lack of theory testing in naturalistic settings, the continued dominance of one-shot investigations, and the use of sophisticated correlational methods to imply causality

As the research aims to investigate factors affecting co-creation, the role of quantitative research would be limited to generalised characteristics of a population, ignoring the particular. The qualitative approach, however, serves the purpose of the research in explaining the particular, rather than seeking to reach a general profile regarding the study populations (Hyde, 2000). Qualitative study provides conclusions which account for the details of every case taken into consideration to explore and identify factors affecting their co-creation practices. Thus, following Guba and Lincoln (1994) and Hyde (2000), this study adopts the qualitative method under the critical realism to investigate factors affecting value co-creation in O&C and O&P contexts, to gain in-depth findings. The following section presents the research methods available under qualitative research investigation.

3.3.1 Action Research

In action research, action is an integral part of the method, differentiating it from other research methods as its core element is the close relationship between knowledge acquisition and action (Heller, 2004). Action research necessities a real-life environment and unrestricted access to the problem domain within an organisation, where the researcher can learn and refine that knowledge; such a process of learning could be lengthy without guaranteeing a positive outcome (Remenyi et al., 1998; Heller, 2004). For example, Elg et al. (2012) uses action research to study the process of patient co-creation and different mechanisms through which health-care organisations can learn from the patient.

Gaining lengthy, unrestricted access to an organisation's value co-creation practice is difficult as VCC requires interactions between at least two actors in the O&C context and many actors in the multi-actor contexts, with the investigation and analysis of confidential business data. Action research also requires access to such interaction and confidential business data to change their context. Given these requirements, it has been decided that action research would not fulfil the aim of this research.

3.3.2 Ethnography

Ethnography is defined as "the study of people in naturally occurring settings or 'fields' by means of methods which capture their social meanings and ordinary activities, involving the researcher participating directly in the setting" (Brewer, 2004: 312). The ethnography approach allows researchers to explore the social meanings and activities of people in the research setting, by close involvement in the field (Brewer, 2004). This necessities a considerable amount of time (often years) and extensive access to the field (Bryman, 2016). For example, Mulder (2012) uses this method to study how "living labbing" was used in Rotterdam, Netherlands to enable citizens to co-create and to facilitate social innovation. Given these requirements, such as the length of time and access to the field, ethnography was no considered appropriate to support the aim of this research.

3.3.3 Grounded theory

The aim of grounded theory is to discover what kinds of concepts and hypotheses are relevant to the area one wishes to understand (Strauss and Corbin, 1994). It provides new insights to develop theory derived from the collected data through constant comparative analysis (Lansisalmi et al., 2004). In terms of the process of collecting data, grounded theory differs from other qualitative methods as its generation and development of theory is through interplay with data collected in actual research. This means constant comparison between data collection, analysis and theoretical sampling as well as theoretical saturation (Strauss and Corbin, 1994; Lansisalmi et al., 2004). For example, Pinho et al. (2014) used grounded theory method to explore the concept of value co-creation in complex value networks with many actors.

The aim of this research is to identify positive and negative factors in value co-creation between various actors in service systems. The grounded theory approach may be suitable to study this context with extensive access to VCC practices between various actors. However, this researcher has limited access to actors and information. As some VCC activities are longer and others shorter, involving sensitive business information, the researcher can only bring a general overview of such a context, which makes the interplay between data and theoretical sampling difficult in a given time. Thus, grounded theory is considered to be beyond the scope of this project.

3.3.4 Interviews in qualitative research

According to Madill et al. (2000), qualitative interviews can be classified on a scale according to their ontological and epistemological position. Interviews can take a realist or constructionist approach (King, 2004). From a critical realist epistemological position, interviewees' accounts are treated as "providing insight into their psychological and organisational lives outside of the interview situation" (King, 2004: 12). However, this necessitates concern with the accuracy of findings, which may be obtained through triangulation, a continuous comparative process of interviewees' responses on every occasion possible (Patton, 2002). Realist interviews are also considered to be more structured than some other types qualitative interviews, because, it is necessary to make certain that different participants and different types of data are represented and can be systematically compared (King, 2004).

Several scholars, e.g. Madill et al. (2000), King (2004), Creswell (2009) and Bryman (2016) identified the key features of interview as bringing different perspectives to the same issues noted by King (2004): "*The qualitative research interview is ideally suited to examining topics in which different levels of meaning need to be explored. This is something that is very difficult to do with quantitative methods, and problematic for many other qualitative techniques."* As discussed in Chapter 2.2, value has different meanings for different actors and their creation process differentiates how value is perceived and interview is suitable technique to explore that. The other advantage of interview include: able to gather in-depth information, more personalised approach and more flexible approach to tailor the need of individual, however, some of its limitations noted as the reactive effect: interviewer's presence and characteristics may bias results, limited sample size, the long process and difficult to quantify results, requires strong interviewing skills and considered to be costly method (Creswell, 2009; Bryman, 2016).

King (2004) noted other advantage of the qualitative interview as one of the most flexible methods to research various organisation-related practices, such as value co-creation. It can address focused questions about aspects of an organisation's co-creation practices with customers with much greater emphasis on their motivation, process, resources and the outcome of such practices. For example, Vega-Vazquez et al. (2013) use interviews to study the consumer's role as a value co-creator in the service, concluding that there is a positive relationship between value co-creation and customer satisfaction.

Given the fact that these features of the interview method, as well as its alignment with research's ontological and epistemological stand with a critical realism, the study chooses the method to conduct the first part of the research to investigate factor affecting value co-creation between organisation and customers. Section 3.4.2 explains the interview process in details.

3.3.5 Case study research

The case study, according to Eisenhardt (1989: 534) "is a research strategy which focuses on understanding the dynamics present within single settings". It examines a phenomenon in its natural setting, employing multiple methods of data collection to gather information from one or a few entities (people, groups or organisations). The boundaries of the phenomenon are not clearly evident at the outset of the research and no experimental control or manipulation is used (Banbasat et al., 1987: 370).

Yin (2014: 16) proposes a twofold definition of the case study, first dealing with its scope which helps to distinguish the method from others, i.e. *a case study is an empirical inquiry that*:

- Investigates a contemporary phenomenon (the "case") in depth and within its real-world context, especially when
- The boundaries between phenomenon and context may not be clearly evident.

The second part of the definition focuses on the features of the case study, as a *case study inquiry;* it

- Copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one results
- Relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result.

As already discussed, research questions 1a and 1b aim to explore VCC factors related to organisation and customer, which are empirically under-explored, a situation that can be studied with a case study research (Yin, 1984: 2014). This method, as Yin suggests, relies on multiple sources of evidence, to which the researcher has limited access to in relation to study 1. As organisation and customer value co-creation activities and practices involve exchanging confidential business information, the researcher's attempts to find a case where both parties provide their views and information on their VCC activities are limited to organisation's views. Thus, interview was chosen as an appropriate method to explore factors in study 1.

In regard to study 2, which aims to explore factors between organisation and its partners, the case study method is supported by Yin's (2014) suggestion that it is suitable for, *a contemporary phenomenon (i.e. VCC between multi-actors) and technically distinctive as well as the availability of multiple sources of evidence*. The strength of a case study is an exploring issues from emerging theories: "the case study strategy is ideally suited to exploration of issues in depth and following leads into new areas or new constructions of theory (Hartley, 2004: 328)", which allows the researcher to conduct the in-depth investigation required to address the research aim and objectives. Thus, study 2 uses a case study to achieve aim 2. Section 3.4.3 explains the case study process in details.

3.4 Research Design for This Study

This section presents the overall research design for study 1 (aim 1) and study 2 (aim 2). According to Saunders et al. (2007), the exploratory research approach starts with a broad focus and narrows its focus to the point where knowledge is gained at a very detailed level; thus, it is helpful in understanding and clarifying a research problem. Its purpose is to find new insights, starting with the pilot study. A pilot study is a small-scale preliminary study conducted to define an appropriate scope of the research project, sample size and to improve on the study design (Zikmund, 2003; Bryman, 2016). The next section describes the pilot study conducted to explore various VCC factors.

3.4.1 Pilot study

The aim of the pilot study was to explore the significant factors associated with the practice of value co-creation with customers. Chapter 1.5 presented its findings. Prior to conducting the pilot study, the interview guidelines were developed from the VCC literature. In the pilot study, the respondents were VCC practitioners from the ICT industry, who worked at an executive level. The researcher gained access to the companies through snowball sampling, allowing the researcher to make initial contact with a small group of people relevant to the research topic and using these to make contact with others (Bryman, 2016). The pilot study included semi-structured interviews, based on the following guidelines:

- The background of the business/interviewee
- Actors involved in VCC
- What do they do; their activities
- Important factors in VCC
- Challenges to value co-creation.

Thematic analysis is used (discussed in section 3.4.2) to analyse the data collected from the interviewees. As presented in Chapter 1.5, the pilot study (PS) results obtained from three interviewees (C1, C2 and C3) indicated that their firms invite business customers to co-create value in five activities: idea generation, product development, customisation, feedback and marketing phases. The results also revealed several significant VCC factors that are related to both organisation and customer sides, presented in section 1.5.

With the results of the pilot study, the study 1 (O&C context) conducted further detailed literature search to find a study that corresponds to and complements the pilot. However, the existing research was found to be fragmented; Chapter 2 provides an overview of the literature gap. The results from the pilot study provided the motivation and basis to conduct study 1; its design is presented in the next section.

3.4.2 Design of Qualitative Interviews to Study O&C VCC Context

This study choses the critical realism which supports systematic exploration of literature to understand the phenomenon being studied. An a priori framework will be developed in Chapter 4, which will guides the data collection process. This study utilises the organisation’s perspective as it provides insightful perceived casual inferences and explanations (Yin, 2014); however, current studies offer limited insights into how organisations perceive the factors affecting co-creation in the B2B market (Mustak et al., 2013; Kohtamaki and Rajala, 2016).

The organisation’s perception of value co-creation can also be different from the customer’s, because, organisations are responsible for creating and enriching co-creation experience and incentives for the customer (Fuller et al., 2011; Rayna and Striukova, 2014). Therefore, studying value co-creation from the organisation’s perspective allows the researcher to delve deeper into their perception (Jarvi et al., 2018). The criteria for selecting an interviewee is that the company which they represent incorporates co-creation with customers in their business model and meets the definition of value co-creation proposed in Chapter 2. Then, a purposeful sampling (Patton, 2000) approach to recruit respondents with relevant experience are sourced through personal networks, an approach advocated by Lehrer et al. (2012), Greer (2015) and Petri and Jacob (2016).

The data were collected from nine executives from nine different organisations who specialises in value co-creation practices. The number of respondents selected required to reach a conclusion in qualitative research practice is open to debate. This study follows Adler and Adler's (2012: 8) suggestions that:

> On a cases or subjects, a small number of respondents, may be extremely valuable and represent an adequate number for a research project. This is especially true for studying hidden or hard to access populations such as deviants or elites. Here, a relatively few people, such as between six and a dozen, may offer us insights.

The number of respondents should also be supported by the amount of time the researcher has and the issue of saturation or representativeness (Adler and Adler, 2012; Brayman, 2016). The researcher believes that within the limited time available and to be representative, nine organisational VCC practices were sufficient. Larger numbers may be warranted when the subjects are easier to reach (Adler and Adler, 2012), but in the VCC in B2B context subjects are not easy to find, because, the interaction between organisation and customer involves the exchange of sensitive data. Obtaining access to such information is therefore difficult.

This claim is also supported by the existing research in the value co-creation domain. For example, to study consumers' defective co-creation behaviour in professional service encounters, in the B2C context, Greer (2014) have in-depth interviews with 38 respondents. However, the study of Coviello and Joseph (2012), investigating major innovation with customers in B2B, interviewed 9 respondents from six ICT organisations in New Zealand. Similarly, the study of Roberts et al. (2014) conducted in-depth interviews with 17 people in an online gaming community to explore consumer's motivations to engage in innovation through co-creation activities.

The profiles of interviewees, the data collection process and the analysis process are described below:

3.4.2.1 Data Collection Process and Interview Guidelines

The study uses semi-structured, in-depth interviews with executives from nine organisations to explore VCC practices and to use the COTE framework as a theoretical foundation to guide investigation of factors affecting VCC in the B2B context. Interview guidelines were based on the following six topics:

1) Introduction (role, experience with co-creation task, its types, the reason and motivation for co-creation)

2) Customer context (motivation, value expectation, significance of customer resources, the importance of trust, and their influencing behaviour)
3) Organisation-related factors (motivation, resources required, value sought, policy and governance, organisational culture)
4) Technology context (firm's digital infrastructure, new technology, privacy and security)
5) Environment context (government policy and regulation, market structure, trends and competition)
6) Challenges associated with VCC.

The final version of the interview guidelines is presented in Appendix A. The interviews were conducted in England between September 2016 and April 2017, eight face to face and one via Skype, and lasting from 45 to 115 minutes. The researcher then spent time researching their organisational co-creation initiatives with business customers using their company website, case studies, news articles and company policies. Content analysis of these documents helped in exploring the organisations' co-creation practices, their vision to include customers in service development or innovation processes and to identify their past co-creation activities. The interviewees are

- Senior-level staff or executive team member in various organisations who have worked with customers in product/service development in the B2B market.
- Their organisations have utilised co-creation with customers in the products/service development process.

Each interview was recorded and subsequently transcribed. The study relied on the complementary roles of interviewees from various organisations to increase *data triangulation and validity* (Hahn et al., 2016). Table 3.2 presents the details of each interviewee: nine organisations (O1 – O9), representing various small-medium enterprises (SMEs) and multi-national corporations (MNCs) operating in the UK market.

Table 3.2 Profiles of the Interviewees

Organisation (coded)	***Position of interviewee***	***No of Years of work experience***	***Length of interview (minutes)***	***Company profile***
O1	Head of Engineering	7 years	60	Software and Solutions Provider in big data, SME
O2	Systems Architecture	over 30 years	45	Consulting & Solution Provider in technology space, MNC
O3	Associate Director, Head of Business, UK	15 years	70	Software and Solution Provider, MNC
O4	Founder and CEO	26 years	65	Software and Solution Provider, SME
O5	Senior portfolio accounts manager	19 years	82	Software and Solution Provider, MNC
O6	Head of Enterprise	15 years	115	Delivery and Shipping

	Architecture			Company, MNC
O7	Group IP Acceleration Program Director	23 years	70	IT Services & Consulting, MNC
O8	Operations Director	20 years	70	Software as a service in HR and Recruitment, SME
O9	Sales Account Manager	7 years	60	Product and Solution Provider in ICT area, MNC

3.4.2.2 Data Analysis Process: Code and Themes

To analyse qualitative data, scholars (e.g. Braun and Clarke, 2006; King, 2012; Brooks et al., 2015; Bryman, 2016) have identified three main techniques: thematic analysis, grounded theory and analytical induction.

Thematic analysis (TA) is a flexible approach to identifying and analysing patterns in qualitative data (King, 2012; Clarke and Braun, 2013; Nowell et al., 2017). It does not require adherence to any particular theory or explanatory framework for human beings, experiences or practices. These features allow TA to be flexible within a range of theoretical frameworks regardless of ontological and epistemological assumptions (Clarke and Braun, 2013).

Within qualitative analysis there exist several ways of performing thematic analysis, including matrix and template analysis. Template analysis, "is a form of thematic analysis which emphasises the use of hierarchical coding but balances a relatively high degree of structure in the process of analysing textual data" (Brooks et al., 2015: 203). It requires an initial version of the template on the basis of a sub-set of the data (Brooks et al., 2015), while other styles of TA, such as one developed by Braun and Clarke (2006), focus on producing themes. This study adopts thematic analysis following Braun and Clarke's (2006) approach, around predetermined (a priori) and emergent patterns. Predetermined codes are developed based on the research questions;

- *RQ1a-What are the factors affecting customer participation in value co-creation?*
- *RQ1b-What are the factors affecting organisational participation in the value co-creation process?*

This is further supported by the elements of the conceptual framework COTE presented in Chapter 4. For example, the conceptual framework proposes that one of the factors affecting customer participation is *motivation of customer*; as a factors affecting co-creation, it was coded as *need and/or desire of customer*. The following statement from the Head of Engineering is coded as "need of customer":

> So every first part is for customers to recognise and to admit that they have a problem; that might sound obvious, because why would someone bring you in if you don’t have problem (O1).

Further examples of codes are provided in each section of the report in Chapter 5. The analysis process also involved a cross-respondent analysis comparing findings from the individuals to identify similarities and differences in their views. The process involved continuous reading, comparing and contrasting each response. This analysis resulted in several themes which were not directly relevant to the research questions or conceptual framework. Therefore, those emerging themes that were not relevant to a priori codes or research questions were grouped under emerging themes during the data analysis. For example, the priori analysis included emerging themes such as interview guidelines presented in an earlier section identified as the ‘introduction phase’, where interviewees also talked about the various forms of co-creation (see Frow et al., 2015) in their organisation. These emerging themes, that is forms of co-creation such as customer feedback (Groonrose, 2012), co-conception of ideas, co-design, co-research, co-marketing (Frow et al., 2011: 2015) were discussed in previous research except for co-conception of competition, which emerged from the data analysis. These emerging themes are presented in Chapter 5.2.1. The analysis process also identified one more theme which was not part of a priori themes, challenges to VCC, also presented in detail in Chapter 5.2.6.

Overall the study applied predetermined (a priori) and emerging codes (Braun and Clarke, 2006; King, 2012; Miles et al., 2014; Stuckey, 2015) to analyse the findings of the collected data. This combination meant that the overall response from the research participants resulted not only in answering the research questions but also in providing another facet of co-creation in practice as presented in Chapter 5.

The research also utilised Nvivo software, a tool which assists the process of qualitative data analysis (Bazeley and Jackson, 2013; Bryman, 2016); it also supported the continuous comparative process of data triangulation, i.e. on every occasion possible, the study compares interviewees’ responses (Patton, 2000).

Other approaches, such as grounded theory and analytical induction, are also used to analyse qualitative data. Both are iterative processes, where there is a repetitive interplay between the collection and analysis of data. Analysis begins immediately after collection of some of the data, and the implications of that examination then shape the next steps in the data collection (Bryman, 2016). Due to the nature of the study exploring various factors in multiple contexts, the interplay between the collection and analysis of data seems to be limited by resources in accessing all the actors in the ecosystem. Thus, thematic analysis was chosen for its advantages, and the limitations of the other approaches.

Overall, the study followed the methodological guidelines suggested by Patton (2000), Braun and Clarke (2006), King (2012) Miles et al. (2014), Yin (2014) and Stuckey (2015), to make certain of rigorous data analysis; representative and applied predetermined conceptual coding and emerging coding are used in qualitative research to reduce data complexity (Hahn et al., 2016). Further examples of codes are provided in each section of the report in Chapter 5. The next section presents the design of the case study for the O&P context.

3.4.3 Design of the Case Study Research

As discussed in chapter 2, service systems are made up of several actors, and also referred to as service ecosystems. One of the challenges to this research was reaching most of the actors involved in creating value. To achieve the aim of the research within time and limited resources, this study narrows down the scope to focus only on the B2B alliance context, where independent firms collaboratively create and co-create value. Many firms compete and complement to one another's products and service in an alliance.

In this instance, a single case design was thus used to investigate the phenomenon of value co-creation between the actors in an alliance; the advantage of a single case is its commitment to intensity and its ability to exploits opportunities to explore a significant phenomenon under rare or extreme circumstances (Eisenhardt and Graebner, 2007; Creswell, 2009; Bryman, 2016). The single case study method has attracted several service systems scholars, Echeverri and Skalen (2011: 356) noted the research gap, and as

> Interactive value formation is an empirically under-explored area of research, we decided to adopt an exploratory single-case study design in order to address to research limitations.

Edvardsson et al. (2012) used the case of a major telecom equipment and service provider to investigate the social structure embedded in value co-creation practice. Sarker et al. (2012) used a single case design using a software firm to investigate the value co-creation relationship between an ERP vendor and its partners. Similarly, the work of West and Wood (2013) used a single case study of a Symbian platform to examine evolving an open ecosystem.

This study employs Eisenhardt's (1989) suggestion on exploratory case studies to use existing theoretical constructs to guide theory-building research in which an a priori specification of constructs can help to share the initial design. The exploratory case study help to answer 'what' question, e.g. what can be revealed about the case (Yin, 2014).

With regards to selection of a case study in O&P context, Dube and Pare (2003: 609) analysis of information systems through critical realism case research supports the rationale for a single case design approach based on:

- Criticality of a case that allows to testing of a theory
- Uniqueness that it is rare and worth analysis
- Revelatory; the case was previously inaccessible.

As in this study, employed a single case study, and found a business model that required VCC and fulfilled the requirements set by the definition of value co-creation, to identify a case that had many actors practicing VCC.

Various sources of data can be used in case study research, as outlined in the literature. Yin (1989: 2014) suggests six data collection sources: *documents, interviews, direct observation, archival records, physical artefacts and participant observation*. This study uses a B2B case in the specific context of a hardware vendor, AlphaVendor (AV) (Pseudonyms), to explore the phenomenon of VCC with alliance actors, described below.

3.4.3.1 Case Description

A B2B case was chosen to explore the phenomenon of value co-creation with alliance actors, in the specific context of a hardware vendor, AlphaVendor (AV) (not its real name). AV delivers hardware products and solutions to customers through its partners. Its business model therefore necessitates collaboration with their partners to reach the end customer, providing opportunities for co-creation between the vendor and its partner.

AlphaVendor is a global organisation that offers information, telecommunication and networking equipment and services. The rationale for the choice is that AV is one of the most successful organisations globally in information and communication technology (ICT) equipment in terms of market share and revenue growth. The company was founded in the 1980s and now employees over 180, 000 people worldwide, in 2017 generating more than $92 billion revenue across all its business segments. It is comparatively new to the UK market, but its market share has risen gradually in a short time. It has managed to sign up over 50 partners in its alliance. Its success can be attributed to its cocreation approach with its partners, which creates opportunity to investigate the phenomenon of value co-creation from the AV perspective.

The AlphaVendor has three areas of business: telecom carrier network, device manufacturing and enterprise business. As the organisation operates on the global scale it may have different operation mechanisms for different regions; however, this study is confined to the UK market, focusing only the enterprise business in the UK market, i.e. providing equipment, software and services to enterprise customers, as B2B ICT products and solutions. Other independent firms acting as AV's partners are involved in selling, extending and implementing hardware-based ICT solutions in the UK enterprise market. Thus, the AV alliance utilises channel business models, in which it, the vendor (AV), does not deal with customers directly, and relying fully on its channel partners to deliver products and solutions. The partners are therefore part of the AV sales ecosystem.

AlphaVendor offers its products and solutions to partners, and the partners act as bridge between AV and the customers. The partners provide several services such as sales support, customisations and their expertise. The findings section outlines other roles and responsibilities of each member involved in the ecosystem.

The study aims to identify factors affecting value co-creation in the alliance context, and access to AV and its partner organisations provides a unique opportunity to examine how their alliance operates and co-creates value. The chapter 7 presents further details of AV's sales channel ecosystem.

Multiple sources for data collection: documents, audio recording from conference presentation, and semi-structured interviews, help to minimise possible limitations such as response bias and reflexivity (Yin, 2014), as described below.

3.4.3.2 Documents

Documents contain text (words) and images that may be policies, regulations or reports, which can be found on company websites, and in databases and news stories (Bowen, 2009). The documentary evidence used includes channel policies provided by AV; company websites and industry reports available online are used to understand the company profile, channel business model and the role of each actor in AV's channel ecosystem. These documents are transcribed and stored in Nvivo software for further analysis in relation to the research aim. These documents were collected between January 2017 and July 2018.

3.4.3.3 Conference audios

The AlphaVendor gave permission to attend two Channel Conferences organised by AV in London, in June 2017 and May 2018, which helped to further understand AV's channel ecosystems and identify prospective interviewees for further investigation. It was also possible to record presentations from AV representatives on their channel approach and strategy for coming years. The conference audio is coded as CA, where AV's channel director explained their channel roadmap for coming years, coded as AV_M1_CA. Presentations by both partners (e.g. CP6_CA) and customers (e.g. Cust2_M_CA and Cust3_M_CA) were recorded and transcribed to understand their views on AV's strategy, products and services. The conference attendance was also helpful in making contacts with AV's partners and distributors to request their voluntary participation in the case study research. Table 3.3 provides an overview of conference recordings.

Table 3.3 Profile of conference presentation audio

Organisation (Coded) Conference audio (CA)	Brief description of organisation	Speaker's position/ responsibility	Audio length (minutes)
AV_M1_CA	Original equipment manufacturer and solution provider, mainly focused on hardware products in ICT area, MNC	Channel Director responsible for all enterprise partner channels programme and development in UK (AV_M1_CA)	17
CP6	Network solution and systems provider, equipment configuration and service management, UK-based channel partner	Operations Director responsible for all operations and engineering solutions, vendor and customer management (CP6_CA)	17
Cust2	UK-based broadband service provider serving residential and corporate clients	Technical Architect, looks after infrastructure and solutions development (Cust2_M_CA)	18
Cust3	UK higher education institution which has 17, 000 students and well over 3,500 staff	Network and technical manager/engineer, responsible for planning/managing systems (Cust3_M_CA)	21

3.4.3.4 Interview process and guidelines design

The in-depth, semi-structured interviews were held with managers from various organisations in the AV alliance, to explore VCC practices; the conceptual framework developed in chapter 6; factors affecting value co-creation in the alliance, FAVCA framework was used as a theoretical foundation to guide the interviews. Twelve interviews were conducted in England between November 2016 and June 2018, ten face to face and two via Skype; they lasted from 23 minutes to 120 minutes. The snowball sampling technique (Bryman, 2016) was used to identify participants who were part of the AV channel ecosystem. Interviewees are from senior and managerial-level staff or executive team members in AV, (AV_M1, M2), distributor (PDist_M), channel partner organisations (CP1-CP5), their customers (Cust1), training academy (TA_M) and competitor multinational corporation (MNC) (Comp_M1, M2), who have worked in the UK and European enterprise market for several years; Table 3.4 presents their profiles.

Table 3.4 Profile of interviewees involved in case study

Organisation (Coded)	*Brief description*	*Interviewee's position/ responsibility*	*Interview length (minutes)*
AlphaVendor	Original equipment manufacturer and	Channel Director responsible for all	120

(AV)	solution provider, mainly focused on hardware products in ICT area, MNCs	enterprise partner channels programme and development in UK (AV_M1)	
		Area Sales Manager for southern England (AV_M2)	60
Training Academy (TA)	Higher education institutions that provides AV education and training products to industry people and students	Executive Director for AV Training & Certification responsible for managing and developing training academy (TA_M)	28
Distributor (PDist)	An IT distributor; consumer division and enterprise division in hardware equipment, mobile, general computing, PCs. laptops, and print distribution	Account director of enterprise division responsible for managing and developing AV channel ecosystem (PDist_M)	90
Channel Partner (CP1)	IT products and solutions provider for internet service provider (ISP), data centre providers, managed service provider (MSP), and public and private sectors	Two Co-founders/Directors, responsible for business development/operations management (CP1_M)	71
CP2	Multi-vendor IT-solutions provider, professional services project management; also manages services across UK	Director for Technical Services responsible for incorporating all the services and to sell a solution based on six core partners (CP2_M)	61
CP3	IT hardware and software service and solutions, Helpdesk, Server Monitoring, Managed Networking and Consultancy Services provider in UK	Sales Manager responsible for AV product business development (CP3_M)	69
CP4	Global MNC with a wide range of products and services in ICT, consumer and enterprise business division	Strategic alliance business development within UK. Looks after AV alliance and partner business development (CP4_M)	53
CP5	Software-based storage products provider, commodity storage area network (SAN) development. Work closely with distributor and vendor	Partner and alliances manager, responsible for developing partner programmes and leading many of the alliances (CP5_M)	23
Customer (Cust1)	UK-based an alternative ISP; serving both residential and business broadband customers	Network Operations Director, responsible for managing network infrastructure and ensuring service quality (Cust1_M)	26
Competitor (Comp)	MNC providing enterprise information technology with wide range of products and solutions; strong presence in UK and global market.	IOT Alliance, responsible for developing and managing alliance (Comp_M1)	56
		Senior Manager Worldwide Distribution, looks after distribution of products (Comp_M2)	40

The FAVCA framework is used to define and structure the guidelines for the semi-structured, in-depth interviews. The interview guidelines cover:

1) Introduction (role, relationship with AV, reasons for joining the AV ecosystems, mechanism for co-creation)
2) Alliance governance (governing the process between partners, contractual agreements etc.)

3) Technology-related collective strength (advantages and disadvantages of technology products in comparison to competitors etc.)
4) Power politics conditions (differences between alliance partners, e.g. status differences)
5) Opportunism (violations of industry/contractual norms, e.g. dishonesty and misinformation)
6) Challenges associated to VCC in the AV channel ecosystem.

The final version of the interview guidelines is available in Appendix B. Each interview was recorded and consequently transcribed using Nvivo software. The study relied on documents, conference audio recordings, complementary roles of interviewees, customers' and competitors' views, ensuring the data triangulation and validity (Hahn et al., 2016). This process also supports to generalisation of the theory developed from the case study. However, the value of generalising from a case study is questionable, and it is suggested to follow analytical generalisation, i.e. establishing the links between the findings and existing literature (Eisenhardt, 1989; Lee and Baskerville, 2003; Yin 2014). Table 3.5 identifies the primary and secondary sources used in this study. The following section discusses the data analysis process.

Table 3.5 Data collection techniques and sources

Data collection technique	Data source	Purpose/Use
Documents	Secondary: Channel policies Company websites Industry reports	Data collection
Channel conference audio recordings	Primary: Presentations from vendor, partners and customers organisations	Data collection and triangulation
Interviews	Primary: Vendor organisation Partners organisation Customer organisation Competitor organisation	Data collection and triangulation
Informants review	Primary: Five practitioners managers from various organisations	Validation

3.4.3.5 Data Analysis Process: Code and Themes

As discussed in O&C context, the data analysis process identifies the *thematic analysis* (Braun and Clarke, 2006) approach using a priori and emerging themes. The study applied predetermined (a priori) codes (Braun and Clarke, 2006; Stuckey, 2015) to analyse the finding of collected data, based on the following research question*:*

- *RQ2- What are the factors affecting underlying co-creation mechanisms of an organisation and its partners?*

This is further supported by the elements of the conceptual framework, FAVCA presented in Chapter 6. For example, conceptual framework proposes that one of the mechanisms that affect VCC is alliance governance mechanism, was coded as contractual agreement; the following statement form the manager of competitor organisation is coded as contractual agreement:

> It looks like, it’s just a page but contracts are essential. The contract needs to be simple and at the same time protect you, protect them. So, make sure you don’t overcomplicate the task factor and so these are really important things (Comp_M1).

Further examples of codes are provided in each section of the report in Chapter 7. Similar to the analysis of O&C context described in section 3.4.2.2, the data analysis also utilised emerging patterns in data which were not directly relevant to research question and conceptual framework. These emerging themes are identified as actors in enterprise business model, enterprise business, and challenges in enterprise business associated with VCC presented in Chapter 7.2. For example, for actors in the channel business ecosystem, *to identify various actors in enterprise business,* was coded as ‘actors in enterprise businesses’. The following statement from the Channel Director of AlphaVendor was therefore coded as actors in enterprise business:

> We’ve AlphaVendor as Vendor or OEM, whatever you name it. We’ve got in the channel eco-system, you’ve got distributors, and you’ve got channel partners that focus on the certain industries like oil and gas or finance. So, we don’t sell directs to the customers. We only sell through partners (AV_M1).

Thematic analysis was applied to all the data sources used: documents, conference audio and interviews transcripts. All the transcripts were stored using Nvivo, then the predetermined codes and emerging codes were applied to explore the six categories identified above in interview guidelines.

The study followed Patton’s (2000) suggestion of data triangulation as a continuous comparative process on every occasion possible, comparing interviewee responses (Patton, 2000).Validation and triangulation process were also supported by the conference audio recordings from various participants, presented in Table 3.3.

Overall, this study followed the methodological guidelines suggested various authors (Patton, 2000; Braun and Clarke, 2006; Yin, 2014, and Stuckey, 2015) to ensure rigorous data analysis and representation (Hahn et al., 2016). Further examples of codes are provided in each section of the report in Chapter 7. The next section describes the validation process of the research findings.

3.5 Validation of Research Findings

Informants review is sought, given the limitations in validating the frameworks for factors affecting value co-creation in O&C and O&P VCC contexts. This section presents the rationale for validation of the research findings, and its processes.

An informant is “any individual with relevant knowledge and experience of a particular topic” (Cantrill et al., 1996). Informant review is an established method in qualitative research to evaluate the claims, validity or trustworthiness of the enquiry (Sandelowski, 1998). A common method of validating the results of a qualitative research is used, regardless of the researcher ontological position, often seeking experts with a view toward arriving at the consensual truth (Sandelowski, 1998). Chapter 8 describes the detailed process and the results of the informants review process.

The research validation procedure according to Yin (2014: 198) “is to have the draft report reviewed, not just by peers, but also by the informants.” When comments made by informants are helpful, and the improvements made through this process will enhance the accuracy of the case study, hence, increasing the construct validity of the study (Yin, 2014: 199). Thus, the informant review method was selected to validate research findings, involving communication between the researcher and informants, and is designed to extract the maximum amount of unbiased information from them (Iden et al., 2011).

In terms of number of the informants required, scholars have suggested from “4 to 300” (Linstone, 1978). Nielsen (2000) suggested that five would reach 80% usability accuracy. Thus, the decision about the number is pragmatic, with criteria being limits in time and expense, as well as the qualities of the informant, rather than the absolute number (Hasson et. al., 2000; Powell, 2003). Chapter 8 describes the validation process, and presents the outcome.

This phase also utilised thematic analysis described in earlier sections (see 3.4.2.2 and 3.4.3.5). Using a priori codes (i.e. based on the research questions, and conceptual frameworks: COTE and FAVCA) and emerging codes (see section 8.2.3) the research validated both the frameworks.

3.6 Ethical Issues

An ethical clearance form was completed using the University of Reading's ethical procedures for research. The form detailed the interview data collection procedure and interview guidelines, including the purpose and timing of the research and the profiles of the interviewees. Since the profiles consisted only of an individual working in an ICT-based company, and include no vulnerable participants such as minors or medical patients, the form was approved.

Interviewees then signed the consent form voluntarily before the interview process started. The interview guidelines and permission from interviewees for the anonymous analysis and publication of the interview results can be found in Appendix C. During the data collection, interviewees were free to withdraw from the interview process at any time or avoid answering any of the questions. Some respondents asked not to use their real company name, but others gave their permission. For consistency and reasons of anonymity, this study does not use the real company names, but a representative dummy.

3.7 Summary of Chapter

The aim of this study is to explore factors affecting value co-creation. Chapter 3 discussed the research paradigm and the methods used to achieve the overall research aim: a critical realism research paradigm to study the service system.

As summarised in Table 3.6, qualitative interviews to study the O&C context and a case study method to study the O&P VCC context are introduced, and the limitations of other methods discussed. Overall, study conducts 29 interviews; 3 pilot, 9 in O&C context, 12 in O&P context and 5 informants and utilises documents and audio recording in a case study. An overview of data collection, and analysis techniques, and evaluation of the research findings, are provided. The process of ethical clearance is also discussed.

Table 3.6 Summary of research methods adopted

Research question	Research method
RQ1a-What factors affect customer participation in value co-creation? RQ1b-What factors affecting organisation participation in value co-creation?	– *Semi-structured interviews* with executives in nine organisations conducted to explore their VCC practices with customers, the interview findings presented in Chapter 5 – Validity of the research findings: Informants review with 5 industry practitioner, presented in Chapter 8.3
RQ2- What factors affect the underlying co-creation mechanism of an organisation and its partners?	– A case study method; data were collected from 12 interviews, conference presentations recording and documentary sources, case study findings presented in Chapter 7 – Validity of the research findings: Informants review with 5 industry practitioner, presented in Chapter 8.4

Chapter 4 presents a literature review on factors affecting VCC between an organisation and its customers and proposes a conceptual framework of factors affecting value co-creation between them.

Chapter 4 Literature Review: Factors Affecting Value Co-creation between Organisation and Customer

4.1 Introduction

The overall aim of this chapter is to review factors affecting value co-creation from the existing literature and to propose a conceptual framework of factors affecting value co-creation between organisation and customer, responding to research questions 1a and 1b.

RQ1a-What are the factors that affecting customer participation in value co-creation?

RQ1b-What are the factors that affecting organisational participating in value co-creation?

The Chapter is structured as follows:

Section 4.2 presents the literature review process

Section 4.3 presents the key findings from the literature review

Section 4.4 reviews the key value co-creation frameworks

Section 4.5 draws a rationale for the new framework

Section 4.6 presents the significance of the TOE framework

Section 4.7 discusses the role of customers in value co-creation

Section 4.8 presents the customer context of value co-creation

Section 4.9 presents the organisational context of value co-creation

Section 4.10 presents the technology context of value co-creation

Section 4.11 presents the environmental context of value co-creation

Section 4.12 summarises the customer-organisational-technology-environmental framework

Section 4.13 summarises the chapter.

4.2 The Literature Review Process

A systematic literature review following a pre-established protocol (Torraco, 2005; Kitchenham, 2007) was carried out of items retrieved from a search on *the theory of value co-creation*. Based on arguments used to describe the concept of value co-creation and their synthesis, a new conceptualisation of value co-creation is proposed. Table 4.1 lists the scholarly works reviewed.

Table 4.1 Scholarly articles on value co-creation reviewed

Scholar	***Year***	***Journal***
Prahalad and Ramaswamy	2000	*Harvard Business Review*
Prahalad and Ramaswamy	2004	*Journal of Interactive Marketing*
Edvardsson et al.	2005	*Journal of Service Research*
Ballantyne, D. and R. J. Varey	2006	*Marketing Theory*
Rowley et al.	2007	*Marketing Intelligence & Planning*
Anderson et al.	2008	*Journal of Service Research*
Moller et al.	2008	*California Management Review*
Nambisan, S. and P. Nambisan	2008	*MIT Sloan Management Review*
Payne et al.	2008	*Journal of the Academy of Marketing Science*
Vargo, Stephen L. and R. F. Lusch	2008	*Journal of the Academy of Marketing Science*
Vargo et al.	2008	*European Management Journal*
Fuller et al.	2009	*Journal of Management Information Systems*
Nambisan, S. and R. A. Baron	2009	*Journal of Product Innovation Management*
Desai, D. A.	2010	*The Learning Organization*
Fuller, J.	2010	*California Management Review*
Hoyer et al.	2010	*Journal of Service Research*
Zwass, V.	2010	*International Journal of Electronic Commerce*
Campbell et al.	2011	*Information Systems E-Business Management*
Fuller et al.	2011	*R&D Management*
Gronroos, C.	2011	*Marketing Theory*
Kohler et al.	2011	*MIS Quarterly*
Stucky et al.	2011	*Information Systems E-Business Management*
Westergren, U. H.	2011	*Information Systems E-Business Management*
Chen et al.	2012	*Journal of Management Information Systems*
Grover, V. and R. Kohli	2012	*MIS Quarterly*
Hakanen, T. and E. Jaakkola	2012	*Journal of Service Management*
McColl-Kennedy et al.	2012	*Journal of Service Research*
Russo-Spena, T. and C. Mele	2012	*Journal of Service Management*
Choi, H. and B. Burnes	2013	*Prometheus*
Goh et al.	2013	*Information Systems Research*
Grönroos, C. and P. Voima	2013	*Journal of the Academy of Marketing Science*
Ind et al.	2013	*California Management Review*
Rishika et al.	2013	*Information Systems Research*

Saarijarvi et al.	2013	*European Business Review*
Yngfalk, A. F.	2013	*Journal of Marketing Management*
Bettencourt et al.	2014	*California Management Review*
Bharti et al.	2014	*Marketing Intelligence & Planning*
Jaakkola, E. and M. Alexander	2014	*Journal of Service Research*
Ordenes et al.	2014	*Journal of Service Research*
Paasi et al.	2014	*International Journal of Innovation Management*
Ranjan, K., R. and R. Read	2014	*Journal of the Academy of Marketing Science*
Rayna, T. and L. Striukova	2014	*International Journal of Technology Management*
Xia, L. and R. Suri	2014	*Journal of Service Research*
Cova et al.	2015	*Marketing Theory*
Dong, B.	2015	*Journal of Service Management*
Frow et al.	2015	*British Journal of Management*
Guo et al.	2015	*Journal of Service Research*
Heidenreich et al.	2015	*Journal of the Academy of Marketing Science*
Laamanen, M. and P. Skalen	2015	*Marketing Theory*
Lusch, R. F. and S. Nambisan	2015	*MIS Quarterly*
McColl-Kennedy et al.	2015	*Journal of Service Management*
Neghina et al.	2015	*Marketing Theory*
Ostrom et al.	2015	*Journal of Service Research*
Scherer et al.	2015	*MIS Quarterly*
Skalen, P., S. Pace and B. Cova	2015	*European Journal of Marketing*
Smaliukiene et al.	2015	*Journal of Business Economics and Management*

Publications from 2000 to 2015 were searched in key databases, e.g. Science Direct, EBSCO, ProQuest and Emerald. The keywords used a search terms included *value* and/or *co-creation/cocreation/cocreating* and terms similar to *enabling, inhibiting, affecting, facilitating positive, negative, significant, factors, problems, difficulties, drawbacks,* and *challenges*.

The search retrieved 106 articles. Two criteria suggested by Torraco (2005) were used to determine out the relevant literature:

- Read all the abstracts of the 106 papers to limit their significance to the aim of the paper, and
- Use the Association of Business Schools (ABS) journal ranking to assure the quality of the published work, selecting only articles from journals with 1-4 star ratings.

Figure 4.1 Value co-creation literature word cloud analysis on Nvivo software

The application of these criteria resulted in 55 papers, presented in Table 4.1, that were relevant to aim of the research. Although these papers represented both B2B and B2C contexts, this demarcation was not applied at this stage because there were limited results for B2B alone. After identifying and reviewing this literature, *thematic content analysis* (Braun and Clarke, 2006) on Nvivo was applied to identify co-creation factors associated with organisation and customer; this software supports coding, analysing and linking data, and conceptual framework building (Bazeley and Jackson, 2013), helping to identify and categorise factors affecting co-creation as elements of the conceptual framework. Figure 4.1 shows the word cloud generated by Nvivo, illustrating the emergence of words that has indicated scholars' priorities in the value co-creation literature. The next section presents the main findings from the literature survey.

4.3 Key Findings from the Literature Survey

Table 4.2 summarises the findings from the key VCC articles identified. Scholarly works in the VCC domain place much emphasis on the use of technology in co-creating value, e.g. Nambisan and Nambisan (2008), Kohli and Grover (2008), Nambisan and Baron (2009), Fuller (2010), Westergren (2011), Stucky et al. (2011), Scherer et al. (2015), Smaliukiene et al. (2015). Highlighting the importance of technology, Akaka and Vargo (2013) argue that it is an operant resources that is capable of acting on other resources to create value, and, thus, "becomes a critical resource for value co-creation" (Akaka and Vargo, 2013). Choi and Burnes (2013) provide an example of how technology, such as the Internet is enabling value co-creation in cultural industries.

