

MODELLING AND MEASURING OF CONSUMERS' CO-CREATED VALUE IN E-SERVICES

Ph. D. THESIS

by

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**DEPARTMENT OF MANAGEMENT STUDIES
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
ROORKEE – 247667 (INDIA)
JUNE, 2016**

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A THESIS

*Submitted in partial fulfilment of the
requirements for the award of the degree*

of

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in

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by

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Dedicated in the loving memory of my
brothers

Late Ashish Agrawal

&

Late Ankit Agrawal



INDIAN INSTITUTE OF TECHNOLOGY ROORKEE ROORKEE

CANDIDATE'S DECLARATION

I hereby certify that the work which is being presented in the thesis entitled “**MODELLING AND MEASURING OF CONSUMERS’ CO-CREATED VALUE IN E-SERVICES**” in partial fulfilment of the requirements for the award of the Degree of Doctor of Philosophy and submitted in the Department of Management Studies of the Indian Institute of Technology Roorkee, Roorkee, is an authentic record of my own work carried out during a period from July, 2012 to June, 2016 under the supervision of Dr. Zillur Rahman, Associate Professor, Department of Management Studies, Indian Institute of Technology Roorkee, Roorkee.

The matter presented in this thesis has not been submitted by me for the award of any other degree of this or any other Institute.

(AMIT KUMAR AGRAWAL)

This is to certify that the above statement made by the candidate is correct to the best of my (our) knowledge.

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Date:

The Ph. D. Viva-Voce Examination of **Amit Kumar Agrawal**, Research Scholar, has been held on **September 17, 2016**.

Chairman, SRC

Signature of External Examiner

This is to certify that the student has made all the corrections in the thesis.

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Head of the Department

Dated:

Abstract

Armed with modern technologies, companies today offer consumers a plethora of choices as value propositions. However, despite rigorous efforts to attract consumers and achieve customer satisfaction, companies fail to achieve these objectives. While there could be many reasons behind such failures, a key reason is failure to understand what ‘value’ actually means to the customer. For a very long time, value creation, communication and delivery were supposed to be firm exercises. However, advent of and increased access to the internet led to availability of information, and networking & empowerment of consumers. The new empowered consumer didn’t want to remain at the end of the supply chain, rather, the consumer sought participation in the value development process. Riding on connective technologies, customer collaboration with organisations (or co-creation of value for oneself and others) constantly increased. Wikipedia, Youtube, Threadless, e-choupal, and social media are a few examples of the customer co-creation phenomenon, evident in e-services. Advantages associated with co-creation led to its increased adoption by companies. Despite the wide acknowledgement of the importance of co-creation, many questions still need to be answered, such as: Who are the participants in the value co-creation process? What is the nature of co-created value? How and why participants, along with consumers, get satisfied with their participation in the co-creation process? What role does co-created value play in consumer satisfaction? This dissertation attempts to investigate consumer participation in the value co-creation process and evaluate the consumer’s role in the service decision making process in context of e-services.

For this purpose, the study capitalises on literature from various streams such as human resource management, innovation research, services marketing, psychology, and strategic management. Building on findings of these studies, we propose a research model of consumers’ value co-creation process and examine it through empirical data. The research model comprises of active customer participation, perceived organisational support and perceived fellow customer support as predictor variables which are inevitable for consumer’s value co-creation process and acts as an important antecedents for consumer’s co-created value which finally influences the satisfaction of customer. Consumers’ co-created value is proposed to act as a mediating variable between the various predictors outlined and consumer

satisfaction. Consumers' co-created value (CCV) is supposed to be a multidimensional construct and a scale was constructed to measure it.

A descriptive study has been undertaken and empirical analysis conducted towards quantitatively investigating consumers' value co-creation process in an online banking context. Data were collected through self-administered banking SST intercept survey from 320 customers using automated teller machines (ATM) at various locations in Delhi.

Results held that consumers' co-created value (CCV) is a key mediating variable in the consumers' value co-creation process. It was found that CCV acted as a mediating variable among active customer participation & satisfaction, perceived organisational support & consumer satisfaction, and perceived fellow customers' support & satisfaction of consumers. It was also found that consumers' co-created value and all the predictor variables had significant direct effect on customer satisfaction. Thus, this study is one of the first attempts to understand the nature of consumers' co-created value and its affect on consumer satisfaction in service decision making process. The present research would motivate researchers to extend this piece of work by incorporating consumer communities study and investigating each dimension of consumers' co-created value individually. Each dimension of co-created value and its affect on a customer's behavioural intention can be an area worthy of future study. This study will be a major help to managers who want to engage consumers on their websites. Firms need to work on each dimension of co-created value to retain consumers. Thus, findings of the study would help both managers and researchers, and contribute to the service decision making as well as consumers co-creation process by enhancing the various dimensions of value created in the collaborative process, fostering the environment which greatly the interaction and dialogue between the firm and customer, and allowing the access and exchange of resources among the various partner in the co-creation process.

Keywords: Co-creation, Value, Consumers, Services, Service Dominant Logic, E-services, Banking, SSTs, India.

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कर्मण्येवाधिकारस्ते मा फलेषु कदाचन। मा कर्मफलहेतुर्भूर्मा ते सङ्गोऽस्त्वकर्मणि॥

(Bhagwat Gita: Chapter Two verse 47)

In this verse from the holy Bhagwat Gita, Lord Krishna, who is a Guru, friend and a guide to greatest warrior of all time Arjuna!, says that “You have a right to perform your prescribed duty, but you are not entitled to the fruits of action.” Never consider yourself the cause of the results of your activities, and never be attached to not doing your duty.” Following the recited path recited above, I embark my journey of PhD, which has been the package of hard works, failures, constant support, motivation, moments of pain and joy.

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(Amit Kumar Agrawal)

Table of contents

Title	Page No.	
<i>Candidate's Declaration</i>	i	
<i>Abstract</i>	iii	
<i>Acknowledgements</i>	v	
<i>List of Figures</i>	xiii	
<i>List of Tables</i>	xv	
<i>List of Abbreviations</i>	xvii	
Chapter 1	Introduction	1-22
1.1.	Introduction	1
1.2.	Research Background	4
1.2.1	Gaps identified in the literature	5
1.3.	Research Scope and Motivations	6
1.3.1	Why consumer value co-creation	8
1.3.2	Why e-services	8
1.4.	Research Objectives and Questions	9
1.5.	Methodology of The Present Research	14
1.6.	Overview of Present Research	14
1.6.1.	Contributions	16
1.7.	Chapter Organization	18
1.8.	Summary	21

Chapter 2	Literature Review	23-46
2.1.	Introduction	23
2.2.	Method	25
2.3.	Theoretical background	27
2.3.1.	Conceptualizing value co-creation	27
2.3.2.	Role of consumer in co-creation	29
2.3.3.	Role of firms in co-creation	33
2.4.	The nature of value co-creation	34
2.4.1.	Service view of value co-creation	35
2.4.2.	Collaborative & networked nature of value co-creation	35
2.4.3.	Interactive and experiential nature of value co-creation	36
2.4.4.	Contextual nature of value co-creation	38
2.4.5.	SD logic service ecosystem view	38
2.5.	Measuring value co-creation	39
2.6.	Gaps in the literature	41
2.7.	Summary	46
Chapter 3	Overview of E-Services	47-62
3.1.	Introduction	47
3.2.	Research Methodology	49
3.3.	Overview of E-Service Literature	51
3.3.1.	E-Services: definition and conceptualization	52
3.3.2.	E-Service Characteristics	53
3.4.	Various Kind of E-Services	54
3.5.	Thematic Evolution of E-Services	56
3.6.	E-Services and its role in customer value co-creation	58

3.6.1.	Customer Value Co-Creation	60
3.7.	Gaps Identified from the E-Service Literature	61
3.8	Summary	62
Chapter 4	Research Model and Hypotheses	63-76
4.1.	Introduction	63
4.2.	The Theoretical Background	63
4.2.1.	The Research Model	64
4.2.2.	The S-O-R theory	64
4.2.3.	The social exchange theory	65
4.3.	Service consumer decision making process	65
4.4.	Predictor of satisfaction in co-creation process	67
4.4.1.	Co-created value as organism	68
4.4.2.	Customer participation	69
4.4.3.	Perceived service provider support	70
4.4.4.	Perceived fellow customer support	71
4.5.	Hypotheses	72
4.5.1.	Customer participation hypothesis	72
4.5.2.	Perceived service provider support hypothesis	73
4.5.3.	Perceived fellow customer support hypothesis	74
4.5.4.	Mediating effect hypothesis	74
4.5.5.	Co-created value hypothesis	75
4.6.	Summary	76
Chapter 5	Research Design and Methodology	77-88
5.1.	Introduction	77