Table 4.2 Summary of existing research in VCC literature

Scholar	Topic/Research Methods/Context of research	Key findings
Prahalad and Ramaswamy (2000)	The article focuses on identifying customers' role as active participants in the marketplace The literature overview of customer participation in value creation for over 30 years	– Customers become a new source of competence for the corporations, and they are fundamentally changing the dynamics of the marketplace; thus, in the new economy, companies must incorporate customer experience into their business – Customers are active players and are becoming co-creators of value
Edvardsson et al. (2005)	This article introduces co-creating customer value through hyperreality in the pre-purchase service experience Literature review of customer value, experience and service literature	– This article introduced the concept of hyperreality, the simulated reality of a service experience through the "experience room", the place where the simulated experiences takes place – The authors apply six dimensions (i.e. physical artefacts, intangible artefacts, technology, customer placement, customer involvement and hyperreal service experience) of experience rooms to demonstrate how organisations can co-create value with customers through hyperreality.
Boyle (2007)	The author proposes a process model of brand cocreation in order to clarify the roles of the company and the brand consumers Literature review of various types of marketing, consumer behaviour, psychology and new product development literature	– A five-stage process of brand co-creation is proposed: the five stages are *new product development*, *marketing communication*, *consumer interpretation*, *purchase and consume, and repurchase/commitment/love* – The company is in control over the first two stages and the consumer over the last two processes. Both firm have equal control *interpretation*.
Rowley et al. (2007)	This paper provides insights into the customer community, and engaging customers in co-creation of a consumption experience. A case study of a specialist in sporting kite technology was chosen that focuses on product innovation and customer-community development.	– It is found that a firm's innovative product development strategy provides the catalyst for co-creation of a customer experience through fostering a sense of community among users, facilitating communications within that customer community, acting on the feedback, and continuously developing the community relationship – The author proposed *customer community leadership*, as new role in business to foster co-creation with the customer community
Moller et al. (2008)	This study investigates the limitations of RBV theory to enhance the understanding of service innovation and to identify the role of customer-provider collaboration Literature review based on the analysis of secondary case analysis of service firms, e.g. IBM	– The study proposed two frameworks: 1) A generic service innovation framework that clarifies different service innovation approaches; and 2) A client-provider service co-creation framework that reveals the interaction modes in service innovation – It is argued that organisations which incorporate customers' experiences and capabilities into service co-creation will be strong and successful
Nambisan, S. and P. Nambisan (2008)	This research focuses on identifying the benefits of virtual customer environment (VCE) Based on the multiple case studies based on the key design elements of virtual customer environments and	– The authors offered a framework to evaluate customers' VCE experience profile, such profile made up of four components: *pragmatic experience, sociability experience, usability experience and hedonic experience*

	the different customer value co-creation roles they facilitate in various service organisations	– Research proposed five different customer roles in innovation and value co-creation: *as product conceptualiser, product designer, product tester, product support specialist,* and *product marketer* – A set of strategies and practices is suggested to promote appropriate customer experiences such as design to encourage customer innovation through establishing an exclusive customer forum and a contribution recognition programme
Fuller et al. (2009)	This paper presents how consumers are empowered through Internet-based co-creation activities Action research based on 727 consumers having taken part in virtual co-creation projects	– The research found that the consumer empowerment depends on the design of the applied virtual interaction tool, the related enjoyment of the virtual interaction, the participants' task and product involvement, as well as their creativity and characteristics. – It is also found that the levels of perceived empowerment and enjoyment have a strong impact on the consumers' willingness to participate in future virtual new product development projects
Nambisan, and Baron (2009)	This paper investigates why do customers participate voluntarily in value co-creation in virtual environment such as online forum Multi-case study based on customer participants of the VCEs of two firms, Microsoft and IBM.	– It is found that customers perceived four types of benefits from their interactions in VCEs: *learning* (e.g. product-related learning), *social integrative* (e.g. belongingness or social identity), *personal integrative* (e.g. reputation or status) and *hedonic benefits* (e.g. pleasure and enjoyment) – The findings highlighted that firms should fully acknowledge the importance to consumers of the benefits of co-creation before they embark on VCC
Chan et al. (2010)	This study examines how customer participation drives performance outcomes through the creation of economic and relational values and how cultural value orientations affects customer participation in value creation Based on the quantitative enquiry from 349 pairs of customer and service employees of the Hong Kong and US operations of a large multinational bank	– It is revealed that promoting co-creation of value through customer participation could be a double-edged sword for the firm; although VCC enhances customers' economic and relational value, but it also increases employees' job stress and hampers their job satisfaction. – In terms of cultural values of both customers and service employees, the more relational value might result from customer participation if both customers and employees have higher collectivist value orientations.
Pongsakornrungsilp and Schroeder (2011)	This paper studies value co-creation in a co-consuming brand community context by investigating double role of consumers as providers and beneficiaries of their own provisions A case study of Liverpool Football Club's 'ThisIsAnfield fan community', that focuses on value co-creation in a particular type of co-consuming group	– The results show that co-consuming groups are platforms for value creation in which exploitation (by provider) occurs, but – at the same time – such exploitation in co-creation does not necessarily threaten consumers' perception of power and agency, because co-creation by definition entails an active role for consumers.
Echeverri and Skalen (2011)	This study investigates interactive value formation at the provider-customer interface	– This research results challenges previous research by proposing that the interactive value formation process that takes place between providers and

	Exploratory single-case study of public transport of a Swedish public transport organisation	customers is not only a creative but also a destructive process: value is both co-created and co-destroyed at the provider-customer interface – The authors also identified five interaction value practices (*informing, greeting, delivering, charging*, and *helping*) that makes their model of co-creative and co-destructive inter-active value formation
Randall et al. (2011)	This study focuses on identifing a key driver of relationship closeness for service organisations based upon the concept of co-creation and service-dominant logic Mixed method comprising field interviews and survey with 432 respondents from the charity organisations in the USA	– This study found that connection, trust and commitment may comprise dimensions of a higher-order co-creation construct; – Connection captures one dimension of the interaction between the customer and the organisation in the value-creation exchange process. – This investigation has demonstrated that connection combines well with trust and commitment as a valid precursor to future intention.
McColl-Kennedy et al. (2012)	This research investigates what healthcare customers use when they co-create value. The investigation is based on the theory of consumer culture, social practice theory and SDL Qualitative enquiry of healthcare patients using 20 depth interviews, field observation, and four focus groups	– The authors revealed customer value co-creation activities such as cooperating; collating information, combining complementary therapies, co-learning, changing ways of doing things; connecting, co-production, and cerebral activities, such as positive thinking, psyching up oneself, reframing and sense-making, and emotional labour. – The authors also proposed a value co-creation practice styles typology for a healthcare setting
Hakanen, and Jaakkola (2012)	This study focuses on identifying critical factors affecting the effective co-creation of customer focused solutions Qualitative methodology that uses 51 interviews and observation of two business networks comprising 13 companies and their customers	– It is found that effective co-creation of solutions requires a fit between the perceptions of suppliers and their customers in the core content, processes, customer experience and value of the solutions – Research found various factors, e.g. clarity of role, degree of competition, and the outcome, affecting co-creation
Gronroos and Voima (2013)	This paper analyses value creation and co-creation in service logic Conceptual paper	– The authors define the roles of the customer and the firm in the value creation process. They define value creation as customers' creation of value-in-use, whereas co-creation is defined as a function of interaction. The authors also introduce three value-creation spheres; provider sphere, joint sphere, and customer sphere – It is argued that the joint sphere provides opportunity for organisations and customers to co-create value
Ind et al. (2013)	This study focuses on exploring how participation emerges in co-creation and what outcome does it delivers. It is based on the action research which utilises participative netnographics to study virtual online communities	– The research found that people participate in a co-creation platform because active participation in a community can stimulate creativity and offers them the chance to find fulfilment, to express their creativity, and to socialise.

Durugbo and Pawar (2014)	This study explores methodologies for co-creation and proposes a model of co-creation capturing both organisation and customer processes. Based on the case study of a semiconductor company	– This article proposes a unified model for co-creation that integrates functions for strategising supplier–consumer involvement based on existing value-in-exchange and value-in-use and for selecting co-creation techniques.
Paasi et al. (2014)	This article investigates the challenges for organisations in open innovation initiatives with customers in B2B market Qualitative multiple case study using semi-structured interview with 48 managers from Finland and the Netherlands	– The authors propose a typology of open innovation with customers, which provides the context in which strategic and operational challenges of open innovation with customers are explored – Strategic and operational challenges related to co-creation with customers were also identified, such as challenges arising from overloaded customer information, challenge to protect co-creation platform and insufficient capabilities of IP management to support co-creation with customers
Ponsignon et al. (2015)	This study explores how financial services organisations manage the customer experiences co-creation A multiple case study of financial service firms operating in the USA and EU	– The authors proposed five practices that are consistently used by financial service organisations to manage the customer experience co-creation – They also identified four industry-specific characteristics; information intensity and contract complexity affect the choice of these practices
Cova et al. (2015)	This articles investigates the nature of value co-creation with unpaid consumers A case study of Alfisti collaboration platform which belongs to the carmaker Fiat automotive	– The research introduces the notion of brand volunteers, i.e. brand enthusiasts who work unpaid for their loved brand. With this notion, the article discusses the possibility of exploiting consumers in value co-creation and the existence of compromises, signifying an agreement between two co-creating actors in which one actor temporarily puts aside possible sources of conflict. – The authors introduce the concept of compromise that serves to resolve the conflict between theories that see value co-creation processes as a form of exploitation of consumers
Morosan (2015)	This study researches intentions to co-create value in hotels using mobile devices Large-scale survey of hotel guests in the United States	– The author's investigation found that customers' perceptions of personalisation, trust in the organisation, and their personal innovativeness were found to influence their involvement with mobile devices in hotels, which are contributory in the development of intentions to engage in specific co-creation behaviours

Motivation and the role of customer and organisation in value co-creation is also discussed by many scholars, e.g. Prahalad and Ramaswamy (2000), Boyle (2007), Rowley et al. (2007), Moller et al. (2008), Hoyer et al. (2010), Campbell et al. (2011), Pongsakornrungsilp and Schroeder (2011). Aarikka-Stenroos and Jaakkola (2012), Coviello and Joseph (2012), Bharti et al. (2014), Roberts et al. (2014), Xia and Suri (2014) and Sweeney et al. (2015). For example, Boyle (2007) identifies the roles of firm and consumer in brand co-creation; as presented in the table 4.2, firms are responsible for new product development and marketing communications, and consumers for purchase and repurchase stages of the co-creation.

Process (e.g. interaction between actors, resource integration) and the outcome of co-creation is also discussed in literature by Edvardsson et al. (2005), Arvidsson (2011), Witell et al. (2011), Chen et al. (2012), Elg et al. (2012), Russo-Spena, and Mele (2012), Filieri (2013) and Skalen et al. (2015). Nambisan and Nambisan (2008) revealed that the outcome of virtual customer co-creation could be innovation-related, e.g. intensity of customer participation in co-innovation activities; or customer relationship management-related, e.g. brand loyalty.

Co-creation by definition entails an active role by the customer (Pongsakornrungsilp and Schroeder, 2011). However, the negative consequences of such process, e.g. co-destruction, have started to gain attention in recent years; for example, Smith (2013), Heidenreich et al. (2015), and Laamanen and Skalen (2015) highlight how co-creation can have negative consequences. The literature review also revealed a few papers, e.g. Paasi et al. (2014) and Rayna and Striukova (2014), that focus exclusively on exploring challenges related to value co-creation.

In addition to the above papers, the literature review also revealed value co-creation frameworks/models, as described in the next section.

4.4 Review of Value Co-creation Frameworks

The literature review revealed the key value co-creation frameworks. Each adds a new dimension and outlines new factors to the value co-creation process:

- *The DART (Dialogue, Access, Risk benefits and Transparency)* is the foundation of value co-creation (Prahalad and Ramaswamy, 2004). Since customers have become more informed and active and growth and value creation the dominant theme for managers, these four items are central to the next practice in value co-creation. According to Prahalad and Ramaswamy (2004: 6) “consumers want to interact with firms and thereby co-create value”.

Hence, the interaction between a firm and its consumers sets the foundation for value co-creation. The co-creation literature highlights Prahalad and Ramaswamy's (2000: 2004) contribution as a major point of reference, especially in establishing the theory of co-creation and highlighting the role of customers in shaping firms' offerings. The latest works of Wolf et al. (2015) and Taghizadeh et al. (2016) further develop and conceptualise DART in an empirical context.

- *The process-based framework of value co-creation* was developed by Payne, Sotrbacka and Frow in 2008. They argue that "value is considered to reside not in the object of consumption but in the experience of consumption"; thus, customer experience is vital in co-creation activities such as product design and development. The framework highlights customer experience, core competence of both customer and company, need for learning and knowledge, and factors external to the organisation such as technological breakthrough/innovation, changes in industry logics, and changes in customer preferences and lifestyles which provide opportunity for value co-creation (Payne et al., 2008).

- *Taxonomic framework of value co-creation was proposed by Zwass in 2010.* The taxonomic framework is particularly useful for identifying the key areas in co-creation, e.g. who are the actors (co-creators), and their motivation to involve in co-created task and processes, the importance of co-creation process governance (Zwass, 2010).
- *Framework of consumer co-creation in new product development* was developed by Hoyer et al. (2010). It consists of organisation stimulators, and impediments, and both organisation-related and customer-related outcomes of the co-creation process.
- *The co-creation design framework* was proposed by Frow et al. (2015) to provide guidelines on how co-creation opportunities can be captured, designed and developed. The framework consists of six dimensions: co-creation motive, co-creation form, engaging actor, engagement platform, level of engagement and duration of engagement. The framework identifies various categories within the six dimensions, listing nine co-creation motives including access to resources, and reduced cost that drive firms to initiate co-creation (Frow et al., 2015).

Reviewing all of these prior works in the context of this research in order to gain a deeper understanding of factors affecting value co-creation, none of the frameworks include all the factors outlined in a single setting that claimed to affect the VCC process between organisation and customer. In fact, the review shows that each work brings a unique factor to the co-creation literature, to be considered as equally important for the success of achieving value co-creation. This suggests integrating these components in a single framework. The next section presents the rationale for a new framework that aims to capture all the factors that affect VCC.

4.5 Rationale for the New Framework

The purpose of Chapter 4 is to propose a conceptual framework of factors affecting value co-creation between organisation and customer. The thorough literature review process did not find any existing value co-creation frameworks except that Hakanen and Jaakkola (2012) outlines factors affecting value co-creation between organisation and customer. These factors involve co-creating a customer-focused solution, but their work does not consider external factors such as technology that have an impact on value co-creation as discussed by Payne et al. (2008) in their process based frameworks of value co-creation.

The current research is similar to that of Hakanen and Jaakkola (2012), identifying factors related to customer and organisation that affect value co-creation, but in a different domain as this study does consider the role of external factors such as the effect of technology in co-creation (cf. Payne et al., 2008). Thus, this study applies key concepts outlined in each of the value co-creation frameworks discussed earlier, bringing together the findings in one place. This necessitates to proposing an alternative model or new framework.

The study examined several IS and service frameworks, including the Technology Organisation Environment (TOE), the Technology Acceptance Model (TAM), and Work Systems Theory (WST). The *TOE framework*, widely discussed in the information systems literature, was found to be useful, as explained below.

4.6 Technology Organisation Environment (TOE) Framework

The *technology-organisation-environment (TOE)* framework created by Tornatzky and Fleisher (1990) is widely applied in investigating how the firm context influences the adoption and implementation of innovations. Innovation is defined as "an idea, practice, or project that is perceived as new by an individual or other unit of adoption" (Rogers, 2003: 12). The firm context, according to Tornatzky and Fleisher (1990), has three elements:

- *Technological context:* includes all of the technologies that are relevant to the firm including those in use at the firm level, and those available in the market but not in use in the firm.
- *Organisational context:* includes the resources available to the firm and the characteristics of the firm.
- *Environmental context:* includes the external business environment in which the firm operates, facing competition and dealing with the market regulators and structural change.

The freedom to vary the factors or measures for each new research context makes the TOE framework highly adaptable (Baker, 2011). Scholars (e.g. Teo et al., 2006) agree that the *technology-organisation-environment* contexts influence innovation adoption. However, the factors identified within the three contexts may vary across different studies. For instance:

- Teo et al. (2006) have used the TOE framework to identify technological, organisational and environment-related inhibitors in the context of deployment of B2B e-commerce in North American.
- Lin and Lin (2008) have used TOE to develop a model to study the determinants of e-business diffusion in the Taiwanese context.
- Oliveira and Martins (2011: 119) analysed the use of the TOE framework in empirical research and compared it with other theoretical constructs, concluding that the "TOE framework includes the environment context, thus, it becomes better able to explain intra-firm innovation adoption; therefore, we consider this model to be more complete".

Given the TOE framework's highly adaptability, scholars have seen little need to adjust or refine the theory itself (Baker, 2011). Previous works on the adaptation of the TOE framework has been limited to reckoning the various factors that are applicable in several innovation adoption contexts. According to Baker (2011),

> "No new constructs have been added to the framework; the TOE framework has evolved very little since its original development".

Some of the prior frameworks discussed earlier, e.g. Payne et al. (2008) outline the significance of technology and the external environment on value co-creation. However, their study does not investigate how this take place.

This supports Baker's (2011) statement that "[it] remains to be seen how the [TOE] framework will evolve and change in response to the new domain". In respond to this call, this study extends the construct of the TOE framework to include the customer context in a *customer-organisation-technology-environment (COTE) framework*. The next section describe *COTE*.

4.7 The Role of "Customer" in Value Co-creation

In chapter 2, section 2.4, the role of *customer* in value co-creation was discussed. Service theories such as service-dominant logic and service science emphasise the customer as an important actor in the value co-creation process. A more recent development in service theory; *Customer-dominant logic (CDL)* (Heinonen et al., 2010; Anker et al., 2015; Heinonen and Strandvik, 2015) emphasises the need for *more holistic understanding of the customer's life, activities, practices, experiences and context*, in which service is logically and unavoidably rooted.

Furthermore, Vargo and Lusch (2004: 2008: 2016) see the customer as co-creator in VCC. Thus, understanding in-depth the customer's perception, motivation, activities, practices, and context would allow companies to build a sustainable business. To understand this in-depth perspective, this study adapts and extends the TOE framework by adding a new dimension the *customer context*, to investigate the factors affecting value co-creation between organisation and customer, and defined as below:

- *Customer context (C)* refers to characteristics and resources/capabilities of the customer who involved in the value co-creation process with the organisation
- *Organisational context (O)* refers to the characteristics and resources of the firm which involved in the VCC process with the customer
- *Technological context (T)* includes the internal and external technologies, or technology-related factors that are relevant/available to the firm so as to facilitate VCC; and
- *Environmental context (E)* refers to the industry characteristics, market structure and competitors that has affect on the VCC process.

The next section describes each elements of COTE found within the current literature.

4.8 Customer-context (C)

The customer context is the *characteristics and resources/capabilities of the customers involved in the VCC process*. In other words, it outlines the customer-related factors that affect value co-creation. In section 4.4 several frameworks outlining these important customer-related factors were presented. Building on Payne et al. (2008), Zwass (2010), and Hoyer et al. (2010), this study has organised the customer-related factors into *customer motivation, perceived value, competence, trust and relationship, and peer influence.*

4.8.1 Customer Motivation, Needs and Desires

Why does the customer want to be involved in the value co-creation process? Fuller (2010) argues that one of such motives is customer's need or desire. A recent study by Neghina et al. (2015: 235) also points out that “Customers are motivated to co-create by their personal needs and desires, which can vary greatly and will influence their willingness to engage in cocreation activities”.

Others (e.g. Edvardsson et al., 2005; Bharti et al., 2014) stress that problems of everyday life, customers’ needs and requirements as well as their dissatisfaction with existing products and services drive them to engage in co-creation, which provides them with offerings tailored to meet their needs (Heidenreich et al., 2015).

Jaakkola and Alexander (2014) found that customers’ needs contributed to improvement in a co-created service system in public transport. Stucky et al. (2011) who analysed the case of IT service engagement, and Smaliukiene et al. (2015) who investigated co-creation in travel service, found that customer needs were the foundation of new co-creation solutions.

In addition to customer needs and desire, *customer motivation* to engage in a value co-creation process is also dependent on several factors. Fuller’s (2010) study of virtual VCC found customers’ degree of motivation is influenced by the kind of projects and tasks involved, the incentives they receive and the preferred interaction partner they expect. Fuller (2010: 114) further suggests that intrinsically interested customers are more likely to participate in such activities than extrinsically interested customers:

> Intrinsic motives such as intrinsic innovation, interest and curiosity, and internalised extrinsic motives such as showing ideas, positively affect consumers’ further interest in co-creation projects, the extent of participation, as well as time spent. Extrinsically interested consumers seem to be less interested in further participation.

His finding also shows that intrinsically and reward-driven customers have high and enduring interest in co-creation projects. Reward-driven means a willingness to engage more often as long as they receive monetary or other compensation for their efforts. However, intrinsically motivated customers are found to be interested in a wider range of products than extrinsically driven ones (Fuller, 2010). Chen et al. (2012) suggest that these extrinsic and intrinsic motivators play an important role in co-creation participation, which they demonstrated through the case study of Dell IdeaStorm.

Roberts et al. (2014) reveal how differences exists between different customer motivations and the type of co-creation activities. They outline three types of customer motivation:

- *Egocentric;* this category includes self-centred motivation such as hedonism; fun, passion and personal development; and skill and competence development.
- *Altruistic;* belongingness, fun, feedback, recognition; making friends and being social; helping others.

- *Opportunity and goal-related motives*; economic, influencing new product development, career opportunities.

Roberts et al. (2014: 147) link these three types of customer motive to co-creation activities, which they identify as:

- Innovating independently of the firm; co-creators work independently
- Innovating as part of a community; co-creators work with other community members
- Innovating directly in collaboration with the firm; co-creators work with the firm.

These findings are underpinned by the expectation that working closely with the firm will unlock opportunities that affect change in the firm, its products, and the future of the individual involved (Roberts et al., 2014: 165).

These studies, with those of Zwass (2010), Chen et al. (2012), and Ind and Coates (2013) show that the absence of motivational elements in the co-creation process, such as monetary and non-monetary rewards, can have an impact on the number of co-creators for the innovation process, which ultimately affects the success of the product in the marketplace. On this note, Fuller et al. (2011) and Rayna and Striukova (2014) suggest that companies are responsible for creating and enriching the co-creation experience and incentives for customers, to motivates them to actively engage in co-creation projects. These motivations, however, also have to meet how customer perceive value in the co-creation process; the next section discusses how this affects customer co-creation practice.

4.8.2 Perceived Value

Some customers perceive value based on their a*ssessment of benefits and sacrifice;* other look for *attributes of the product;* and the rest enjoys *the ultimate experience of activities that generate value for them,* as discussed in Chapter 2. However, value is always uniquely and both experientially and contextually perceived and determined by the customer (Gronroos and Voima, 2013). Customers only volunteer their time and talent if they consider co-creation to be rewarding, as demonstrated by Etgar (2008), Nambisan and Baron (2009), Fuller (2010) and Guo et al. (2015).

The study of Nambisan and Baron (2009) found that the customer's input in VCC is not only motivated by altruistism; rather, the customer expects "to attain significant benefits such as enhanced product knowledge, communication with other knowledgeable customers, enhanced reputation, and cognitive stimulation and enjoyment from a co-creation participation" (Nambisan and Baron, 2009: 400).

Customers' competences are critically important for a firm to gain strategic benefits. However, their input cannot be taken for granted in VCC, according to Saarijarvi et al. (2013: 12):

> There have to be mutual incentives for establishing a change in the traditional resource integration process. These incentives can include either monetary rewards or more subjective and intrinsic benefits.

This claim is supported by the study of Bharti et al. (2014) who found the presence of monetary incentives significantly influences a customer's willingness to participate in any kind of value-generating activity. Lack of perceived expectation can lead to decline in motivation towards co-creation and satisfaction (Heidenreich et al., 2015). Thus, how customers perceive the value of the co-creation task affects the overall value creation process. Customer competences or their resources are key to co-creation as discussed in the following section.

4.8.3 Customer Competence

The service-dominant logic and service science literature discusses competence as *operand and operant resources* required for value co-creation. Customers' knowledge, know-how, their creativity and skills are discussed under operant resources and tangible resources such as monetary input discussed under operand resources (Vargo and Lusch, 2008). Operant resources are highlighted in SDL FP4, as the fundamental source of strategic benefit" (Vargo and Lusch, 2016: 8).

To achieve such strategic benefit, a firm needs to utilise as much information, knowledge, skills and other operant resources as they can access and use from their customers (Normann and Ramirez, 1993; Payne et al., 2008). As Saarijarvi et al. (2013: 16) point out:

> Customers are increasingly seen as a critically important operant resource for firms – not only as the ultimate determinant of customer value – but as a source of creative, knowledgeable, and motivated resources that can be harnessed to work with the firm in co-creation.

The availability and integration of both of the customers' resources affect co-creation, as shown in various studies, e.g. Nambisan and Nambisan (2008), Desai (2010), and Fuller (2010). For example, Desai (2010) shows how customers' competence, expertise and talents helped Microsoft to come up with innovative solutions. On the other hand, lack of such skills impacts co-creation, as demonstrated by Skalen et al. (2015) in Alfa Romeo's online Alfisti brand community. These studies show that the availability and integration of customers' operant resources enabled value co-creation (cf. Desai, 2010), whereas, the lack of such resources inhibited value co-creation (cf. Skalen et al., 2015). Customers have to trust the organisation to be ready to exchange their competence for co-creation, as outlined below.

4.8.4 Trust and Relationships

This study defines *value co-creation as an active, creative, and social interaction process* in which, relationships are always present wherever there is an interaction between two or more actors. However, it is the quality of the relationship between firm and customers that matters (Ballantyne et al., 2006). Relationship building requires both commitment and trust between people. Trust, according to Morgan and Hunt (1994), is a state that exists when one party has confidence in an exchange partner's reliability and integrity. Trust in others determines people's willingness to share ideas. Without trust, co-operation and creativity are undermined (Ind et al., 2013).

As an example of the significance of trust and relationship in value co-creation, the study of Westergren (2011) found the importance of relationship and trust in an open innovation project failure. His study suggests that co-creation of value requires the development of trust and strong inter-organisational relationships, amongst other factors. Chaoi and Burnes (2013) found that actors tied by trust in a service system can lead to co-creation of value. In a similar vein, the study of Ind et al. (2013: 22) found that,

> An environment of trust enables participants to flourish progressively and trust is a main factor to build positive relationship which can lead to successful outcome.

Neghina et al. (2015) suggest that factors such as the trust participants have when establishing interaction is a necessary factor, along with others that trigger or intensify the co-creation activity. Therefore, trust can be considered as a significant factor that enables VCC; its absence inhibit VCC (cf. Chaoi and Burnes, 2013).

Trusting in and having a good relationship with the organisation can also lead to changing customer behaviour and making them loyal. Loyal customers can influence their colleagues, friends and family, and how these customer peer-influencing behaviours affect co-creation is discussed in the next section.

4.8.5 Peer Influence

Peer influence is spread in many forms, e.g. electronically or by word of mouth; a customer's behaviour can influence and help other customers to choose the best possible service. Organisations have leveraged the expertise of customers in product marketing activities, shaping peer perceptions through dialogue and discussions (Nambisan and Nambisan, 2008). Customers sharing service experiences through word of mouth, recommendation or other channels can generate wider interest or lack of interest in co-creation (Zwass, 2010).

Many firms have deployed word of mouth in co-creation activities; consumer-side production of ads, such as *flying iPods,* is a prime example of influencing other customers to choose products. Customers' ratings, recommendations, reviews, and electronic word of mouth using social media have an impact on customers deciding whether to join a specific service system, e.g. PS4 vs Xbox (Zwass, 2010).

Goh et al. (2013) empirically investigated customer engagement in a social media brand community and their influencing behaviour customers influence one another's purchasing through both informative and persuasive interactions that leads to a significant increase in customer expenditure.

Jaakkola and Alexander (2014: 256) found that positive word of mouth from customers in a public service systems was a

> More appealing option for other customers who were therefore willing to use the service and potentially contribute other resources that would result in additional benefits to the organisation.

Their study suggests that, by sharing their experience through word of mouth, ratings or recommendations, customers influence others' decision to join or not to join a new service system.

On the recommendation side, Rowley et al. (2007) suggest firms are responsible for generating positive word-of-mouth communication amongst their customers, which can ultimately act as a channel for customer feedback. The outcome or the value produced in these co-creation activities can be of value for other customers (Witell et al., 2011), as discussed in chapter 2, enabling the organisation to recruit more customers. That is, this influencing behaviour affects the value co-creation process for *co-creation for other contexts* (cf. Witell et al. 2011).

The next section examines the organisational context of value co-creation.

4.9 Organisational-Context (O)

The organisational context involves the characteristics and resources/capabilities of the organisation in the value co-creation process with the customer. It outlines organisation-related factors that enable or inhibit VCC. Section 4.4 presented VCC frameworks that outline important organisational-related factors affecting VCC, and building on Payne et al. (2008), Zwass (2010), Hoyer et al. (2010) and Frow et al. (2015), this study divides the organisation-related factors into o*rganisational motivation, perceived value, competence, policy and governance mechanisms,* and *organisational culture.*

4.9.1 Organisational Motivation

Organisational motivation, just like the customer motivation discussed earlier, refers to why an organisation wants to embark on the value co-creation process. As with customers, organisations are motivated by their needs and desires, together triggering value co-creation, and defined as "an active, creative and social interaction process based on the need or desire of actors (i.e. customer and organisation)".

The organisation's need and desire are discussed under *resource integration* in the VCC literature (e.g. Vargo and Lusch, 2004: 2008). Organisational need to access the resources of the customer is justified by the fact that the customer's operant resources contribute to the success of value co-creation (Saarijarvi et al., 2013). Access to and use of customer resources contributes to successful value co-creation.

Examination of the VCC literature suggests that empirical investigations into organisational motivation (apart from access to resources) for value co-creation appear to be lacking except for the work of Frow et al. (2015). They investigated firms' motives for initiating value co-creation, listing them as *access to resources, enhance customer experience, create customer commitment, enable self-service, create more competitive offering, decrease cost, faster time to market, emergent strategy, and build brand awareness* (Frow et al., 2015: 9).

Although Frow and her colleagues draw on the example of various companies that use co-creation to access to resources, earlier researchers (e.g. Stucky et al., 2011; Hakanen and Jaakkola, 2012) claimed that, if there is no alignment between customer and organisational motivation, access to resources is not possible, leading to VCC failure. A state of alignment according to Stucky et al. (2011: 278) "requires that the objectives, goals, constraints, and commitments of each party are clearly and accurately understood by both". An organisation's lack of such motivation and commitment to a co-creation project can lead to risk of losing co-creators (Chen et al., 2012).

Co-creation requires openness and flexibility, where, organisational commitment is crucial to recognise the need for meaningful engagement with customers. Willingness to share information with customers and commitment to common goals thus affect the outcome of value co-creation (Hakanen and Jaakkola, 2012).

More recently, Neghina et al. (2015: 235-6) agreed that an organisation's various motivations influence how it engages with customers:

> Organisations also pursue different goals within cocreation activities, which can influence how they interact with respective customers.

This claim is further supported by the findings of Skalen et al. (2015), who pointed that misalignments in engagements occur when organisation and customer enact a co-creation practice with different purposes. Such misalignments can lead to failure. Conversely, alignment between the organisation's motives for initiating co-creation and the customer's motivation for engaging with it can lead to the successful value co-creation.

These motivations is also influenced by how organisation perceive value in the co-creation tasks; the next section discusses the organisation's perceived value.

4.9.2 Perceived Value

The organisation's motivation to access to customers' resources is to compete for the extraction of economic value according to Prahalad and Ramaswamy (2004: 11):

> Companies and customer are both collaborators and competitors—collaborators in co-creating value and competitors for the extraction of economic value.

In co-creating value with customers, organisations expose their organisational norms and values aiming to establish themselves as a unique brand by opening up their organisational processes and managing customer expectations. In return, they expect to increase sales and loyalty in customers (Edvardsson et al., 2005).

The aim of the value cocreation process is to create value for organisation and customer, as outlined in the definition of value co-creation in chapter 2:

> VCC… create win-win benefits for the involved actors.

Such co-creation process creates something new and unique that can lead to competitive advantage (Ballantyne and Varey, 2006). Organisations achieve competitive advantage through the benefits (or value) by way of *revenues, profits, referrals* (Payne et al., 2008), *innovation, customer relationship management capabilities* (Nambisan and Nambisan, 2008), *decrease in high product failure rates* (Fuller, 2010), *increased efficiency by reducing operational costs* and *improved effectiveness through an enhancement of a product value and innovativeness* (Hoyer et al., 2010; Campbell et al., 2011). The firm looks for financial and other value to be gained from a business engagement (Gronroos, 2011).

The benefits of co-creation organisations have been demonstrated by several scholars (e.g. Moller et al., 2008; Russo and Mele, 2012). Moller et al. (2008) studied co-creation in the healthcare industry, and, found co-creation initiatives benefited organisations in the form of *cost reductions, higher operational quality, and shorter process times*. Organisations were also able to enhance their brand image as innovative, cutting-edge providers of medical services.

Drawing on ten companies' co-creation practices (e.g. Lego's Mindstorm, P&G's Connect+, BMW's Co-creation Lab) Russo and Mele (2012) found that, companies involved in co-creation benefited from the several innovation-related benefits in the form of *new product concepts, new product tools, new products,* and *new solutions*. The empirical study of Guo et al. (2015) shows the organisations improve their operational effectiveness by involving customers in various stages of service recovery process, enhancing the customer experience. Involving them in such co-creation initiatives influence "customers' justice perceptions" (Guo et al., 2015: 13); positive perceptions can lead to create loyal customers (Edvardsson et al., 2005).

Achieving these various benefits expected by the organisation, however, is also dependent on the organisation's competencies. The next section discusses how this affects their co-creation initiatives.

4.9.3 Organisational Competence

Service theories outline *operand* and *operant resources* required for value co-creation, i.e. competences. Emphasis is given to operant resources for both parties, organisation and customer, as they are needed to achieve strategic benefits:

> Operant resources are the fundamental source of strategic benefit (Vargo and Lusch, 2016: 8).

Such competencies are significant to the organisation because if:

> The provider lacks the competences or willingness to develop the competences needed to meet the client's service requests, the client may seek new partners (Moller et al., 2008: 37).

It is the organisation's competences initiate, run and manage the co-creation task. Application of the company's know-how, employees' tacit knowledge, and their skills, as well as other tools available to improve the customer service experience, are the crucial factor of co-creation as demonstrated by various studies, e.g. Vargo and Lusch (2008); Stucky et al. (2011); Skalen et al. (2015).

As an example, Stucky et al. (2011) show firms increasing their capabilities in the IT service context resulting in increased customer satisfaction. The work of Smaliukiene et al. (2015) demonstrates how organisational competences, e.g. knowledge and experience, shapes the value co-creating experiences in the travel industry. Lacking such knowledge and experience can lead to service failure and customer dissatisfaction, as revealed by Skalen et al. (2015) in the automotive industry.

Thus, organisations' ability to manage co-creation is affected by their competence, both operand and operant. Such competences are also useful in deciding the organisational policy, which defines *the rule of engagement* (Lusch and Nambisan, 2015) for value co-creation; the next section discusses why this is significant for co-creation.

4.9.4 Organisational Policy and Governance

Policy and governance guide the value co-creation process through *defining mechanism, control, responsibilities, resources sharing, intellectual property (IP), reward and feedback systems,* i.e. defining the rules of engagement (Edvardsson et al., 2005; Nambisan and Nambisan, 2008; Lusch and Nambisan, 2015). Effective governance capability can lead to co-creation of new capabilities (Grover and Kohli, 2012). These new capabilities are developed through changing organisational policy, which reconfigures the traditional roles of customers and firms in order to harness the resources of each in new and innovative ways (Saarijarvi et al., 2013). Thus, co-creation can be supported by establishing new organisational mechanisms (Lusch and Nambisan, 2015).

One of the burning issues on the development of policy and governance for co-creation initiatives can require firms to deal with awkward questions around the ownership of *intellectual property*. Several studies, e.g. Nambisan and Nambisan (2008) and Hoyer et al. (2010) point out that organisational policy also has impact on organisational approach to intellectual property rights (IPR) that can affect overall co-creation's success or failure.

Nambisan and Nambisan (2008) draw on the Microsoft example of how it deals with IPR issues. The company introduced community content solution programme, whereby it allows its customer community members to author product support content, which is hosted within the Microsoft platform but is owned (IPR) by the community. Through its IPRs policy Microsoft intends to enhance the transparency of its co-creation outcome (Nambisan and Nambisan, 2008).

The lack of consistency and fairness of IPRs in the co-creation context is discussed by Hoyer et al. (2010: 289):

> A lack of consistency in intellectual property policies might create perceptions of unfairness among customer contributors. They may also create legal entanglements. Firms that emphasise retaining ownership of intellectual property rights for themselves are therefore less likely to engage in a high degree of cocreation.

Co-creation also requires organisations to act on the *control mechanism*: operationalisation of co-creation requires a balance between autonomy and freedom of customers' choices and administrative control, so control is an important element within co-creation (Desai, 2010; Yngfalk, 2013).

Desai (2010) argues that imposing administrative control on the co-creation process can affect customers' freedom and autonomy, which does not foster learning co-creation. On the contrary, losing control of co-creation can result in customers hijacking a brand (Fournier and Avery, 2011). Thus, there needs to be a balance between control and freedom.

In terms of control mechanism in the co-creation process, Guo et al. (2015) suggest including customers in three types of organisational control process: *process control, decision control and information control;* this can lead to influence customers' perceptions of fairness and, ultimately, their product repurchase intention.

The balance between customer freedom and administrative control was studied in the context of the automotive industry by Cova et al. (2015), who demonstrated co-creation failure if the firm does not allow freedom of expression of customers' interest.

Motivation, perceived value and competences are also influenced by organisational culture, as discussed in the next section.

4.9.5 Organisational Culture

Organisational culture, according to Watkins (2013), is a shared view of "what is", "why is" and "how organisations do things". It consists of *leadership, approach to innovativeness; open vs closed, risk taking* and *learning behaviours*. Learning behaviour is fundamental to co-creation which requires changing managerial practices (Prahalad and Ramawamy, 2004). How leaders or managers perceive flexibility, learning and openness can impact co-creation, as VCC requires openness (Vargo and Lusch, 2008). Desai (2010: 391) suggests that the top-down authority-imposed coordination is not responsive to the dynamics of interdependent learning, creativity and adaptability: "Adaptive leadership is crucial for co-creation".

Leaders and managers in the co-creation process need to see themselves as part of the "cultural fabric", there to contribute, create, support, pose question, listen and learn, which will enable the organisation to share information with co-creators and work effectively (Ind et al., 2013).

In addition, the *organisational approach to innovation* means changing from closed to open innovation, although opening up internal organisational processes to customers is not an easy task. For example, Passi et al. (2014) found that transforming the innovation approach from *closed to open* is difficult, because cooperation with all other stakeholders was not supported previously by the company culture. However, overcoming such challenges by developing co-creation learning (Prahalad and Ramawamy, 2004), adoptive and participatory leadership (Desai, 2010; Ind et al., 2013) and opening up the organisation (Passi et al., 2014) can lead to successful VCC.

The next section outlines technology-related factors of value co-creation.

4.10 Technological context (T)

The *technological context (T)* is the internal and external technologies or technology-related factors that are relevant/available to the organisation so as to facilitate the value co-creation. Technology may be defined as the application of a scientific principle to solve human problems or satisfy human needs (Arthur, 2010). The dual role of technology as operand and operant resources has made a wide range of interactions and interactions tools available (Madhavaram and Hunt, 2008; Akaka and Vargo, 2013). Section 4.4 presented several key value co-creation frameworks that outline important technology-related factors that affecting the value co-creation process.

For example, Payne et al. (2008) outline the importance of technological breakthroughs and innovation in providing opportunities for value co-creation. The importance of IT support for co-creation (Zwass, 2010) and the use of digital applications (Frow et al., 2015) conceptualise technology as an important as a vital elements in VCC. Building on these earlier studies, this study has organised the technology-related factors into *the firm's digital infrastructure and support systems*, *new technology development*, *and privacy and security*.

These factors are also in line with the suggestions of Tornatzky and Fleisher (1990), that technology-related factors can be separated into technologies that are in use at the firm level, and the technologies available in the market but not in use at the firm. The following section discusses these factors.

4.10.1 Firm's Digital Infrastructure and Support Systems

Digital infrastructure refers to a collection of information technologies and systems that jointly produce a desired outcome (Henfridsson and Bygstad, 2013). Through various developments in IT artefacts and information systems, information technology is increasingly seen as the bearer of knowledge and the driver and enabler of innovation (Rouse and Baba, 2006). One enabling technology is to facilitate interactions between the organisation and customer involved in value co-creation (Westergren, 2011).

The service-dominant logic and service science literature discusses the dual role of technology as operand and operant resources, enabling a wide range of interactions and selection of interactions tools to make co-creation a suitable means of creating value (Madhavaram and Hunt, 2008; Akaka and Vargo, 2013). However, the digital infrastructure developed and introduced over many years and for different purposes means that organisations also face the challenges of managing and controlling such systems and technologies (Henfridsson and Bygstad, 2013). This stresses the significance of paying particular attention to the role and character of the digital infrastructure used in an organisation in order to understand its potential benefits and the impact.

The relationship between a firm's internal digital infrastructure and the way it is used for co-creating value with customers has attracted VCC scholars, e.g. Nambisan and Baron (2009), Grover and Kohli (2012). Based on a 20-month action research project, Kohler et al. (2011) examined the design and user friendly interface of an organisation's digital presence, such as,

- The use of multimedia attracts attention quickly, creating pleasure and involvement during the course of co-creation;
- Navigation structure and a multimedia-rich interface design eases usability;
- Frequent interactions around prototypes reduces the product failure rate.

To leverage technology for co-creation, Kohler and his colleagues suggest design principles for virtual co-creation systems including developing interactive objects, designing to inspire, simplifying the experience, nurturing playfulness and providing individual support. Such design features, according to Lusch and Nambisan (2015), offer richer social experiences and enhance the quality of discussion, thereby generating greater opportunities for value co-creation.

In addition to designing a digital platform, its prototyping, interface, and provision for personalised interaction, it is also suggested that an online co-creation platform captures customers' collective intelligence, the success of which is dependent on customer support systems. The study of Fuller et al. (2009), Jaakkola and Alexander (2014), Heidenreich et al. (2015), and Frow et al. (2015) demonstrate that the success of co-creation tasks is dependent on the extensive customer support provision, including technical/tool support (Ind et al., 2013; Bettencourt et al., 2014) and human touch, i.e. the availability of humans to support co-creation tasks (Ostorm et al., 2015).

Technologies available in the market but not in use at the firm also influence the value co-creation process; the next section discusses how.

4.10.2 New Technology

Dialogue (Prahalad and Ramaswamy, 2004) or the interaction (Gronroos and Voima, 2013) as the foundation of value co-creation are enabled by the use of technology. The latest technological advances allow for real-time, and highly personalised interactions and social collaboration between customer and organisation. This enables organisations to involve their customers in product planning, product development, and product marketing activities (Rishika et al., 2013). To put this in the context of the value co-creation definition, it is "to support the various VCC activities such as idea generation, participate in the development, solutions implementation*….*"*.* The use of new technologies in these phases of innovation facilitates greater interactions between customer and organisation, establishing a deeper connection between them (Rishika et al., 2013).

New technology that did not exist 10-15 years ago, e.g. social media platforms, have changed how organisations interact and create value, as observed by Guh et al. (2013). Their study found over a million companies have launched brand communities on social media platforms to leverage the potential of social sharing to co-create marketing value. The rapid technology-dominated service evolution, including cloud computing, AI, IoT, smart city and wearable devices, is opening up new opportunities for co-creation (Ostorm et al., 2015).

However, the emergence of these new technologies also present significant challenges for value co-creation, in which, according to Ostorm and his colleagues (2015:139) organisations have to ensure:

- The customer has a seamless service experience across the personal/face-to-face, self-service, automated, and social media interaction
- Front-end employees well-informed about new interactive technology to provide value-added information and personal service that sets the firm apart in the new technology-enabled era
- Firms need to acquire new competences in new technologies that combine data analytics and IS knowledge with customer and service-orientation skills
- Technology cannot substitute for human creativity as the source of new ideas for services and their delivery; the non-substitutable personal touch avoids the commoditisation of services. The right blend of the two, human touch and new technology, is therefore required.

The use of multiple technology channels and interactions over these platforms may raise a critical issue of privacy and security for customers, which the next section outlines as one of the technology-related factors that affect co-creation.

4.10.3 Security and Privacy

Perceived security reflects the extent to which an organisation's digital infrastructure is able to protect the integrity of resources from attacks/intrusion (Shin, 2009). A large amount of information is captured, stored, and analysed by an organisation using through its digital infrastructure, which must be able to fend off attacks/intrusion as it plays a key role in value co-creation process. Morosan (2015: 9) said that the "customer's perceptions of security play a critical role in the risk-reward dimension of cocreation interactions"; at the same time, customers rarely have the knowledge required to assess the vulnerabilities of the organisation's digital infrastructure, so it is organisation's responsibility to have robust systems in place. Robust security perceived by the customer leads to customer confidence and trust (as discussed above).

The value co-creation process also warrants transparency and access to information (Prahalad and Ramaswamy, 2004). Although they are of little value if the organisation do not clarify the provisions for customer privacy, i.e. how they use and handle customer data. The organisation needs to define rules that govern interactions in the service platform, implying information security and privacy protocols (Lusch and Nambisan, 2015).

This indicates an existing organisational context of co-creation, where the organisation's policy and governance needs to be transparent in clarifying security and privacy. Effective and clear governance concerning privacy and security can lead to co-creation of new capabilities (Grover and Kohli, 2012), the lack of which can lead to co-creation failure (Morosan, 2015).

The next section explains how the external business environment affect VCC.

4.11 Environmental context (E)

The *environmental context (E) or business environment* refers to the industry's characteristics, market structure and competitors that can affect the value co-creation process. External factors, such as changes in industry logics, and in customer preferences and lifestyles provide opportunity for value co-creation (Payne et al., 2008). The environmental context beyond the firm's boundaries is also referred to as the *extended service climate* in value co-creation literature (Jaakkola et al., 2015).

Theoretically, the environmental contexts is discussed within the social forces influencing value creation, i.e. value-in-social-context. According to Edvardsson et al. (2011: 327),

> Value is co-created with customers and assessed on the basis of value-in-context. Such context is shaped by social forces and social structures, thus, value should be understood as value-in-social-context and that value is a social construction.

Building on Payne et al.’s (2008) *changes in industry logics,* and *customer preferences,* and Edvardsson et al.’s (2011) *value-in-social-context* conceptualisations, this study organises the environment-related factors (E) into *government policies,* and *changing market structure, trends and competition.*

4.11.1 Government Policies

Policy refers to a plan or course of action on how a government controls various market-related practices between organisation and customer, which may include is but not limited to regulations on customer rights, sustainability, health and safety, taxes and investment and intellectual property. The government’s approach to these policies can also affect an organisation’s approach to co-creation (Lemey and Poels, 2011; Yngfalk, 2013; Laamanen and Skalen, 2015).

Yngfalk (2013) investigated how political intervention and regulations influence value-formation processes. His study reveals that regulations are creative mechanisms within the value co-creation process, which influence how organisation and customer interact and co-create value. Paasi et al. (2014) discuss the limited competence in intellectual property management and national legislation of the customer’s home country as one of the key challenges for organisations while working with customers. This finding is also supported by Laamanen and Skalen (2015), who argue that state actors regulating the functioning of market actors and governing everyday acts can either intervene in or encourage interaction between organisation and customer.

The new technologies and a robust national infrastructure support and bring together organisation and customer on one platform. The government policies on investment in the country’s digital infrastructure can have an impact on effective interaction between organisation and customer. Government investment in the richness of digital and other infrastructures enables a wide range of value-sharing platforms, i.e. greater opportunity for co-creation (Grover and Kohli, 2012). Shortage or a poor digital infrastructure can have an impact on effective interaction and co-creation.

The next section outlines how the changing structure of the market and customer trends affect co-creation.

4.11.2 Market Structure, Trends and Competition

Payne et al. (2008) suggest that customers will wish to co-create more individualised, experiential and differentiated goods and services, presenting an opportunity for value co-creation. This argument is further supported by the conceptualisation of the value-in-social-context (Edvardsson et al., 2011).

As value co-creation practices are influenced by various social contexts, the context of the business (e.g. industry structure), social forces (e.g. customer lifestyle and culture), and competition can affect the organisation's co-creation efforts (Edvardsson et al., 2011; Hakanen and Jaakkola, 2012).

Grover and Kohli (2012) show how competition affects value co-creation. Competitions between organisations in the digital products and services market is now at the platform level, and it is likely that platforms, which are a source of value, will become open or will be replaced with other open platforms such as RosettaNet (Grover and Kohli, 2012). The degree of competition amongst firms can be aggressively in attracting and retaining valuable co-creators (Hoyer et al., 2010; Hakanen and Jaakkola, 2012), because, "markets are no more local but global with a high number of companies fighting for the limited number of customers" (Paasi et al., 2014: 4). Such competitions and co-operations between organisations continue to evolve, where digital infrastructure, devices, and software tools create opportunities for value co-creation (Grover and Kohli, 2012).

In addition, changes in the market structure, e.g. vertical operation to network/ecosystems development, ensure the desired resources are available for exchange. Technical advances push the business ecosystem boundary, providing more opportunity for innovation and co-creation of value (Vargo et al., 2008; Grover and Kohli, 2012). The market structure also varies according to different regions requiring different innovation logic:

> Focus on the developing (e.g. Asian) markets that call for different innovation logics than the companies are used to (Paasi et al. 2014: 17).

Various market trends, e.g. customers wanting to take a greater role in innovation tasks, changing customer preferences and their knowledge, service orientation, have an impact on co-creation (Vargo and Lusch, 2008; Zwass, 2010; Hakanen and Jaakkola, 2012); as a result of "many customers are willing to take a more active role in innovation than in the past in order to get products and services that fits to their specific needs" (Paasi et al. 2014: 17).

The section below summarises the factors affecting value co-creation according to the COTE framework.

4.12 Summary of the COTE Framework

The c*ustomer-organisation-technology-environment (COTE)* framework represents the definition of value co-creation, of *an active, creative and social interaction process based on the need or desire of actors (i.e. customer and organisation)* enabled or inhibited by the customer context (C) and organisational context (O). Further, the efforts of customer and organisation *to support the various VCC activities such as idea generation, knowledge sharing, product development and solution implementation* are affected by technological (T) and environmental (E) contexts. Thus, the COTE elements represent the four different contexts of VCC, as summarised in Table 4.3, together with the relevant literature.

Table 4.3 Conceptual framework of factors affecting value co-creation: summary of the COTE elements

Factors	*Supporting literature*
Customer-context	
– *Customer motivation, needs and desire*	Edvardsson et al., 2005; Fuller, 2010; Stucky et al., 2011; Chen et al., 2012; Jaakkola and Alexander, 2014; Neghina, 2015; Heidenreich et al., 2015
– *Perceived value*	Prahalad and Ramawamy, 2004; Etgar, 2008; Fuller, 2010; Campbell et al., 2011; Saarijarvi et al., 2013; Bharti et al., 2014; Guo et al., 2015
– *Customer competence*	Maglio and Spohrer, 2008; Nambisan and Nambisan, 2008; Desai, 2010; Vargo and Lusch, 2004; 2008; 2016; Skalen et al., 2015
– *Trust and relationships*	Ballantyne et al., 2006; Vargo and Lusch, 2008; Westergren, 2011; Ind et al., 2013; Chaoi and Burnes, 2013; Scherer et al., 2015
– *Peer influence*	Rowley et al., 2007; Nambisan and Nambisan, 2008; Zwass, 2010; Goh et al., 2013; Jaakkola and Alexander, 2014
Organisational-context	
– *Motivation*	Moller et al., 2008; Chen et al., 2012; Russo-Spena and Mele, 2012; McColl-Kennedy et al., 2012; Hakanen and Jaakkola, 2012; Chen et al., 2012; Ranjan and Read, 2014; Cova et al., 2015; Frow et al., 2015
– *Perceived value*	Edvardsson et al., 2005; Ballantyne and Varey, 2006; Rowley et al., 2007; Payne et al., 2008; Zwass, 2010; Fuller, 2010; Hoyer et al., 2010
– *Competence*	Ballantyne and Varey, 2006; Vargo and Lusch, 2008; Moller et al., 2008; Campbell et al., 2011; Stucky et al., 2011; Neghina et al., 2015

– *Policy and governance*	Desai,, 2010; Hoyer et al., 2010; Fournier and Avery, 2011; Grover and Kohli, 2012; Lusch and Nambisan, 2015
– *Organisational culture*	Prahalad and Ramawamy, 2004; Desai, 2010; Ind et al., 2013; Gronroos and Voima, 2013; Paasi et al., 2014; Ordenes et al., 2014
Technology-related context	
– *Digital infrastructure*	Prahalad and Ramaswamy, 2004; Nambisan and Baron, 2009; Fuller, 2010; Kohler et al., 2011; Westergren, 2011; Grover and Kohli, 2012; Akaka and Vargo, 2013
– *New technology*	Payne et al., 2008; Rishika et al., 2013; Guh et al., 2013; Ostorm et al., 2010; 2015
– *Security and privacy*	Grover and Kohli, 2012; Morosan, 2015; Lusch and Nambisan, 2015
Environmental-context	
– *Government policies*	Zwass, 2010;Yngfalk, 2013; Paasi et al., 2014; Laamanen and Skalen, 2015; Laamanen and Slalen, 2015
– *Market structure, trends and competition*	Prahalad and Ramaswamy, 2004; Payne et al., 2008; Hoyer et al., 2010; Hakanen and Jaakkola, 2012 Rayna and Striukova, 2014

4.13 Summary of Chapter 4

Chapter 4 discussed the findings from the literature review, which suggested several factors affecting VCC between organisation and customer. However, little research to date has investigated and included both organisation- and customer-related factors in a single study.

After identifying and reviewing the relevant literature, the study adapted the technology-organisation-environment (TOE) framework created by Tornatzky and Fleisher in 1990, extending it to include the customer (C) context of value co-creation. This resulted in COTE framework which combines a generic set of factors affecting value co-creation between organisation and customer.

The study has also presented five customer-related factors (i.e. motivation, perceived value, competence, trust and relationship and peer influence), five organisation-related factors (i.e. motivation, perceived value, competences, policy and governance, and culture), three technology-related factors (i.e. digital infrastructure, new technologies and security and privacy), and two environmental factors (i.e. government policy, and market structure, trends and competition). The proposed framework explored how each components of COTE affects VCC between organisation and customer.

By proposing the conceptual framework COTE, the study also responded to research aim 1: *to explore factors affecting value co-creation between organisation and customers;* COTE also answers:

> RQ1a-What are the factors affecting customer participation in value co-creation?
>
> RQ1b-What are the factors affecting organisation participating in value co-creation process?

By this means, this chapter presented one of the theoretical contributions of this research project by proposing- *COTE framework of factors affecting value co-creation between organisation and customer* that extended the work of Tornatzky and Fleisher's (1990) *TOE framework to COTE* by adding new construct "C".

Chapter 5 applies the conceptual framework *COTE* in an empirical setting and presents the results from this empirical investigation.

Chapter 5 Findings and Discussion of Organisation-Customer Context of VCC

5.1 Introduction

In Chapter 4, the *Customer-Organisation-Technology-Environment (COTE)* framework of factors that affect value co-creation between organisations and business customers was proposed and discussed.

This chapter puts the COTE factors in an empirical context of with the various practices of VCC; thus, the aim of the chapter is to uncover the COTE-related factors empirically. The research methodology discussed in chapter 3 identified the adoption of *qualitative interviews* to investigate factors affecting VCC in the O&C context. This chapter addresses the research questions RQ1a and RQ1b by discussing the findings from both the interviews and the literature (Chapters 2 and 4) to discuss the implication of research.

The Chapter is structured as follows:

Section 5.2 presents the findings of the interviews

Section 5.3 discusses the findings

Section 5.4 summarises the chapter 5.

5.2 Interview Findings

The interview findings are presented according to the six categories identified in chapter 3.4.2.1: introduction, customer-contexts, organisation-contexts, technology-context, environmental-context and challenges associated to VCC with business customers. The study discovered the various forms of *co-creation in practice* in the introductory phase, following the COTE factors, then the challenges associated with VCC, presented as follows:

5.2.1 Forms of Co-creation in Practice

In introductory phase, the purpose of asking about the types or forms of co-creation was to reveal the various VCC practices through which co-creation might occur. The various forms act to bring both organisations and customer resources to the table, from which to co-create value. These emerging themes are developed based on Groonrose (2012) customer feedback (Groonrose, 2012) and Frow et al. (2011: 2015) Co-conception of ideas, Co-design, Co-research, and Co-marketing. Co-conception of competition, which emerged from the data analysis. Table 5.1 summarises forms of co-creation and the associated coding used to classify the interviews findings. The results also show organisations involved in more than one form of co-creation. For example, O2 was found to be practising *co-conception of ideas, co-design, co-research, and co-marketing*. How does O2 practices co-creation utilising various forms? One of their Systems Architects confirmed:

> We work with a client or couple of clients, to really to co-develop, their problems, our technology, working together to actually go and create and improve the concept, that then, becomes a sort of intellectual property we can take them into and productise, they can take and do market development (O2).

O2 provided further evidence of their co-design, co-research and co-marketing practice with the example of one of their successful products:

> … [Product] is a very good example, when we were doing stuffs with X (customer), where we were co-creating some kind of oncology solutions. The great example where using their skills as oncologists and our skills as technologists and coming together to create this pretty much game changing solutions and then co-marketing it (O2).

The other form found to be dominant amongst companies, is the *feedback loop*. This is used for various purposes; O3 for example uses it to improve their prototype, as their Associate Director explained:

> At the end of this process we might even form sort of prototype like put in search for example and we say to customer can you look it back and see some of the feature and give feedback before we formally release it to you in next prototypes (O3).

Table 5.1 Co-creation forms coding and themes

Level 1 Code	***Source***	***Example of Level 2 Code***	***Themes example***	***Associated Organisati***
Co-conception of ideas	Frow et al. (2011: 2015)	New Ideas/features	"Do we see an opportunity to test new ideas or concepts with that customer loyalty? Yes, massively."-O4_M	O2_M, O6_M, O9_M
Co-design	Frow et al. (2011: 2015)	Formulating solution together	"And then working with them, providing them with sort of snippets of capability they could then feedback on and help ensure sort of solution they get… in the shape of working prototype"-O1_M	O1_M, O5_M, O6
Co-research	Frow et al. (2011: 2015)	Research engagement	"One of the area is research where there are lot of really about doing things, our research department, So now with the research we have a whole way engaging with our clients. So I think first of it kind of a client projects. We think this is everyone's area where everything is being tested at the real world. We work with a client or couple of clients, to really to co-develop, their problems, our technology… one very specific example of where we do it is our research team."-O2_M	O2_M
Co-marketing	Frow et al. (2011: 2015)	Client demonstration	So we gave them some clients to talk to and they have arranged with the client. They're actually going to go in office and sit with them so they can actually see the system working."-O8_M	O2_M, O8
Feedback loop	Groonrose (2012)	Problem identification	"And then we began to close partnerships in agile terms when we develop a solutions, getting feedback and adjusting it we went the way. So that type of opportunity to get close to the customer and innovate alongside each other we do, but it is within the product."-O4_M	O1_M, O3_M, O5_M, O7_M, O9_M
Co-conception of competition	Emergent	New features/beating competition	" … (customers) tend to network a lot whether it be at conferences or forums and they will talk about new things that they've seen or new suppliers. So we need to be aware that they can gain knowledge of other systems. We mustn't be complacent. We must continue to engage"-O8_M	O3_M, O8

The feedback loop in O5 is used to bring new features and innovation to products:

> Some sort of different widget in the screen… some sort of button to press to do this, then we say to all of those customers….. We have got thousands of thousands of customers across the world, we are thinking about this as an idea, what do you think? Will this be useful to you? … Yes! Obviously lot of the customers think it is a good idea or indeed if it is a good idea for us then yes (O5).

One of senior portfolio managers at O5 explains further, how it becomes a form of co-creation: "… we will listen to them and work on that… And then, the next release will have that innovation in it"

O3 and O8 practise *co-conception of competition*, which was found to be a *new form of co-creation,* as the literature does not include such forms; it is defined *as customer helping organisation to beat their competitors.* Interviewees from O3 and O8 suggest two ways in which customers help their organisation to beat competition:

1) Pursuing/forcing the organisation to add new features, functionality or services to their products, so that they will match or outperform the competition, and
2) Helping the organisation directly in how the competitors' product/systems work, and consequently suggesting the next step.

The practice of co-conception of competition using these two ways was found in O3; one of their Associate Directors explained the process of co-conception of competition as:

> Sometime it is far greater than that (i.e. suggesting new features). Sometime it is 'I hate supplier X'. It might be the outgoing supplier that we are taking over from- 'Oh I hate them' and then they give us login to their systems so that you can have a look at what we are up against! …and you go, oh I never thought I would had that! That's a good idea (O3).

In the case of O8, customers help their organisation by *suggesting new features* that they have seen elsewhere or desire to have as theirs, the Operations Director explained:

> I think it might influence their (customer) desire for our product to have what our competitors have. We may be able to justify why we haven't got that functionality and offer an alternative functionality to meet that need or we might think, well if they're looking at an alternative supplier and are really interested maybe we do need to do some work on this (O8).

The other forms of co-creation found in various organisations are presented in Table 5.1. The next section presents the customer context of co-creation.

5.2.2 *Customer Context of Value Co-creation*

The customer context refers to the characteristics and resources/capabilities identified in Chapter 4 as *customer motivation, perceived value, their competence, trust and relationship and peer influence* that have positive or negative effects on VCC. One factor found from the interview to be significant to co-creating value was *culture of customer firm*. This makes six customer-related factors to be considered in the value co-creation process. The Table 5.2 presents the codes used to identify the theme for each theoretical category.

5.2.2.1 Customer Motivation

All nine interviewees mentioned customer needs or problems as the main source prompting the co-creation process. For example, Systems Architecture at O2 argued that:

> Again they understand where they need to get to open up their own market and that differentiate them and that's the area they look into and ask us for innovation to plug those holes (O2).

Altruism or helping others was confirmed by O3 as their Associate Director said, "Some people are more like they want to do for greater good…". However, she also acknowledged that it is only a handful of customers who shows altruistic motives.

5.2.2.2 Perceived Value

Customers' perceptions of value in co-created products and services are mainly driven by *benefits* from the *features of the product* that they will receive. The *experiential approach* to customer value is generally well discussed in B2C studies as identified in Chapter 4, and it is also found to be significant in the B2B context, as confirmed by O9. Sales manager at O9 observed that their business customers were more concerned with their end-user *customer experience*, rather than the cost (i.e. monetary value), which was found to be only a factor only up to a certain point. Table 5.2 presents examples of these themes.

Table 5.2 Codes used for Customer-context data analysis

Framework	Level 1 code	Examples of Level 2 codes	Themes example
1. Customer context	1.1 Motivation	Needs	"…very first part is for customers to recognize and to admit that they have a problem….You know that might sound obvious because why would someone bring you in if you don't have problem."- O1_M
		Desire	"Some people are more like they want to do for greater good…"-O3_M
	1.2 Perceived Value	Benefits-sacrifice	".. One is the risk, you know our customers are willing, depends on the opportunity on what we are doing but at times our clients are willing to risk more if there is more gain. So there is certainly the risk tolerance, especially if they are looking at first to market or driving something quickly."-O7_M
		Means-end (e.g. product attributes)	"…so that they get better candidate engagement and they can recruit more effectively and more quickly and perhaps than their competitors so that it could actually be to two different ideas here that one for them to be more efficient and effective and save money for their organization.-O8_M
		Experiential approach	- "cost is only the factor to the certain point. So it is more about the student experience. It is going to effect the student experience in the long term and they won't do it."- O9_M
	1.3 Competence	Operant resources (e.g. presence of/ lack of skills and knowledge)	"....they definitely have "know"- high technical, they have a vast amount of resources, they have cloud, they have all sort of fantastic things we know we don't have access to"- O6_M "The great example where using their skills as oncologists and our skills as technologists and coming together to create this pretty much game changing solutions and then co-marketing it." [i.e. presence of operant resource]-O2_M "…We were sort of talking about flying drones and you know ... Air ships with internet capabilities… they are so far out of their comfort zone. Because that's why I live to deliver service to my customers today and my customers don't necessarily understand all these. [i.e. lack of operant resource]- O5_M
	1.4 Trust & Relationship	Trust	"…Because they know we see their clients across their sectors and able to obviously not breach clients confidentiality.-O7_M
		Relationship	"……. I mean it is of mutual relationships. They need our assistance and we need their assistance. We need their help in order to help them." O1_M
	1.5 Peer Influence	Recommendations	"… We will be recommended to other organizations by current users because they think we're good. They think our software is good and they think our service and support is good. So they will influence perhaps a peer in another organization."-O8_M
	1.6 Culture	Leadership	"I think you have got overall corporate culture as well as the executive leadership that drive are they going to truly innovate and change"-O7_M

5.2.2.3 Customer Competence

Customers' knowledge, know-how, their creativity and skills were found to be significant in co-crating value with the organisation. Participants from all nine organisations explained why they expect a certain level of customer competence to understand their problems, their domain and the ability to use/perform the intended solutions. However, they also agreed on the limitations of customers' competence, which therefore required the organisation's help, as Systems Architecture at O2 elaborated:

> Customer competence is very important but it has limitation they understand their problems and business domain, however, lacks the skills set and resources to overcome, therefore they require organisations' resources and skills set (O2).

Customer competence is appreciated by organisations when co-creating from scratch, as Associate Director at O3 stated:

> If we are building something from scratch, then, maybe we don't know huge lot about, then, their skills become really important because we need to understand their objectives, what motivates them, and we really need to get in to their skin… (O3).

Even if customers lack such competence, their intention to learn is really important to successful co-creation effort, according to O8: "I think they need to have sort of people that have a real vested interest in their own organisation's abilities to improve and flourish and streamline".

What can be concluded from this evidence is that customer competence is required to understand their problems, opportunity and their domain. However, they do have limitations in their resources, so co-creation begins with other organisations providing such resources; the intention to learn new skills (one of the customer motivations) is vital to successfully creating value.

5.2.2.4 Trust and Relationship

Development of trust and inter-organisational relationships plays a significant role in the B2B co-creation of value. In the interviews, the issue of trust and relationship was only raised by companies that are fairly new to the market, O1 and O9. According to the latter: "…there are couple of things and normally that is about the relationships and when you are new to market place do they trust you? (O9)".

On the other hand, a well-established company such as O4, declared that strong trust is needed to succeed in co-creation: "…so the customer needs confidence of the person they talk to help them…all the solutions we have had and there's an element of unquantifiable kind of trust. (O4)"

O9 was fairly new to the UK market, while O4 had served it for over two decades. Well established companies, e.g. O4, O6, O7, have already gained customer trusts and have strong relationships, and found customer trust as one of the enabling factors for co-creation.

5.2.2.5 Peer Influence

The influencing behaviour of number of business customers, such as *recommending* other customer, was found to play a key role in developing product ecosystems, as found in O3:

> …they can see benefits in getting you more customers because in the course of the product they know that if we have got more customers, the more we will invest in the product itself… they don't want to be only customer to have your product because they never risk. So again there is a slightly selfish aspect to it (O3).

The more customers and the more interaction between them result in more added features and strong product ecosystems. This also indicates customers' *goal oriented motivation;* they want to recommend others to make the product ecosystems stronger.

The product and the organisation have to have a good history with the customer to be recommended, according to O8. When employee change organisations, they also influence their new workplace to use new service, as found in O2: "The other way you get leakage between the companies you know is when the people move." O9 emphasised that this affects co-creation by bringing more customers into the product ecosystems:

> …we put together lots of case studies with the customers who want to work with us longer or more closely. They make recommendation to other customer… that say actually we want to work with you and be our customer (O9).

O2, O7 and O9 also found that customer recommendation depends on their nature of the business. Public sector customers such as universities readily make recommendations (O9), unlike the financial sector where banks may have issues recommending to their competitors (O2, O7). Information systems are very dependent on customer referrals according to O6: "…perhaps there is a reference call when you purchase a big IT systems, in those cases, it is absolutely a standard practice (O6)."

5.2.2.6 Culture of Customer Firm

The culture of the customer firm, *which was not included in the conceptual framework*, emerged from the findings as one of the significant factors that affect co-creation. Interviewees from O3, O4, O5, O6 and O7 explained that the business customer's way of thinking, their mind-set on opening up their organisation, their innovation approach and interaction with the organisation were found to affect the overall business relationship; according to Head of Enterprise Architecture at O6:

> It is always painful, it is always stressful and it is all about how well the two cultures work together to solve the problems.

Some customer are "… much more open to co-create and look to us almost to curate that (O7)", and others, "are sometime keen to point finger on us saying 'oh you have not done this on time!' They don't mind the fact that they have not done XYZ! That's very much a cultural thing (O3)".

Customer firms' learning culture affects their competence development, as O8 confirmed. Blaming and pointing a finger at the organisation would affect their future co-creation efforts, according to O3 and O6. The customer firm's culture lays the foundation for other factors to flourish, to interact, to exchange resources, to build, to learn, and to succeed.

The analysis of interviews with the nine organisations suggests that value co-creation depends on all the six customer-related factors. The next section describes organisation-related factors.

5.2.3 Organisational Context of Value Co-creation

The organisational context refers to characteristics and resources/capabilities, which are identified as *organisational motivation, perceived value, competence, policy and governance mechanism, and organisational culture*, each having a positive or negative effect on VCC. The analysis of the interview is described below, and the findings presented in Table 5.3.

5.2.3.1 Organisational Motivation

The main motivation behind the organisational approach to co-creation was found to be *creating more competitive offerings and reducing the product failure rate*, views confirmed by interviewees from O1, O2, O3, O4, O5, O6 and O8. According to O2:

> Closed door research…and that wasn't working very well. So now with the research we have a whole way engaging with our clients. So we are more likely to work with clients who help us develop that and obviously then we work out how we will take that to market. So, if you get up, you are more specific then there's more opportunity for co-creation at that business level (O2).

Organisations were also concerned about the *product success and sustainability* of their business, confirmed by O5:

> So we need them to give us the feedback to say… yes you are doing the right thing or you are not doing the right thing, and we don't like you for X, Y or Z. If we can't have that then we will be uncompetitive in the market (O5).

Access to customer resources, e.g. their know-how of the problem, and opportunity as a motivation to co-creation, were acknowledged by O2, O3, O4, O5, O6 and O7.

Head of Enterprise Architecture at O6 emphasised the significance of access to the customer's resources: "If you don't listen then you are not in contact with your customers. You will end up doing something stupid".

Co-creation as an *emergent strategy* found to be one of the motivating factors in initiating co-creation; this view was expressed by the participants from O2, O4, O5, O6, O7 and O9. O6 referred to co-creation as a strategy, stating that: "the opportunity if you do something tactical in the radar and if that is successful then it is great and if it is not then you should stop talking about it" (O6).

In addition, the CEO and founder of O4 noted two more reasons for co-creation in their firm;

- To create customer commitment, and
- To enhance customer experience.

The Head of Enterprise Architecture at O6_M emphasised that the co-creation approach is also helpful to *reduce cost* on their product innovation.

However, *lack of motivation or not clarifying the motivation* to engage with customers can lead to co-creation failure; this view was confirmed by O4, their founder suggested:

> …sometime you don't have the willingness to… innovate and take risks in the organizations. Your dependency in customer for the future of survival or growth of your business is screwed.

To sum up the findings on organisational motivation to co-creation with their business customers, the following motivations were found to be significant: *to create competitive products, to reduce product failure, to access to resources, to create customer commitment, to enhance customer experience, emergent strategy and to decrease innovation cost.*

Table 5.3 Codes used for Organisational-context data analysis

Framework	Level 1 code	Examples of Level 2 codes	Themes example
2. Organisational context	2.1 Motivation	Access to resources	“Customer knows their problems, they have skills to know problem so access to that skills knowledge”- O2_M
		Create competitive offering	“So when we follow the experimental scientific path of doing experiments on a very small scales, learning from them and refining our directions that tends to work very well in terms of building things on what people do want and what people don’t pay money for.”- O1_M
	2.2 Perceived Value	Monetary	“It’s all about money and building right things… building the things that market wants”– O2_M
	2.3 Competence	Knowledge and skills	“Critical to that is our employees, our teams, their skills and their attitudes… it is not necessarily a domain where many people have direct experience in. And that’s what I think definitely is allowing us to go and deliver the value we are to our clients.-O1_M
	2.4 Policy and Governance	NDA	“And obviously there is a things like Non-Disclosure Agreements and other things that get signed along the way to ensure compliance on our side “-O1_M
		IPR	“We have specific stuffs around IPRs; what it means, who can use it, terms of use, whether there’s any monetary to and from, etc. For example, we have some products we sell, if we have co-created them with the customer, every time we sell it they will get kind of like a royalty.”O2_M
	2.5 Organisational culture	Risk taking	“I see as when I look at the customer as I am the one that takes risks and investments so that my customers doesn’t have to.”- O4_M OLM

5.2.3.2 Perceived Value

The many benefits perceived from the co-creation process by organisations were revealed by study participants. There was no argument amongst participates that *monetary benefits* is the primary expectation; O9 emphasised the importance of money in business: “fundamentally, every customer I speak to understand that we are in the business to make money” (O9).

Along with monetary revenue, organisations also expect the *product success;* according to O2: “It’s all about money and building right things”. Participants also perceived *referrals* as one of the important outcomes of co-creation; O1 explained how they get customers’ referrals: “I have heard about you from X. Can you show me how you can help me sort out with my … problems?” (O1).

O2 and O3 also highlighted *organisational learning* as an outcome of co-creation with customers, O3 elaborated:“… it’s not perfect... but we still do it… we learn!”. Learning experiences overtime from co-creation projects with customers over time also help develop organisational competence.

5.2.3.3 Organisational Competences

Application of the company’s know-how, employee’s tacit knowledge, and their skills, as well as other tools available in the organisation, were found to be crucial factors for co-creation.

In co-creation, not all the ideas are going to work, and the company’s *skills and experience* are really important; O3 acknowledged:

> Because it usually needs a lot… it usually… whether it is a product or standalone thing you need someone with loads of experience to go in with that list to know which ideas are not going to work.

On this note, Head of Engineering at O1 noted that *domain-specific knowledge* is also crucial to deliver value to customers. Organisational competence tends to *complement customer trust* according to O4:

> Business like ours has to have a deep understanding …It has to have the people who do the job. It has to have people who defines the industry … So if you have got that and the ability ...then effectively we are the trusted navigators.

What differentiates organisations from customers is their competence; highlighting the *strategic advantage of skills and experience* over customers, manager at O5 asserted: “we are light years ahead of where the customer is in terms of thinking. Because, we are developing things and we live in the Silicon Valley and not everybody lives in Silicon Valley" (O5).

That the wealth of organisational *competence is the key to beating competition and convincing customers* was confirmed by O9:

> …that is more than third of our employees are in research and development, which to me says to our customer…that we are investing in the future and we are developing …X… as opposed to doing perhaps what our competitors do…If you convince the customer that it is (Your money) probably going towards the R&D staffs, the X program …and all those things then the customer can understand little bit more.

The study participants did not mention the issues of lack of organisational competence, as their very existence depends on their competence, making co-creation possible. O2 elaborated: "they (customers) understand the business problem and business model they are trying to do, we have a skills to make it happen".

The competence of organisation was found to be useful in deciding the organisational policy, which defines *the rules of engagement* (Lusch and Nambisan, 2015) for value co-creation, as presented below.

5.2.3.4 Policy and Governance

Analysis of the findings suggests that organisations are well aware of the importance of the rules of engagement for value co-creation, to which they bring the process of co-creation, compliance, non-disclosure agreement (NDA), confidentiality and the issue of intellectual property rights (IPRs).

Interviewee from O2 highlighted the significance of their organisational approach to controlling confidentiality in the co-creation process with customers:

> … that sort of confidentiality and privacy is absolutely paramount. And they deter with us if we are creating a new product, you don't want to tell the market that it is coming out in six months' time because, guess the competitors move quite gleefully as well.

The sensitiveness of co-creation projects is also *dependent on the nature of the customer business*: some government agencies, the banking sector and other customers are prone to publishing collaborative work. Such kind of co-creation task may require a whole set of new policies to tackle various issues of confidentiality, IPR and knowledge sharing; according to O2:

> If we are creating certain products with the certain companies they wouldn't want to be seen of working with us...they don't want to reveal what they are doing undercover because that expose them to tackle things like that. So there's a whole bunch of that which has to be built into our working arrangements, what's been produced and how much of that can be shared in terms of knowledge and information elsewhere after that as well.

Co-creation also requires *defined methodologies,* which provide a systematic framework to work with customers; this view was confirmed by O2, O3 and O7. Explaining their organisational policies, Associate Director at O3 said: "it is an organisation policy here because we have a defined methodologies of working, agile methodologies we work with".

A similar view was expressed by O2, as participant asserted: "We are into much more agile way of delivering products and services. Because the market demands much-much faster. So now the whole idea of working with customer groups in combined design thinking, design led sessions, kind of schedule we are in, lots of agile sprinting" (O2). Such methodologies, according to O7 demystifies and make the process more tangible.

However, *too many methodologies and processes is bad* for co-creation and innovation, according to O4:

> If you create a bureaucratic system you never free-up the innovation. You will never do it, because, it just takes too long. I think it is particularly true with where software technology area is, we can do things quite faster, we can fail and learn quite quicker.

Many processes may result in problems in doing business with customers; however, reviewing such processes can save the business, as O5 experienced:

> The chairman heard from one of the customers 'you are terrible to do business with! And I want to buy a software from you and it is taking me a month or something' and the chairman put in place a taskforce to get this thing sorted out. Then we had to simplify our contracts, we had to put the program in place.

Entering a co-creation agreement triggers a contract and all sort of IP requires transparency between organisations and customers. This view was emphasised by O6: "If we need to partner with …to develop or something like that again it is what it is… the scale that you are doing and how transformative is it and all that IP issues".

These processes, policies and the governance are also dependent on how organisations perceive and practise their day-to-day operations, and their attitude towards customers, through their organisational culture, which the next section presents.

5.2.3.5 Organisational Culture

Leadership, approach to innovation, open vs closed, customer support, risk taking and learning behaviours are all considered under organisational culture. O6 explained that co-creation is all about how well the two cultures work together to solve problems. One of the key cultural practices found was the organisational attitude towards extensive *customers support* throughout the product life cycle, facilitating the relationship between organisation and customer. According to O1: "Culture is definitely positive…. We are all about helping our customers… We want to make customer happy whatever it takes".

It was found that supporting customers and solving their problems has become the norms; this view was confirmed by O2:

> We have other teams whose all job in life is to go and co-create! …we can call up them to facilitate our sessions as well…it's been such an intrinsic part of our DNA for years! I mean one of our core values is client first! And again client value in every interactions.

This finding also suggests that participants really valued customers' contribution to their product ecosystem to improve the product and its delivery. As Operations Director at O8 acknowledged: **"**customers are the best people to tell us what might be missing in our product or might not be as good in our product or what they would really value in our product".

The organisations have developed a strong customer support culture within organisations, including O8: "What are we doing wrong? How can I make you have more confidence in us? Nine times out of ten that will work. And it is at our core that exemplary customer care is what stands out from anybody else" (O8). This type of feedbacks and knowledge from customers is also facilitated through *knowledge sharing and learning culture* within the organisation. O8 further explained, "…there tends to be a culture… a month's technical people and developers and coders in particular of knowledge exchange and in-house skill exchange …we can exchange that skills and knowledge" (O8).

The absence of organisational motivation for internal innovation is risky for the long-term firm survival; according to O4: "Sometime you don't have the willingness to … innovate and take risks in the organisations. Your dependency in customer for the future of survival or growth of your business is screwed (O4)." Therefore, organisational culture is also linked back to organisational motivation for co-creation: why and what do they expect from their customers?.

Extensive customers support built over time, learning from customers, internal (within the organisation) provision to facilitate knowledge sharing, and the risk-taking propensity to innovation were found among the study the participants to be significant cultural factors to be considered in the co-creation process.

The next section presents technology-related findings.

5.2.4 Technology Context of Co-creation

The importance of technology was emphasised by the companies involved in this study,as significant enabler for engaging and for maintaining strong links with customers. The interview findings suggest that technology, especially information and communication technologies (ICT), enables co-creation by supporting interaction between the organisation and its customers and enabling new business models.

For example, the *firm's digital infrastructure, new technology and provision for security and privacy* were found to play a significant role in enabling co-creation between the organisation and its business customers. Table 5.4 presents the results of the analysis.

5.2.4.1 Firm's digital infrastructure

The organisation's digital platform supports frequent interaction, product prototyping and business model innovation; according to O1: "technology is a huge enabler for engaging and for maintaining a strong links with customers. And also kind of help with the aspects of lean start-ups".

Business, especially back office operations, is handled by the firm's digital infrastructure, allowing the organisation to achieve efficiency and effectiveness. The importance of the digital infrastructure in their business is confirmed by O6:

> APIs allow customers to tell us more about the items. They will be able to interact with us, place sales orders…we are trying to make lot of products more flexible and ease of business with us. That is the directive on the digital space and obviously in our digital space we are trying to do with apps and mash-ups …and make more money on and in that space the technology at the back end is all the central function.

Table 5.4 Codes used for Technology-context data analysis

Framework	Level 1 code	Examples of Level 2 codes	Themes example

3. Technology context	Digital infrastructure	Interaction	"…with our ongoing communications, whether we are doing management of a servers or otherwise sort of having technical tools at your finger-tips for communicating with your clients whether it is instant messaging or emails or whatever shortens the gap between you and your clients".-O1_M
	New technology	Human creativity	"Things will never going to happen via telephone, is it? ...and in the Asia there is different dynamic and there is also different things across the world and even within the Europe there are sort of different things happening"-O5_M
	Security and privacy	Data access	"With the cloud products, all of our UK customers wants the data to be kept in the UK, so we have to open the UK data centre for that bit. The most sensitive for … type of customers want only the UK people to access the data in the UK. So that's the sort of an additional layer of the"-O5_M

5.2.4.2 New technology

The findings suggest that the companies have influenced and benefited from new technologies such as the mobile and social platform revolution, cloud computing and big data and machine learning technologies. Organisations' interest in new technology is mainly driven by two factors: *it helps shaping customers' expectations and it allows new business models*. This was highlighted by a number of respondents, including O9: "You need to keep up with the technology and customers' needs to make sure that their technological infrastructure is at that level. Otherwise, again the end customer experience will go down".

New technology is also perceived as an opportunity to innovate business models, a acknowledged by O1, O4, and O5; as O4 explained:

> Newer technologies and where we have been up to the moment, allow us to be more variable and to allow us provide different value propositions at different price points. We couldn't have done this without the technology.

When organisations change their core business model in accordance with new technology, this also necessitates a new set of interaction with customers, requiring new competence (found in O2 and O5), *fulfilled by hiring new employees* according to O5:

> Changing from traditional premise business to new cloud business, is that we had to change our employees… the right employees for the new world… this new world is all about service and it is very different way ... so much more interaction between us and the customer means we need to change the employees…and there is a lot of change in the employees.

Interviewees also highlighted the importance of human creativity, which is never substituted by new technology; and this view was confirmed by O5, who noted the *organisational ability to perform* *personal touch with customers*, i.e. human factors based on employee experience significantly contributes to the betterment of the organisation-customer relationship.

The lack of such organisational competence and human touch in managing the digital infrastructure based on new technology can lead to co-creation failure, as experienced by O6:

> …again in the co-creation we were one of the first to implement the cloud in the UK, it was very cutting edge and if it would have worked we would have been all over the press. Look how fantastic we are! But it didn't and that is where it kind of go very bad.

Thus, findings suggest that new technology can bring several benefits to organisations if they are competent and creative in handling it for co-creation; this was also found to be affected by how well the organisation deals with the provisions for security and privacy, presented in the following section.

5.2.4.3 Security and privacy

The companies involved in this study deal with a large amount of information using their digital infrastructure; they are information intensive (see chapter 3, Table 3.2). Provision of the security of information, and clarification of the issue of privacy between organisation and their customers was found to play an important role in developing confidence and trust. According to O3: "You answer all the points about security and you say 'oh yes we have got ISO this and ISO that', data protection we have to do that".

All these compliances, such as international standards (e.g. ISO27001) and certification from government agencies, e.g. GCHQ, were found to play a key role in protecting the digital infrastructure (O3, O5, O8 and O9). O9 explained:

> …I say once the GCHQ because they have a security background and quite massive influence over what people thinks in this country regardless of the security, so if you have got a GCHQ report in your equipment saying it is safe then the customer will believe it is going to be safe.

However, all these additional layers of security and certification contribute to *increased cost* of the co-created products. Customers may not be willing to pay these additional costs, as experienced by O5:

> Given that all those serious security breaches we had recently…of course the security and privacy is very important! You know we think they are most important but our customers…. it is the cost or the perceived cost against the threats is the main problem.

This issue links back to the customer context of co-creation, in their perception of the product and the availability of resources pay for such products or for certification to secure their digital infrastructure. Although cost remains challenge, the findings demonstrated that the security and privacy remain one of the important factors to be considered in value co-creation.

The next section presents the findings on business environment-related factors.

5.2.5 Environment Context of Co-creation

The study findings suggest that business environment-related factors such as *government policies and regulations, and competition and market trends*, are important factors in co-creating value with business customers. Table 5.5 presents the examples of coding for the environmental context of value co-creation.