5.1.1.	Rationale for A Cross-Sectional Survey Design	77
5.1.2.	Context	79
5.2.	Data Collection Methods	80
5.2.1.	Scaling Techniques	80
5.2.2.	Questionnaire Design	80
5.2.3.	Sampling Design	81
5.2.4.	Target Population	82
5.3.	Data Collection Procedure	85
5.4.	Data Analysis Procedure	85
5.5.	Summary	88
Chapter 6	CCV Scale: Development & Measure	89-112
6.1.	Introduction	89
6.2.	Scale Development Procedures	92
6.3.	Domain Specification	93
6.3.1.	Value Co-Creation	93
6.3.2.	Conceptualizing Customer Co-Created Value	94
6.4.	Phases of Scale Development	100
6.4.1.	Phase 1 Generation And Reduction Of Scale Items	100
6.4.2.	Phase 2 Scale Refinement	102
6.4.3.	Phase 3 Scale Validation	108
6.5.	Summary	112
Chapter 7	Analysis and Results	113-128
7.1.	Introduction	113
7.2.	Useable response rate	114

7.3.	Demographic segmentation	114
7.4.	Non response biasness	115
7.5.	Methodology	118
7.5.1.	Measurement	118
7.5.2.	Data collection	118
7.6.	Test of the Hypothesized Model	119
7.6.1.	Confirmatory Factor Analysis (CFA)	119
7.7.	Result of Confirmatory Factor Analysis	120
7.7.1.	Measurement model	120
7.7.2.	Examining common method bias	122
7.7.3	Structural model results	123
7.8.	Mediation analysis	125
7.9.	Summary	127
Chapter 8	Discussions and Conclusions	129-142
8.1	Introduction	129
8.2.	Outline of the Present Research	130
8.3.	Discussion	132
8.4.	Contributions	134
8.5.	Implications	137
8.5.1.	Theoretical Implications	137
8.5.2.	Managerial Implications	138
8.6.	Limitations	140
8.7.	Suggestions for future research	141
8.8.	Summary	142
References		143-176

Papers Published from the Research Work	177-178
Appendices	179-180
Appendix I: Scale Questionnaire	179-180
Appendix-II: Customer Value Co-creation Questionnaire	181-183
Appendix III: E-services used and various types of customer co-creation	185-185
Appendix IV: Literature Review Table	187-192

List of Figures

S. No	Title	Page No.
1.1	Classification Framework for E-Services	9
1.2	Transformation of gaps into research objectives	10
1.3	Schematic representation of research objectives and questions	11
1.4	Flow Diagram of Research	15
1.5	Overall Research Framework for the Present Study	16
1.6	Chapter Organization of the Thesis	19
2.1	Flow Diagram for Literature Search	26
3.1	Flow Diagram of E-Service Literature	50
3.2	Schematic representation of e-service literature	51
4.1	Model of consumer co-created value (CCV)	63
4.2	Schematic Representation of the research model development	64
4.3	Hypothesised relationships	72
5.1	Flow Chart of research methodology	87
6.1	Scale Development Framework	92
6.2	Confirmatory factor model	107
6.3	Causal model relating CCV construct to a single factor	110
6.4	Model for nomological validity assessment	111
7.1	Research Model	113
7.2	Confirmatory factor model	121
7.3	Structural model	126