Table 5.5 Codes used for Environmental-context data analysis

Framework	Level 1 code	Examples of Level 2 codes	Themes example
3. Environment context	Policy and regulations	compliance	"They (compliance) play big role especially with… (Industry). So the government will come out with some new rules. Usually with a surprise and usually with a deadline. And then from the customer perspectives, they turn around and say how you going to help us achieve this!"-O3_M
	Market structure, trends and competition	Competition	"… but at APIs I mean again APIs are big thing all if you can look over competitors like X (competitor) they have already got APIs."-O6_M
		Trends	"in …(industry) as it stands at the moment, if you jump back to may be 5 or 10 years ago it was the X (customer) choosing the … and now it is the … choosing X because they are paying … This is the problem we have to deal."-O9_M

5.2.5.1 Government policy and regulations

Government policy or courses of action were found to be intervening in or encouraging interaction between organisations and customers (O1, O2, O3, O4, O5, O6, O7 and O9). Highlighting the significance of government rules and regulation, O3 noted: "the government will come out with some new rules. Usually with a surprise and usually with a deadline… we need to make sure that we need to keep that in the road map and make sure they are built in". Changes in government legislation also creates opportunities for organisations, as further explained by O4:

> The market condition at the time were major government legislative changes that were taking place … there was an external impact in terms of the restructuring of the industry which was quite major. I look back in, they created an opportunity for a new start-up to take the best of the technology with good understanding and insights into the target market.

In addition to opportunities and challenges created by government compliances, participants reported that, the mind-set of regulators still concentrates on the manufacturing sector, and does not support the service economy. According to O7:

> Regulatory bodies are very much aligned to a hard manufacturing type of environment. And they have been slow to truly create the regulations, the environment and the support system to look at to a service economy. So a non-manufacturing economy, where I think primary focus on the majority of regulations have been developed around manufacturing processes etc.

The slow process and the manufacturing type of regulations are not aligned with the new start-up environment, e.g. big data, according to O1. For example, O7 said that: "it won't keep up with for example, trying to manage data security, what data can exist where, privacy (both individual and corporate level privacy), how that works, patents, etc. are still in slow process". Whereas, external circumstances are changing very quickly, such as the increasing use of AI, "the regulatory body are slow to change and they still have a long way to go" (07).

The next section explains how competitors and the market trends affect co-creation.

5.2.5.2 Market competitions and trends

Market competition and various market trends, e.g. customers wanting to take a greater part in innovation, service orientation, and new business models, were found to have an impact on co-creation amongst interviews participants.

On how competition affects organisation-customer co-creation, O8 explained:

> It might influence their (customers) desire for our products to have what our competitors have. It may be, we may be able to justify why we haven't got that functionality and offer an alternative functionality to meet that need. Customer will talk about new things that they've seen or new suppliers. So, we need to be aware that they can gain knowledge of other systems. We mustn't be complacent.

Organisations are required to develop additional features that may be similar to their competitors', and interestingly, customers help organisations to build such features; O3 confirmed how their customers help them to understand and learn from their competitors.

In addition, O4 stated that organisations can learn from competitors' good ideas in order to be competitive:

> When we look for ideas we scan a range of market, and a range even within own market, different providers….. they have got quite nice approach! So what can we learn from theirs to make ours nice! So we look at to sort of fertilize our own creativity but that's about it in terms of doing that.

Market trends, such as new business models and new areas of business e.g. big data, were also found to be affecting co-creation as organisations want to follow these trends; this view was confirmed by O2:

> All the work around Blockchain and IOT are the two good examples of where a new technology comes into market and people want to go and try it! And, obviously we are very keen in these emerging technological areas…. to work with customers and to get real understanding.

New technology allowing new business models and new approaches to innovation, such as open innovation, could also be challenging for some organisations; according to O7:

> The biggest problem right now is not only the internal transformation, but if you look at the lot of these innovative projects, they are smaller. So we might talk to a client about doing a $2 million deal, whereas, in the past we were talking about $20-30 million. So, it is reshaping how we go to the market and how we interact with our customers, how you string one project to the next. So, our whole business model is changing and that is requiring us not only change our processes and organizations but also the people and role.

This shows that both competitors' products and emerging market trends affect value co-creation with customers. The section below describes the challenges to VCC.

5.2.6 Challenges to Value Co-creation

Analysis of the interviews with the nine executives from nine organisations suggests four particular challenges related to value co-creation:

1) Identifying the right balance of customer input
2) Managing resource limitations
3) Overcoming commercialisation of co-created products and managing complexity, and
4) Co-ordination throughout the co-creation process.

Challenge 1. The right balance of customer input

The interviews revealed a number of challenges associated with co-creation with customers. A number of respondents, including O1, experienced challenges in meeting customer needs with little input from them in co-creation; and not enough customers who knew about or had understood the problem, so there was no co-creation of value. As O1 noted:

> …because it was a bet on customer or some customers wanting something and before confirming …Ah… something was built and delivered and it did not really meet their needs. So I guess, put it like this…. there was no co-creation of the value and it was just a creation from our part.

The challenge of finding the balance between customer needs and wants was also confirmed by O2: "One of the area where there is definitely a problem is how do you work with the client to make sure what they need not necessarily what they want".

On the other hand, too much customer input in co-creation was found to be challenging, as O3 acknowledged:

> You take so many input from different people that you actually lose the guide of what you were actually trying to achieve. And at the end when we went back to the customer they were like 'seriously is this what you have created? Can we start again please?.

The challenge is that the customer will ask for the biggest ideas and provide vast requirements; this view was confirmed by O8: "So the challenges are I suppose how to manage the big ideas and bringing those big ideas into manageable ideas".

The complexity and challenge of managing too few or too many ideas from customers is also highlighted by the constrain on resources for co-creation.

Challenge 2. Limited resources

Limited time to develop products which increasingly have a short product life cycle, and the whole industry trend moving towards incremental products with the possibility of ensuring maximum value, were found to be challenging when co-creating value with customers. O5 described the challenges of the shorter product life cycle as:

> The market change has been more sort of shorter programs with more value, small incremental value but the time to value is so more important. So, you get the first phase of the project, you do trying to get something live within 6-9 weeks, and then minimum viable product and then next phase and then next phase. So, that's been real shame for us, what we have noticed is the big project makes them completely gone away and now we are at a much more incremental product project. That's been a huge challenge.

On a related note, O2 and O8 highlighted the lack of sufficient time affecting the co-creation process itself; as O8 noted:

> Yes, it can be frustrating if we don't have enough time or there are contingencies on time. Time is probably always the biggest thing …there are frustrations sometimes because there wasn't enough time to do this or that happened.

The challenge to manage limited resources can also constrain the commercialisation aspect of co-creation.

Challenge 3. Commercialisation of co-created products

How fast companies make money from their collaborative projects was found to be a key challenge to a number of companies. For instance, O6 explained why commercialisation was important for co-creation with customers:

> Obviously, the business runs in money, so if we embark on what can take years then we probably wouldn't do that… as soon as the company is investing the risk money they want return on the risk money… in short, we need to get the value out on both sides.

In addition, O3 and O6 explained that the challenge is to secure the investment and getting people on boards for collaborative projects. O6 noted the complexity and expectations of stakeholders on how fast they make money; as she explained:

> So things like, can we do this collaboration, can we do this pilot or sell this? That 1 pound you are not spending on that because you are wasting the money. It is much harder to do. And yes money for innovation in these day and age, how do you get that money and where do you spend it? And the people want to see the return, so as much as they say well we failed fast and so on…..

The other challenge related to commercialisation, a more financial one, is around customers wanting more features or systems upgrades without payment; this would not bring about a viable co-creation relationship, according to O6:

> X (Customer) just said to me, 'we will be really interested in … (features) and if it doesn't cost anything …. Well it is ok, yeah….. So, they are interested but there is not a lot of money to be put-into that. They say, yeah I want this but when we say 'ok, do you want to pay?' they say 'No!'…. so we have got to fund it, repair for it and do it but …

As these participants suggested, how do they turn what they are doing into money remains a key challenge.

Challenge 4. Complexity and co-ordination

Co-creation may involve many stakeholders and a large number of customers and communities, which makes co-creation a complex process to manage; thus, co-ordination between various stakeholders was found to be challenging for companies, including O6:

> Although we have got one thing sitting here, there are 150 interfaces coming in so you have to coordinate across that whole community to migrate and move everybody so it becomes very complex and I think you get to the point where there are lots of laggards from our customer side of things.

Co-creation requires a change: change in people's perceptions and change in the organisational process. It opens up internal processes, but because people are normally risk averse and resist change, co-creation is complex to manage, as confirmed by O7:

> People are not… you know the people are typically risk averse and people make of corporations, so you don't have a lot of organization running towards change. You typically have organisation running away from change.

The next section presents discussions and implications of the findings.

5.3 Discussion and Implications of Findings

This section presents a discussion and implications of study one, the context of organisation and customer value co-creation practices. Figure 5.1 summarises the findings from earlier sections. Discussion and implications of the findings are presented under several headings: forms of co-creation, the Customer-Organisation-Technology-Environment related factors and challenges to co-creating value. The following section discusses in detail.

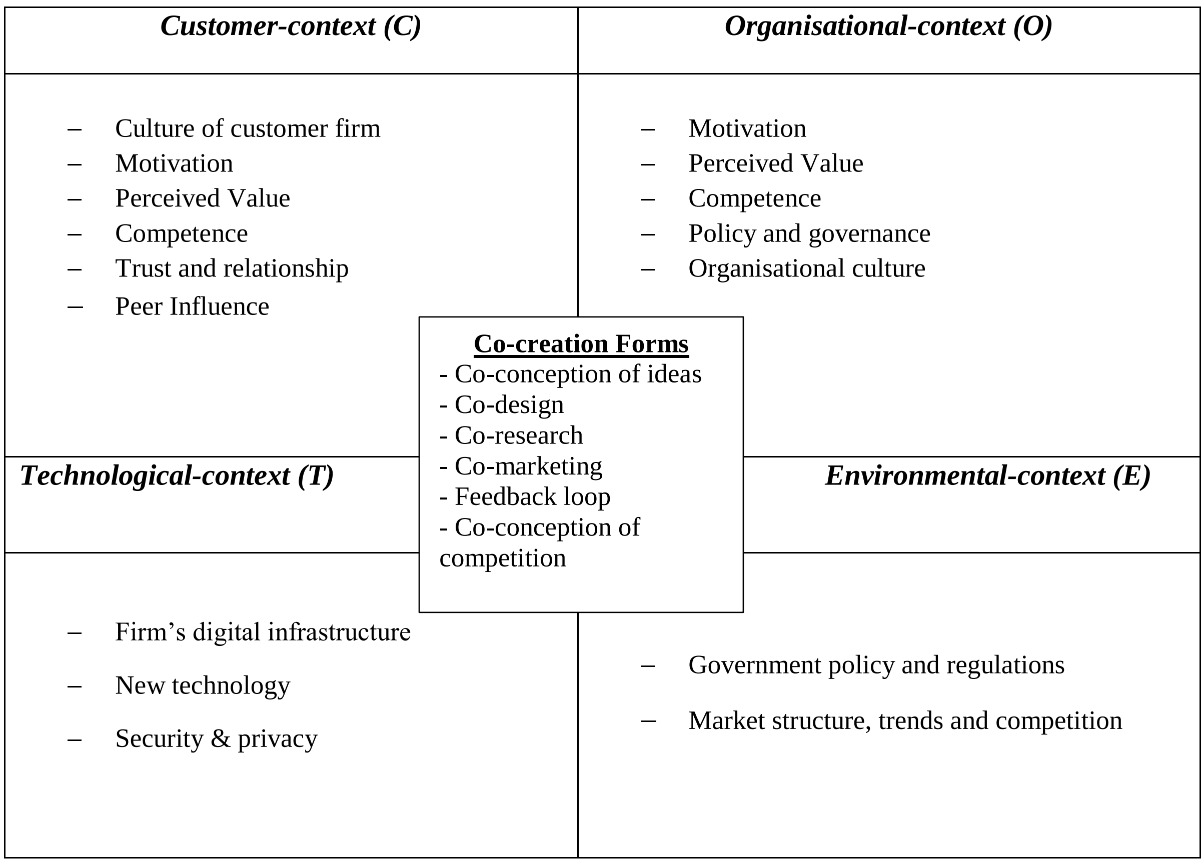

Figure 5.1 COTE: Framework of factors affecting value co-creation in O&C

5.3.1 Forms of Co-creation

The findings reported that most of the organisations participated in *feedback loops*, as a one of the dominant forms of co-creation. This empirically supports the conceptualisation of Gronroos (2012), who included customers' feedback as one of the co-creation activities and argued that by enabling customers to provide feedback through various direct and indirect methods, e.g. survey, the service provider receives valuable input for the firm's development processes. This was further supported by O3, who use customer feedbacks to improve their prototype; O4 for problem identification; and O5 for introducing new features and product innovation.

The results also confirmed the existence of various forms of co-creation in practice (cf. Frow et al., 2015) discussed in Chapter 4. Respondents asserted the use of various forms of co-creation in organisations; including O2, for example, was found to be practising *co-conception of ideas, co-design, co-research, and co-marketing.* This confirms the suggestions of Frow et al. (2011: 2015) that, one form of co-creation may exist alongside others.

The results further revealed a new form of co-creation, *co-conception of competition*, defined as *customers helping organisations to beat their competitors in two ways:*

1. Pursuing/forcing service providers to add new features, functionality or service to their products, so that they will match or outperform the competition (confirmed by O8).
2. Helping service provider directly to understand how the competitors' product/systems works, and consequently suggesting the service provider's on next step (confirmed by O3).

The study therefore proposes *co-conception of competition* as a new form of co-creation, fulfilling the prediction of Frow et al. (2011: 2015) that in the future, new forms of co-creation may emerge.

The following sections discusses the customer context of co-creation.

5.3.2 Customer Context of Co-creation

The results revealed six customer-related factors affecting value co-creation: *the culture of the customer firm, customers' motivation, how they perceive value in co-creation, their competences, their trust and relationship with the organisation, and peer influence*. The implication of each factors is discussed in detail below.

5.3.2.1 Culture of customer firm

The culture of the customer firm was found to be one of the factors related to customers that affect co-creation with the organisation. This was not part of the conceptual framework described in Chapter 4, but emerged from the results (O3, O4, O5, O6, O7) in that the customer's way of thinking, their mind-set on opening up their organisation to other, their innovation approach and interaction with organisation were found to affect co-creation.

The dominant literature on VCC explains the significance of organisational culture, such as the importance of learning, openness and leadership vision to co-create value (Desai, 2010; Ind et al., 2013). Like the service provider's organisational culture, the culture of client firm is all about "how they do things" and such established cultures can become impediments to survival when there are substantial environmental changes (Watkins, 2013). As value co-creation requires openness and learning new things (Vargo and Lusch, 2008), the established culture of the customer firm equally impedes or enables value co-creation with their service provider, as found in the participating organisations.

The findings support the argument of Patterson et al. (2006) that customers' participations is a social exchanges; therefore, the norms, roles, and expectations of both customer and organisation should be influenced by each party's cultural background. This implies that matching customers and organisations with similar cultural value orientations could facilitate the creation of value (Chan et al., 2010). The extent of success of value co-creation therefore, may depend on how customer firms do things, such as, information seeking and sharing, providing feedback, involvement in interactions and advocacy (Yi and Gong, 2013).

This finding is also in line with the study of Oesterle et al. (2016) who highlighted the significance of the quality of collaboration between two parties: how well both parties organisation and customer, work jointly and coordinate together. Such collaboration supports value co-creation.

The findings support aspects of prior research, but also provide some new insights by exploring the role of culture of the customer firm in value co-creation (e.g. O6), and revealing how this factor enables value co-creation (as in O7) and determines its success (as in O3) in the context of B2B interactions. This suggest that the customer firm's culture lays the foundation for other factors to flourish: interaction, exchanging resources, building, learning, and succeeding. The next section discusses the customer's motivation for co-creating value with the organisation.

5.3.2.2 Customer motivation to co-create value

The finding from this study that *customer needs or desires are the main source prompting co-creation* supports previous studies (e.g. Fuller, 2010; Stucky et al., 2011; Bharti et al., 2014; Roberts et al., 2014; Neghina et al., 2015; Heidenreich et al., 2015). Customer need or desire is described as an *opportunity and goal related motive* (i.e. non-altruistic) (Roberts et al., 2014). In the domain of an online gaming community in a B2C context, "innovating directly in collaboration with the firm appears to be driven by opportunity or goal related motives" (Roberts et al., 2014: 147).

The current study with its focus on the nine B2B-oriented organisations had a similar experience over *their business customer motivation,* confirming the study of Roberts et al. (2014) application in the B2B contexts, i.e. *co-creating value with organisations was found to be driven by opportunity or goal-related motives of customers in a B2B context.*

The *altruistic motive*, such as helping others (Roberts et al., 2014), or *value for other customers* (Witell et al., 2011) was confirmed by only O3. O3, who indicated that only a handful of customers who shows such motivations. Although customers' altruism has been widely studied in the context of B2C and open source software and was found to play a key role in VCC (e.g. Zwass, 2010), this study concludes that it is very rare in the B2B context.

5.3.2.3 Perceived value by customer

Customers' perceptions of value from co-created products and services are mainly driven by the *benefits* they will receive. This indicates that customers in the B2B domain are mainly driven by the *benefit-sacrifice approach* of customer value, confirming previous studies (e.g. Zeithaml, 1988; Klanac, 2013).

The results also indicated a *means-end approach* (Woodruff, 1997), such as prioritising product features (as in O8) and an *experiential approach* (Holbrook, 1999; Holbrook, 2006; Helkkula and Kelleher, 2010), which highlights experience (as in O9) in the B2B context. However, the participants confirmed the dominance of the benefit-sacrifice approach.

O8 and O9 identified product features and end-customers' experience as very important, but money only to a certain point. This finding suggests that both financial and non-monetary benefits such as quality or even experiential value are perceived by customers in the B2B context, confirming the argument of Saarijarvi et al. (2013: 12)- "co-creation can include either monetary rewards or more subjective and intrinsic benefits".

5.3.2.4 Customer competence

SDL FP4 highlights the importance of competence for strategic benefits. The literature indicates that to achieve this strategic benefit, organisations need to utilize all the information, knowledge, skills and other operant resources that they can obtain from their customers (Normann and Ramirez, 1993; Payne et al., 2008).

The findings support this, in that organisations expect customers' competence in terms of *describing their problems, opportunity recognition in the market and their domain*. Even if customer lacks such competence, their intention to learn is really important. This finding agrees with Desai (2010), that customers' competence is seriously valued when co-creating from scratch.

This study extends the understanding of what competences are expected from customers in co-creation, but that customers have limitations in this respect; therefore, VCC requires other organisations to find such resources.

5.3.2.5 Trust and relationships

The findings from this study suggest that trust and relationships with customers can lead to successful co-creation of value, supporting previous studies (e.g. Westergren, 2011; Chaoi and Burnes, 2013; Neghina et al., 2015; Petri and Jacob, 2016) that co-creation of value is enclosed within the development of trust and inter-organisational relationships. This study concludes that building trust and relationships with customers may take longer for the companies that are fairly new to the market (O1 and O9), than for well established companies (O4) which can take advantage of the existing strong trust of their customers.

5.3.2.6 Peer influence

The findings found that customer recommendations to other customers to use the product/service play a key role in VCC. The results support the previous studies (e.g. Zwass, 2010; Goh et al., 2013; Jaakkola and Alexander, 2014) which found that customers sharing service experiences through various modes, e.g. word-of-mouth can generate wider interest in co-creation.

This study extends and brings together the reasons and conditions where customers show peer influencing behaviours. Organisations with good history of customer relationships are recommended, and such recommendations play a key role in developing product ecosystems. The wider an organisation's customer base, and the more interactions between them, the stronger are the product ecosystems. This indicates customer *goal-oriented motivation:* customers want to recommend products because the ecosystem becomes stronger.

This study also extends understanding of peer influencing behaviour affecting co-creation: when employees move to another organisation, they also influence their new workplace to use the new service (O2). Customers' recommendation also depend on their nature of the business i.e. public sector customers make recommendations (O9) than the financial sector customers (O2, O7).

The next section discusses the organisational context of co-creation.

5.3.3 Organisational Context of Value Co-creation

The results revealed five organisation-related factors affecting value co-creation: the organisation's motivation, their perception of value, their competences, organisational policy and regulation on co-creation, and their culture. Each of these is presented in detail below.

5.3.3.1 Organisational motivation to co-creation

The results revealed the following motivation of organisations to co-create value with customers:

- To create competitive products
- To reduce product failure
- To access to customer resources
- To create customer commitment
- To enhance customer experience
- Co-creation as an emergent strategy and
- To decrease innovation cost.

These various motivations are consistent with the holistic categorisation of Frow et al. (2015). This study, however, brings together extends the understanding that an organisation's lack of such motivation and commitment to co-creation projects can lead to the risk of losing co-creators (as found in O4); the finding also supports the work of Chen et al. (2012).

Findings such as access to customers' resources (as in O2, O3) also confirm that value co-creation is a *resource integration* process (Vargo and Lusch, 2004: 2008); the organisation's seeking to access customer resources is also justified by the fact that the customer's operant resources contribute to the success of value co-creation (Saarijarvi et al., 2013) by reducing product failure and creating more competitive offerings (as in O1 - O6).

5.3.3.2 Perceived value by organisation

The findings reported *monetary benefits* as the primary expectation of value co-creation, and this position is consistent with the insights of Prahalad and Ramaswamy (2004: 11): "Companies and customers are competitors for the extraction of economic value" in co-creation.

In addition, organisations perceive product success as a result of co-creation with customers (as in O2). This finding is similar to that of Fuller (2010); however, this study contributes to the understanding of such expectations from the organisation's perspective in the B2B context, as opposed to Fuller's work in B2C from the consumer perspective.

This study's findings also revealed *referrals* (e.g. O1) and *learning* (e.g. O3) as outcomes of co-creation, supporting the findings of previous studies (e.g. Payne et al., 2008; Hoyer et al., 2010). However, this study findings also bring together the understanding of perceived value in the context of the information-intensive the B2B domain.

5.3.3.3 Organisational Competences

The finding from this study: organisational skills, domain-specific knowledge and experiences, as crucial to delivering value to customers, support previous studies (e.g. Smaliukiene et al., 2015; Skalen et al., 2015). The findings show that service provider's existence depends on the advantage of their competence over customers, and this position is consistent with the insights of Moller et al. (2008: 37): "The provider lacks the competences or willingness to develop the competences needed to meet the client's service requests, the client may seek new partners".

The organisation's strategic advantage of skills and experience over customer (as in O5) also supports SDL FP4 that their operant resources can serve to achieve strategic benefits (Vargo and Lusch, 2016).

The results also complement the work of Smaliukiene et al. (2015) who demonstrated how organisational competences shapes the value co-creating experiences in the travel industry. This study, however, emphasises the role of such competencies in the B2B context.

The findings bring together this research with that of others in establishing the significance of organisational competence for value co-creation by extending the understanding that the organisation's competence tends to complement customer trust (as in O4) and is key to beating the competition and convincing customers to join their service systems (as in O9).

5.3.3.4 Organisational Policy and Governance

The results show that organisations are well aware of the importance of the rules of engagement for value co-creation; such rules consist of the control over processes and methodologies, privacy, compliance, non-disclosure agreements (NDA), confidentiality and the provision of intellectual property rights (IPRs).

The finding that "when entering to co-creation agreement that triggers contract and all sort of IP requires transparency between organisation and its customers" supports the ideas of DART conceptualisation, where transparency is key to VCC (Prahalad and Ramaswamy, 2004).

The results further revealed that confidentiality and privacy between organisations and customers is absolutely paramount in VCC, and developing control mechanisms for protecting such provision supports previous studies by Desai (2010) and Yngfalk (2013), who argue that control mechanisms is an important element within co-creation.

It is also reported that the sensitiveness of co-creation projects is also dependent on the nature of customers' business: some government agencies, the banking sector or other customers are reluctant to publishing collaborative work. This kind of co-creation task may require a whole set of new policies to tackle various issues of confidentiality, IPR and knowledge sharing. This view to some extent supports the argument of Lusch and Nambisan (2015), that co-creation can be supported by establishing new organisational mechanisms.

The results reveal that some of the methodologies, e.g. agile and design thinking, are consistent with the theory of value co-creation (e.g. Vargo and Lusch, 2008: 2016), which allow organisations to demystify the process and make it more tangible. However, it was also found that too many methodologies and processes are bad for co-creation and innovation, this view supporting Desai (2010) who argued that imposing administrative control on the co-creation process can affect customers' freedom and autonomy, which does not foster learning co-creation.

5.3.3.5 Organisational culture

The results revealed several organisation-related cultural factors, such as, *extensive customer support built over time, learning from customers, internal (within organisation) provision to facilitate knowledge sharing, and the risk-taking propensity of innovation*, which support value co-creation.

The findings show organisations have developed a strong culture of customer support, which together with solving their problems has become the norms. This result confirms the ideas that leaders and managers need to see themselves as part of the *cultural fabric:* there to contribute, create, support, and learn (Ind et al., 2013).

It was found that feedback and knowledge received from customers is also facilitated through a knowledge-sharing and learning culture within the organisation; such learning behaviours according to Prahalad and Ramawamy (2004) is fundamental to co-creation, which requires changing managerial practices. However, results also revealed that too much dependence on customers' contribution and the lack of organisational motivation to innovate internally is risky for the long-term survival of the firm. This findings link back to their motivation to co-create; why and what they expect from their customers, and how they shape their culture of innovation.

The findings support aspects of prior research, but also provide some new insights by exploring organisations' approach to becoming *co-creation cultural fabric* with the development of intensive customers support, and also revealing the impact of too much dependence on customers for the long term firm survival.

The next section presents technology-related factors of co-creation.

5.3.4 Technology Context of Co-creation

The technology context of co-creation, such as the *firm's digital infrastructure, new technology available in the market and provision for security and privacy* were found to play a significant role in enabling value co-creation between organisations and customers.

The findings revealed that a firm's digital infrastructure supports frequent interaction with customers, customers support functions, product prototyping, back-office operations and business model innovation. This enables organisations to involve their customers in different forms of co-creation, e.g. product planning, development, and marketing activities (Rishika et al., 2013). This finding supports the research of Westergren (2011) and Frow et al. (2015) who argued that a firm's digital infrastructure supports interactions between organisations and customers.

New technology or technological advances e.g. big data analytics, were found to be advantageous for organisations as they help shape customers' expectations and allows new business models (as in O1, O4, and O5). This finding is consistent with the view of Payne et al. (2008), Ostorm et al. (2015) and Breidbach and Maglio (2016) that technological breakthroughs create opportunity for co-creation.

The results also revealed two particular challenges with regards to the use of digital infrastructure and the adoption of new technology: the non-substitutable nature of the *human-touch* and the *issue of privacy and security*.

Human creativity and the personal touch in supporting customers can never be replaced by new technology (O5). This view empirically supports the argument of Ostorm et al. (2015), who noted that technology cannot be substitute for human creativity as the source of new ideas for services and their delivery; the non-substitutable personal touch avoids the commoditisation of services. This further explains that the lack of such organisational creativity and human touch with the introduction of technology can lead to co-creation failure (as in O6).

The provision of securing information and clarifying the issue of privacy between organisation and customers was found to play a vital role in developing customers' confidence and trust (as in O3); the results support the study of Morosan (2015), who claimed that robust security perceived by customers can lead to develop customers' confidence and trust in the B2C context of hospitality sector. This study, however, highlights the implications of this provision in the B2B context.

In addition, the study revealed that organisations use several compliances such as ISO (e.g. ISO27001) and certification from the government agencies, e.g. GCHQ, to secure their digital infrastructure (as in O3, O5, O8 and O9). This additional layers of security and certifications on the one hand develops customers' confidence, but on the other contributes to increasing the cost of co-created products. The latter is challenging for the organisation because customers may not readily pay such additional cost (O5_M).

The findings from technology context of co-creation support aspects of previous research, but also offer some new insights into current practices; a firm's digital infrastructure and new technology encourage innovate business models and create new opportunities, as well as challenges to co-creating value with customers.

The next section presents business environment-related factors affecting value co-creation.

5.3.5 Environment Context of Co-creation

The results show business environment-related factors, *government policies, regulations, competition and market trends*, were found to be affecting value co-creation.

Government policy and regulations were found to intervene in or encourage interaction between organisations and their customers; this result supports earlier studies (cf. Lemey and Poels, 2011; Yngfalk, 2013; Laamanen and Skalen, 2015).

The results further highlighted the pace of organisational change using the latest developments (e.g. the use of Artificial Intelligence) as monumental; this pace, however, is not supported by the regulators (government agencies) at the same speed. The mind-set and the practices of regulators still concentrate on the manufacturing sector, and are not fully aligned with the service economy (as in O7).

This issue links back to GD logic concepts (discussed in Chapter 2) (Vargo and Lusch, 2008: 2011; Vargo et al., 2010) that *service* is still considered as a *transaction* not *relationship and collaboration*; *value is added, not co-created* (as in GD logic). The mind-set of regulators was found to affect new information-intensive industries in particular, e.g. big data (e.g. O1) as they require new rules around data, patents and the new processes; regulators, however, are slow to develop rules of engagement for new industry.

The findings support aspects of prior research in explaining the existence of GD logic (cf. Vargo and Lusch, 2008; Vargo et al., 2010), but also offer some new insights into current practice: of how regulation affects the overall business operations of new companies, thereby impacting co-creation with customers.

The results indicated that some of the market trends, such as new business models and new areas of business such as big data, IOT, and AI have emerged as opportunities for organisations to co-create value with customers. Organisations were found to be interested in trying out new trends to develop capability around new areas of business, which require new sets of interaction with customers. This supports the earlier argument that new trends provide opportunities for co-creation (e.g. Vargo et al., 2008; Grover and Kohli, 2012)

The results also show that competition between organisations pushes organisations to learn more and to develop additional features for their products that may be similar to those of their competitors. While these findings seem to be obvious in the co-creation literature (e.g. Hoyer et al., 2010; Edvardsson et al., 2011; Grover and Kohli, 2012; Hakanen and Jaakkola, 2012; Paasi et al., 2014), the results further confirmed that customers help organisations to build such features (as in O3). This extends the understanding that new market trends and new technical capability open up new avenues for organisations and customers to develop a new form of co-creation called *co-conception of competition.*

5.3.6 Challenges to Co-creation of Value with Customers

The value co-creation literature suggests several co-creation-related challenges for organisations (e.g. Hoyer et al., 2010; Verhoef et al., 2013; Paasi et al., 2014). The findings of this study revealed that too little input or too many ideas from customers can both lead to co-creation failure. This challenge was highlighted in previous researches (cf. Aarikka-Stenroos and Jaakkola, 2012; Verhoef et al., 2013 and Paasi et al., 2014).

This study, however, emphasises that in finding the right balance for customers contribution to co-creation, it is the organisation’s competence, their knowledge and experience that play a key role in overcoming these challenges, as confirmed by O3 and O4; this finding supports SDL FP4. “Operant resources are the fundamental source of strategic benefit” (Vargo and Lusch, 2016: 8).

The results show that organisations perceive a challenge in limited resources to co-creation and commercialisation of co-created products, as was highlighted in the literature (e.g. Rayna and Striukova, 2014; Durugbo and Pawar, 2014). For example, Rayna and Striukova (2014) conceptualised that it is unlikely that customers perceiving additional value they derive from the service provider’s efforts would lead to a willingness to pay an amount high enough to cover the higher level of costs. Further, they identified several co-creation-related costs e.g. search costs, coordination costs, negotiation costs, etc. (Rayna and Striukova, 2014). The findings from O6: *customer wanting more features without paying much financially*, and O2 and O3: *how do they turn what they are doing into money*, empirically support Rayna and Striukova’s (2014) claim, explaining and extending the understanding of the context.

The challenge of managing many stakeholders, including a large number of customers, and co-ordinating them, makes co-creation process complex, as highlighted in the work of Ramaswamy and Gouillart (2010), Durugbo and Pawar (2014), Paasi et al. (2014) and Wong et al. (2016). The findings (as in O6 and O7) empirically bring together the statement of Ramaswamy and Gouillart (2010: 89), that "co-creation requires collaborative and communicative co-ordination" and extend the work of Paasi et al. (2014) and Wong et al. (2016) on understanding how co-creation becomes challenging and leads to failure if not managed properly.

The following section presents the implications of the COTE framework.

5.3.7 Implications of Customer-Organisation-Technology-Environment Framework for Existing Research

Chapter 4 presented the rationale for a new framework to assess the factors affecting value co-creation between an organisation and its customers. After reviewing existing VCC frameworks such as DART and examining several IS frameworks such as TAM and TOE, the study proposed the COTE framework by extending Tornatzky and Fleischer's (1990) TOE framework.

The COTE framework encompasses earlier suggestions, e.g. Payne et al. (2008), but also includes a *customer-related* context; one of the main foundations of service science and service-dominant logic is that customers are co-creators of value (cf. Vargo and Lusch, 2008: 2016). The *customer context* also serves the call of customer-dominant logic: the need for more holistic understanding of the customer's life, activities and practices, in which service is logically rooted (Heinonen et al., 2010; Heinonen and Strandvik, 2015).

The findings from the nine organisational practitioners of VCC revealed that the COTE framework can serve the aim of capturing the holistic nature of various factors affecting value co-creation. The framework also provides the freedom to vary the factors or measures for each new research context. For example, the findings from O1 to O9 suggest that each of the organisations has both similar and different motivations to co-create value, and the use of COTE holistically outlined such motivations of both organisations and business customers. The ability of the COTE framework to assess holistically the effect of four different factors and sub-factors in the value co-creation process makes it highly adaptable.

The COTE framework also incorporates some aspects of earlier value co-creation frameworks. For example, Prahalad and Ramaswamy's (2004) DART *i.e. Dialogue, Access, Risk benefits and Transparency* is a foundation of value co-creation. The COTE includes risk-benefits aspects as well as the provision of access and transparency through its assessment of *organisational policy and governance* within the organisational context.

Some value co-creation factors identified within the COTE framework are in line with Payne et al.'s (2008) *process-based frameworks of value co-creation.* For example, core competence of both the organisation and its customers, and factors external to the organisation such as technological breakthrough/innovation, are included within the COTE framework and reveal the importance of these factors empirically. The COTE framework also outlines factors included in Zwass's (2010) *taxonomic framework*, such as motivation of both the organisation and its customers, process governance, and co-created value, all of which play a key role in value co-creation.

In addition, the COTE framework highlights some of the factors included in Hoyer et al.'s (2010) *framework of consumer co-creation,* such as consumer financial motivation and firm-related outcomes of co-creation. COTE also captured aspects of Frow et al.'s (2015) *co-creation design framework*, including various organisation-related co-creation motives affecting value co-creation. The most important finding in terms of Frow et al.'s (2015) framework was identifying a new form of co-creation: co-conception of competition.

In relation to the definition of value co-creation, the results show that *VCC as an active, creative and social interaction process based on the need or desire of customer and organisation* is enabled or inhibited by the customer context (C) and the organisational context (O). Not understanding customer's needs or their desires, for example, can lead to failure of co-creation in the *customer context* (as in O4).

Similarly, the efforts of customer and organisation *to integrate their resources to support the various VCC activities such as idea generation, knowledge sharing, product development and solution implementation* are affected by technological (T) and environmental (E) contexts. For example, digital platforms support frequent interaction, product prototyping and business model innovation and create opportunities for co-creation (as in O1). Thus, the results confirm that factors related to COTE are key to value co-creation's success or failure, appealing to the framework of factors affecting value co-creation.

In terms of value-in-context, which emphasises the co-creation of value at varying levels of micro, meso, and macro (Chandler and Vargo, 2011), the COTE framework represents factors from all three levels, as portrayed in Table 5.6. As Chandler and Vargo (2011) discussed, the micro-level context of co-creation is revealed through direct service for service exchange, identified in COTE as customer or organisation-related factors such as their motivation to engage in co-creation with the organisation. However the customer's behaviour is influenced by several factors as discussed in section 5.2.2, therefore revealed through indirect and direct interaction with the organisation and its competitors and representing meso-level co-creation. Other factors such as culture consists of many societal norms and other components embedded in organisational practice representing a more macro-level co-creation context.

Table 5.6 Context of COTE factors

Context	VCC Factor
Micro-context level	Customer and organisation's motivation, perceived value, competence, policy and governance, organisation's digital infrastructure, security and privacy
Meso-context level	Customer's influencing behaviour within industry, trust and relationship between customer-organisation
Macro-context level	Culture, new technology, government policy and regulation, market structure, trends and competition

Although the COTE framework is highly adaptable in the various contexts of co-creation and has identified various micro-meso-macro levels of VCC factors, it only captures and focuses on *customer- and organisation*-related resources, activities and contexts, limited a it is to these two major stakeholders. COTE does not include a multi-actor/ecosystem context, although some of the co-creation activities include suppliers and other partners together to co-create value. Some factors identified within COTE, e.g. organisation's motivation or competence, could apply to a partner or supplier organisation in a multi-actor context, but this is already evident in the VCC studies of nine organisational practices described above. Therefore, a second study was conducted to explore what other micro factors affect the multi-actor context, this is the focus of Chapters 6 and 7.

5.4 Summary of Chapter 5

Chapter 5 presented and discussed the results of O&C context. The study findings identified various *forms of co-creation* in practice, *COTE-related factors* and *challenges to VCC*. By presenting the findings of the interviews analysis, the study also answered RQ1a and RQ1b:

> RQ1a-What factors affect customer participation in value co-creation?
>
> RQ1b-What factors affecting organisational participation in value co-creation?

The aim of Chapter 5 was to uncover COTE-related factors empirically. The findings from interviews analysis explored how the each component of COTE affects co-creation between organisations and their business customers in practice.

To this end, this chapter presents one of the contributions of the research project by uncovering COTE factors empirically. Analysis of findings were considered to confirm the relevance of the COTE framework in their ability to effectively capture various factors relevant to co-creation practices between organisations and their business customers. The empirical findings also confirmed the customer (C) context of co-creation, which extends the work of Tornatzky and Fleisher's (1990) *TOE framework* by applying it the new context of value co-creation.

The next section of the thesis: Chapter 6 presents the context of organisations and partners (O&P) VCC, proposing a conceptual framework of an alliance VCC context.

Chapter 6 A Framework of Factors Affecting Value Co-creation between an Organisation and its Business Partners

6.1 Introduction

While the overall aim of the research is to explore factors affecting value co-creation, this chapter reviews factors affecting VCC between an organisation and its B2B partners. It proposes a conceptual framework comprising factors that have positive and negative effects on VCC, in response to Research Questions 2:

> RQ2- What factors affect the underlying co-creation mechanism of an organisation and its partners?

The chapter is structured as follows:

> Section 6.2 reviews the VCC literature on B2B partnerships
>
> Section 6.3 proposes the conceptual framework of factors affecting value co-creation
>
> Section 6.4 summarises the chapter.

6.2 Key Findings from the Literature Survey for an Organisation and Partners

Value co-creation has gained attention since the publication of Prahalad and Ramaswamy's (2000) paper in the *Harvard Business Review*. This and other influential papers, presented in Table 6.1, have explored the VCC alliance between an organisation and its partner. Alliance is defined as a union or association formed for mutual benefit between organisations (Oxford Dictionaries, 2018). This study has utilised the practice of VCC in alliance to explore VCC between an organisation and partners. The review suggests the practice of VCC in alliance has also started to gain scholars' attention, and Table 6.1 summarise a selection of these works.

Sarker et al. (2012) and Laamanen and Skalen (2015) provide comprehensive insights into the nature, mechanism, and process of the value co-creation in alliance. Sarker and colleagues concluded that partners add value to the enterprise resource planning (ERP) system through three different mechanisms: synergistic integration, additive and exchange mechanism. Value co-creation is enabled by the *governance mechanism* and *technology-related collective strengths*, and inhibited by the *exercise of power and politics* in the alliance context. Laamanen and Skalen (2015) examined a collective-conflictual perspective on value co-creation, showing that VCC outcomes can also be negative and conflictual practices.

Ceccagnoli et al. (2012) provides evidence that if independent software vendors (ISVs) join a large firm's ecosystems, they get benefited from increased sales and the likelihood of initial public offerings (IPOs). More recently, Reypens et al. (2016) revealed that alliance partners also expect innovation outcomes (i.e. improved internal processes), knowledge outcomes (e.g. in-house knowledge development) and relational outcomes (i.e. an improved network position) through co-ordination, consultation and compromise.

Like Sarker et al. (2012), Grover and Kohli (2012) and Han et al. (2012) stress the importance of *governance mechanisms,* which help effective management of the alliance relationship in multi-actor VCC. Marcos-Cuevas et al. (2016) suggest that organisations in business markets employ VCC in the form of co-ideation, co-valuation, co-diagnosing, co-testing, co-design, co-launching, and embedding. The earlier work of Frow et al. (2015), discussed in the O&C contexts, outlines twelve of such forms, which vary according to organisational activities such as idea generation, knowledge sharing, product development and solution development.

Table 6.1 Summary of the key literature in VCC in multi-actor context

Scholar	Topic/Research Methods/Context of research	Key findings
Sarker et al., 2012	The study focuses on value co-creation within B2B contexts. Interpretive case study of ERP vendor and its partners.	– Three different mechanisms underlying value co-creation within B2B alliance i.e. synergistic integration (i.e. add-on software), additive (i.e. consulting service) and exchange mechanisms (i.e. development resources) – These mechanisms are affected by three contingency factors i.e. governance mechanism (i.e.. contractual agreement), technology-related collective strength (i.e. compatibility) and power/politics enabling conditions (i.e. conflicting interests)
Ceccagnoli et al., 2012	The study investigates the partnership between an enterprise software platform owner and small independent software vendors (ISVs) that develop complementary applications that are integrated with the owner's platform Quantitative study of enterprise software of a sample of 1210 small ISVs	– Joining a major platform owner's ecosystem is related to an increase in sales and a greater probability of issuing and initial public offering. – The benefits are greater when ISVs have greater intellectual property rights and stronger downstream capabilities, i.e. unique knowledge
Grover and Kohli, 2012	The study examines how IT value originates in multi-firm environments Conceptual paper on IT value co-creation	They offer Cocreating IT value though four layers of relational arrangement between firms: – *Asset layer:* involves two or more firms, at least one of which contributes specialised IT hardware/software or network facilities that create new value – *Complementary capability layer*: this focuses on finding and exploiting complementary resources/capabilities among the partners such that together they are a source of value – *Knowledge sharing layer:* it involves the sharing of information and expertise that lead to the creation of new products and services – *Governance layer*: it provides effective management of the relationship by setting up a control structure that reduces transaction costs and incentivises new value co-creation. This is typically done through contracts and formal economic safeguards.
Han et al., 2012	This paper examines firms participating in open innovation alliances which are involved in co-creating IT-based value Quantitative/ companies participating in open innovation alliances	The study found that governance structures which facilitates openness, self-regulations and self-monitoring and knowledge sharing are crucial for co-creating value.
Laamanen and Skalen, 2015	This paper proposes the collective–conflictual perspective on value co-creation.	Their framework enables empirical research in value co-creation that accounts for multiple actors nested in fields of collective action.

	Literature review	
Reypens et al., 2016	The study investigates why stakeholders participate in innovation networks and how value is created in innovation networks with multiple stakeholders. Qualitative Grounded theory/multiple stakeholders interactions in health care industry	They offer three processes of value co-creation: – Co-ordination – Consultation and – Compromise Their study also outlines three value outcomes of the co-creation process; innovation outcomes, knowledge outcomes and relational outcomes
Marcos-Cuevas et al., 2016	The study investigates the practices and capabilities that organisations in business markets employ to co-create value Case study that explores co-creation practices from four organisation; Rolls-Royce, SAP, Bekaert and Unilever	The study identifies six strategic interaction capabilities: *individual*, *relational*, *ethical*, *empowered*, *developmental* and *concerted* that enable an organisation to co-create value. The study found organisations in business markets adopt three dimensions of VCC practices as: – Materialising practices – Institutionalising practices and – Linking practices. Further, they divide these dimensions into six practices: co-ideation, co-valuation, co-diagnosing, co-testing, co-design, co-launching, and embedding
Prior and Marcos-Cuevas, 2016	This study investigates the practice of value creation in service ecosystem Qualitative case study / aerospace industry	– For any given action, there is a need to balance possible benefits against opportunity costs, which means, for any set of interactions, there is always scope for the coexistence of both value co-creation and value co-destruction – Actor goals are not always consistent, which means each actor has different priorities from the service experience. This heterogeneity leads to value co-creation only when goals are complementary
Chowdhury et al., 2016	The study explores the dark side of VCC in B2B service network. Qualitative Multiple case study/Advertising service network	– The presence of actors' role conflicts, role ambiguity, opportunistic behaviours and power plays indicate that there is indeed a dark side to VCC that is currently omitted from existing VCC frameworks

However, do B2B alliance actors' interactions always co-create value? Laamanen and Skalen (2015), Prior and Marcos-Cuevas (2016) and Chowdhury et al. (2016) have the answer. Prior and Marcos-Cuevas (2016) suggest that there is not always value co-creation in a service ecosystem. For any set of interactions between actors, there is always scope for the co-occurrence of both value co-creation and value co-destruction. They further argue that value is only co-creation when the goals of the actors are complementary. Chowdhury et al.'s (2016) conclude that the presence of actors' role conflicts, role ambiguity, opportunistic behaviours and power plays indicate that there is indeed a dark side to VCC. It is thus important to include such factors in this study. Therefore, based on these earlier studies this study proposes the following conceptual framework of factors affecting value co-creation between an organisation and its business partners.

6.3 Conceptual Framework of Factors Affecting Value Co-creation between an Organisation and its Business Partners

Each of the study reviewed above add new dimensions and outlines new factors to the value co-creation process, including:

- Sarker et al. (2012) focus on value co-creation between a business-to-business ERP vendor and its partners. The alliance is both enabled and inhibited by three contingency factors: *governance mechanism, technology-related collective strength*, and *power and politics.*
- Laamanen and Skalen (2015) proposes a *framework for collective- conflictual value co-creation* which points to unequal power relations between actors and conflicts of interests between them, which can lead to *negative outcomes in value co-creation* i.e. value co-destructions.
- Chowdhury et al. (2016) explores the dark side of value co-creation within B2B advertising service networks. The presence of actors' *opportunistic behaviours* and *power plays* indicates that there is indeed a dark side to value co-creation

These factors are described below.

6.3.1 Alliance governance mechanism

This section explains how the governance mechanism affects value co-creation and its outcomes, as explained by Sarker et al. (2012) and Leclercq et al. (2016). The dominant literature on alliance governance appeared in the late 1990s: Harrigan (1988), Gulati (1998), Gulati and Singh (1998), Das and Teng (2000), Colombo et al. (2006) and Dacin et al. (2007). Other studies developed the governance concept in other business networks or ecosystems governance, e.g. Gulati et al. (2012), Capaldo (2014), and Kolbjornsrud (2017).

The formal contractual structures used to organise the alliance is called the *governance structure* (Gulati, 1998), a mechanism to manage uncertainty in alliance (Dacin et al., 2007). Governance structures may be *equity* or *non-equity (contractual) based* (Harrigan, 1988; Gulati, 1998; Dacin et. al., 2007). Partners in equity-based alliances are tightly coupled with the formal structures and may involve joint ownership, e.g. joint ventures and minority equity positions. Equity alliances are complex to administer and control and may take longer to establish or dissolve (Harrigan 1988; Dacin et al., 2007).

Non-equity alliance, the focus of this study, are forms of organisation (Dacin et al., 2007), e.g. joint R&D, long-term sourcing agreements and reciprocal distribution. This type involves less structure, fewer hierarchical elements, less replication of organisational control and coordination and less joint ownership than equity alliances (Pisano, 1989; Gulati, 1995). Non-equity alliances are less demanding, have greater flexibility for the partnering firms and easier termination of the relationship; they altogether pose fewer risks to the partnering firms (Dacin et al., 2007), and tend to be *loosely coupled,* i.e. actors are connected to others via soft and hard contracts (Vargo and Lusch, 2011: 185).

Loosely coupled organisation, a concept pioneered under business ecosystems, is bounded by the relationships and interdependencies between them (Adner, 2006). These loosely coupled social economic actors are connected by shared institutional logics (Vargo and Lusch, 2008; Lusch and Nambisan, 2015). The significance is also highlighted in service-dominant logic FP 11: "Value cocreation is coordinated through actor-generated institutions and institutional arrangements" (Vargo and Lusch, 2016: 8).

Such logics and arrangements may include *structure, governance* and *design of ecosystem,* e.g. choosing members, criteria for membership, duration of exclusivity of membership; or alternatively such provision may choose more open membership arrangements in which the boundaries are kept more permeable. Many IT platforms, e.g. Android ecosystems, are designed on an open membership arrangement (Gulati et al., 2012; Vargo and Lusch, 2016).

Governing to facilitate value creation within loosely coupled organisations is challenging as it consists of many organisations. Sarker et al. (2012) found two key governance-related factors enabling value co-creation practices:

– *Contractual agreements:* contractual agreements between alliance partners explain in details the terms and conditions of responsibilities and other coordination-related issues (Park and Ungson, 2001; Reuer and Arino, 2007). They lay down procedures for duplication and redundancy, and facilitate further cooperation and value co-creation between partners (Sarker et al., 2012). Sarker et al. also reported that such contractual agreements between alliance partners are more effective and lead to effective value co-creation when the partners are more loosely coupled and the characteristics are transactional.

– *Self-reinforcing mechanisms*: while contractual agreements help protect processes and facilitate value co-creation, the presence of self-reinforcing mechanism such as *trust, goodwill* and *commitment* reduce bureaucratic complexity (Park and Ungson, 2001; Sarker et al., 2012).

These two mechanisms, contracts and self-reinforcing, are two key enabling factors of value co-creation practices of alliance in the software industry context (Sarker et al., 2012).

The findings of Sarker et al. (2012) are confirmed by Capaldo (2014), whose investigation of network governance of joint-design alliance and 14 collaborative ventures within them, found relational mechanisms, e.g. interpersonal relationships, trust and reciprocity, yielding considerable knowledge-based benefits and strategic outcomes at the alliance and firm level.

Leclercq et al. (2016: 37) define governance from the perspective of how actors coordinate themselves during the co-creation process; they suggest three types of governance mechanism to co-ordinate value co-creation:

1) *Hierarchical:* it is based on rules and a structure.
2) *Market-based:* it uses incentives rooted in the supply of and demand for interactions and exchanges; and
3) *Relationship:* based on trust and relationship, in which past experiences shape future expectations.

These findings are complemented by the recent study of Kolbjornsrud (2017), who drew on a multiple case study of network organisation, found four governance mechanism which can be implemented to mitigate problems in collaborative network organisational forms, e.g. alliance. These mechanisms are:

1) *Mutual monitoring*: enabling self-regulation and peer-based control;
2) *Membership restrictions:* regulating admission to the community;
3) *Values and rules*, guiding members' action and collaboration; and
4) *Property rights and incentives*, regulating rights to community resources and distribution of rewards.

This suggest that actors' performance is dependent on *values, rules, incentives and their enforcement*. Effectively implicating these mechanisms positively affects members' willingness and ability to find each other, form relationships, share knowledge and resources, share benefits, and contribute to the success of value co-creation. On the other hand, not implementing such provisions results in failure of the VCC.

Based on these previous studies, this study will assess the governance mechanism in the context of a case study characterised by a multi-actor, a B2B partnership to co-create value in UK enterprise business, by including *governance mechanism* in the conceptual framework presented in Figure 6.1. Chapter 7 discusses the case study.

The next section describes how the technology-related collective strength of the organisation affects the overall value co-creation process within the alliance.

6.3.2 Technology-related collective strength

To understand how mutual or collective strength of the alliance affects the co-creation process, this section explains *technology-related collective strength*. According to Das and Teng (2000: 51): "collective strengths are the amounts of relevant valuable resources possessed by the alliance". In essence, strategic alliances are formed to take advantage of the joint power of the partners. Collective strengths provide opportunities for partners to create value from their resources. Thus, collective strengths describe the alliance's overall resource endowments and capabilities (Das and Teng, 2000). Collective strength related to technology factors will have an important role in the outcome of the alliance relationship (Blodgett, 1991), confirmed by the study of Sarker et al. (2012: 335), in which, "vendor and partners' know-how, functionality and simplicity of the tech product, its support functions, knowledge transfer and the fit between the vendor, partner" contribute to enabling value co-creation.

Theoretically, service science and SDL prioritise the role of technology in business ecosystem success; it is considered as an *operant resources* in SDL, "the fundamental source of strategic benefit" (Vargo and Lusch, 2008: 2016). Identifying the role of technology in the ecosystem, Akaka and Vargo (2013: n. p.) emphasise "technology as an operant resource—one that is capable of acting on other resources to create value—and, thus, becomes a critical resource for value co-creation, service innovation and systems (re)formation". The importance of technology-related factors in value co-creation between an organisation and its customer was presented in Chapters 2 and 4; the implications of technology are equally important in the organisation and its partnership context.

Several technology-related features that enable the success of the VCC process, including those related to the *basic IT infrastructure, computer networks that facilitate basic communication and transactions,* and *interfaces* (Powell and Dent-Micallef, 1997); *infrastructure for dialogue* (Prahalad and Ramaswamy, 2004); *low downtime and institutive navigation* (Bauer et al., 2006); *technology* *tool-based support* (Nambisan and Baron, 2009); *use of multimedia* (Kohler et al., 2011); *simplicity and adaptability of the technology* (Sarker et al., 2012); *enhanced capacity of IT to capture, store and analyse information* (Grover and Kohli, 2012); *simple design features* (Lusch and Nambisan, 2015); *better IT capabilities to deliver better value from alliance in non-equity governance structure* (Lioukas et al., 2016); *and changing the overall role of the firm* (Breidbach et al., 2018).

All of these technology-related attributes have great importance in value co-creation in the ecosystem context, as demonstrated in the empirical context of the Android ecosystem (Gulati et al., 2012); the IBM ecosystem (Fjeldstad et al., 2012); and small-medium ERP software firms (Sarker et al., 2012). This research thus include technology-related collective strength to complement the *framework of factors affecting value co-creation in alliance.*

Technology-related collective strength and governance also depend on actors' ability to influence other actors in their ecosystem, this is referred to as actor's *power and politics practices* within the alliance, described below.

6.3.3 Power-Politics Conditions

According to Lacity and Willcocks (1998) and Pfeffer (1981), power refers to an actor's ability to influence the behaviour of others; whereas, politics focuses on the use of authority to cause changes in goals and directions within organisations. Several tactics such as authority, resource acquisition, and selective use of decision criteria are used to exercise power and engage in political manoeuvring within inter-organisational relationships (Lacity and Willcocks, 1998; Agarwal et al., 2010; Sarker et al., 2012; Laamanen and Skalen, 2015).

Partners may become involved in political activities in order to get ahead in conflicting situations, leading to poor cooperation and performance (Pearce, 1997; Laamanen and Skalen, 2015). Khanna et al. (1998) suggest that there are two types of benefits from alliances: private and common. Clearly, private benefits give rise to potential conflicts of interest. The exercise of power and politics by alliance members can bring inter-firm conflict in the form of both interest conflicts and operational conflicts (Das and Teng, 2000). Both types are detrimental to alliance performance in a number of ways: first, when partner firms have different and competing interests in the alliance, their incentive and willingness to work together will be reduced (Das and Teng, 2000); second, operational conflicts result from the different and incompatible organisational cultures and operational practices of the partners, which reduce the effectiveness of the alliance (Olk, 1997; Das and Teng, 2000; Laamanen and Skalen, 2015).

Park and Ungson (2001) suggest that one of the key reasons for alliance failures is internal factors such as political behaviours on behalf of the alliance partners themselves. Agarwal et al. (2010: 417) highlight several politicking techniques such as partners' attempts to "privately benefit at the expense of the others' in the alliance" that can hinder the generation of value.

The exercise of power and politics by alliance members is thus found to be one of the key inhibitors to VCC. Sarker et al. (2012) found that exercising them can create inter-firm conflicts. Conflict, according to Lusch (1976), is the perceived feeling of pressure, tension and hostility of a partner member produced by another member (Lusch, 1976). Sarker et al. (2012) identified one related factor contributing negatively to VCC: the *conflicting interests* pursued by a vendor and its partners in ERP systems development and sales. They found that conflicting interests and activities (initiated intentionally or accidentally) reduce the alliance's ability to cater to customer needs and thus diminish value for all parties.

One other factor that emerged in Sarker et al.'s (2012) study is the *status differences* between the alliances partners, contributing negatively to the VCC process. Irregularity between the alliance partners can lead to dependencies and vulnerabilities, to the point where there are "hostage" situations, such that the stronger partner tending to appropriate resources away from the disadvantaged party (Park and Ungson, 2001; Sarker et al., 2012).

More recent studies in alliance VCC (e.g. Christoffersen, 2013; Hauff et al., 2014; Huntgeburth et al., 2015) have found that irregularity between partners or the conflicts between them affect performance negatively. Christoffersen (2013) suggests such conflicts are likely to lead to *misunderstandings*, *distrust*, and *anxiety*, resulting in *less than efficient integration of resources*, and so contributing to failure of the overall co-creation process. Huntgeburth et al. (2015), in the context of cloud computing ecosystems, suggest developing a *formal and informal ecosystem governance mechanism to resolve coopetition-trade-off between partners*, as reviewed under *alliance governance mechanism* above. Based on the findings from these earlier studies, this research thus includes power-politics conditions in the conceptual framework.

Alliance actors are not only involved in power and politics within the alliance; their opportunistic behaviour is prevalent in value co-creation practices, described below.

6.3.4 Opportunistic Behaviour

The alliance actor's transaction cost of searching, contacting, contracting, or any other efforts is generally be much too high for co-creation to be initiated or successful. These efforts and how they affect the actor's behaviour are well documented in *transactional cost economies theory* (TCT) (e.g. Williamson, 1985). The underlying assumption of TCT is that firms seek to minimise economic transaction costs, showing bounded rationality and opportunism (Williamson, 1985). The TCT is well researched and still relevant in the modern computing era and sharing economy (e.g. Karimi-Alaghehband et al., 2011; Ferreira et al., 2014; Henten and Windekilde, 2016). This section examines actor's behavioural reasons, highlighting *opportunism* in value co-creation, using TCT.

Opportunism or opportunistic behaviour is not a new concept in the alliance literature; it is defined as troublesome source of behaviours, such as *dishonesty and misinformation* presented by actors in inter-firm relationships (Williamson, 1985). Williamson (1985: 47) defines opportunism:

> Self-interest seeking with guile . . . such as lying, stealing, and cheating. It refers to the incomplete or distorted disclosure of information, especially to calculated efforts to mislead, distort, disguise, obfuscate, or otherwise confuse.

This form of opportunism is described as *blatant* or *strong form* opportunism (Masten, 1988; Luo, 2006). As suggested by Williamson's (1985) discussion, this form of opportunism may manifest itself through both:

1. Deliberate misrepresentation of various kinds during relationship initiation (i.e., ex ante), and
2. Various forms of violation over the course of the relationship (i.e., ex post).

Wathne and Heide (2000) present the strong form opportunism by providing the example of Ford and its supplier the Lear Corporation in the context of creating the 1996 version of the Ford Taurus. The Lear Corporation intentionally agreed to a contract for supplying seats for the new car model even though they knew they would not be able to fulfil it. Lear had a severe shortage of engineers, among other problems, and therefore missed the deadlines and failed to meet price and quality standards. Ford sustained significant transaction costs (Wathne and Heide, 2000).

Theoretically, Lear's failure to disclose its true attributes, intentionally withholding critical information, illustrates a particular form of opportunism (Williamson, 1985; Wathne and Heide, 2000). Luo (2006: 123) characterises this as *contractual norm violations*, i.e. violating terms, clauses, and conditions that are explicitly codified in the main body of a contract. In the case of Ford and Lear, it is failure to honour contractual liability.

Luo (2006) also proposes *weak form opportunism,* which involves actions that violate relational norms, i.e. are not written out in a contract but represent shared understanding among all members. Examples of weak form opportunism (Luo, 2006; 123) include:

- Terminating unwritten commitments or dishonouring oral promises;

- Not adhering to trust building and equity-exchange principles;
- Breaking mutual forbearance and knowledge-sharing rules;
- Hiding critical resources needed by another party;
- Misrepresenting a party's own abilities;
- Standing by unconcerned when another party or joint entity is suffering; limited opportunities for opportunism
- Withholding full effort and cooperation in an ongoing relationship
- Not adhering to the explicit or implicit collective controls governing inter-party exchange
- Reacting dishonestly to contractual renegotiations or change; and
- Making calculated efforts to confuse and manipulate information or incompletely disclose information to another party

There are various consequences of such opportunistic behaviour in business relationships, which the next section presents.

6.3.4.1 Consequences of opportunism

Opportunistic behaviours of the parties involved in collaborative efforts in inter-firm relationships have the potential to both restrict value creation and cause redistribution of wealth created (Wathne and Heide, 2000). Opportunism restricts value creation in a number of ways: first, it increases transaction costs; second, it increases information costs; third, it affects the process of value creation and increases conflicts between alliance partners (Williamson, 1985; Hennart, 1988; Nooteboom, et al., 1997; Wathne and Heide, 2000). Opportunism also hampers the development of reciprocity or repeated commitment and it is an obstacle to fostering confidence in partner cooperation, escalating inter-party conflicts and hence weakening the foundation for collaboration. This failure to see beyond the short-term optimisation of self-interest inhibits the cooperative effort (Luo, 2006; Ertimur and Venkatesh, 2010).

Theoretically, the concept of actors' opportunistic behaviour is well documented under TCE, summarised in the next section.

6.3.4.2 Theoretical lens: Transactional Cost Economics

Complex systems are studied from a number of approaches, e.g. economic man, working man, political man, hierarchical man (Williamson, 1985). Transaction Cost Economics (TCE) distinguishes and views economic organisation as contractual man (Williamson, 1985). TCE studies behavioural assumptions imputed to contractual man, the attributes of transactions and the governance of contractual relations. Williamson (1985) proposes that contracts and transactions are affected by behavioural assumptions on which transaction cost economics relies. He proposes two forms of behaviours: rationality and opportunism. Rationality acknowledges limits on cognitive competence; opportunism is simple self-interest seeking. He further classifies rationality (Williamson, 1985: 45):

- Maximising rationality is the rationality with all the information and knowledge of all possible options.
- Bounded rationality assumes that most transactions occur with limited information, and actors try to be rational.
- Organic rationality is concerned with evolutionary trends, where ignorance may even be better than knowledge in planning toward ends

In this rationality ladder, he favours bounded rationality over perfect rationality, i.e. transactions occurring with limited information, allowing actors to be more problem solvers, and negotiating a transaction and monitoring and adapting it over time (Williamson, 1985). He reiterates that humane are capable of opportunism as well as simple self-interest behaviour. Opportunism assumes people will do whatever it takes to maximise their interests: lie, cheat, steal, deceive and misinform. This is a troublesome source of behavioural uncertainty in economic transactions, which offers challenges to value co-creation practices (Chowdhury et al., 2016).

Recent works exploit the assumptions of TCE in the area of *IT outsourcing* (Karimi-Alaghehband et al., 2011), *cloud computing* (Yigitbasioglu, 2014), *international business alliances* (Ferreira et al., 2014), and *sharing economy and technology platforms* (Henten and Windekilde, 2016), all of which suggest the existence of actors' opportunism. The next section presents opportunism in service theory.

6.3.4.3 Opportunism in service science and SDL

As reviewed in Chapter 2, GD logic concepts highlight the *transaction* or *transactional relationship,* where, interaction between parties is facilitated by *promotion/propaganda* or *maximising behaviour* and value is added not co-created (Vargo and Lusch, 2008: 2016). SD logic, however, is based on *relationship and collaboration* warranting co-creation between involved parties. Service science and

SD logic promotes win-win relationships, hence value co-creation between entities. However, the fundamental concepts of service science reviewed in Chapter 2 suggest the possibility of a lose-lose outcome between entities (Spohrer and Maglio, 2010), the dark side of value co-creation (Noordhoff et al., 2011). Co-creation participants may bring the risk of redundancy and opportunism leading to value co-destruction, where interaction between the entities can have negative outcomes (Noordhoff et al., 2011; Echeverri and Skalen, 2011; Laamanen and Skalen, 2015; Prior and Marcos-Cuevas, 2016; Chowdhury et al., 2016).

The outcome of co-creation as lose-lose, lose-win or win-lose (Spohrer and Maglio, 2010) through opportunism has started to attract attention as value co-destruction (e.g.Noordhoff et al., 2011; Laamanen and Skalen, 2015; Leclercq et al., 2016; Chowdhury et al., 2016). Laamanen and Skalen (2015) show the direction of the co-creation outcomes can also be negative and conflictual practices, i.e. *lose-lose or lose-win or win-lose,* while Chowdhury et al. (2016) show that actors' opportunistic behaviours affects value co-creation in the empirical context of B2B advertising service network. Their study reveal *weak-form opportunistic behaviours*: violation of unwritten (but understood) relational norms, found to be tolerated and almost expected within long-term relationships. This can negatively affect future interactions and supplier-partner relationships. This research thus include actors' opportunistic behaviour in the conceptual framework, summarised below.

6.3.5 Summary of the factors affecting value co-creation in an alliance

Accordingly, Figure 6.1 presents the conceptual framework for factors affecting value co-creation in the alliance context, FAVCA. In Figure 6.1, Firm X's bundle of resources is integrated with Firm Y's resources to co-create value (Edvardsson et al., 2011; Edvardsson et al., 2012). Successful outcomes from cooperative alliances are contingent on the exchange partners' decision to contribute to the strategic alliance (Agarwal et al., 2010). *Alliance governance* and *Technology-related collective strengths* are presented as factors enabling value co-creation, and *power and politics* and *opportunism* as factors inhibiting it.

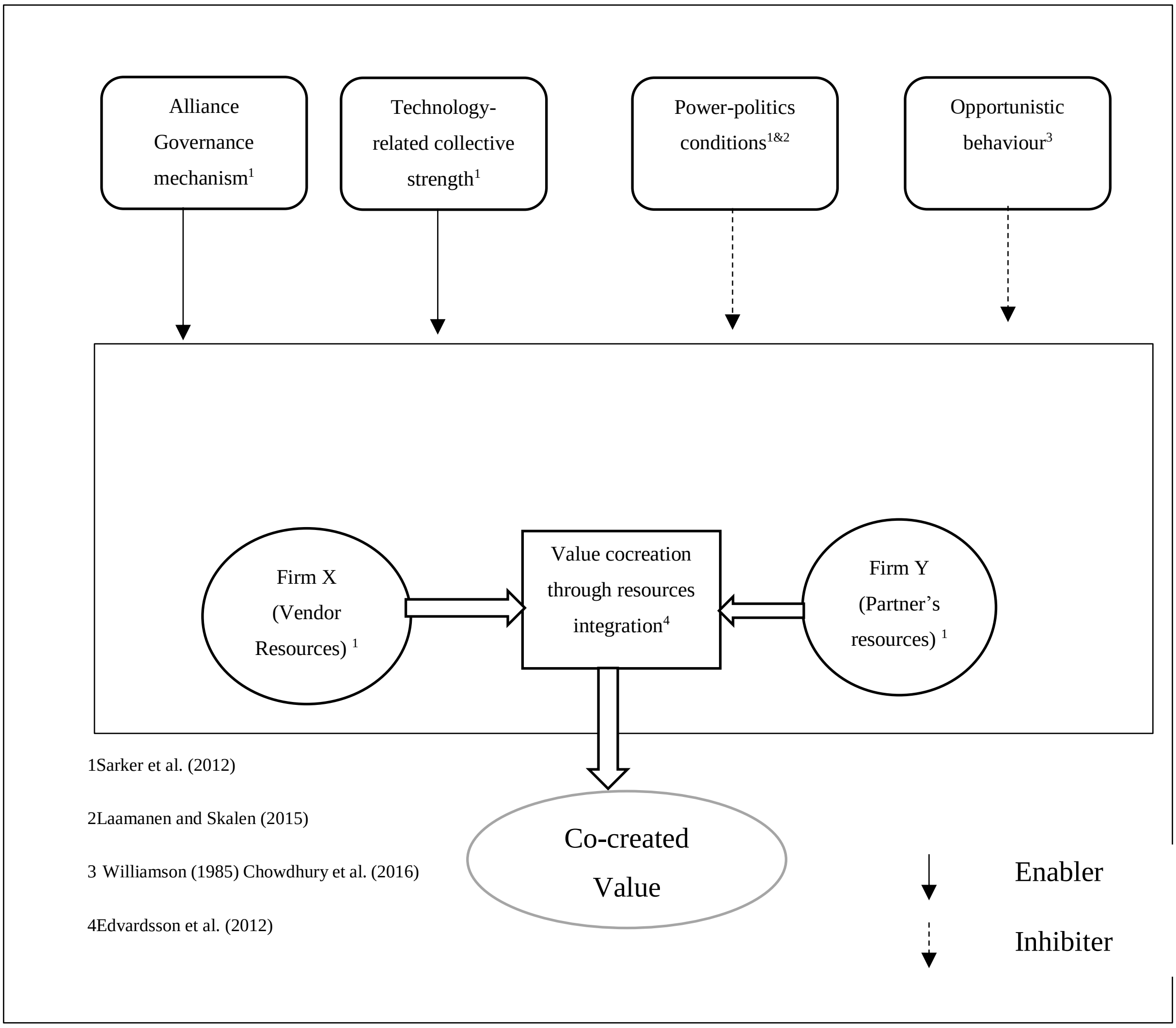

Figure 6.1 Conceptual Framework for factor affecting value co-creation in an alliance

Table 6.2 summarises these factors.

Table 6.2 Summary of the factors affecting VCC between alliance actors

Factors	Descriptions	Supporting literature
Alliance governance mechanism	The formal (and informal e.g. trust) contractual structures that explain terms and conditions of responsibilities and other coordination-related issues	Harrigan, 1988; Gulati, 1998; Das and Teng, 2000; Park and Ungson, 2001; Reuer and Arino, 2007; Dacin et al., 2007; Sarker et al., 2012; Gulati et al., 2012; Capaldo, 2014; Leclercq et at., 2016; and Kolbjornsrud, 2017.
Technology-related collective strengths	The amounts of relevant valuable resources related to technology, e.g. know-how, functionality and simplicity of the tech product, knowledge transfer	Blodgett, 1991; Das and Teng, 2000; Nambisan and Baron, 2009; Kohler et al., 2011; Sarker et al., 2012; Grover and Kohli, 2012; Gulati et al., 2012; Fjeldstad et al., 2012; Lusch and Nambisan, 2015; Lioukas et al., 2016; Vargo and Lusch, 2008: 2016.
Power-politics condition	Alliance actors' influencing behaviours and their use of authority to cause changes in alliance practices	Pfeffer, 1981; Lacity and Willcocks, 1998; Agarwal et al., 2010; Sarker et al., 2012; Christoffersen, 2013; Hauff et al., 2014; Huntgeburth et al., 2015; Laamanen and Skalen, 2015; Chowdhury et al., 2016.
Opportunistic behaviours	Alliance actors' calculated efforts and practice to mislead, distort, or disguise, that violates contractual and non-contractual norms	Williamson, 1985; Masten, 1988; Nooteboom, et al., 1997; Wathne and Heide, 2000; Luo, 2006; Ertimur and Venkatesh, 2010; Karimi-Alaghehband et al., 2011; Ferreira et al., 2014; Henten and Windekilde, 2016; Chowdhury et al., 2016.

6.4 Summary of Chapter 6

This section reviewed VCC studies in the context of an organisation and its partners, bringing together Sarker et al.'s (2012) three factors, *governance mechanism, technology-related collective strengths* and *power and politics* that enable or inhibit value co-creation; Laamanen and Skalen's (2015) *conflictual perspective* on value co-creation, and Williamson (1985) and Chowdhury et al.'s (2016) *opportunism*. The chapter applies key concepts from these earlier works to propose a conceptual framework for factors affecting value co-creation in the alliance context, called FAVCA.

The chapter extends the framework of Sarker et al. (2012) by adding new construct *opportunism* (cf. Williamson, 1985; Chowdhury et al., 2016) in value co-creation research. In proposing FAVCA, the study responds to call from Ostorm et al. (2015), Laamanen and Skalen (2015) and Leclercq et at. (2016) to study the dark and conflictual side of VCC practices, and also proposed an answer to research question 2.

FAVCA serves as the basis for empirical data collection, and Chapter 7 uses it to uncover the factors affecting VCC in an alliance case study.

Chapter 7 Findings and Discussion: Organisation-Partners Contexts of VCC

7.1 Introduction

In Chapter 6, *a conceptual framework of factors affecting value co-creation in alliance (FAVCA)* was proposed and discussed. This chapter place FAVCA in the empirical context with an exploratory case study. The research methodology discussed in Chapter 3 identified adopting a case study method to investigate factors affecting VCC in the O&P context, and this chapter addresses research question RQ2 by discussing the findings and implication from both the case study and the literature reviewed in Chapters 2 and 6.

The chapter is divided into five sections:

Section 7.2 presents the findings from the case study

Section 7.3 discusses the findings

Section 7.4 presents the implications of the FAVCA framework

Section 7.5 summarises the chapter.

7.2 Case Study Results

The case study results are presented based on the six categories identified (in Chapter 3): introduction, governance mechanism, technology-related collective strengths, power and politics conditions, opportunism and challenges to VCC. The study revealed the enterprise business model and role of each actor in enterprise business, in the introductory phase, as follows:

7.2.1 Enterprise Business Model

Evidence from the document review and interviewees suggested that the examples of enterprise-level brands in the UK market involved in producing and selling hardware devices include Cisco, Juniper Network, Ericsson, HPE, Broadcom, Lenovo, ZTE, Huawei and Dell. These brands are also known to be enterprise brands, because they produce high-quality products for business use with requirements for reliability, scalability, compatibility, performance and security. They produce a range of hardware products such as networking devices, service storage, security, cloud, data centre equipment, switches, and routers.

The enterprise business go-to-market model is to go through channels only, as confirmed by the case study participants. According to the interviewees, the addressable hardware enterprise market size in the UK where vendors sell only through partners is about £5 billion. AlphaVendor is one of the emerging hardware enterprise brands in the UK market, with 5-10% market share; it enjoyed 60% market growth in 2016/17 according to AV_M1. This demonstrates the importance of channel partners to in increasing their share of the enterprise market and opening up more opportunities for co-creation.

7.2.2 Co-creating Value Together; Type of Actors, and Their Role in Enterprise Market

The initial outcome of the data analysis suggests the existence of a number of actors involved in the hardware enterprise market, contributing to co-create solutions for customers. The actors involved in hardware selling and solution creation are:

- *Vendor:* the main organisation that manufactures products and offers them through a network of other companies in an alliance to create a solutions.

- *Distributor*; an independent organisation involved in maintaining the supply of products manufactured by the vendors, developing and managing the sales channel (channel partners). Distributor in the UK market include Comstor, Tech Data, Avnet, Exertis, Ingram Micro. These companies are MNCs and have thousands of employees worldwide.
- *Channel partner (CP)*: an independent organisation that partners with the vendors and distributors to market and sell the products manufactured by the vendor. They are also called resellers, and are mostly SMEs.
- *Value Added Partners (VAP)*: it also called Value Added Reseller (VAR); another version of the channel partner with greater commitments to the vendor and bigger sales targets. The VAP is allowed to perform joint customisation and innovation with the vendor, and is also considered as a channel partner.
- *Independent software vendor (ISV)*: an organisations that develops, sells and markets software that usually complements vendor-manufactured products. ISVs are also included in the sales channel and are managed under channel partner policy.

All these actors are also part of sales or channel ecosystems, according to AV_M1: "Nobody can do everything IoT and Cloud, it fundamentally relies on an ecosystem, which includes ISV partners, developers, channel partners and even customers you know more and more (AV_M1)". The relationship between AV and its sales channel is presented in Figure 7.1, which also shows the nature of the interaction between AV and its sales channel.

The findings suggest that actors in the enterprise market co-create value. The vendor, as indicated in Table 7.1, brings innovative products, R&D capability and expertise. AV's partnership has two tiers: tier 1 is the distributor and tier 2 represents all the channel partners including VAR, ISVs, and resellers. The distributor manages stock from the vendor and also manage the channel partners on behalf of the vendor, providing credit lines to channel partners. Channel partners bring business (customers) to the distributor and vendor.

Each of the actors thus brings unique resources to the relationship and there is frequent interaction and resources sharing among them. The findings suggested existence of various forms of co-creation such as co-conception of ideas, co-design, and co-marketing, and this view is confirmed by AV_M1, AV_M2, PDist_M, CP1_M, CP2_M, CP3_M, CP4_M, and CP6_M_CA. The detailed roles and rewards from the relationship are presented in Table 7.1.

The next section describes the alliance governance mechanism revealed in the case study.

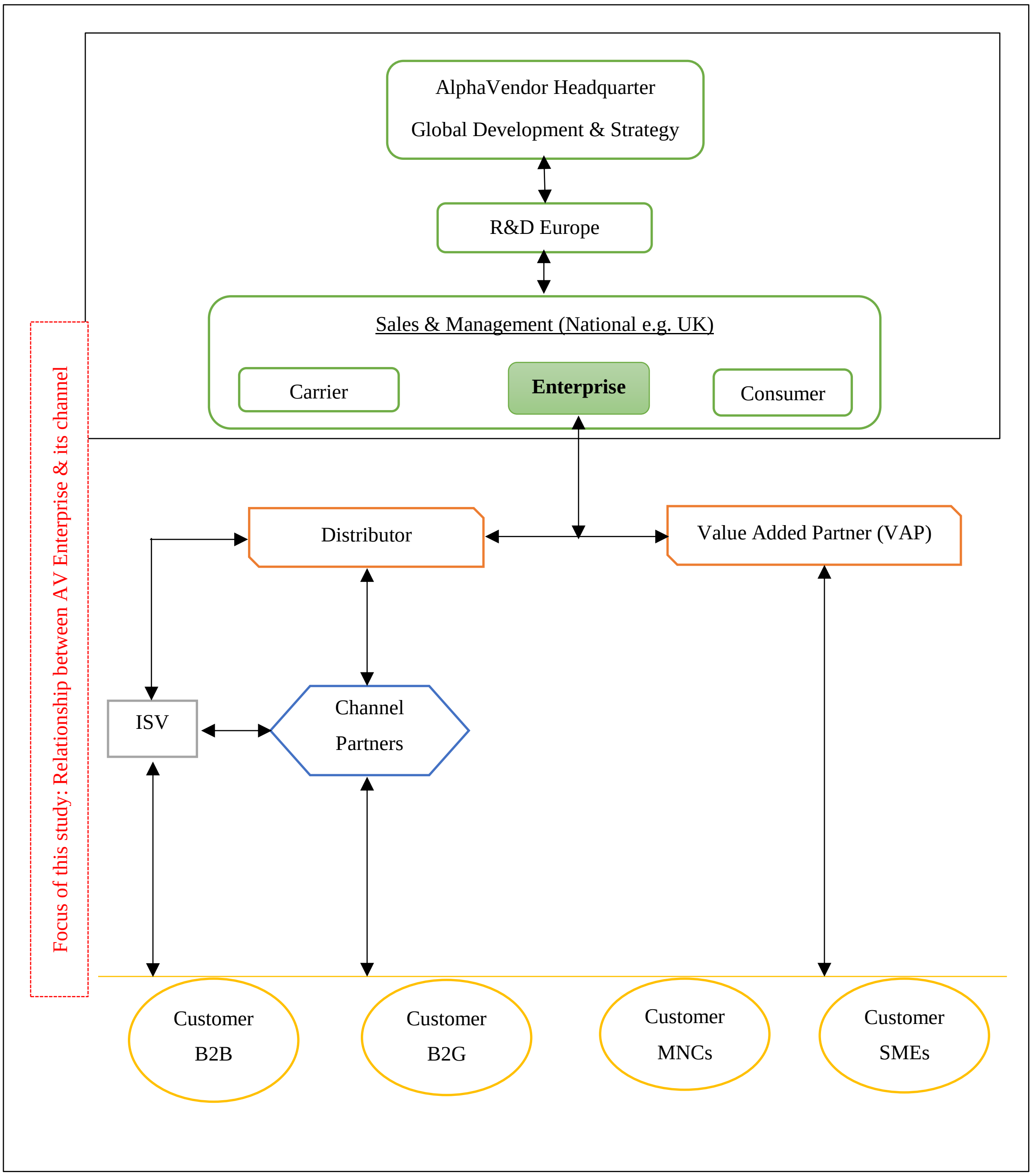

Figure 7.1 Relationship between hardware vendor, its distributors, channel partners, ISVs & customers

Table 7.1 Actor roles, resources and rewards in AV alliance

Contribution/value	Vendor	Distributors	Channel partners/VAP
What they bring; contribution to relationship	- Wide range of product portfolio - Innovation - R&D - Support funds - Product knowledge & expertise - Support and warranties - Global presence	- Financial leverage to support stock of the products in local/regional market - Product stock management - Human resources to support vendor and CP - Channel partner knowledge base/ lock in/ strong reputation in CP - Knowledge of regional and local market - Channel Partner base - Customer consulting and support on pre-sales/post sales - Global presence	- Knowledge of local market; cultural expertise - Specialised knowledge and expertise in certain field (Design skills) -Project implementation - Customer trust - Innovative add-ons to the products and capabilities to customise products - Customer base - Extensive consulting and customer support
Value and benefits perceived from relationship	- Revenue - Market share - Loyalty from distributors and Channel partners - Innovation - Knowledge and expertise on local market/ feedback/reduced risk of failure	- Wide product portfolio + quality+ durability - Handsome percentage of bonus and margins - Training and certification - Wide range of the market due to the variety of products and the low cost of the products - Funds for business development/marketing	- Wide product portfolio + quality + durability Revenue -attractive margin on products - Fund for innovation and marketing - Training and certification - Wide range of the market due to the variety of products and the low cost of the products

7.2.3 Channel Governance Mechanism

The findings reported three types governance mechanism of the channel ecosystem:

- Contractual agreement
- Criteria for membership and incentives
- Self-reinforcing mechanism

Table 7.2 Alliance Governance Mechanism: Coding and Themes

Construct	**Level 1 Codes**	**Example of Level 2 Codes**	**Themes example**
Alliance Governance	Contractual agreements	Terms and conditions e.g. NDAs, IPRs, Teaming agreement	"In an OEM contract, you need to think really about all possible conditions. I will re-sell these, we will re-sell that. What about these babies little box, what about that, what about the brand things, what about the logo. You need to think about all those sort of considerations and what would we do. What sort of service level agreement, what do we do in this case, what do we do in the case of service fault in this part, for that one with less critical what do I do (Comp_M1)" "It could be that the partner will manage the customer relationship and do the pre-sales and design work and then AlphaVendor will do the validation of that design and some of the technical support, some of the delivery and installation but it's there (written) to formalize each person's responsibility so that when we're working on a bigger tender it's very clear who is doing what (AV_M1)".
	Criteria for membership and incentives	Restriction through layers i.e. certification/tier	"Where you want to motivate partners to be fully trained and accredited as they can be. But at the same time making sure that they don't fall behind because that has the potential to affect how we're represented in the market. If they're not skilled and they say the wrong thing to the customers that can negatively affect us (AV_M1)"
	Self-reinforcing mechanisms	Trust and relationship	"For us it's about business relationships; we work very well. This commercial is behind the curtain I guess, for want of a better word. But for me, we like the people at distribution; we trust them, the world of enterprise IT is changing fast paced and what is important is keep your business relationships going and keep your customers onsite (CP2_M)."

Each mechanism was found to play a vital role in enabling interaction between AV and its partners, elaborated below. Table 7.2 presents the themes and coding used for the governance mechanisms.

7.2.3.1 Contractual Agreement

The findings confirmed that contractual agreements are written agreements that ensures "*Everybody does things in the right way"* (CP3_M); when something is in writing, "It's followed, and I personally haven't seen any issues where you know written commitments are not met" (AV_M1).

These contracts explain the responsibilities of each party, the resources required from each party to collaborate and the processes and rewards in the relationship, as service-level agreement, non-disclosure agreements (NDAs) and channel policy documents.

Understanding such provisions makes conducting business easier according to Comp_M1, who further noted the importance of contracts:

> It looks like, it's just a page but contracts are essential. The contract needs to be simple and at the same time protect you, protect them. So, make sure you don't overcomplicate the task factor and so these are really important things.

AlphaVendor has channel policies and channel frameworks in place through which they sell and promote their products and partnership, as confirmed by AV_M2:

> We launched a framework on how we can connect with our partners. So we don't directly sell, we only sell to our partners. So in each of the lots of frameworks, we have to recommend the partners we want to sell through, so that is a kind of thing we do as a collaboration with our partners to get our customer to come and talk to us.

In addition to the policies and NDAs, the other common agreement found in the case study was *teaming agreement.* This refers specifically to a particular project and establishes each party's responsibility in that project, as noted by AV_M1 (Table 7.2). This makes it more in-depth than perhaps an NDA or a partner agreement. On a related note, PDist_M, CP3_M and CP4_M highlighted the significance of the contractual agreement which protects their interests and those of the other parties.

7.2.3.2 Criterial for Membership and Incentives

AlphaVendor has membership restrictions to its channel ecology and strictly regulates the admission of a partner to the community. Its ecology membership is divided into *business functions, annual revenue, certification, staff and other general requirements* as stated in their *Western Europe Channel Handbook, 2016*.

As explained in the *Channel Handbook* and depicted in Figure 7.1, partners are divided by role, responsibilities and certification standards (see Table 7.3). For example, the distributor needs to meet $10 million dollar annual sales target, whereas, authorised partners do not have a revenue target.

Table 7.3 Alpha Vendor partners' requirements based on their *Channel Handbook, 2016*

Partners' classifications	Annual sales targets	Staff and certification requirements
Distributor	$10,000,000 across 4 different businesses	8 industry-certified pre-sales engineers; Have at least 6 AV course certifications
Value added partner	$2,000,000	Engineers with 5 AV course certifications At least 2 AV pre-sales support engineers
Gold partner	$500,000	1 Pre-Sales Manager/2 Account Managers 3 AV certified engineers
Silver partner	$250,000	1 Pre-Sales Manager/1 Account Manager 2 AV certified engineers
Authorised partner	N/A	At least 1 Pre-Sales Managers who has passed AV Pre-Sales training

On the incentives side, AV_M1 highlighted:

> The way we do that is by offering them better pricing, may be a lower cost to be a AlphaVendor partner that is to be a competitor's' partner. We offer discount on the products. With the competitors, it's more tightly controlled in terms of discounts. And, they can earn rebates in the back end.

PDist_M promptly confirmed AV's upfront margins and rebates are very healthy in comparison to other vendors, she argued that "with AlphaVendor we have to add more value, so we can justify a healthier margin" (PDist_M).