List of Tables

S. No.	Title	Page No.
2.1	Various definitions of value co-creation and contribution	30
2.2	Measurement of value co-creation	42
3.1	Various definitions of e-services in literature.	52
3.2	Distinguishing characteristics between goods/e-services/services	54
3.3	E-services categories & application	55
3.4	Key areas under e-service research	59
5.1	Places of data collection	83
6.1	Various dimension and context enumerated in previous value co-creation studies	98
6.2	Sample characteristics of focus group	100
6.3	Number of Items per Construct (Prior EFA)	101
6.4	Demographic Profile of the Respondents	102
6.5	EFA/CFA results and final CCV scale	105
6.6	Calculation of validity and reliability	107
6.7	Demographic Profile of the Respondents	108
6.8	Calculation of validity and reliability	109
7.1	Demographic segmentation	114
7.2	Non Response Bias	115
7.3	Correlation Matrix	122
7.4	Path estimate for proposed model	124
7.5	List of hypotheses	125
7.6	Mediation Table	127

List of Abbreviations

Abbreviations	Full Form
AMOS	Analysis of Moment Structure
ANOVA	Analysis of Variance
AVE	Average Variance Extracted
CA	Corporate Ability
CSR	Corporate Social Responsibility
CCV	Customer Co-created Value
CSP	Corporate Social Performance
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CR	Construct Reliability
CR	Composite Reliability
CVC	Customer Value Co-creation
EFA	Exploratory Factor Analysis
GDP	Gross Domestic Product
GFI	Goodness of Fit Index
GRI	Global Reporting Initiative
IPT	Information Processing Theory
KMO	Kaiser-Meyer-Olkin
KLD	Kinder, Lydenberg and Domini
NCR	National Capital Region of Delhi
NGOs	Non-Governmental Organization
NFI	Normed Fit Index
PCE	Principal Component Extraction
PSQ	Perceived Service Quality
RBI	Reserve Bank of India
RMR	Root Mean Residual
RMSEA	Root Mean Square Error of Approximation
R&D	Research and Development
SDL	Service Dominant Logic

SEM	Structural Equation Modeling
SBI	State Bank of India
SERVQUAL	Service Quality
SOR	Stimulus Organism Response
SPSS	Statistical program for Social Sciences
UK	United Kingdom
USA	United States of America
NFI	Normed Fit Index
PCE	Principal Component Extraction
PSQ	Perceived Service Quality
RBI	Reserve Bank of India
RMR	Root Mean Residual
VCC	Value Co-creation

Chapter 1

Introduction

Preview

The current chapter is an introduction to the research presented in this thesis. The chapter opens with a brief description of various concepts, underlying theories and frameworks. The study of these concepts and theories has led to the identification of research problems associated with the subject. The study seeks possible answers to the research questions in a systematic manner. After the introduction, the chapter presents the methodology adopted and gives a description of subsequent chapters in the thesis.

1.1. Introduction

The study of marketing practices reveals that marketing is dynamic and keeps changing. This change is highly evident from the fact that roles of firm and consumer have undergone tremendous transformation over the years. Conventionally, the firm was entrusted with the primary responsibility of value creation as a manufacturer, and the role of consumer was limited to that of a buyer or consumer of the goods or services offered by the firm. However, advancements in internet and communication technologies changed the role of consumers, and the consumer-firm relationship. Value creation, which was earlier viewed as a firm activity, now became more consumers oriented. Consumers today are more informed, connected, and empowered, and active participants in creating value for themselves and others. The value creation activity has evolved as a co-creation or joint value creation activity between firm and consumer rooted in active interaction and dialogue (Prahalad & Ramaswamy, 2002, 2004a, 2004b; Vargo & Lusch, 2004, 2006; Saarijarvi, Kannan & Kuusela, 2013).

Value has always been pivotal to marketing activity. Such is the importance of value that American Marketing Association (AMA, 2013) defined marketing as “an activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings *that have value* for consumers, clients, partners, and society at large”. Thus, value is largely responsible for consumer actions before, during and after the purchase process (Gautam and Singh, 2010a). Consumer evaluation of value is based on the benefits derived from it, and the

cost incurred for it through purchase of products or services (Value= Benefits-Price). Hence, marketers need to ensure that offering of the firm has something which can be perceived as having value by the consumer.