The *Channel Handbook* also specified a benefits and rewards mechanism to attract members to their channel. The reward is allocated according to partnership criterial and performance. Distributor and VAR for example, will have access to management by objective (MBO) incentives, whereas sales performance incentives are available for gold, silver, and authorised partners, but, not distributors. However, a training fund is available for all Tier 1 and Tier 2 partners. CP1_M promptly confirmed these incentives for partners. AlphaVendor also has a number of penalties for unacceptable behaviours, ranging from losing all the incentives to the termination of their partnership.

On a related note, Comp_M1 and Comp_M2 also confirmed the variations and levels of partners; some are distributors and others are platinum, gold, silver and business partners. Comp_M1 explained that partners can achieve higher-level of status with “a combination of higher revenue and specialisation that you (partner) have on the solution from the vendor” (Comp_M1).

For membership certification governance, AV_M1 highlighted that AV Certification is intended to make sure that partners meet the required levels of skills and quality to represent the brand. Along similar lines, Comp_M1 noted:

> How do I guarantee that my partners deliver the right level of quality? By certifying the skills of my partners, they need to prove to me that they have a certain number of people who are certified, they passed exams on different classes of solutions.

Such certifications and quality, according to Comp_M1, protect their image and brand logo in the marketplace. For the partners such as, CP2, compliance with the vendor’s certification, is part of working with the vendor; however, when vendors bring in additional certification requirements, CP2_M noted:

> It's not an insignificant commitment, but it comes back to resource utilisation and costs of training to get to certification status. By doing that and being complained, that's where we want to see some reciprocal value added back to us from the vendor in terms of marketing funds or whatever that might be.

7.2.3.3 Self-reinforcing Mechanism

Case study participants from the vendor to the end customer, highlighted the importance of trust, relationship, commitment and support enabling the partnership to go forward. PDist_M noted that trust between vendor, distributor and partner is really critical to deliver the right results in the enterprise market and it is essential to build on mutual trust:

> A lot of vendors, I have worked in the past almost behave as if they were doing us a favour, but actually with AlphaVendor, it is the other way around, they recognise our need for them, and also that our customers (channel partners) trust us to deliver the right results.

PDist_M also pointed out that being honest and having an open channel of communication is key in the enterprise market. This however, does not always happens, and she gave an example where, despite trust on both sides, a channel partner took their businesses somewhere else. She had experienced such behaviours when a new person comes into the business who has an existing relationship with someone else, or whose business is in financial difficulty and they need to look at better commercial value.

CP2_M explained the role of trust in the enterprise market:

> We do our due diligence and we gain their (vendor and distributor) trust and they get our trust and then its open and nice business relationship, it is a relationship we want to have for longer term, there's no short term gain.

He further highlighted the example of a strong trusting and relationship where the vendor and distributor allowed a partner a few months to reserve the price for a customer. CP3_M also asserted the role of trust in the partnership between distributor and AV:

> Massive trust is one of the key things that's part of this partnership. Without that trust, there's no partnership and you have to have some level of trust or be able to build that trust in order to and this go both ways.

Both he and CP2_M highlighted the role of vendor support in their business development.

The next section presents technology-related collective strengths.

7.2.4 Technology-related Collective Strengths

The case study findings identified four types of technology-related collective strength enabling value co-creation:

- Price, range, quality and reliability of AV technology
- Collective IT capability
- Technology support
- Knowledge sharing.

The Table 7.4 presents codes and themes for technology-related collective strengths. Each of technology collective strengths is then discussed in details.

Table 7.4 Technology-related collective strengths: Codes and Themes

Construct	***Level 1 Codes***	***Example of Level 1 Code***	***Themes example***
Technology-related collective strength	Price, range, quality and reliability	Price of the technology	“the price is dramatically cheaper, price isn't the driver, price from last thing on the list, but, the ability to be able to do a lot more with a lot less is a big message with the AV (CP1_M)”
		Quality of technology	“I can 100% assure all my customers the quality of the equipment AV produces is second to none comparison to the likes of ABC (Pseudonym; other competitors). We have lot of products even now which work in 10 degrees higher temperature than our competition and 10 degrees lower than our competition (AV_M2)”
	Collective IT capability	Vendor core strengths	“We are in competition with the likes of ABCs (Pseudonym; competitors). If they (Competitors) do not have got something in their product portfolio, then, they go out and buy company from somewhere else. We don’t do that. We use our R&D staff to create solutions for us. It might take longer but is sustainable. Then brought into our solution portfolio and made to work properly. And we never try to integrate something that was not created by us in the first place. We have a number of innovation and R&D centres worldwide, and in the UK as well (AV_M2)”.
	Technology support	Supporting and helping parties	“One of AV’s real qualities is that, we don't let customers or partners, we don't hang people out to dry, and we'd always try and fix that issue even in the cases that the party got into trouble and couldn't fix the issue by themselves. We would probably have ended up going into help (AV_M1).”
	Knowledge sharing	Education and training	“We have to educate and incentivise these (AV’s) partners. Lots of it is down to education. The sales people in this channel, we have to train them just as we train our own sales team. Lots of it come down to enablement that’s providing pre-sells training, sells training, so these people in the re-sellers can go out and tell the story (AV_M1)”.

7.2.4.1 Price, Range, Quality and Reliability of Technology

In the enterprise market, general differentiation from the competition relies on a number of parameters, which according to Comp_M1 are “the quality technology (products), and obviously the level of profitability you offer to them (partners), and at the end of the day, they buy from you because they want to make money” (Comp_M1). The findings suggest AV’s technology (their products) is pioneered around this philosophy with an added range of products confirmed by AV_M1, CP1_M, CP6_M_CA, Cust2_M_CA and Cust3_M_CA.

AV_M1 highlighted their strategy on pricing, portfolio and quality of their technology products “We do that is by offering them (partners) better pricing, may be a lower cost to be a AlphaVendor reseller that is to be our competitors re-seller. We give them access to much broader range of product” (AV_M1). He also noted that AV acts more flexibly than some of the bigger established vendors in the market. AV offers discounts on its products, whereas for its competitors, “it’s more tightly controlled in terms of discounts. We tend to work on just at the upfront margin at the moment” (AV_M1).

This model is readily acknowledged by AV partners; all of the participants accepted that the price, quality and portfolio of products are differentiators:

> AlphaVendor is the only vendor who has a portfolio that address all those different product pillars. It’s very comprehensive that enable us and our channel partners to make healthier margin and we are not in a back log in a saturated market against like other competitor vendor. (PDist_M)

CP1_M, CP2_M, CP3_M, CP5_M and Cust3_M_CA agreed that the price, quality and range of products do differentiate AV from competitors. From the perspective of end users, Cust1 noted, “good technology, significant service support function in the UK, strong presence in the marketplace and economic to do so” (Cust1_M).

CP1_M recalled his experience of the reliability of AV technology; his company created data centre solutions for AV and competitors’ products:

> ABC (not the real name; competitors’ products) had an engineer called three times because, it failed and after the third time they gave up. AV product units are still there in 8 years. Because, it has got ability to grow and expand performance in that box, such future proof, they've done that with the career design. So technology is wonderful.

CP3_M readily agree that AV would be able to supply technology of an equal standing in terms of "its performances and reliability" (CP3_M), although it is much more aggressive on pricing, allowing channel partners to retain margins.

Likewise, AV_M2 highlighted the product portfolio a number of times during the interview, saying:

> I would not say that we are one-stop shop for everything, we are close to being an one-stop shop to everything but we provide IT solutions in the market place and we are just getting customers on board and convincing customers that we are the real deal.

According to CP5_M, AV can provide full end-to-end solutions, because they manufacture everything themselves. AV's customers, e.g. Cust2 and Cust3, confirmed this. AV_M2 highlighted the quality of AV technology as "is second to none". CP2_M confirmed this claim "AlphaVendor with a range of quality products that we tried and bought a few and showing to our customers and they did It exactly what it said" (CP2_M).

7.2.4.2 Collective IT Capability

The collective IT capability of an alliance was found to be at the heart of AV's value co-creation. It is found that AV's core strength is the *IT research and development (R&D)* team, as CP1_M confirmed:

> Competitor, for example would go selling- I've got this product look in to this, this is brilliant. It has these features you want this, you need this. So, I'm trying to sell it to them. AlphaVendor did this- what you want, you write down what you want, we will go away with our R&D guys, If we haven't got it we'll build it for you!

AV_M1 agreed:

> AlphaVendor has such a big R&D engine. It is able to customise things for partners and customers when it comes up and it is able to fix issues very quickly, if we need to get our R&D involved and that's been seen a big benefit to all of our partners and customers.

In an AV alliance, distributor strength involves their resourcefulness in various tasks such as pre-sales support, solution architecture, pre-run concepts (running a test to make sure it does what the customer is expecting), site surveys, help in the service cycle, implementation, 24/7 support centre, remote monitoring service, etc. PDist_M commented on their strengths: "what we are trying to do is, create a suite of services offerings to underpin the hardware and the software that we are actually selling to the customer" (PDist_M).

As AV goes through the channel to sell products, PDist_M further elaborated "they (AV) don't want to own that (channel partner) relationship directly themselves, because that is a phenomenal amount of work and to maintain that" (PDist_M). Thus, having that distribution level in the middle to manage the partner relationship make the processes run more smoothly and is really valuable for AV.

Most of AV channel partners are smaller companies which do not have their own technical teams. The distributor complements their resources to strengthen the alliance's IT capability, as PDist_M confirmed:

> They (channel partners) can use technical expertise that we have, lot of partners are smaller and new to AlphaVendor. So they are just embarking on that journey and they don't have skills in-house. So, they need us to provide those skills.

In return, as AV and the distributor do not engage with end-customer directly, it is the channel partners who bring business to the alliance, as confirmed by AV_M1, PDist_M and CP3_M. Therefore, there is resource compatibility between all actors in the alliance, their collective capabilities allowing them to co-create value.

7.2.4.3 Technology Support

Another technology-related factor found to be key in the VCC alliance is provision of support from the alliance actors in their co-creation activities. AV_M1 noted that supporting partners is a key, as the partners want to know that when something goes wrong AV will be on hand with the infrastructure to support them.

From the distribution partnership perspective, PDist_M confirmed that AV are very good at supporting distributors in addressing various issues; she noted: "They (AV) will not stand by unconcerned. They absolutely, particularly, the supply-chain team, is well" (PDist_M). From the channel partner perspective, CP3_M said: "I do really like about them (AV) is that there willingness to really sort of get behind the partners and support them" (CP3_M).

CP4_M highlighted the support availability of support from AV:

> They (AV) give us a lot of attention, lot of support, so when we have a problem, they can put people in it, when we're trying to devise a solution for particular client, they will give us technical resource to help to design the solution. There's a lot of practical and we have access to their people as well.

Channel partners also need support from the distributor, PDist_M stressed the availability of such supports, through pre-sales support, information for the tender, 24/7 support centre, remote monitoring service, and access to technical expertise, she noted:

> We can help them (channel partners) with things like getting support calls sorted and addressing any problems they have and also from the start perspective, we can make it easier for the partners to deliver product to their customer in a faster way.

Channel partners, CP2 and CP3 confirmed the efforts of the distributor; as CP3_M noted, "PDist put a lot of effort and built investments in terms of making sure they've got some really good pre-sales people in their business. So that they are really good" (CP3_M).

7.2.4.4 Knowledge Sharing

Since AV's products are more technical and evolve around new technology such as the Cloud, it has created an academy programme through which to provide its partners with the requisite skills. AV has several knowledge transfer programmes, such as online forum, partner portal, channel conferences and through other joint activities. The academy programmes are seen as bridging the gap between partners' knowledge and AV products, a view is confirmed by AV_M1 and TA_M.

AV's academy programme ranges from general technology sales training to the complicated network, storage, security and cloud technology trainings conducted through online and class-room based teaching. These programmes are not only limited to AV channel partners, but also available to university students:

> Our value add is around our Academy program. So the Academy program is something we provide to all our education to our customers free of charge. So it is a way of offering not only the staffs but also the students a qualification when they leave education. So it is the course any single students can take via AlphaVendor equipment. (AV_M2)

TA_M readily agreed that students from their institution can take various courses on AV equipment for free, and that the academy also meets partners' training needs. If any of new firm (channel partners) wants to join the AV channel, it is required to go through the academy programme to meet membership criteria, gaining the skills required and knowledge of AV products and services.

The academy programme thus ensures channel partners' certification and quality, allowing partners to join the AV product ecosystem and co-create value with them, as confirmed by AV_M1, AV_M2, TA_M, PDist_M, and CP2_M.

The next section presents the effect of actors' power and political behaviours in alliance.

7.2.5 Power and Politics Conditions

The case study revealed two particular power and politics practices of actors in the enterprise market:

- Conflicts of interest between alliance partners
- Status differences between alliance partners.

Table 7.5 presents the codes and themes used to generate these two constructs. The following section presents these two findings in detail.

Table 7.5 Codes and themes identified from data for power and politics and opportunism

Construct	***Level 1 Codes***	***Example of Level 2 Codes***	***Themes example***
Power and Politics	Conflict of interest	Approaching customer	“There will only be more complex throughout the year when our channel partner talking to a customer about a solution services. But, then the distributor has also been talking to the customer about their range of services. It’s a problem that's not going to go away (CP2_M)”
	Status differences	Big partner-small partner	“Particularly like Vendor X (AV’s competitor) they're very arrogant. Unless you're one of them really big partners is that kind of thing that people should buy Vendor X because it’s Vendor X. Not because for any other reason, it is very difficult to deal with. They don't support you. And one of my key customers he is turned off by Vendor X and doesn't really want to buy a Vendor X anymore ; very well-known company (CP3_M)
Opportunism	Strong-form	Contracts not fulfilled	“We have a particular customer at the moment that got very large project which we trying to win, but something else that we previously sold to them, which is totally unrelated to this particular project isn't working as expected. And as a result, that is creating some level of problem. And the reason why he's not doing it is expected, because the particular Vendor had us no support and don't want to support. So we try to fix what is actually ultimately not our problem. So in order to facilitate out of the deal (CP3_M)”.
	Soft-form	Terminating unwritten commitments/dishonouring oral promises	“When the Vendor will have marketing leads that they distribute to a Partner. The Partner goes- Oh that is a nice lead, I think actually we might do better with another Vendor and they do take it somewhere else (CP3_M)”
	Strong-soft forms	Marketing development fund	“There's a lot of people that sign up to be a partner try to apply to take marketing funds and never deliver anything (CP2_M)”

7.2.5.1 Conflicts of Interest between Alliance Partners

Respondents AV_M1, Comp_M1, PDist_M, and CP1_M all confirmed instances of various conflicts between alliance actors. A participant from AV acknowledged the conflict between alliance partners in enterprise business, noting:

> As the business increases, they (partners) see the value of doing it by themselves. A lot of challenges around managing conflict because you got a lot of resellers out there potentially selling it to the same customers. All of them would say that they have the best relationship with the customer, they have found the opportunity, and therefore, it should be theirs to own. (AV_M1)

Therefore, he considered that the biggest challenges are managing any conflict and making sure that the partners have got good coverage across the market.

One of such conflicts in the AV channel ecosystems was found around-"who should approach to customer". The vendor going directly to the customer without including partners, causes problems as PDist_M confirmed: "I suppose when there were times when AV have gone directly communicating with our customers without including us, only included us later, caused problem (PDist_M)".

CP1_M agreed: "AlphaVendor still have mind-set that they straight talk to the end users and that has been a consistent challenge" (CP1_M). Such practices undermine the overall enterprise business model of selling through partners.

The other conflicts between alliance actors were found to be concern "who provides service". All three actors: vendor, distributor and channel partners, were found to be fighting to provide the same services to the end user. As PDist_M claimed:

> we are a certified services provider, and there's a bit confusion around when we should be promoting our services or when AlphaVendor should be promoting their services, but obviously, we put a significant investment in becoming a services partner, so we would want to take a lead on that.

Conversely, CP2_M noted from the channel partners' perspective that "distributors should not be selling to end users, but they are selling services to end users. And for us (channel partner) as a service company that's conflict" (CP2_M).

However, PDist_M's views on their future plan revealed that they are increasingly moving towards providing services and service is their "big focus". The vendor also wants the distributor to develop competence in selling solutions, not just shifting a box from vendor to channel; this view was confirmed by Comp_M2. This illustrates the doubt and fear of CP2_M that this kind of problem will remain and will result in more conflicts over time, as there is a limited number of distributors, whose margins are low, focusing on various vendors. However, there is a much larger number of channel partners.

PDist_M confirmed that “one of the things we are looking at do on the process of training is to become an authorised training centre for AlphaVendor” (PDist_M). If this happens, the existing training providers, *such as TA*, would have to compete with PDist_M and would lose some of their business, so there is an element of conflict of business between PDist_M and training providers.

PDist_M also explained the situations where she experienced conflicts with their channel partners:

> Only, if we give them disappointing information. We can’t meet a particular deadline, for example. Or, we are slow to process and order or something like that or we don’t respond to every question, quickly enough. Then absolutely, conflict there.

Along similar lines, CP4_M noted that it’s all normal business practices that can lead to conflicts: “bad communication, changing priorities that happens in a business especially as you get near the financial year end, priority change, and focus changes depending on how well the business has performed up to that point” (CP4_M). To heal such conflicts, PDist_M explained that the clear service level agreements (SLAs), setting realistic expectations and improving communications are crucial.

7.2.5.2 Status Differences between Alliance Partners

The case study revealed the differences between large and small (in terms of their organisational size) partners affecting value co-creation, confirmed by CP1_M, CP4_M and CP5_M. CP1_M, for example, experienced AV favouring big partners, he noted:

> They (AlphaVendor) felt we were too small to serve that market and just in terms of overall size, so they went to these guys (other partner) because, they thought they would drive volume.

CP5_M readily confirmed that the size differences inhibited value co-creation:

> It is going to be quiet big challenges with these big vendors, like AlphaVendor, especially when you are smaller vendor like us. Because their mind set, so their focus is in always on the partnership, so there is kind of equal share based on your size.

CP1 and CP5 are small businesses, and their claims are partly supported by CP4, which is a large organisation with a global presence:

> Joint innovation labs, access to their (AlphaVendor) technology, they are very generous in terms of their space. So, if we want to bring clients to demonstrate it's always available to us. If we want to use their buildings for events things like that they will almost always make themselves available to us.

Such premium access to the vendor's resources for other partners is not available. In opposition to the belief of CP1_M and CP5_M, PDist_M emphasised that AV's focus is on small partners, although she accepted that status difference does exist with other vendors. She recalled her past experiences with other vendors: "small partners have commented on the past, their constant feedback, negative feedback was that they felt totally undervalued in favour of much bigger partners" (PDist_M). CP3_M, who is particularly new to AV channel, related his experience with other big venders, whose arrogant behaviour led to ending the business relationship.

The main reason behind status differences, according to CP1_M, is AV's mind-set; they think they are big (in terms of organisational size) and they should deal big. However, this according to CP1_M is self-harming; he claimed that big partners do not work proactively to develop business, which ultimately harms AV business.

The next section describes actors' opportunistic behaviours and its effect on value co-creation.

7.2.6 Actors' Opportunistic Behaviour

The case study revealed the practice of both *strong and weak form of opportunism* in the enterprise market, presented in Table 7.5. The actors' opportunistic behaviour is not only limited to AV and its partners. Participants experienced several incidents related to such behaviours with AV, other vendors, distributors and partners in the enterprise market. One such instance, common to most actors, is with the Marketing Development Fund (MDF).

7.2.6.1 Opportunism in Marketing Development Fund

This fund is invaluable in promoting products and driving the vendor forward. However, it was found to be the prime example of opportunism, both strong and weak, as participants confirmed the funds were misused. AV_M1 confirmed this:

> There have been occasions where those funds have been misused. Sometimes that's just gone directly to the company's bottom line as a way of making extra profit on a deal or over the course of the year.

He provides further examples of such misuse, such as a partner not spending all the money allocated, but retaining the balance. Or there might be expectations that AV will work with partner A, but partner A is negotiating with three different vendors, competitors, at the same time. Failure to conclude a deal is frustrating for the vendor and sometimes for the partners. AV’s competitor also confirmed this behaviour of partners: “Of course, they (partners) do. It is something called creative use of MDF” (Comp_M1).

The partner firms who had worked in the UK enterprise market for more than two decades confirmed that there are indeed such practices: “there's a lot of people that sign up to be a partner try to apply to take marketing funds and never deliver anything” (CP2_M). CP3_M agreed:

> Unfortunately that can be abused, I worked for a vendor for a few years. So I was on the other side of it of course. So I understand how these things work and you get a lot of applications and all of that rubbish.

Other partners indicated that it might be the vendor organisation which is involved in opportunistic behaviours, agreeing to provide MDF initially but not delivering on time or even at all. “When it was time for them (Vendor) to start delivering some activity and some MDF to support that, it turned into a long process” (CP5_M). CP5_M also pointed to changes of management or policies in the vendor organisation contributing to delay or failure to process MDF.

Another partner, CP1_M, agreed that half the time they did not receive marketing funds from the vendor, even if they had completed every processes. CP2_M had a similar experience with MDF: “5-10 years ago the money was quite forthcoming, and that's become a lot more challenging now” (He further explained the reason), “The I.T. World is changing, nobody wants to give Marketing money away because people had their fingers burnt by giving money away and having no reward or no revenue back from MDF funding” (CP2_M).

From the PDist_M perspective, it is normal to cut MDF, because the trend in the market is more profit focused; nevertheless, PDist_M indicated the possible consequences of not having enough marketing resources to attract more channel partners to promote AV, and to beat the competition: “If that Channel Partner can’t go to the internet and sign up as the partner easily, find the information they need, and track the marketing funding etc. then it all falls down” (PDist_M).

7.2.6.2 Instances of Strong-form Opportunism

CP3_M noted two instances of strong-form opportunism that he had experienced with other vendors and distributors, explaining the results of the distributor's opportunistic behaviours:

> Unfortunately, I have been involved in a company that went into liquidation because, the support withdrawn from a credit line point of view. Credit line withdraw and it became very difficult to be able to trade, as a result the business had to go to.

He further expressed his on-going difficulties to win the contract for a major project with an existing customer. He sold a vendor's products to the customer, but the customer was dissatisfied due to the lack of vendor support. Even though CP3_M's firm was not responsible for providing support, it had difficulty wining another contract from that customer because of the vendor's violation of the contractual norm.

7.2.6.3 Instances of Soft-form Opportunism

The case study also revealed many other forms of soft opportunism such as the *misrepresentation of party's own ability* as experienced by AV_M1, PDist_M, CP2_M, CP3_M, and CP4_M. The respondents also noted that this was not limited to AV and its partners, but applied to other vendors and partners in the enterprise market. PDist_M shared her experience:

> Sales representative go to the customer and say- yes, of course, we can get you 90% discount, and then partner would come to us and say we promised that we could get this level of discount and then we can't do it, and that reflects badly on us.

CP2_M pointed out that such instances happens on both sides; both vendor and channel partners make promises which they cannot deliver. Such behaviour is not necessarily intentional however; CP4_M observed instances with a new product or solution development, where something goes wrong, and the firm could not deliver on time or within budget. From the vendor's perspective (AV_M1), their partners' misrepresentation tends to result from overstating their capability as confirmed.

Another category of factors that emerged as a form of soft opportunism is *terminating unwritten commitments or dishonouring oral promises*, a view was confirmed by CP1_M about vendors: "We would do work on a project, we provide demo, provide support with quotations and eventually come up with the opportunity. But, another partner will be told, they will to supply the deal" (CP1_M).

Such behaviour is not limited to vendor organisations, as channel partners are also involved in such practices, according to CP3. Other examples include *lack of honesty* (PDist_M), *overcharging/not* *giving the right service* (CP3_M), and *promises made on behalf of other party* (PDist_M). AV_M1, however, emphasised that such practices are occupational and minor in the enterprise market.

It is also emerged that actors' opportunistic behaviour is also influenced by the fact that they are under immense pressure to win business, and to maintain a certain level of profit (AV_M1 and PDist_M). Such behaviours, according to CP3_M, could result from not believing on the vendor's brand, or the actors' greed. Comp_M1, asserted that:

> These (Partners) are companies of any size, which do business with you (Vendor) in order to make money. So, whichever mechanism to make money is good to them.

The outcome of such behaviours is long term, according to AV_M1: "Ultimately it will come back to bite you". CP3_M and Comp_M1 readily agreed with this, Comp_M1 elaborating: "When we realise, then first thing that happen is obviously the contract is terminated and then we take all the possible ways to defend our own locality, IP and whatever it is" (Comp_M1).

Next section presents actors' challenges in the hardware enterprise market.

7.2.7 Challenges in Enterprise Market

In addition to the four constructs discussed above, the case study revealed various challenges to the AV alliance in the enterprise market, as presented in Table 7.6.

- AlphaVendor's organisational culture
- Customer trust and brand awareness
- New technology and new business models
- Transferring knowledge to partners
- Motivating partners, and
- Miscellaneous: Portfolio, Solutions and Perceptions.

7.2.7.1 AV's Organisation Culture as a Challenge

AV_M1 defined their organisational culture as how they go about their work, which he claimed is *customer centric*; he noted that "we're very persistent and we're very, we persevere in projects and we always aim to deliver quicker and better than our competitors (AV_M1)". Some of the partners, however, found AV's organisational culture a challenge to co-creating value. CP5_M, for example, explained that their company is very agile; however, big companies like AV take longer to make decisions: “what makes it very difficult for us to partner, because, we want them to do things very quickly” (CP5_M). CP2_M also experienced time delay on some of the decisions, but, he noted “they have got better off on us” (CP2_M).

PDist_M also noted improvement in decision making and processing efficiency in recent times but accepted that “there are many challenges, but, then that comes up with them (AV) relatively new here” (PDist_M). CP3_M recalled his experience with AV, that there was no perception that things should happen quickly, with a rapid decision of ‘Yes’ or ‘No’; however, sales cycles in the UK market can takes months, because due diligence must be carefully considered. CP4_M asserted that “culture is the first challenge” for AV, because, it is comparatively new to the UK market in comparisons to other established vendors. He noted that it takes time to adapt and understand the UK enterprise market and develop their strategy, as they are learning how to approach partners, and partners are also learning how to approach them.

Table 7.6 Challenges to AV Alliance actors

Theme	Theme example	Affected party
Organisational culture	"They're learning as well as we're learning with them that they've had to learn how to approach us, and I think they're getting better (CP4_M)."	Vendor, Distributor, Channel Partners
Customer trust and brand awareness	"I think there are couple of things and normally that is about the relationships and when you are new to market place do they trust you! The issue AV has probably in the UK is we are quite new to the market in the UK and so we are not as popular as in comparison to competitors (AV_M2)"	Vendor, Distributor, Channel Partners
New technology and new business models	"Born in the cloud' partner would aggregate cloud services by pulling some resources from Azure, other from Amazon Web Services or and some other stuff from Salesforce, none of that needs infrastructure from AV. As AV wants to sell infrastructure to cloud provider to run their applications in it, but, 'born in the cloud' scenario it is very difficult to work with those partners (AV_M1)"	Vendor, Distributor, Channel Partners
Transferring knowledge to partners	"The challenge for us is how we enable our partners to understand our products, and transfer our knowledge to configure, manage and sell them. AV biggest challenge is the sheer breadth of product range that we've got. We simply don't have the resources to train everybody on everything and it wouldn't make sense to do so (AV_M1)"	Vendor, Distributor
Motivating partners	"The most common problem that every vendor has with its channel is how can I make sure my channel is loyal to me, that they favour my solution verses the competition (Comp_M1)"	Vendor, Distributor
Miscellaneous	"Every customer down the bottom chain always wants to speak higher because of perception of If I speak to someone above I get it cheaper; that's the biggest challenge to the retailers and distributors always have to demonstrate what their value is (CP1_M)"	Distributor, Channel Partners

7.2.7.2 Customer Trust and Brand Awareness

As AV is comparatively new to the enterprise market, respondents raised the issue of trust and brand awareness (AV_M2, PDist_M, CP1_M, CP2_M and CP5_M). PDist_M noted that:

> The major issues that they (AV) have really is brand awareness and trust, they need to address that trust with users. But also, the channel trusting them to making decision and stick to the decision.

This view is confirmed by CP1_M: "AlphaVendor is difficult to sell. ABC (pseudonym; competitor) is very easy to sell)" (CP1_M). CP2_M added that IT managers and CIOs may have heard of the name AV "but, still don't understand what they do in enterprise marketplace" (CP2_M).

Being new to the market, AV also struggles to expand its partnership with well-established and resourceful firms, and treated like existing competitor vendors according to AV_M1.

7.2.7.3 New Technology and New Business Models

This challenge comes from the new technology and new business model. For example, with the introduction of cloud computing, 'born in the cloud' firms do not buy infrastructure from the enterprise vendors, reducing the business opportunity for companies like AV. Creating products and services suitable for these young 'born in the cloud' firms is a challenge, according to AV_M1.

The new business models, cloud and IOT are also putting distributors at risk, according to Comp_M1 and Comp_M2, because, "if you buy as a service, there is no need for inventory, and if you pay per use, there is no need for finance" (Comp_M1). Comp_M2 noted that "If distributors are suffering we (vendor) are suffering". Thus, vendors are also affected by the new trend.

These trends are also a challenge for channel partners. Those who focus on one-off project business, i.e. CAPEX (capital expenditure), are struggling to compete with 'born in the cloud' partners that focus on OPEX (operating expense), i.e. providing service on a monthly or annual subscription basis (AV_M1 and CP2_M). The channel partners have to shift their organisational model to work differently to compete with 'born in the cloud' partners.

7.2.7.3 Transferring knowledge to Partners

The findings suggested that vendors also struggle with transferring knowledge to their partners. As AV has a range of products, creating and delivering comprehensive training is challenging (AV_M1); see Table 7.6. The distributor also highlighted partners' lack of skills as a challenge:

> We have certain partners who say they want to be skilled, but won't invest and therefore, they lean very heavily on our team to do everything for them. So, they do use lots of resource and don't necessarily win the business. (PDist_M)

7.2.7.4 Motivating Partners

The other challenge found to be related to the overall enterprise business model design. As vendors go to market only through channels, they struggle to motivate their partners to bring business on a continuing basis. As vendor-partner agreement is not exclusive either way, partners are free to sell the products of any vendors.

Making the partners loyal and motivating them to sell specific vendor products is a constant challenge according to AV_M1, Comp_M1 and Comp_M2. Comp_M2 asked "How do we get enough attention form distributor on to our focus areas is a challenges" (Comp_M2). The distributor also found this to be challenging:

> What we don't want is someone doing one lumpy project with us and going away. What we want is the partner who believe in us enough that they keep bringing us back repeat business. (PDist_M)

7.2.7.5 Miscellaneous: Portfolio, Solutions and Perceptions

The partner firms (CP1, CP2 and CP3) also raised a challenge associated with the vendor's approach of selling an IT product, whereas, their "customers are looking for a solution" (CP2_M). CP2_M explained that most vendors in the enterprise market are interested in the product, but partners also need their (Vendor's) expertise and support to create and deliver the solutions, and it is sometimes difficult to convince them of this.

Software and hardware go together in finding solutions for customers. Interoperability certification from big ISVs removes risk and increases credibility amongst customers. However, PDist_M and CP5_M raised a challenge from the vendor's side, the lack of focus on ecosystems development to bring big ISVs into AV channel ecosystem.

However, AV_M1 noted: “from a customer's perspective and a partner perspective it's really important for them to see that AlphaVendor being endorsed by those big players in the market” (AV_M1). Although AV does have an alliance and ecosystem development team in its global and European offices that works to develop its ecosystem and ensures interoperability of its products with other companies, he agreed that: “definitely that will happen as we grow and as we develop” (AV_M1).

CP1_M highlighted the challenge of managing and convincing customers of “If I speak to someone above I get it cheaper” in the enterprise market is a challenge. PDist_M, CP2_M and CP3_M noted that distributors runs on tight margins and therefore do not want to see too many competitors; they only want to see vendor signing up to distributors, because there's no value; the margins would be too small when many competing. CP3_M further highlighted a challenge to distributors who “have wide portfolio of products; their skills and their knowledge base might be somewhat diluted” (CP3_M). The challenge is to concentrate on building their base, their pre-sales and supports.

The next section summarises the findings from the case study.

7.2.8 Summary of the Findings

The case study examination of AV sells channel ecosystem found a business model that requires the collaboration of three different parties: vendor, distributor and channel partner to create value for customers. While creating value for customers, they also have the opportunity to co-create value as they complement one another in the ecosystems.

It was found that, while co-creating value, alliance governance mechanisms and AV’s technology-related collective strength enable a co-creation, whereas, actors’ practice of power and politics and opportunistic behaviours inhibit value co-creation. Many challenges to the actors in co-creating value were identified. The Figure 7.2 summarises the findings from the case study. The next section presents discussions and implications of the findings.

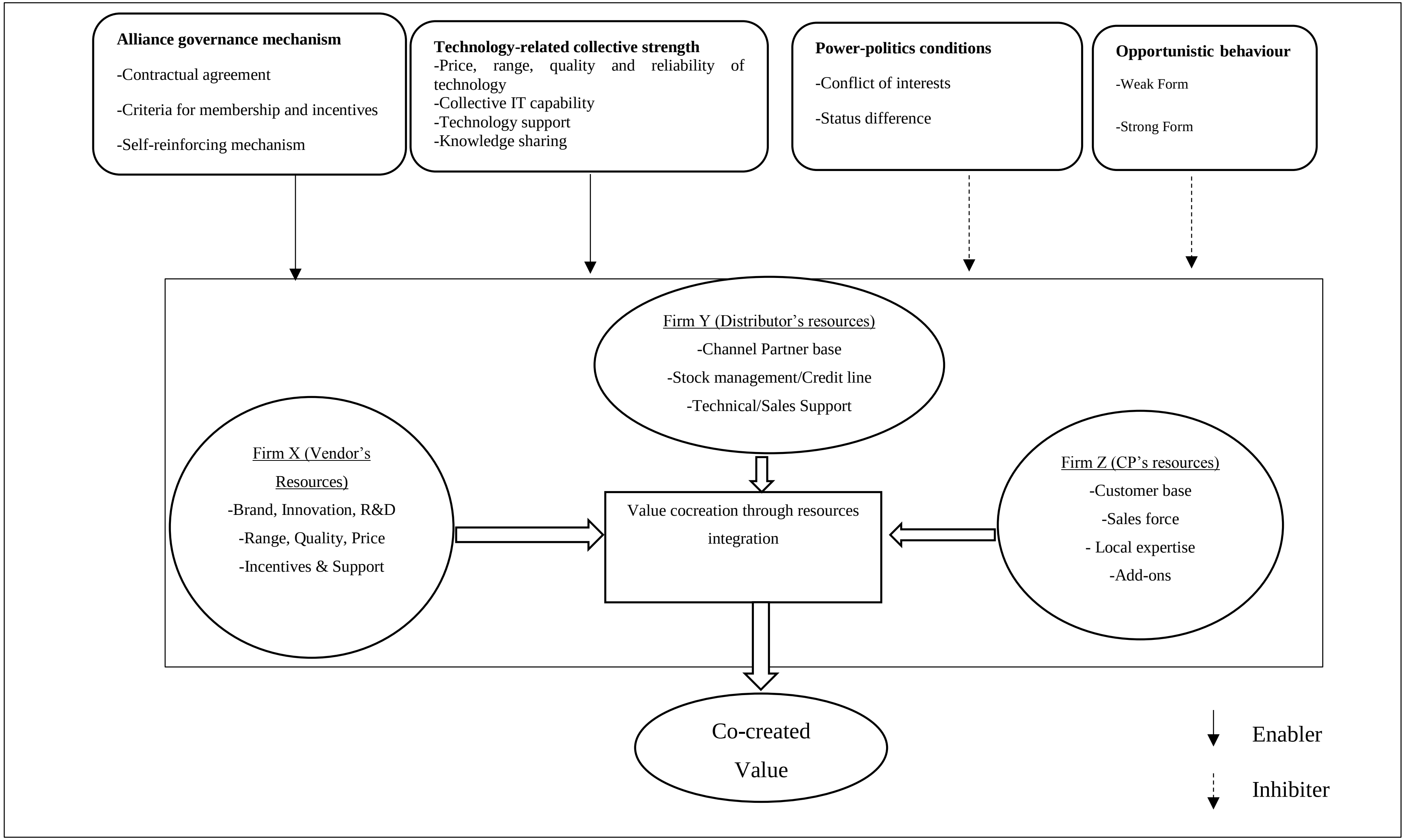

Figure 7.2 Revised Framework of Factors Affecting Value Co-creation in Alliance

7.3 Discussion and Implications of the Findings

This study explored how the business model of a hardware enterprise business co-create value, a left unanswered in the value co-creation literature. Although previous research (e.g. Sarker et al., 2012), went on to discover mechanisms that enable and inhibit value co-creation practices in alliances, the current study identified the structure of the vendor-partner mechanism in a broader scope. While exploring this research avenue through a case study it was revealed that the hardware vendor organisation creates a B2B alliance with partner organisations to deliver products and services to customers. The study went to discover how resource sharing works in the enterprise business, and its contribution as well as a reward mechanism attracting partner organisations to join the alliance, thereby initiating co-creation of value.

Study 2 also addressed a significant predicament, particularly in the ICT enterprise market where the vendor-partner relationship prevails, in that both sets of actors reported satisfaction and dissatisfaction with each other's performance. This study presented both the outcome of "satisfaction and dissatisfaction" situations, first where the provision of value co-creation is enabled by alliance governance mechanisms and technology-related collective strengths. Secondly, in the dissatisfaction situation, value co-creation is inhibited by actors' power and political and opportunistic behaviours leading to co-destruction of value, e.g. a lose-lose outcome.

The AV case study also explored the co-creation of hardware solutions in the ICT sector, highlighting how a vendor-distributor-partner alliance can be an effective way to develop, sell, and implement hardware ICT solutions for customers. The section below presents the implications of study 2 in details; the Figure 7.2 summarises the overall findings of O&P context as depicted in the FAVCA framework.

7.3.1 Alliance Governance Mechanism

AlphaVendor's use of the *tiering* approach to partnership, where the distributor as a Tier 1 partner and channel partners in Tier 2 has two important functions; it reduces coordinative complexity and serves as a motivational mechanism (Gulati et al., 2012). The study found several contractual agreements, e.g. NDAs, which protect the relationship between vendor and partners, as highlighted in the literature (e.g. Gulati, 1998; Dacin et al., 2007) to manage uncertainty in the alliance. This view is similar to the findings of Sarker et al. (2012), who put forward the idea that contractual agreements help protect against opportunism and help facilitate value co-creation. The idea of contractual agreement to govern the alliance is similar to Leclercq et al.’s (2016: 37) *hierarchical mechanism*, which is based on rules and structure.

The findings also reported a *teaming agreement* as a basis for loosely coupled situations, where partners join a channel ecosystem for specific opportunities. Although this is similar to the argument of Sarker et al. (2012) that a contractual agreement enables value co-creation, this study illustrated through the case study how this instrument, the teaming agreement, can handle loosely coupled situations in the enterprise market.

Criterial for membership and provision of incentives were also found to be useful in attracting partners, protecting the quality of the brand in the marketplace and as strong instruments to minimise partners’ opportunistic behaviours. Designing the right incentives structure is a necessary condition for strategic alliance success (Khanna et al., 1998). Strict requirements for membership, however, adds an additional resource burden to the partner firm; it was highlighted by Kolbjornsrud (2017) that membership restrictions are useful to regulate admission to the collaborative community. This study, however, emphasised such implications for the enterprise market with reference to how such provisions for membership can protect the vendor brand in the marketplace.

The case study findings reported the role of a *self-reinforcing mechanism* to facilitate value co-creation: substantial trust, relationship and support from the vendor allowing the AV channel ecosystem to flourish. The finding is similar to that of Sarker et al. (2012), who reported the importance of a self-reinforcing mechanism to co-create value between a software firm and its partner. The current study, with its focus on the enterprise IT market, has similar findings in terms of a relational governance mechanism allowing value co-creation; it also confirm the findings of Capaldo (2014) Leclercq et al. (2016). The current findings, however, emphasise specific instances (e.g. the vendor/distributor protecting the price for a certain time to allow partners to sell solutions), where trust between actors plays a key role in reducing bureaucratic complexity (Park and Ungson, 2000). The next section presents technology-related collective strengths.

7.3.2 Technology-Related Collective Strength

As discussed in the literature reviews, the service literature emphasises the importance of “technology becoming a critical resource for value co-creation, service innovation and systems (re)formation” (Akaka and Vargo, 2013: n. p.). The case study findings report the role of technology at the forefront of the AV alliance, as its collective strengths are described around its own technologies:

- Price, range, quality and reliability of technology

- Collective IT capability
- Technology support
- Knowledge sharing.

These key strengths around AV technology supports the argument that collective strength related to technology factors will have an important role in the outcome of the vendor-partner relationship (Blodgett, 1991; Gulati et al., 2012; Sarker et al., 2012; Fjeldstad et al., 2012).

The study by Sarker et al. (2012) suggested vendor and partners' know-how, functionality and simplicity of the tech product, its support functions, knowledge transfer and the fit between the vendor and partner contributing to enable value co-creation in small-medium software partnerships. The current findings are similar to Sarker's in terms of reliability, scalability, technology support and knowledge sharing.

This study, however, has also identified and demonstrated that one of the key technology strengths of the AV alliance is around its product range, price, quality and the strength of its R&D team. Such IT capabilities can deliver greater value for all actors involved in alliance. This findings also supports one aspect of another study (Lioukas et al., 2016) that better IT capabilities can deliver better value from an alliance in a non-equity governance structure. This supports the argument that one of the reasons behind AV's market growth may be its collective IT strengths.

Another category, knowledge transfer through the academy programme, also indicates AV's ambition to go beyond its sales channel to create a wider ecosystems around its products. Reaching and influencing a wider range of stakeholders through the academy programme can attract more actors (students, through free courses) to its ecosystem. Such initiatives can create stronger brands and challenges competitors. This demonstrates AV's approach to the use of operant resources such as academic programmes to achieve strategic benefits (cf. Vargo and Lusch, 2008: 2016).

The following section discusses power and politics in the alliance in relation to value co-creation.

7.3.3 Power and Politics Conditions

Exercising power and politics in the alliance were found to affect value co-creation, confirming previous studies (e.g. Park and Ungson, 2001; Agarwal et al., 2010; Sarker et al., 2012; Christoffersen, 2013; Hauff et al., 2014; Huntgeburth et al., 2015; Laamanen and Skalen, 2015) on conflicts of interest between alliance which can hinder value creation in alliance. This study, however, emphasised the different context of the research to demonstrate conflict and the conditions leading to the failure of value co-creation. Two specific conflicts of interest within the vendor-distributor-partner were found:

- Who should approach the customer in the enterprise market?
- Who provides service to end customers?

The vendor, as a big multinational company with significant resources, was found to be approaching end users and attempting to provide all services. The distributor, of a similar size and with sufficient resources, had tight margin in its business operations and was found to be encroaching on the service provider status to make more money and increase its market share. Channel partners, on the other hand, were comparatively small in size and with limited resources, and even with their strong presence in local and perhaps regional markets, they were struggling against the resources and power of the vendor-distributor and their all-encompassing service provider behaviour.