Even when the traditional view of firm being the creator of value was prevalent, importance of consumers was recognized. Drucker (1964, p.79) stressed that “consumer defines business”. Similarly, Theodore Levitt also focused on the importance of consumer perceived value in his article “Marketing Myopia” where he claimed that businesses could flourish only by understanding that value they offered was not goods; instead, services obtained through goods. Kotler et al. (2010) discussed “new wave of technologies” (p.5) and stated that social media and mobile apps were driving consumers to connect, collaborate and create value for themselves and others, re-orienting relationship marketing and CRM to co-creation (Grönroos, 1994, 1996, 2000, 2004; Sheth, Parvatiyar, & Sinha, 2012; Kumar & Reinartz, 2012). These new technologies have enabled consumers to connect and interact through computers, mobiles, internet and various other interactive technologies. Pointing towards active consumer participation, Kotler et al. (2010) argued that advance collaborative value was created when consumers themselves played an active part in value creation.

Prahalad and Ramaswamy (2002, 2004a, 2004b) authored many thought provoking articles on value co-creation which suggested a shift of value creation solely as a firm activity to being a joint effort between the firm and the consumers. Building on the seminal work of Prahalad and Ramaswamy (2000), Vargo and Lusch (2004) presented service dominant (SD) logic where they referred to services as the basis of exchange taking place between parties. They viewed these exchanges as exchange of skills and competencies through interaction and dialogue. In another proposition, they insisted that consumer was always the co-creator of value, and that the firm’s role was limited to facilitation of value proposition.

Extending the work on value co-creation and SD logic, Gronroos (2008) Strandvik (2012) suggested that consumers governed value for themselves through consumption and the value creation process. Summarizing the value co-creation process, Saarijarvi, Kannan, and Kuusela (2013) asked marketers to focus on “reinventing value in terms of the value-creating system itself where different actors—suppliers, businesses partners, allies, and consumers—work together to co-produce value” (p. 7).

This new view of value co-creation emerged due to interaction and resource exchange between firm and consumer. The prevalence of this interaction is evident from

examples such as Flipkart, Youtube, Facebook, Twitter, Wikipedia, Flickr, Instagram and LinkedIn. These websites allow consumers to form communities, personalise the firm offerings according to their preferences and facilitate dialogue ((Prahalad & Ramaswamy, 2004). Traditional manufacturing companies such as Arvind Mills have also started working significantly towards increasing proximity with consumers, allowing consumers to collaborate and design their own shirts. However, co-creation being a recent phenomenon, Saarijärvi et al. (2013) emphasise that technology advancement and change in management thinking have turned the consumer-firm relationship into a “continuous flux” and these dynamic relationships have resulted into “unorthodox and innovative ways of integrating resources for the purpose of value creation” (p. 6). The value co-creation process has brought a transformation in the value chain concept; the consumer does not sit at the end, instead, the consumer enters the value chain very early through purposeful interaction and new technologies to co-create value. These new interactive technologies comprise various social media platforms to let consumers interact, exchange and create knowledge and learning within the online communities. Further, consumers today seek real time communication (through recent technologies) with the firm and expect immediate feedback and solutions to their problems. Failure to do this on the part of the firm many a time results in widespread negative communication by consumers on online platforms.

The changing natures of firm-consumer relationship, and communication and exchange through online technologies have made co-creation a subject of serious research. Many questions arise which warrant answers, such as: When consumers are the value co-creators, what are their roles in, and resources contributed towards co-creation? “How firms and marketing professionals will adapt to the new paradigm of value creation? If understanding co-creation of value and developing new best practices that recognize its cyclical nature are essential to success in today’s complex marketing landscape, are older and more experienced marketing practitioners and academics—individuals who were schooled in the traditional approach of value creation from within the firm—recognizing and adapting to the ongoing dialogue with consumers to co-create value? What is the collaborative value created in various online services? How it can be measured? One thing seems clear though - value co-creation is the path for firms striving towards competitive advantage and differentiation.

The overall purpose of this study is to model and measure consumer-created value in context of e-services. The study asserts that value created in co-creation is not a linear

function. Instead of considering co-created value as an outcome, this thesis views collaborative value created in the process of consumption and as an outcome of the consumption process as well. The next section explores various concepts of value and value co-creation, and their importance in marketing. Within the framework of facilities, transformation and usage (FTU), the following research question will be investigated:

“How consumers co-create value in online services? What are the motivators behind consumer co-created value? How to measure co-created value in online services?”