The vendor-distributor behaviour seems to undermine the overall enterprise business model of go-to-market through channel partners. This undermining exercise of power could inhibit value co-creation in the alliance, as indicated by Sarker et al. (2012). The result from the current study, of conflicting interests between alliance actors affecting value co-creation, confirms the Sarker et al. (2012) and Laamanen and Skalen (2015) findings although in a different context with many actors present in the enterprise market.

Status difference, i.e. the big firm-small firm dilemma reported in the case study, was found to be a source of conflict among alliance actors, again similar to the findings of Sarker et al. (2012). The differences between big-small partners demonstrated that strong partners tend to appropriate resources away from the disadvantaged party (Park and Ungson, 2001), and creating more conflict that can affect performance negatively (Christoffersen, 2013), fuel opportunism and reduce the alliance's ability to co-create value (Lacity and Willcocks, 1998; Sarker et al., 2012).

The next sections discusses the actors' opportunism affecting value co-creation.

7.3.4 Actors' Opportunistic Behaviour

The finding from the case study of *the various practices of both strong (e.g. withdrawing credit line),* and *weak form opportunism (e.g. dishonouring oral promises),* supports the argument of Williamson (1985) and Luo (2006) that alliance actors show opportunism, a troublesome behaviour which affects value co-creation. The findings reported several example of weak-form opportunism, similar to suggestions by Luo (2006), such as *misrepresentation of party's own ability*, which ultimately weakens the foundation for collaboration.

The proposition for value co-creation needs to be a win-win situation for all parties involved, as discussed in service science. However, opportunistic behaviour could results in win-lose results in the short-term, such as receiving MDF (win for partner) but not using it in the right place (lose for vendor). In the long-term, however, such behaviour could contribute to a lose-lose outcome for all parties, e.g. the vendor tightens or stops providing such funds to partners, as highlighted in the findings.

The study findings, *presence of opportunism*, is also consistent with the literature, suggesting the direction of the co-creation outcomes can also be negative and conflictual practices (Laamanen and Skalen, 2015). For any set of interactions, there is always scope for the coexistence of both value co-creation and value co-destruction (Prior and Marcos-Cuevas, 2016), and weak-form opportunism is one of the factors leading to the dark side of VCC (Chowdhury et al., 2016). The findings unearthed such claims by exploring *how actors' both strong- and weak-form opportunism contributes to negative outcomes* and conflicts in its overall impact on the channel ecosystem.

Although the study revealed evidences of actors' various opportunistic behaviours, the literature on their opportunism in the B2B co-creation is limited. This study therefore makes a contribution to the VCC literature by extending the understanding of the occurrence of such behavioural acts in the context of enterprise value co-creation. The findings support the argument that actors' troublesome behaviours play an important role in the generation of often-negative outcomes that can hamper the overall market and channel ecosystem in the long term, destroying relationships and the value creation capability of the alliance (Williamson, 1985; Luo, 2006).

In relation to the theory of SDL and service science, the findings agree that value is co-created by multiple actors (FP6), and a service-centred view is inherently beneficiary-oriented and relational (FP8) as the actors are interdependent and one actor dominating others can destroy value. This can ultimately result in the lose-lose outcome for all actors in the channel ecosystem. However, the actors' conflicting behaviours also indicate that value co-destruction can existed alongside value co-creation (cf. Prior and Marcos-Cuevas, 2016) in the enterprise market, and such opportunism is widely practised and multi-directional in vendor-distributor-partner interactions.

The following summarises the challenges to alliance VCC.

7.3.5 Challenges to Co-creation Value in Alliance

These challenges include a mismatch between organisational cultures, e.g. slow process, slow decision making, and lack of brand awareness reported as a result of AV being new to the UK market. As organisational culture is embedded and transmitted through processes and tools (Daymon, 2000) and referred to as “how we do things” (Zaheer et al., 2003: 185), it can influences cooperation (Murphy et al., 2013) and enable firms to achieve their objectives (Chatman et al., 2014).

A new alliance facing cultural challenges can be managed by developing partners’ capabilities; Luvison and de Man (2015: 1584) suggested that the proliferation of capability within a firm promotes cultural development: “firms develop their alliance capability they will also develop cultural values and assumptions that are more supportive of collaboration across its portfolio”. The interviewees confirmed that culture does not inhibit co-creation, and they have seen much improvement in processes and decision making over recent years, although there is still room for improvement.

The challenge to management of transferring knowledge to partners and motivating them is partly related to developing alliance capability and culture (cf. Luvison and de Man, 2015). It is from this fact that a well-developed structure and processes facilitate coordination (Gulati et al., 2012; Chatman et al., 2014). A structure such as *effective governance capability* can incentivise learning and knowledge sharing. Sharing of IT-based developmental skills, for example, can spawn ideas for innovations (Grover and Kohli, 2012: 229). To motivate partners, designing incentives in addition to monetary benefit, such as privileged access to information or involvement in important decisions, may be advisable (Gulati et al., 2012).

It is also reported that technology such as cloud computing and new business models such as service selling (OPEX) instead of product selling (CAPEX) is a huge challenge for some distributors and channel partners in the enterprise market. There is the possibility that in future a vendor can provide customers with every solutions they need, as is seen in many ‘born in the cloud’ firms, although this needs huge resources. It could also be opportunity for distributor and channel partners to become cloud firms to remain in the market.

This supports the recent study of Clohessy et al. (2017) which suggests that new technology such as cloud computing may work as an inhibitor for IT service providers and increase the complexity of their business models; however, they also argue that “cloud technology provides IT service provider both business operational value and economic value benefits previously not afforded to them in the traditional mode of IT service provision” (Clohessy et al., 2017: 14). This suggests that business model innovation is an option for those affected by new technology trends.

The next section presents implications for the FAVCA framework.

7.4 The Implications of Framework of Factors Affecting Value Co-creation in Alliance

Building on the theory of Williamson (1985), Sarker et al. (2012), Laamanen and Skalen (2015) and Chowdhary et al. (2016), and grounded empirically in the AV case study, the study devised the FAVCA framework. Depicted in Figure 7.2, it shows that the alliance actors' (vendor, distributor and channel partners) co-creation activities is enabled by their *alliance governance mechanism* and *technology-related collective strengths*, resulting in value co-creation. However, their co-creation activities are inhibited by alliance actors exercising *power and politics* and *opportunistic behaviours*, which can lead to value co-destruction.

The FAVCA framework in relation to the definition of value co-creation, shows that *VCC as an active, creative and social interaction process based on the need or desire of actors* is enabled by *governance mechanisms* such as membership criteria to ensure quality and skills requirements for partners and incentives to attract them, and *technology-related collective strengths* such as R&D capability and intensive support to partners. Not understanding partners' needs or their desires, such as the intensive support required by partners can lead to failure of co-creation.

Similarly, the effort made by vendor-partners *to integrate their resources through participation in phases of product development, marketing and solution implementation* is affected by any or both of the actors' (vendor's, distributor or channel partner's) power and politics as well as opportunistic behaviours. For example, misuse of MDF by channel partners can have negative consequences for further collaboration between vendor-distributor-partner, i.e. no integration of resources, losing opportunities for co-creation. This shows that factors within the FAVCA are key to value co-creation (win-win) or to avoid value co-destruction (lose-lose).

Although the FAVCA framework can be highly adaptable in various contexts of co-creation with multi-actor settings, it does not capture the context of organisation-customer co-creation. As its focus is on the multi-actor context, it only captures the supply-side of the business activities and their context. The first study, COTE, captures the context of organisation-customer VCC.

In relations to theory, SDL and service science, for example, emphasised the positive outcome, i.e. value co-creation and win-win outcome. Until recently service theories incorporated conflictual and negative outcomes (e.g. Laamanen and Skalen, 2015). The FAVCA framework incorporates the possibility of both positive and negative outcomes. This theoretical departure towards the possibility of negative outcomes also incorporates transaction cost economics to service theories such that *firms seek to minimise economic transaction cost, actor show bounded rationality and opportunism* (Williamson, 1985).

In this regard, SDL FP6 proposes “Value is cocreated by multiple actors, always including the beneficiary (Vargo & Lusch 2016: 8). Given the instances of co-destruction behaviours in the case study findings, SDL should also incorporate how value might be destroyed: “Value is also co-destroyed by multiple actors”.

As discussed in AV case, instances of vendors’, distributors’ as well as channel partners’ practices of opportunism leading to co-destruction of value. This possibility was informed by TCE (cf. Williamson, 1985; Wathne and Heide, 2000; Luo, 2006). It is obvious that a destructive process will affect the recipient of any benefits. The rationale for this claim is that while SDL already incorporates who should co-create value, it should also include who can co-destroy value and how they can do it. This will open up wide avenues to research the effect of the conflictual side of value co-creation and demise strategies to avoid such conflicts.

Although there is a solid progression in the literature of SDL incorporating the conflictual perspective recently (e.g. Noordhoff et al., 2011: Echeverri and Skalen, 2011: Laamanen and Skalen, 2015; Prior and Marcos-Cuevas, 2016; Chowdhury et al., 2016; Farquhar and Robson, 2017), and development in evaluating SDL FPs (e.g. Vargo and Lusch 2004: 2008: 2016: Vargo et al., 2010; Gronrose, 2013; Oertzen et al., 2018), this study through the FAVCA framework presents stepping stones to such a departure by incorporating TCE in SDL and applying it in a unique case of the ICT enterprise market.

The next section summarises the chapter.

7.5 Summary of Chapter 7

The chapter presented the results of the case study examination, which considered enterprise business models, the actors involved, their contribution to alliance and the rewards they receive for their contribution. These actors co-create value through two factors; alliance governance and technology-related collective strengths. On the other hand, their power and politics and opportunistic behaviours were found to inhibit value co-creation. The findings also reported various challenges to alliance actors.

Analysis of the case study was considered to confirm the relevance of the FAVCA framework to effectively capture various factors relevant to co-creation practices in the O&P context. Its implications addressed research question 2 and research objectives 2a, 2b and 2c. Its relationship to existing theories, e.g. SDL, service science and TCE, was also discussed.

To this end, this chapter presents one of the contributions of the research project by discussing the implications of the framework in its their ability to successfully capture various factors relevant to co-creation practices between an organisation and its partners in the alliance context, as well as its relationship to existing theories.

Chapter 8 Validation of the Research Findings

8.1 Introduction

Chapters 5 and 7 reported the findings on O&C and O&P contexts respectively. This chapter reports the results of the review process identified in Chapter 3, to increase the accuracy of the findings and confirm the validity of the study (Yin 2014).

The chapter is divided into five sections:

Section 8.2 presents the validation process

Section 8.3 presents the informants' feedback on study one

Section 8.4 presents the informants' feedback on study two

Section 8.5 synthesises the discussion on the COTE and FAVCA frameworks

Section 8.6 summarises the chapter.

8.2 The Validation of Research Findings

Informants review is sought to increase the validity of the research findings as explained in chapter 3, this section presents the informants selection, and the analysis process.

8.2.1 Informant selection

Informants were selected based on their relevant knowledge and experience, as recommended by Cantrill et al. (1996), with knowledge and experience of both as the O&C and the organisation and partners contexts of VCC. Before selecting informants, their profile and knowledge base, and their expertise in VCC, were researched through social media such as LinkedIn; they were asked for their voluntary participation. Five informants volunteered to provide feedback on the proposed frameworks in face-to-face and virtual meetings which took place during August-September 2018. Table 8.1 lists the expert profiles.

Table 8.1 Profile of Informants

Informant	Profile	Duration
In_1	More than 10 years of experiences in co-creation practices with business customers and partners in IT project management, IT security management, and management consulting. Experience in both IT and non-IT environments in the UK and Europe. Worked in both small-medium enterprise (SME) and multi-national corporations (MNC). Regular speaker in an industry conferences on a range of technology-related topics.	51mins
In_2	Currently working as Operations and Program Director at one of the global cloud service providers. Formerly worked in large MNCs and SMEs in the UK market. More than 14 years of experiences in IT and management consultancy, client and cloud architecture and project management. Worked extensively with business partners and customers in B2B market.	50mins
In_3	Currently working as a Business Analytics Consultant in one of the fast-growing big-data solutions providers in the UK. More than 13 years of experience in IT and Management Consulting. Worked in MNCs, SMEs and in UK higher education at managerial and lecturer levels. Experience of dealing with many enterprise vendors in UK market as a partner.	40mins
In_4	Over 15 years' of experience in IT, business, and cyber security practices. Currently working as a Senior Cyber Security Consultant in of one of big	45mins

	consulting firms in the UK. He is the only expert who has worked in various environments providing the expertise on VCC between all actors; organisation, suppliers, its partners and customers in the UK enterprise market.	
In_5	Associate Professor in Marketing and Service Management at a Business School. Service recovery, creativity in service, service innovation researcher for more than 15 years. Her research has received financial support from several bodies and been published in the Journal of Service Research, European Journal of Marketing, etc.	25mins

8.2.2 The process of expert review

The researcher presented and explained the revised frameworks after the findings of interviews/case study: COTE (Chapter 5, Figure 5.1) and the FAVCA (Chapter 7, Figure 7.2), to the informants and requested their responses and views on each component, using the following validation criteria, asking semi-structured questions based on the suggestions of Miles et al. (2014):

- Do the study findings make sense (in a general VCC context)?
- Do these findings apply beyond this specific case (in your business context/ other similar business models)
- Do you see any limitations/suggestions for improvements?

Each informants provided their feedback, first on COTE framework, and on the FAVCA framework, with interviews lasting from 25 minutes to 51 minutes. There are other alternative validation approaches such as respondent validation (Brayman, 2016). This process requires to have research participants, those who volunteered in interviews and case study. However, due to their unavailability, this research sought other informants, nonetheless, the goal is to seek confirmation that the research findings are valid (Sandelowski, 1998; Yin, 2014).

8.2.3 Analysing expert feedback

The analysis of informant feedback was conducted using a priori codes, following Braun and Clarke’s (2006) approach, i.e. based on the components of framework propositions. The four main steps are followed to analysis of the comments made by informants during validation process;

- The comments of all experts were summarised; incorporating both similarities and differences
- A complete list of observations was produced and summarised

- The comprehensive list of comments was reviewed against existing literature and the frameworks' components
- Changes were accordingly made to the frameworks.

Where any comments were contradictory or outside the scope of the project, the researcher tried best to explain such conditions. In cases, where recommended improvements could not be made, they were outlined in the future work section. The frameworks were updated as a result of this process.

8.3 Informants' feedbacks on COTE framework

Study one reported on the organisational and customer context of value co-creation and identified COTE-related factors affecting the overall process. It also reported co-creation forms. Informants provided their views and experiences of each of the components of co-creation forms and the elements of the COTE framework.

8.3.1 Co-creation Forms

Chapter 5 reported six co-creation forms: co-conception of ideas, co-design, co-research, co-marketing, feedback loop, and co-conception of competition. Informants provided their views on all the forms, presented in Table 8.2. On the feedback loop, In_1 highlighted that,

> I would say *rapid feedback loop* are important, feedback loop in itself has no meaning to me, it should be rapid, I would say, it should have time bound, having rapidness in mind, it's important to have viewpoint from non-contractual obligation.

In_3 also emphasised the key role of such rapid feedback. In_2 stressed the co-conception of competition:

> Co-conception of competition is important and you can argue that this framework for example, is starting to tapping to the benefits of those working relationship between organisation and customers.

In_1 readily responded to this form as, "to gain an insights in the competition capabilities. Then, formulating strategy accordingly".

Table 8.2 Informants' comments and feedback on co-creation forms

Framework component	Comments and feedback from informants
Co-creation form	• I agree on all of these, and the last one (co-conception of competition) probably cover all other, because, you should invite customer to feel, they will gain insights on the expectations from organisation and we will gain their expectations and requirements, and its ideal environment to gain idea and involve them in co-design and ultimately include them in marketing that can drive your business development. (In_1) • It's possible to use the customer network to gain an insights in the competition capabilities, because, that what it's all about. Gaining an insights to the competition, the capabilities shows organisation's weaknesses and strengths. Now you have an extra set of an insights from customer, who are feeding back to you information about where you stand in the market. Then, obviously you priorities what are your next steps in the product or service development pipeline. (In_1) • For example, if you can see your competitors producing more attractive user interface and that one of the main reasons you are losing market share, you can adjust corporate strategy for product development in terms of hiring more people who will be expert in user interface design. That's the kind of approach I like about the co-conception of competition. (In_1) • If we got SLAs established within an organisation and between its customer, I would not propose a feedback loop to be established based on that legal criteria, because, based on my experience, those criteria set on their to satisfy some kind of request for proposal by the customer organisation. So whoever have published to those request, does not have the clue of rapidness, feedback loop should have rapidness (In_1) • What we produce, we work together on, does coming to the form like co-design, co-research, co-marketing and feedback of how we can improve and better ourselves and vice versa. So, I do think the framework is valid. (In_2) • Co-conception of competition is important and you can argue that this framework for example, is starting to tapping to the benefits of those working relationship between organisation and customer. (In_2) • We could not survive without co-design. We need reviews from all the time; for some customer the degree of co-design vary, other just give reviews. (In_3) • Feedback loop is quite key, because, sometimes how you do impact others whether you do any form of co-creation at some point you need to ask organisations how you doing and that's very important (In_3) • My idea of co-conception of competition, how we develop products that goes to the vision of organisation and how you use customers on that matters (In_3)

8.3.2 Customer-context of VCC

The customer-context of VCC was identified as six customer-related factors affecting value co-creation, as presented in section 5.2.2. The six factors are *the culture of customer's firm, customer's motivation, how they perceive value in co-creation, their competences, their trust and relationship with organisation*, and *peer influence*. Section 5.2.2 reported that each of these factors is significant to the VCC process. The comments of the informants are presented in Table 8.3. Interviewees in study one highlighted how long-term relationships with customers strengthen their ties and facilitate collaboration. One of the informants, In_5, suggested including *relationship commitment and trust*, instead of trust and relationship, arguing that "our research show that long-term relationship and commitment facilitate to build trust". This is further reviewed in section 8.3.6.

Table 8.3 Informants' comments and feedbacks on customer-context of VCC

Framework component	Comments and feedback from informants
Customer-context of VCC	• At the end of day, in B2B point of view, its people buy people, you have that good relationship. Business can see the value of the customer and vice versa. (In_2) • We work with universities to provide free of charge software training materials, with the goal of universities training students so that in the future they get a job or placement within our company, or in another business customer of ours. They will get with the experience of job waiting for them at the other end of their degrees. (In_2) • Their motivation to work with us is around that getting knowledge and experience from supplier and industry leader and perceive value around that sort of pertaining that knowledge and expertise. (In_2) • They would have chosen our firm either we have been recommended, because we are small firm, or one of our own companies that recommended us. They have got that motivation that we can do something that they don't already have and most customer come and trust us. (In_3) • Some customer come because of the peer influence they have seen other customers doing it, so they want to do it. (In_3) • Culture is a big factor, we have perceived understanding of the culture. Even the contractual agreement does not codify culture. If we miss the cultural bit (of customer), we will end up, even our strategy will not make sense, because we miss culture. Culture is the fluid, is the oil that drives strategy. (In_4) • The relationship could be anything but, long-term committed relationship, or relationship quality contribute to develop trust. (In_5)

8.3.3 Organisational-context of VCC

The organisational-context of VCC is identified as *organisation's motivation, their perception of value, competences, organisation's policy* and *regulation on co-creation,* and *their organisational culture*. The findings of each of these factors is presented in section 5.2.3, and the informants' comments in Table 8.4.

Table 8.4 Informants' comments and feedbacks on organisational-context of VCC

Framework component	Comments and feedback from informants
Organisational-context of VCC	• Including real customer in our (organisation's) service development process, for example, testing with real customer, having them on-site, it's about inviting the customer to be part of the organisation culture; there is sharing of principals, values, sharing of practices with customer (In_1) • Organisational culture need to be a blame-free culture, where failure is allowed. Invited customer is not going to be constantly contributing in terms of critical evaluation of feature improvement, they are allowed to make mistakes. In return, this will provide customer an ease to share this kind of criticism, allowing customer to even make mistakes. (In_1) • Policy and governance need to be in place to sort of what we offer and work together on and obviously, there is benefits on both sides. (In_2) • It benefits everybody because, we gets to compete with sort of … (competitors), and working with universities help us on stand on market structure in that particular region. (In_2) • We are delivering the service design in that; our motivation is to be the best in the industry. So we want customer to bring us the problem that we solve, that will lead us to the next one. Because, this is how our business model works. (In_3) • The perceived value is just not only how much we get paid, yes, off course we need money to run the business, but, perceived value is how well we able to solve that problem. (In_3) • Competence obviously depend on our own employees and how we train them and how we bring them and obviously we have policies in place to guide the things around and build our culture around that. (In_3) • In business, what we look first, is the value and motivation and the competencies, it all about the financial value driven; making money, or we are saving cost, other value are secondary. (In_4)

8.3.4 Technological-context of VCC

The technology-context of VCC is identified as *firm's digital infrastructure, new technological innovation available in the market* and *provision for security and privacy*. Section 5.2.4 reported the findings highlighting their importance in VCC. All of the informants strongly emphasised the technological context, and how it enables new opportunities to co-create and innovate new products and services with customers. Table 8.5 presents their comments. One of the informants, In_4 suggested that, "technology innovation would broadly explain everything (In_4)", about technological context including the security and privacy provision. This comment is further reviewed in section 8.3.6.

Table 8.5 Informants' comments and feedbacks on technological-context of VCC

Framework component	Comments and feedback from informants
Technological-context of VCC	• Technology context, so we work in the cloud and we provide access to cloud systems around enterprise resource planning, so students can log in, demo, play with things etc. because, we are always improving and building product and access to technology we make sure students has access to, what the university has access to is secure, and private how university access. (In_2) • Obviously all this (other context factors) is underpinned by the technology, 10-20 years would have been different; the data then were different, low small scale. (In_3) • Security and privacy is more and more prevalent GDPR for example, was not an issue two years ago now its big thing to consider. (In_3) • Some of the terms in business are repetitive, under new technology, because, I would have put that as technology innovation, it would broadly explain everything. (In_4)

8.3.5 Environmental-context of VCC

The environmental-context of VCC factor is recognised as *government policies and regulations, competition,* and *market trends* affecting value co-creation between organisations and its customers. Section 5.2.5 presented the detailed results, and the informants' comment are summarised in Table 8.6.

Table 8.6 Informants' comments and feedbacks on environmental-context of VCC

Framework component	Comments and feedback from informants
Environmental-context of VCC	• This is probably the most important, regardless of how we develop or design the product services, there is always going to be policy and compliance matters, so there is always constrains to organisation and customer because of environmental factors (In_1) • Market structure, trends and competition reminded me Porters 5 forces model imposed on organisation on how it overcome challenges of competitors (In_1) • Obviously there is government policies and regulations like GDPR etc. that have to keep checking. (In_2) • GDPR across the boundary between the technology and environment, I will put it in more in environment, then there is obviously market trends and competition things (In_3) • Law and regulations of country make difficult to do businesses e.g. GDPR previously companies taking your data and making money, now they are to find a way that there business model is not compliance with regulations. (In_4) • We have to specify that the laws govern, whether its US or EU we have to specify (In_4) • Business environment is obviously important (In_5)

8.3.6 Discussion and Adjustment to the COTE framework

In addition to the comments on the each elements of the COTE framework, informants agreed on the usefulness of the COTE framework. In_3, for example, highlighted that, “this framework is more applicable to service context as in service co-creation”. In_3 also noted that the application of the COTE framework may vary according to the industry domain, as legal requirements may operate differently in education or finance industry, but he concluded that “COTE elements almost remain the same you just have to tweak it slightly according to industry”.

In_1 compared the COTE with the people, process, and technology and suggested “although I made some changes in those quadrants (i.e. rapid feedback), you have got all there”. Having a framework like, COTE, “that sort of capture those core things and make you relevant for that business” (In_2). In_5 stressed on the customer-context of VCC, because customer are the co-creators of value. The section below discusses the comments made by informants and the changes made to the COTE framework accordingly.

Five informants gave their views on the COTE framework and co-creation forms. The following changes were made based on their comments and feedback, also supported by the literature. The Figure 8.1 presents the final COTE framework.

- “Rapid-feedback loop” added to co-creation forms replacing *feedback loop*, following suggestion from In_1. This is also evident in the literature; Rigby et al. (2016) suggest close collaboration and rapid feedback are feasible. Customers know better what they want as the process progresses.
- “Relationship commitment and trust” added to customer-context, replacing *trust and relationship*, following suggestions from In_5. This is also supported by the study of Morgan and Hunt (1994) and Lancastre and Lages (2006), arguing that relationship commitment and trust has a significant positive direct effect on cooperation between organisation and customer.
- “Technology innovation” added to technological-context, replacing *new technology*, following the suggestions from In_4, and also acknowledging the role of technology as both operand and operant resources (Lusch and Nambisan, 2015; Vargo and Lusch, 2016) that there is consensus that technology innovation has significant effects on the productivity (Oliveira and Martins, 2011; Ostrom et al., 2010:2015; Vargo and Lusch, 2017, and Breidback et al., 2018).

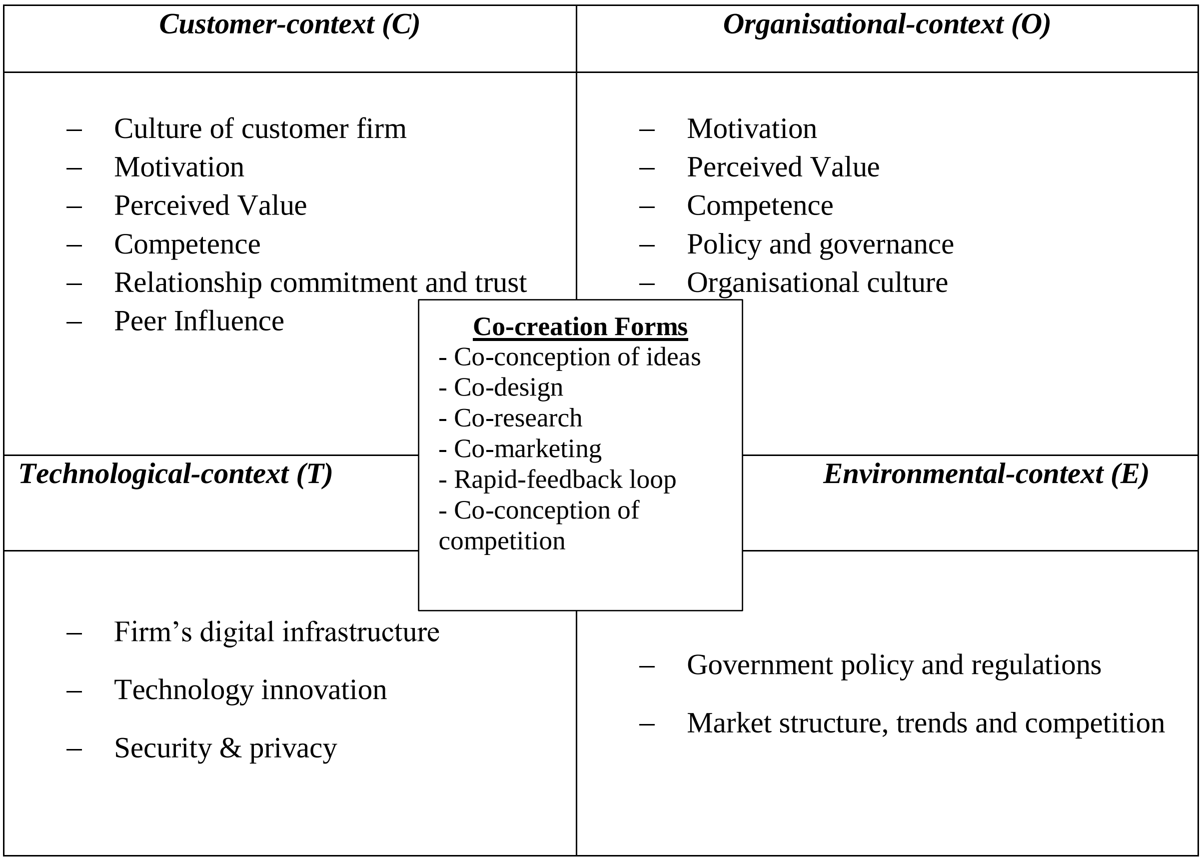

Figure 8.1 Revised COTE framework of factors affecting value co-creation in O&C

8.3.7 Summarising COTE framework

Table 8.7 summarises the COTE factors and sub-factors as well as the co-creation forms and challenges to VCC found in O&C context.

Table 8.7 Summary of the COTE framework

Factors/sub-factors	Description	Source of evidence/[note]
1. Customer-context	Characteristics and resources/capabilities of the customers organised into six factors, i.e. 1.1-1.6	Chapter 4, sections 4.8; 4.12 Table 4.3; Chapter 5, sections 5.2.2; 5.3.2 Figure 5.1 Chapter 8, section 8.3.2; Figure 8.1

1.1 Culture of customer firm	Customer's way of thinking, their mind-set on establishing their organisation, their innovation approach and interaction with the organisation	Chapter 5, sections 5.2.2.6; 5.3.2.1 [*Added as a result from data collection*]
1.2 Customer motivation	Reasons why the customer wants to be involved	Chapter 4, section 4.8.1 Chapter 5, section 5.2.2.1; 5.3.2.2
1.3 Perceived value	Expected benefits; features of the product or experience that they will receive.	Chapter 4, section 4.8.2 Chapter 5, section 5.2.2.2; 5.3.2.3
1.4 Competence	Customers' knowledge, experience, know-how, their creativity and skills	Chapter 4, Section 4.8.3 Chapter 5, section 5.2.2.3; 5.3.2.4
1.5 Relationship commitment and trust	The quality/commitment of the relationship and the confidence in an exchange partner's reliability and integrity (Morgan and Hunt, 1994)	Chapter 4, Section 4.8.4 Chapter 5, section 5.2.2.4; 5.3.2.5
1.6 Peer influence	Customers' behaviour of sharing service experiences through word of mouth, recommendation or other channels (Zwass, 2010).	Chapter 4, Section 4.8.5 Chapter 5, section 5.2.2.5; 5.3.2.6
2. Organisational-context	The characteristics and resources/capabilities of the organisation divided into five factors, i.e. 2.1-2.5	Chapter 4, sections 4.9; 4.12; Table 4.3 Chapter 5, sections 5.2.3; 5.3.3; Figure 5.1 Chapter 8, section 8.3.3; Figure 8.1
2.1 Organisation motivation	The reasons; why organisation wants to embark on VCC	Chapter 4, Section 4.9.1 Chapter 5, sections 5.2.3.1; 5.3.3.1
2.2 Perceived value	Expected benefits, e.g. increased sales, loyalty and referrals	Chapter 4, Section 4.9.2 Chapter 5, sections 5.2.3.2; 5.3.3.2
2.3 Competence	Application of the organisation's know-how, employees' tacit knowledge, and their skills and expertise, as well as other tools available to improve VCC	Chapter 4, Section 4.9.3 Chapter 5, sections 5.2.3.3; 5.3.3.3
2.4 Policy and governance	It defines the rules of engagement on mechanism, control, responsibilities, resources sharing, intellectual property (IP), reward and feedback systems	Chapter 4, Section 4.9.4 Chapter 5, sections 5.2.3.4; 5.3.3.4
2.5 Organisational culture	A shared view of "what is", "why is" and "how organisations do things" (Watkins, 2013)	Chapter 4, Section 4.9.5 Chapter 5, sections 5.2.3.5; 5.3.3.5
3. Technological context	The internal and external technologies or technology-related factors that are relevant/available to the organisation: three factors, i.e. 3.1- 3.3	Chapter 4, sections 4.10; 4.12; Table 4.3 Chapter 5, sections 5.2.4; 5.3.4; Figure 5.1 Chapter 8, section 8.3.4; Figure 8.1
3.1 Firm's digital infrastructure	A collection of information technologies and systems that jointly produce a desired outcome (Henfridsson and Bygstad, 2013).	Chapter 4, section 4.10.1 Chapter 5, sections 5.2.4.1; 5.3.4
3.2 Technology innovation	The latest technological advances allowing collaboration between customer and organisation	Chapter 4, section 4.10.2 Chapter 5, sections 5.2.4.2; 5.3.4

3.3 Security and privacy	How an organisation's digital infrastructure is able to protect the integrity of resources from attacks/intrusion (Shin, 2009)	Chapter 4, section 4.10.3 Chapter 5, sections 5.2.4.3; 5.3.4
4. Environmental context	The industry's characteristics, market structure and competitors orgnanised into two factors, i.e. 4.1 and 4.2	Chapter 4, sections 4.11; 4.12; Table 4.3 Chapter 5, sections 5.2.5; 5.3.5 Figure 5.1 Chapter 8, section 8.3.5; Figure 8.1
4.1 Government policy and regulations	Policy refers to a plan or course of action on how a government controls various market-related practices	Chapter 4, section 4.11.1 Chapter 5, sections 5.2.5.1; 5.3.5
4.2 Market structure, trends and competition	Value co-creation practices are influenced by various social contexts; industry structure, social forces; customer lifestyle, and competition	Chapter 4, section 4.11.2 Chapter 5, sections 5.2.5.2; 5.3.5
Co-creation form	Description	Source of evidence
• Co-conception of ideas	New ideas or concepts received from customer	Chapter 5, sections 5.2.1; 5.3.1 Table 5.1; Figure 5.1 Chapter 8, section 8.3.1; Figure 8.1 [*Rapid-feedback loop; modified as a results of validation]* [*Co-conception of competition*: *Added as a result from data collection*]
• Co-design	Actively using customers to design	
• Co-research	Actively using customers to research	
• Co-marketing	Actively using customers to marketing products and services	
• Rapid-feedback loop	Receiving rapid feedback from customers and acting on it	
• Co-conception of competition	Customers helping organisation to beat their competitors	
Challenges to VCC	-Identifying the right balance of customer input -Managing resource limitations -Overcoming commercialisation of co-created products and managing complexity, and -Co-ordination throughout the co-creation process.	Chapter 5, section 5.2.6; 5.3.6 *[All challenges added as a result from data collection*]

8.4 Informants' Feedback on the FAVCA Framework

Study two reported on the organisation and its partners' context of value co-creation through presenting an alliance case study, which identified two VCC enabling factors: *alliance governance mechanism* and *technology-related collective strength*. It also recognised two VCC inhibiting factors in alliance: *power and politics conditions,* and *opportunistic behaviours*.

8.4.1 VCC Enabling Factors in an Alliance

Alliance governance mechanisms, such as contractual agreements between organisations, criteria for membership and incentives, and self-reinforcing mechanism are reported in sections 7.2.3 to enable VCC practices between alliance actors. Technology-related factors (price, range and quality, collective IT capability, technology support and knowledge sharing between alliance actors) was reported in section 7.2.4 to enable VCC between alliance actors. Informants highlighted the importance of alliance governance mechanism and technology-related collective strengths with examples from their respective organisations, presented in Table 8.8.

Informants noted the importance of governance mechanisms in increasing the sustainability of business operations. In_1 and In_5 highlighted the importance of self-reinforcing mechanisms, whereas, In_2, In_3 and In_4 highlighted policies, membership criteria and incentives. In_1 prioritised the importance of knowledge-sharing practices as technology-related collective strengths. In_3 and In_4 suggested that it is the brand and technology itself that facilitates and encourages partners to co-create value. In_2 provided an example of how their technological systems, i.e. CRM systems, were integrated with their partners' organisations, smoothing relationships full support from the vendor throughout the systems.

Table 8.8 Informants' feedback and comments on governance mechanisms and technology-related collective strengths

Framework components	Comments and feedback from informants
Alliance governance mechanisms	• Self-reinforcement is the most important when it comes to people; Its all about the organisation culture and values and how you reinforce them, because, that will increase the sustainability of business operation. (In_1) • Things that enable is good contracts, incentive obviously, self-reinforcing, everything that you have said, enable this co-creation to work. I would not be aligned with ABC vendor if I do not believe in them. (In_3) • …example of how his (In_2) organisation combines three different actors, their resource to create value for customer. And obviously policies and processes and membership criteria helps. (In_2) • It is driven by incentives and competition; although it is very complex than developing just partnership business model. (In_4)
Technology-related collective strength	• When it comes to technology-related collective strengths, the most important thing is knowledge sharing, because when you have knowledge sharing at the heart of your organisation: mentality of the workforce, process and tools, it's inevitable that you will become more productive, you will be responding faster to either reported incidents, problem with reported to your products. (In_1) • We let our partner have access to work within our own CRM systems and the reason for that is a) we can track where things are going on but then partners can also sort of look we have got this, they need our help for example, lead coming to business, ok I would like to have a presales specialist available and have that capacity all the way through to, I would like to have demo and all the way up to signing the contract. There is huge

	benefits what we see resource and availability to support channel. So they can win and make a sale. (In_2) • Two years ago people were moving to competitor vendor, but now they are coming back to ABC vendor, because they responded to market change in analytics. So that technological strengths is quite key so that one allows and enable us to join and co-create with ABC vendor. (In_3) • It's always driven by incentives unless you have strongest brand; everyone wants to have a piece of cake. I worked in a company that was well known brand, so that was easy to sell. Incentive was second point. Partners want to associate themselves with well-known brand, same as consumers do. (In_4)

8.4.2 VCC Inhibiting Factors in Alliance

Power and politics conditions, *conflict of interest* and *status differences* between alliance partners were reported in section 7.2.5 as inhibiting value co-creation practices between alliance actors in the enterprise market. Similarly, section 7.2.6 explored several instances of both weak- and strong-form opportunistic behaviours of actors inhibiting value co-creation. Informants noted several instances of such conditions and behaviours in the enterprise market inhibiting value co-creation, presented in Table 8.9.

On power and politics conditions, In_1 commented that the vendor firm does not intervene and use its power in the customer bidding process; it is the distributor, channel partners and customers who exercise power and political behaviours. In_2 noted that if the vendor firm uses its power without consulting or informing the distributors and channel partners, this can result in major conflicts. In_3 provided an example of distributors' political behaviours, because "they have accumulated huge power over the vendors and channel partners". However, In_4 suggested it is both distributors and the channel partners which practise power and politics in the enterprise market; he gave several examples.

On opportunistic behaviours, In_5 suggested that "the value co-creation is the positive outcome for all parties, it shouldn't have such behaviours, but it does exists and how would you manage such situations without creating further conflict is a challenge". In_2, In_3 and In_4 provided several examples and the reasons for opportunism. The pressure to make more money, and hitting the quarterly sales target, and focus on quantity (selling more) as opposed to quality (e.g. market development), can all cause opportunism, according to these informants.

Table 8.9 Informants' comments on power-politics and opportunistic behaviours

Framework components	Comments and feedback from informants
Power-politics conditions	• When it comes to conflict, there is huge focus on ethics, it's not ethical to intervene in the process of bidding in the market by leveraging the network. Should be based on transparency and trust. I think the customer try to intervene; let's say bidding process most of the time, in terms of requesting different types of pricing from these types of organisation (channels). It does not happen to the vendor level, but mostly happens at the distributor and the partners levels. (In_1) • Within the alliance model, like this, it's the Vendor, the firm X has the power in terms of the product or the service they sale, and obviously distributor holds your product and channel partners brings customer and sale things. And where this falls down quickly is if overnight, for whatever reasons, the vendor (Firm X) changes something pivotal. So, they running a huge deal and overnight they stop. That can be an obviously a big break in that relationship. It can actually cause a tension between different parties who are working together. (In_2) • There is conflict and struggle between channel partners. (In_4) • The distributors, for example do everything not just the main vendor, I wanted to be a partner of distributor, and I realised that they have everything across the stack. So, that accumulated so much power and how they use such power for small companies is an issue. ABC vendor must learn they should reform their business model. (In_3) • They do have preference between the partners based on relationship; how each partner manages the relationship with ABC vendor. (In_3) • You (channel) are not going to get all equal support from the vendor, it depends on the kind of relationship you have. (In_3)
Opportunistic behaviour	• There is conflict/even legal action (strong-form Opportunism); but, organisations are not maniac so they just settle outside court, most of the time they follow market dynamics. Legal actions are last resort. But the customer are the one who should be blamed for that. (In_1) • Opportunistic behaviours is evident of every facet of the market. Services invoices that never received even in some cases, huge financial sums missing. (In_1) • Too much process driven interactions between human can cause problems. (In_1) • Sometime it comes down to conflicting priorities, and sometimes it comes down to who is paying more. Once you are in the market for a while you will definitely see those difference between a partner there to make commitment and those who just sort of change with the depending on the who is paying more. (In_2) • Vendor ABC (my previous work place) is having problem, they provide incentives to channel partners, but channel partner goes back to other; they are like- we will deliver, we will sell, then the partner will look at alternative vendor for more incentives. (In_4) • Opportunistic behaviour goes with it, same as politics. (In_3) • There are many such practices obviously every business is there to make money (In_3). • From the distributor point, they do the number game. It's all about how many lines can you sell. And they have no views on quality of the products that you deliver; they forget about the quality and focus on quantity of the products they sell. And incentive is most of time is built around how many lines that you've sold. They do not take considerations of quality or market development. That especially where opportunism comes from the distributor. (In_3) • Sometimes the vendor are guilt that they do the number games as well. The biggest problem I see is the number game; quantity as oppose to quality In_3 • We cannot do and define the strategy for channel, we tried to do with the ABC vendor (previous work place) but failed. The reason was to understand the ecosystem, the way they operate their business. If they see the opportunity coming-up with new (Vendor), they (partners) will jump on. (In_4)

	• Weak form is implicit and, strong form is explicit, in many actors situations the main vendor may not be aware of opportunism. (In_5)

8.4.3 Discussion and adjustments to the FAVCA framework

Informants noted that there is a balance between enablers and inhibitors in the FAVCA framework, as presented in Figure 7.2; however, they would like to see more inhibitors in the framework. In_1 observed "I would like to see more inhibitor than enablers because that is more-closer to reality"; he further noted that organisations are constantly failing to show cultural values and respect for other organisations, negatively affecting productivity and cooperation.

The organisational culture affecting VCC was discussed under the *power and politics conditions* in section 6.3.3. Olk (1997) and Das and Tang (2000) acknowledged that incompatible organisational cultures can cause conflicts between organisations. Study 1 also identify how organisational culture affects VCC. This was also found in the case study (section 7.2.7.1) that the AlphaVendor's organisational culture was challenging for those small-scale partners, as small enterprises tend to act more quickly than large organisations. However, the case study concluded that the culture is a challenge, not an inhibitor. It was reported in chapter 7 that there is enough scope for AV to learn and develop, overcoming such challenges between alliance partners.

In_3 noted the limitation of FAVCA, that it is specific to one particular business model; more is from the product co-creation approach:

> For large vendors, the business model is vendor-distributor-partner, but, then for the small companies its vendor and partners. None the less there is co-creation. Co-created value is for end customer. In co-creation you need to remove the waste, it's the waste but unnecessary that can be removed; the distributor play no part in service oriented firm, they don't add value, but they are there for ages but seems to be staying for a while; it looks like this model is not going to change. It still existed; you can-not buy licence directly from the ABC vendor, you have to go to the distributor.

The researcher acknowledged that small vendors use a vendor-partners business model, as studied by Sarker et al. (2012). This research, as explained in chapter 7, focuses on exploring the hardware co-creation context with the focus on large multi-national vendors, therefore In_3's comments are consistent with this research project.

In_4 noted that channel business is not static but very dynamic:

> The enterprise business ecosystem is dynamic, it changes every single day. Your model has to scale up, it has to be agile. It cannot be static, because, you are going to fail.

This statement demonstrates the business ecosystems concepts discussed in Chapter 2, that actors are moving away from traditional buyer-supplier relationships to more dynamic positioning in the market to create and co-create value. Informants also provided solutions to minimise opportunism and to encourage co-creation between enterprise market actors:

- It is the Vendor's responsibility to try reduce as much as possible the partner and distributor network discrepancies and conflicts in the market. Developing technological platform and bringing all of your partners on the platform can reduce opportunism. (In_1)
- Vendor needs to do more interactions and consultations with partners before changing their key offers and policies. (In_2)
- Relationship management is a key to manage those behaviour. (In_3)
- Developing innovative brand and providing an attractive incentives can minimise opportunism. (In_4)
- Identifying root causes and responding that through governance mechanism can increase collaboration. (In_5)

These suggestions support the earlier discussion in section 7.3. For example, Gulati, (1998), Dacin et al. (2007), and Capaldo (2014) confirm the importance of powerful governance mechanisms to reduce opportunism and increase value creation in alliances. The governance mechanism was also highlighted in the COTE framework, that VCC can be supported by establishing new organisational mechanisms (Lusch and Nambisan, 2015). Dialogue and interaction, access to resources and transparency, as discussed in earlier chapters, are the foundation of co-creation (Prahalad and Ramaswamy, 2004). The technological platform can facilitate interaction and cooperation (Westergren 2011; Grover and Kohli, 2012; Henfridsson and Bygstad, 2013) reducing opportunism.

As the informants agreed on all components of the FAVCA framework, no changes were made except the limitations noted above. Figure 8.2 presents the final FAVCA framework. The next summarises the O&P context.

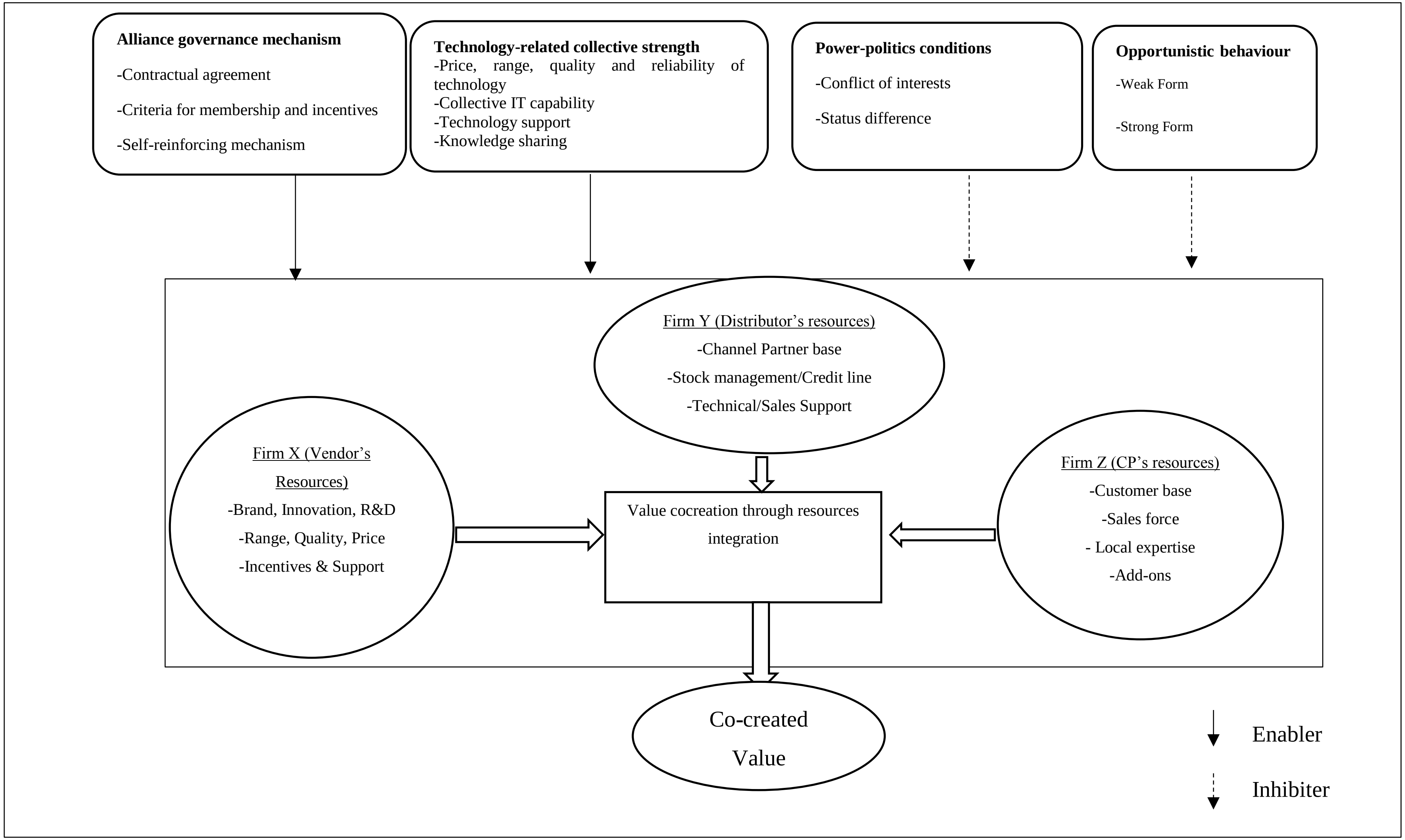

Figure 8.2 Framework for factors affecting value co-creation in an alliance (FAVCA)

8.4.4 Summarising the FAVCA framework

Table 8.10 summarises the factors identified in the FAVCA framework.

Table 8.10 Summary of the FAVCA framework

Factors/sub-factors	Description	Source of evidence
1. Alliance governance mechanisms	Formal contractual structures used to organise alliance, identified in 1.1-1.3, that reduces coordinative complexity and act as motivational mechanism	Chapter 6, section 6.3.1; Figure 6.1; Table 6.2 Chapter 7, sections 7.2.3; 7.3.1; Figure 7.2
1.1 Contractual agreement	Written agreements between partners that ensures everybody does things in the right way	Chapter 7, sections 7.2.3.1; 7.3.1
1.2 Criteria for membership and incentives	Strict regulation on admission of a partner to the community based on business functions, annual revenue, certification, staff and other general requirements	Chapter 7, sections 7.2.3.2; 7.3.1
1.3 Self-reinforcing mechanism	The presence of honesty, trust, strong-relationship, commitment and support enabling alliance partnership to go forward	Chapter 7, sections 7.2.3.3; 7.3.1
2. Technology-related collective strength	Technology-related relevant valuable resources possessed by the alliance, such as identified in 2.1-2.4, enabling VCC	Chapter 6, section 6.3.2; Figure 6.1; Table 6.2 Chapter 7, sections 7.2.4; 7.3.2 Figure 7.2
2.1-Price, range, quality and reliability of technology	Lower cost to buy/sell AV technology, superior portfolio of products with highest quality and reliability	Chapter 7, sections 7.2.4.1; 7.3.2
2.2 -Collective IT capability	Vendor core strength around IT research and development team. Distributor strength is around their resourcefulness and partner base	Chapter 7, sections 7.2.4.2; 7.3.2
2.3 -Technology support	Provision of support from alliance actors to one and other; supporting vendor, distributors, partners and customers	Chapter 7, sections 7.2.4.3; 7.3.2
2.4 Knowledge sharing	Several knowledge transfer programmes such as training academy, online forum, partner portal, channel conferences, etc.	Chapter 7, sections 7.2.4.4; 7.3.2
3. Power-politics conditions	Alliance actor's ability to influence the behaviour of others, using authority to cause changes in direction, such as identified in 3.1 and 3.2	Chapter 6, section 6.3.3; Figure 6.1; Table 6.2 Chapter 7, sections 7.2.5; 7.3.3; Figure 7.2
3.1 Conflict of interests	Conflict between partners around who should approach customers and who provides service"	Chapter 7, sections 7.2.5.1; 7.3.3
3.2 Status difference	The differences between big and small partners affecting their access to resources	Chapter 7, sections 7.2.5.2; 7.3.3

4. Opportunistic behaviour	Troublesome source of alliance actors' behaviours	Chapter 6, section 6.3.4; Figure 6.1; Table 6.2 Chapter 7, sections 7.2.6; 7.3.4; Figure 7.2
4.1 Weak Form	The misuse of trust or dishonouring oral promises	Chapter 7, sections 7.2.6.3; 7.3.4;
4.2 Strong Form	Violations of written commitments, e.g. withdrawing credit line	Chapter 7, sections 7.2.6.1/2; 7.3.4;
Challenges to alliance VCC	-AV's organisational culture -Customer trust and brand awareness -New technology and new business models -Transferring knowledge to partners -Motivating partners, and -Miscellaneous: Portfolio, Solutions and Perceptions.	Chapter 7, sections 7.2.7; 7.3.5; Table 7.6. [*all challenges added as a result from data collection*]

The next section synthesises discussion on the COTE and FAVCA frameworks.

8.5 Synthesising the Discussion on the COTE and FAVCA Frameworks

This study dealt with some of the key concepts in SDL and service science, including relationships and collaboration in service ecosystems, value co-creation, and operant resources. The findings from both O&C and O&P contexts covered the implications for product and service development, customer and partner's relationship development through collaboration with customer and partners, technology development and more general approaches to value co-creation.

These results feedback to service-dominant logic and service science with numerous implications. For example, the use of COTE in identifying factors affecting co-creation provides a mechanism for assessing the effect of various factors in co-creation, which is also related to SDL FP11: "Value cocreation is coordinated through actor-generated institutions and institutional arrangements" (Vargo and Lusch, 2016: 8). In SDL, *institution* refers to actor-generated norms (meaning, symbol, law, and practice), similar to the COTE-related factors *motivation* and *cultural background of actors.*

Institutional arrangements are interrelated sets of institutions that together constitute a relatively coherent assemblage that facilitates coordination of activity in value-cocreation (Vargo and Lusch, 2016), such as, *policy and governance* and also *opportunism* identified in the FAVCA framework. The study attempted to investigate how these institutional contexts affect their value creation efforts in O&P contexts. FAVCA is also useful in assessing how actor's operant resources *such as technology-related collective strengths* contribute to value co-creation, the basis of FP4*:* "operant resources are the fundamental source of strategic benefit" (Vargo and Lusch, 2008: 2016).

The O&C context suggested that all factors within COTE can contribute to both value co-creation and co-destruction. Thorough understanding and management of such factors can facilitate organisations' collaboration efforts resulting in value co-creation. The lack of understanding and mismanagement can lead to co-destruction of value.

The O&P context implies the multi-actor supply side and separates factors based on positive outcomes i.e. value co-creation is enabled by governance and collective strengths, whereas, value co-destruction could results from actors' power and politics as well as opportunistic behaviours. Thus, combining the two frameworks: COTE and FAVCA, is possible; considering the two different settings of O&C and O&P, many of the COTE factors also apply to alliance contexts, e.g. actors' motivation. However, given limited access to data, this cannot be generalised at this stage. But, future research could nevertheless fruitfully investigate the effect of these factors on value co-creation and co-destruction in a single case setting.

The next section summarises the chapter.

8.6 Summary of Chapter

The aim of the Chapter 8 was to validate the findings from the interviews data collected in Chapters 5 and the case study conducted in Chapter 7. It was achieved through presenting and discussing the results of the review by informants, who provided comments and feedback on both O&C and O&P contexts.

The first part of the chapter discussed the several observations made by the informants, and consequent minor changes made to the COTE framework: substituting *rapid-feedback loop* in the co-creation form, *relationship commitment and trust* in the customer context and *technology innovation* in the technology context.

The second part of chapter presented the informants' feedback on the O&P context. Several comments were helpful in identifying the usefulness and limitations of the FAVCA framework.

The Chapter 8 thus confirmed the relevance of both value co-creation frameworks, designed to capture the O&C and O&P contexts.

The final section synthesised the two frameworks, relating them to service science, SDL and TCE theories. Chapter 9 presents the summary, contributions and future work of the overall project.

Chapter 9 Research Contributions, Future Work and Conclusion

9.1 Introduction

This thesis has explored the factors affecting value co-creation between organisation and customer (O&C) and between the organisation and its partners (O&P).

This chapter is structured as follows:

Section 9.2 discusses the major findings from the research project

Section 9.3 presents contributions of the research findings

Section 9.4 presents the limitations of the research project

Section 9.5 presents the areas for future research

Section 9.6 draws conclusions from the research project.

9.2 The Major findings in Relation to Research Aims, Questions and Objectives

The aim of this research project was to investigate factors affecting value co-creation, further divided into the three research questions (RQ1a, RQ1b and RQ2) presented in Table 9.1. The aims, research questions and objectives have been achieved through conducting empirical research into value co-creation practices in two different settings, O&C and O&P, for which two frameworks were developed. The following sub-sections presents the major findings of the research.

Table 9.1 Achievement of research questions and research objective in this study

Research question	Research objective	Reference chapter and sections
RQ1a-What factors affect customer participation in value co-creation?	RO1a To re-examine the value co-creation concept	Chapter 2; section 2.2 and 2.2.4 and the review in section 9.2.1
RQ1b-What factors affecting organisation participating in value co-creation process?	RO1b. To review factors that have positive and negative effects on customers in VCC	Chapter 4; section 4.8, Table 4.3
	RO1c. To review factors that have positive and negative effects on organisations in VCC	Chapter 4; section 4.9, Table 4.3
	RO1d. To formulate a VCC framework of factors affecting O&C based on finding from (a) and (b)	Chapter 4, section 4.12 Table 4.3
	RO1e. To investigate the factors affecting VCC through qualitative interviews	Chapter 5, sections 5.2/5.3 Figure 5.1
	RO1f. To validate the framework	Chapter 8, section 8.3 Figure 8.1; Table 8.7
RQ2- What factors affect the underlying co-creation mechanism of an organisation and its partners?	RO2a. To identify actors and mechanisms of VCC in alliance and to reveal factors facilitating (and inhibiting) VCC	Chapter 6, section 6.2; 6.3; Table 6.1
	RO2b. To propose a framework comprising factors that have positive or negative effects on multi-actor	Chapter 6, section 6.3, Figure 6.1; Table 6.2
	RO2c. To assess the framework through the case study	Chapter 7, section 7.2; 7.3; 7.4; Figure 7.2

	RO2d. To validate the framework	Chapter8, section 8.4 Figure 8.2; Table 8.10

9.2.1 The lack of a holistic view in the B2B context of value co-creation

This study offers a B2B perspective of value co-creation between an organisation and its customers, and an organisation and its partners. The reviewed literature suggested limitations on holistic views of both business customers' and the firm's efforts to co-create value, and the factors affecting such efforts. The VCC literature is dominant in identifying factors relevant to B2C co-creation but is limited in revealing both business customers' and firm's crucial roles in joint creation of value. This suggested research with a focus on the B2B context, as discussed in section 2.6. This study capitalised on such suggestions and investigated various VCC factors captured in two frameworks: COTE and FAVCA.

9.2.2 The 'customer-context' of co-creation from TOE to COTE

The first aim of the research was *to explore factors affecting value co-creation between organisation and customers*. To explore such factors, several existing IS frameworks were evaluated, including the Technology-Organisation-Environment (TOE) framework. The TOE framework has been adapted to explore several contextual factors of innovation adoption in firms. Co-creation could also serve to bring innovation to business customers and firms. The literature review suggested that the TOE framework has evolved very little since its development, and yet can still be applied in the new domains.

This study responded to this call by extending the constructs of TOE framework to include the *customer context* of co-creation, as the *customer-organisation-technology-environment (COTE) framework* to investigate the factors affecting value co-creation between an organisation and its customers.

The foundational concept of service science and premises of service-dominant logic provide a solid foundation for the customer context of co-creation. Therefore, the inclusion of the customer context of co-creation in COTE framework has the potential to offer all the customer-related factors to co-creation.

This study identified customer-related factors as *culture, motivation, perceived value, competence, relationship commitment and trust,* and *peer influence*. Organisation-related factors are *motivation, perceived value, competence, policy and governance* and *organisational culture*. Technology factors consist of *digital infrastructure, technology innovation* and *security and privacy*. Environmental factors are *government policy and regulations,* and *market structure, trends and competition*. In addition, this study identified several challenges to VCC; the finding is summarised in Chapter 8, Table 8.7.

The various concepts studied within service science and SDL such as operant resources, competence, technology, governance, process and outcome, were the basis for developing the COTE framework. These components within COTE offer to capture the co-creation context between customer and organisation and also enable expansion to the context of technology and environment. This positions COTE holistically to capture four different contexts of co-creation and various factors affecting it, which the reviewed literature fails to offer. This is a major finding related to research aim 1, to explore sixteen factors affecting VCC between an organisation and its customers.

9.2.3 Limited research in the area of co-creation of value from an ecosystem perspective

The second aim of the research was to *uncover factors affecting the underlying co-creation mechanism of an organisation and its partners*. Again, current literature offers limited insights that explain factors affecting the VCC B2B partnership, where multiple actors (supplier, partner, and competitors) collaborate and compete to co-creation value. The network or alliance approach could be useful in extending the service-dominant logic and service science theories. Business ecosystem theories suggest extensive collaboration requirements among the various parties; however, there is lack of understanding of the process, mechanism and outcome of co-creation in a B2B multi-firm environment.

In relation to the second aim of the research, this study has brought the case of an alliance that puts co-creation at the forefront of their business model, utilising partner organisation’s resources to co-create value for customers. The case study of AlphaVendor provided an example of the process and mechanisms of co-creation (i.e. a dynamic alliance context of partnership) and identified various actors (e.g. vendor, distributors, and channel partners) who collaborate to co-create value.

9.2.4 The effect of contingency factors of value co-creation in the alliance context

The dominant VCC literature indicates positive outcomes of the co-creation process. However, in relation to aim 2, the study aimed at discovering both positive and negative consequences of co-creation. The underlying domination of VCC as a positive result is challenged by the introduction of the value co-destruction concept. The development of this concept is at a preliminary stage, leaving opportunity to investigate contingency factors that can lead to either value co-creation or value co-destruction.

Transaction cost theory, one of the theories applied in alliance relationships, argues that actors' troublesome behaviour can contribute a negative outcome of the co-creation process. This study devised a framework for factors affecting value co-creation in alliance, FAVCA, that includes both enabling (*alliance governance mechanism* and *technology-related collective strengths),* and inhibiting (*power and politics* and *opportunistic behaviours)* factors in the multi-actor co-creation context.

The FAVCA framework is based on the principles of resources sharing, alliance governance, collective strengths, and actors' troublesome behaviours, incorporating the possibility of both positive and conflictual or negative outcomes in the co-creation process. Thus, the factors within FAVCA are key to value co-creation i.e. *win-win* or to avoiding value co-destruction i.e. *lose-lose*.

The next section presents the contributions of this research.

9.3 Contributions of this Research

9.3.1 Theoretical contributions

This thesis makes several contributions to knowledge. Firstly, it proposes a new definition of value co-creation, presented in the next section. Secondly, it develops a new framework, COTE, applicable to exploring various factors related to co-creation between organisation and customer. The COTE framework extends the TOE framework, applying it to the new domain of VCC. Within the COTE, the study explored how the culture of customer firm affects co-creation. While exploring various factors of co-creation, it also identifies a new form of co-creation. Thirdly, the study explores the hardware enterprise IT business model and identifies mechanisms to co-create value. Finally, it devises a new framework, FAVCA that captures both enabling and inhibiting contingency factors contributing to positive and negative outcomes of co-creation. FAVCA also extends the current theories of value co-creation in the alliance context by capturing various actors and the mechanisms to co-create value among them.

Overall, the study shows that the building blocks of VCC, such as dialogue, information, access and transparency (Prahalad and Ramaswamy, 2004), and motivation, process and forms of co-creation (Zwass, 2010; Frow et al., 2015) are not the only elements that need to be considered when engaging in VCC. COTE-related factors (summarised in chapter 8, Table 8.7) in the O&C context, and the FAVCA factors (summarised in chapter 8, Table 8.10) in the O&P context representing micro-meso-macro level (Chandler and Vargo, 2011) factors need to be considered in co-creating value. The next section elaborates these theoretical contributions;

- The new definition of value co-creation

This study introduced a new definition of value co-creation:

> *An active, creative, and social interaction process based on need or desire of actors linked together within a service ecosystem, who integrate their resource to support the various VCC activities such as idea generation, knowledge sharing, product development, solution implementation and to create win-win benefits for the involved actors.*

This definition combines basic fundamentals of value co-creation concepts from earlier definitions. It includes VCC as an active, creative and social interaction process, but also explains that there is need or desire from actors to initiate such interaction. The definition includes the context of VCC as service ecosystems and incorporates various VCC activities, in which actors integrate their resources.

In addition, it stresses that the outcome of this process should be a *win-win* proposition for the actors involved, as identified in *perceived value for customer and organisation* in COTE framework (see section 5.3.2.3 and 5.3.3.2). The win-win proposition for the ecosystem actors is also presented in Table 7.1 as *perceived value from the relationship* (see section 7.2.2). Therefore, the benefits from the co-creation initiative is not limited to customer firm but also to the organisations, and partner firms as explored in this research. It can also include other actors, suppliers and even competitor firm from the ecosystem as discussed in SDL and service science literature.

In summary, the definition includes interaction, motivation, activities, context, and outcomes of VCC. The existing definitions lacks such complete conceptualisation of VCC.

- Extending TOE to COTE

As a contribution to theory, this research extended TOE framework of Tornatzky and Fleischer (1990) by incorporating a *customer* context to introduce the new co-creation framework, COTE. The extension of TOE to COTE also responded to the research call from several scholars (e.g. Oliveira and Martins, 2011; Baker, 2011). The COTE framework captures both organisation-side and customer-related factors as well as other ecological constructs, such as business environment and technological innovation, some core elements in service science and SDL theories.

COTE explores, for example, the culture of the customer firm and how it affects co-creation, discussed in chapter 5, section 5.3.2.1. This study is one of the few on VCC that incorporates both the organisation's and the customer firm's culture in the value co-creation phenomenon. The significance of other factors is summarised in chapter 8, Table 8.7. It incorporates new notations in VCC, by building on the work of Payne et al. (2008), Zwass (2010), Frow et al. (2015) and others (presented in section 5.5.7) which before this study were divided and isolated.

- Culture of customer firm

The culture of the customer firm; the customer's way of thinking, their mind-set on opening up their organisation to other, their innovation approach and interaction with organisation were found to affect co-creation. This was emerged from the interview results (O3, O4, O5, O6, and O7).

Existing VCC literature highlights the importance of organisational culture, such as the importance of learning, openness and leadership vision to co-create value (Desai, 2010; Ind et al., 2013). Like the service provider's organisational culture, the culture of client firm is all about "how they do things" and such established cultures can become impediments to survival when there are substantial environmental changes (Watkins, 2013). As value co-creation requires openness and learning new things (Vargo and Lusch, 2008), the established culture of the customer firm equally impedes or enables value co-creation with their service provider, as revealed in the participating organisations.

The findings add one more important factor to VCC literature by highlighting the important role of culture of the customer firm in value co-creation (e.g. O6), and revealing how this factor enables value co-creation (as in O7) and determines its success (as in O3) in the context of B2B interactions.

- New form of co-creation; co-conception of competition

The research introduced how customers can help their organisation to beat competitors in the marketplace, a new form of co-creation called ***c****o-conception of competition*. This new form helps to understand the growing importance of customers for organisations. This study also discovers ways in which co-conception of competition exists in the B2B market. This introduction of at new form of co-creation indicates that the number of existing forms is not limited, with new ones emerging from practice, supporting and extending the literature (e.g. Russo and Mele, 2012; Frow et al., 2015).

- The mechanism of co-creation in hardware enterprise business

The study follows Zwass's (2010) suggestion by presenting a unique case of hardware co-creation. The study explored the hardware enterprise IT business model, which necessitates many actors (vendor, distributor and channel partners) working together to create value for customers. The study revealed that partners play a key role and bring unique resources to the alliance to co-create tailored solutions for their customers. However, existing research does not inform or capture how the vendor-distributor-partner relationships is formed or how it works to co-create solutions.

This study is thus a significant departure from classic hardware co-creation; it reveals how the enterprise IT business model and its mechanisms co-create value through channel ecosystems, highlighting the importance of resource integration in the service ecosystem (cf. Mele et al., 2010; Edvardsson et al., 2011; Lusch and Nambisan, 2015). Therefore, it contributes to the literature by revealing how a vendor of ICT hardware can deliver to end customers by creating a collaborative alliance with distributors and channel partners and how value is co-created through such an alliance. This research responded to the research call from various scholars (e.g. Chandler and Vargo, 2011; Sarker et al., 2012; Grover and Kohli, 2012; Mustak et al., 2013; Lusch and Nambisan, 2015; and Leclercq et al., 2016) to reveal VCC from multi-actor perspectives; it contributes not only to the literature on B2B alliance and value co-creation, but also to the hardware enterprise business model.

- The framework of FAVCA

One other notable contribution of this research in terms of theory was the introduction of the FAVCA framework, which is partly based on a previous VCC model in alliance (cf. Sarker et al., 2012), but also incorporates Transaction Cost Theory. This framework includes the positive factors that lead to co-creation of value in alliance and also incorporates factors that can lead to conflictual results from co-creation, summarised in Chapter 8, Table 8.10. This suggests that FAVCA can serve as a basis for explaining both co-creation and co-destruction of value, supporting the collective–conflictual perspective of VCC (cf. Laamanen and Skalen, 2015; Prior and Marcos-Cuevas, 2016).

The final contribution to theory adds to SDL FP6' statement that "Value is cocreated by multiple actors, always including the beneficiary" (Vargo and Lusch, 2016; 8) by proposing a hypothesis for the co-destruction of value:

Value is also co-destroyed by multiple actors.

As explained in chapter 7, section 7.4 this is the initial stage for such a proposition, but it is believed that this can lead to further research on how multiple actors co-destroy value and how to avoid such practices using the insights from the perspectives of TCE (cf. Williamson, 1985).

This study in general has helped understand the various concepts of value co-creation as well as value co-destruction in a B2B partnership. It makes a general contribution to the field of research in value creation, value co-creation and value co-destruction, bridging the gap on the limitations of research into value creation in the IS and service disciplines.

The next section presents the methodological contributions of the research.

9.3.2 Methodological Contributions

One of the contributions of this research is in the methodology adopted for this research. The *critical realism* was chosen for this study. Hyde (2000) noted that under the post-positivist research tradition, adoption of formal deductive procedures using quantitative methods is general, but a deductive process with a qualitative research methodology might represent an important step in assuring conviction of the qualitative research findings. The study of the phenomenon of value co-creation practices is still relatively new and evolving (Ostrom et al., 2015; Neghina et al., 2015), and this study adopted the qualitative method to investigate it, given the noticeable research gap in the literature (e.g. Ma and Dube, 2011; Neghina et al., 2015; Jaakkola et al., 2015; Johnsen and Lacoste, 2016).

Using qualitative research within the post-positivist (Guba and Lincoln, 1994) research tradition makes this research unique. Although this study is similar to, for example, the work of Sarkar et al. (2012) and Chowdhury et al. (2016) in terms of exploring VCC phenomena, it is ontologically based with a critical realist perspective, in comparison to the emergent perspectives used in earlier studies. This research is an important step forward towards identifying, and understanding factors affecting co-creation, through qualitative enquiry.

The *deductively developed* conceptual framework of factors influencing value co-creation between organisation and customers is presented in Chapter 4, and the conceptual framework identifying such factors in a multi-actor environment in Chapter 6. The application of thematic content analysis

(Braun and Clarke 2006; Clarke and Braun, 2013) was helpful in identifying co-creation factors using Nvivo software. The results of the thematic analysis of the literature led the researcher to propose a *conceptual framework of value co-creation and factors influencing it*. With the help of this method, the study achieved the research objectives RO1c and RO2b.

Semi-structured interviews, document reviews, and audio recordings conducted within the first and second research contexts used themes around existing theories *i.e. based on the elements of conceptual framework (a priori coding)* following six phases of deductive thematic analysis (Braun and Clarke 2006). In these six phases of thematic analysis the use of Nvivo software assisted the process of qualitative data analysis. This method assisted to achieve the research objectives RO1d, RO1e and RO2c and RO2d

The following section presents empirical contributions.

9.3.3 Practical Contributions of this Research

Study one investigating O&C co-creation practice explored several forms of co-creation in practice. This provides managers with conceptual clarity on these forms by showing how it is used in organisations. Given that value co-creation has several forms, managers can select the on most appropriate to their organisation, such as using co-conception of competition to beat competitors with customers' help.

Several factors in VCC warrant consideration: motivation of the actors involved, process governance, competence requirement, and the perception of benefits from the co-creation process. These factors are encapsulated within the COTE framework, which will be a valuable reference tool for practitioners to identify and assess their impact on VCC; other research (e.g. Hoyer et al., 2010; Hakanen and Jaakkola, 2012) failed to include all these factors in their frameworks.

Nevertheless, the factors within the COTE framework are not intended to be comprehensive and final. As the co-creation process varies from organisation to organisation and form to form (e.g. co-design vs co-marketing), the components within COTE could serve as foundations which co-creation practitioners may adapt and extend.

The second study in the context of value co-creation practice in alliance exemplifies how resource-scare organisations can create an alliance using a co-creation approach to utilise channel ecology (e.g. Sarker et al., 2012; Lusch and Nambisan, 2015; Prior and Marcos-Cuevas, 2016) to reach new markets. Thus, this study provides managers with the conceptual clarity to adopt and develop such a business model, using the FAVCA framework as a valuable reference tool with which to assess the impact of various factors in the business model. The set of enablers for co-creation and inhibitors that leads to co-destruction can serve as a checklist for organisations to assess their VCC practice.

Given that value co-creation is a *win-win* outcome for alliance actors, the organisation can develop appropriate governance mechanisms and other strategies to reduce troublesome behaviours present in B2B relationships, and again FAVCA provides a valuable reference.

The research project also has several limitations, which the next section presents.

9.4 Limitations of the Research

This research was an attempt to understand value co-creation and to explore factors affecting it at organisation-customer and in ecosystem levels. Inevitably, there are limitations to this research project in terms of conceptualisation, data sources, empirical setting and methodology employed. The literature review may have missed some relevant papers unrecorded in the databases which the researcher searched, or with mismatched search terms. Papers published in languages other than English, books that may make a significant contribution to the co-creation domain, and papers published before 2000 in the domain of value co-creation were excluded from the literature review. This is also applied to the co-creation context where the project specifically focused on the practice of VCC in information-intensive industry.

Although the research considers value co-creation between organisation and customer, it only explored organisation's view on their value co-creation practices due to limited access to data. However, within the organisation-customer VCC context these results are salient, as customers may have different views on the factors identified within the COTE framework. Further, with more and more business customers participating to co-create value with their service provider, it is feasible that inclusion of an organisation's respective customer views may increase the issue of generalisability. This also applies to the second study of value co-creation between AlphaVendor and its channel ecosystem, referring only to its sales channel ecosystem. Including other members from its ecosystem may have provided a wider picture of value co-creation in ecosystem.

Secondly, the sets of interviewees and the focus on the organisations they represent were limited. There were nine interviewees from nine organisations in the first set of research, and although their organisational backgrounds were defined as information intensive, but their job profiles were varied; some were consultants and others were system development specialists. This differentiation also applies to study two where 12 interviewees were conducted, with interviewees from different backgrounds; some were channel managers and others were business development managers, but all were based in England. The findings may have been different with a higher number and more diverse range of participant profiles.

It is also recognised that an alternative research philosophy, such as constructivism with the use of a large-scale survey or action research, would have presented a larger sample and different results. For example, the use of action research to investigate both success and failure interactions between organisation and customer would have made it possible to capture more holistic views and empirical insights into their co-creation practice. The limitation also applies to the context of co-creation practices where we utilised only the information intensive sector. Other co-creation contexts in other sectors, such as agriculture, tourism or medicine, would have offered diverse results. The use of service science, service-dominant logic and transaction cost theory was helpful in defining several constructs of the research, but alternative theories such as actor-network theory may have enriched the research findings.

The study investigated both the organisation-customer context and organisation-partner co-creation in developing the respective frameworks. However, the researcher believes that more work is needed to validate the findings and a wider context of co-creation practice to confirm both COTE and FAVCA. This is also warranted from the perspective of generalisability of the research findings to other contexts.

Several of the limitations noted here naturally serve to suggest further research in value co-creation, which the next section presents.

9.5 Future Research on Value Co-creation

The COTE framework has identified a limited number of factors, for example only six in the customer-context. Further research could explore focusing on other customer-related factors, such as, role clarity to expand the C context of co-creation; and the approach could equally apply to the O, T and E contexts.

Further exploration of several constructs introduced in the research is needed, for example, the new form of co-creation: co-conception of competition. This could focus on the process and consequences of the emergence of this form. Further research could also explore the COTE framework in B2C contexts, using a large-scale survey.

Applying FAVCA in context other than hardware would provide a solid foundation for future research, not only exploring enabling and inhibiting factors in these contexts, but also devising strategies to manage the inhibiting factors. Such research might add more constructs to FAVCA.

Another approach would be to develop framework combining both FAVCA and COTE, to investigate the co-creation practices of both the supply (vendor-partner) and demand (customer) sides. Insufficient empirical data and time constraints prevented the author from achieving this.

Future research could also be conducted to further explore the claim that “Value is also co-destroyed by multiple actors” in different empirical settings. This would support and extend the belief that not only does collaboration exist, but also that conflict and opportunism are dominant practices that should be considered within the debate of SDL.

The next section concludes this research.

9.6 Conclusions

The aim of this chapter was to summarise the overall work and to highlight the findings, research contributions, and the limitations of the research project, and to suggest avenues for further research in the area of value co-creation.

The major findings, with reference to the research aim, is that showed many factors need to be considered in co-creating value either with customers or within the alliance context. These co-creation factors were captured through two frameworks, COTE and FAVCA. These frameworks also capture value co-destruction, which is a new consideration that this research has attempted to capture and explore through a case study. These two frameworks are also considered as theoretical contributions of this research.

The research is based on a priori perspectives, but applying qualitative investigation to collect data has made it unique. The chapter also discussed the research contribution in terms of theories, methods and practice, arguing the wider implications for product and service development, customer and partner's relationship development through collaboration with customers and partners. It also discussed the necessity of integration of operant resources of customers and partners, as well as opportunism, the former leading to co-creation of value, and the latter to possible co-destruction of value.

Several limitations of the current research were noted, requiring further study to validate and generalise the proposed frameworks to other contexts. Future research avenues are discussed to this end.

This research has attempted to contribute to the literature of value co-creation, service science, service-dominant logic, transaction cost economics, and relationship and service marketing.

The summary of this thesis is as follows;

- Chapter 1 introduces the scope of the project by outlining the research gap identified from the literature, and presents the research aim, objectives and research questions, and the structure adopted for the rest of the thesis.
- Chapters 2, 4 and 6 report on the relevant literature on value co-creation. Chapter 2 defines the concept of value co-creation and presents relevant theories and literature. Chapter 4 proposes the COTE framework that identifies factors affecting value co-creation between organisation and customer. Chapter 6 proposes a framework for FAVCA that identifies factors affecting value co-creation in an alliance context.

- Chapter 3 selected the approach adopted to conduct the research project, identifying the research philosophy and methods.
- Chapters 5 and 7 apply the conceptual frameworks proposed in Chapters 4 and 6 to the empirical settings, and discuss the empirical findings.
- Chapter 8 presents the outcome of the research validation process and revises the COTE and FAVCA frameworks. It also summarises the key findings from the research and synthesises their implications as theory.

9.7 Personal Reflections

This project was inspired by a motivation to study B2B relationships, specifically to identify the importance of value co-creation in the B2B context. The project was also motivated by the researcher's previous work in business model innovation, where value co-creation was revealed as an important factors during the MSc dissertation project.

Conducting a pilot study with three ICT organisations provided a clear picture in which to explore not only organisation and customer-related factors in value co-creation but also other emerging technologies and the business environment-related effect on VCC. Given this, examining existing VCC literature only provided fragmented views of either customer-side factor or organisation-related factors. This raised a question: If we are unable to understand the holistic views on the VCC, how can we have insightful discussions on the emerging trends in collaboration between customer, suppliers, partners and other ecosystem actors?

My PhD journey attempted to recognise the holistic nature of VCC by including customer-organisation-partners' perspectives and identifying relevant factors associated with them. The development of the COTE framework is intended to offer a holistic view of VCC, whereas FAVCA offers insights not only into the importance of organisational policies and strengths but also their behavioural practices, such as opportunism playing a key role in co-creation. In addition to these two frameworks there are other tangible outcomes of this research, such as the challenges associated with VCC and the forms of co-creation providing new insights into the VCC domain from practitioners' perspectives. These frameworks provide a solid basis for understanding the impact of all COTE-related factors, new forms of co-creation, challenges as well as actors' behavioural attitude, if VCC is to be understood holistically.

The key challenge I faced during the research was difficulty in accessing organisations that would allow me to investigate their general views on their VCC practice. Collecting data took efforts and time, but I eventually managed to interview 29 executives and managers representing 24 co-creating enterprises, both MNCs and SMEs. Key insights I gained from these experiences were to understand how the organisations' nature and practice differ, even though the fundamentals of creating value remain the same; and the common culture of collaboration and interaction between various actors as well as a belief in the value they offer to other actors.

I have achieved the intended outcome of this research to produce holistic frameworks. Spending the last four years, reading and conducting research in VCC, as well as being committed to carry forward the domain of VCC, I see the more VCC research is warranted to understand the 'dos' and 'don'ts' of VCC in ecosystems and understanding co-destruction of value. I believe such future research will provide a fundamental understanding of value creation in ecosystems which will help businesses to avoid co-destruction and ensure win-win propositions. Overall, it was a long, challenging but certainly rewarding journey.

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Appendix A: Data Collection Guidelines (O&C context)

Data collection: semi-structure interview questions (O&C)

Background

1. Could you briefly describe your company, its products/services, market and your role in the company?
2. What kind of customer engagement and co-creation do you have?

   OR

   What do you do with customer feedback/creative suggestions or new ideas? Any example?

   [IF THEY DO NOT ENGAGE WITH CUSTOMER CO-CREATION]

   What prevents your company to engage with customers/ what prevents acting on customer's feedback to improve service?

   e. g. Customer skills, their ideas worthless, motivation mismatch

Customers' context

- Motivation
  1. What do you think of the reason for customers to help your company in a form of e.g. product review/feedback, customisation, providing new ideas?
  2. What benefits would they receive
- Operant resources e.g. knowledge, skills
  1. How important is customers' resources and their skills & knowledge? Any example?
- Trust/Peer influence
  1. What is the role of customer's trust and relationship in value co-creation?
  2. What would you say about customer influencing behaviours e.g. customer influencing other customers to choose your product/service? Do you think this sort of customer's behaviour have an impact on customers' greater role across value chain e.g. greater control over new ideas, feedback & reviews

What other customer related behaviours, characteristics or their expectation have you come across which influences customer voluntary contribution?

Organisational context

- Motivation
  1. What could be the motivation/incentives/benefits for your company to seek input from customers/ work with customers?
- Competence; organisational/employees

1. How significance is employee's knowledge, skills, & experience in terms of increasing customer engagement in co-creation?

- Policy & Culture
  1. How significant do you think organisational governance mechanism/capability play to facilitate/inhibit customer co-creation practices?
  2. What is the role of policy on Intellectual property rights (IPRs) in customer contribution?
  3. How open do you think the company needs to be in order to integrate customers in internal organisation process when reacting on their ideas/feedback?

IS there any other organisation related issues/things that can positively or negatively impact co-creation with customers?

Technology/Platform

1. How important do you think platform/technology/firm's digital infrastructure play in the process of customer co-creation and their participation and contribution in such activities?
2. How does new technological development affect your co-creation with customers?
3. What have you observed in terms of customer's perception on privacy and security in terms of the use of technology and their participation and contribution?
4. What are the issues that you see while helping customers using technology?

Is there any other technology and platform related issues/things that can positively or negatively impact customers' co-creation activities?

Environmental context

1. Do you think the government policies and regulations affect co-creation with customers?
2. Do you think other market players/ your competitors influence the customers' contribution/participation in co-creation?
3. What are the market trends or the structural changes (e.g. changing regulations) in your industry would you think can potentially have an impact on co-creation with customer?

Is there any other external environment related issues/things that can positively or negatively impact customers' contribution level OR acting on feedback/new ideas that customer provide?

Challenges to co-creating value

Is there anything that you want to share about the future of customer participation in various forms of co-creation or the challenges that can affect these challenges?

Appendix B: Data Collection Guidelines (O&P context)

Data collection: semi-structure interview questions (O&P)

Introduction

- Could you briefly introduce yourself and your company/your business model?
- What sort of relationship do you have with AlphaVendor/what role do you play in the ecosystem of your industry/ what value do you provide to your client & vendor/what value would you receive/expect?
- IS there any customisation/co-design/co-creation between you and other actors in your business model?

Alliance governance mechanism

- What governance process/mechanism do you have in place e.g. policies, NDAs, membership requirements etc. to guide the process? How do you initiate/end the co-creation process?
- What role of trust and long-term relationship/How does it support/inhibit the process?

Technology-related collective strengths

- What do you think the main strengths of this alliance?
- What technology-related factors are advantageous in this alliance in comparisons to its competitors?
- What is the learning mechanisms/how does it facilitate/inhibit co-creation?

Power-politics conditions

- Is there any differences between alliances partners e.g. status; big/small/ how does it effects the relationship between you and other actors?
- Have you observed/experienced any conflicts between partners? Any example? The reasons?

Opportunism

- Have you come across/experienced any of the actors' opportunistic behaviours such as violations of contractual norms/NDAs etc.?
- Do actors (partners/vendors) attempt to for example, lie, cheat, hide information, misinform, dishonest, withholding information, misrepresenting, etc. any example? the reasons?

Challenges to VCC

- What are the challenges that you have/ and the alliance has in this market?
- Is there anything would you like to add, share about the channel ecosystems?

Appendix C: Interviews Consent Form

Research Ethics Committee

Consent Form

Buddhi Pathak

Doctoral Researcher

I am a PhD student at Henley Business School, University of Reading. My research is motivated by the fact that customers/partners are increasingly seen as source of innovation. Customers' (also partners in alliance) input in product/service development e.g. sharing new ideas, customisation, and their feedback is seen as driver to customer satisfaction and competitiveness.

The process of customer contribution, their involvement in service improvement/service innovation is known as Value co-creation (VCC).

My research examines how organisations perceive customer's feedback, their ideas and input in product/service improvement/innovation. By investigating such perspectives this research seek to answer *what are the factors that affect value co-creation between organisation and customers?/between vendor and channel partners (in alliance context)?*

1. I have had explained to me the purposes of the project and what will be required of me, and any questions I have had have been answered to my satisfaction. I agree to the arrangements described in the Information Sheet in so far as they relate to my participation
2. I understand that participation is entirely voluntary and that I have the right to withdraw from the project any time, and that this will be without detriment.
3. This application has been reviewed by the University Research Ethics Committee and has been given a favourable ethical opinion for conduct.
4. I have received a copy of this Consent Form and of the accompanying Information Sheet.

Name: ………………………………………………………………………………

Signed: …………………………………………...………………………………

Date: ………………………………………………………...………………………