Answers to the above questions require a thorough investigation of literature on value, co-creation, SD Logic and various other theories and frameworks associated with co-creation.

1.2. Research Background

Companies today are equipped with advanced technologies to serve consumers better, and consumers have a plethora of choices in offerings of various companies. Despite the advancements in technology and variety in choice, neither companies nor consumers have been able to arrive at a consensus regarding value. Value has a long historical background, was subject of interest even before the start of 18th century (Rameiz, 1999). Despite being one of the most overused and misused term in management and the social sciences, interest in ‘value’ has always tend to keep on increasing multifold time, considering its pivotal role for achieving competitive advantage and long term success for firms (Khalifa, 2004). Value connotes numerous meanings ranging from quality, degree of importance, amount, duration and numerical quantity to estimate, to regard, fix or determine, hold, etc. Value has been dynamic and ever evolving due to its subjective, preferential, relativistic, contextual, perceptual and cognitive-affective nature. (Holbrook, 2006; Farnandez & Iniesta-Bonillo, 2007).

Earlier logic suggests value to be embedded in goods, while services have been seen as peripherals which means that value is created through the exchange process with role of marketing just limited to that of a facilitator in the distribution mechanism (Gronroos, 2011a). Value creation is observed to be the sole purpose of a firm’s existence and its success (Slater, 1997). Value in marketing is greatly influenced from the economic theory of ‘utility’ where it has been taken to be a trade-off between what is received and what is given (Ziethmal 1988; Woodruff, 1997). Value has also been seen from various perspectives - the

augmented product concept, consumer satisfaction and service quality and value chain analysis (Payne & Holt, 2001, Lee et al., 2007). All these perspectives considered the firm's role to be paramount in value creation with the consumer being a passive entity.

Further research point out various areas which are worthy of study: role of consumer in value co-creation, creating and delivering of superior value, determining the value of consumer, consumer perceived value, stakeholder value and relationship value (Gummesson, 1996; Gummesson; 2000; Gronroos, 2011b). Significance of choices for consumers in deciding the real value or value in use through interaction brings value co-creation at the centre stage of discussion. Traditional role of producer and the consumer has transformed into to social and economic actor in value co-creation process. Co-creation is enabled when operand resources start functioning on the potential value proposed by the producer to the consumer (Norman and Ramirez, 1993). Value produced during the value creation process is differentiated into two values: potential value and real value. While potential value refers to the value proposition offered by the firm to consumers, real value is the value obtained from potential value through consumption (Gronroos,2008).

1.2.1 Gaps Identified in the Literature

A rigorous critical examination of studies on value co-creation (from Jan 2004 to March 2016) reveals various theoretical and practical knowledge gaps in its measurement. The following research gaps are worthy of study and should be undertaken in future research endeavours:

- First, a critical review of literature reveals that value co-creation is an emerging area and most of the studies conducted on the topic have been conceptual in nature, trying to figure out what value co-creation is, how value is co-created and who are involved in co-creation. Thus, a gap exists in literature regarding empirical analysis of studies on value co-creation (Agrawal and Rahman, 2015; Vargo and Lusch, 2008; Gronroos, 2008; Woodall, 2003)
- Second, review of extant literature on value co-creation reveals that most of the studies have been on consumer participation in value co-creation, neglecting the outcomes or consequences of consumer participation in value co-creation. Thus, studies need to be undertaken regarding nature and dimensions of value co-created through consumer participation (Neghina et al., 2104; Ranjan and Read, 2014).
- Third, a critical review of literature argues for the development and validation of a scale for co-created value at the micro level. No measurement scale exists to measure value co-

created in consumer-firm interaction. While studies have tried to develop online brand community (OBC) scale (Hsieh, 2015) and consumer participation (CP) scale (Yi and Gong, 2012), these are not fit when studying value co-created in context of consumer value co-created in e-services.

- Fourth, most of the studies on value co-creation have been confined to developed countries and studies in context of developing economies may show different results considering the rapidly growing online presence of firms and interest of consumers in various kinds of online services. According to a BCG (2015) report, the number of internet users in India as of June 2014 was 190 million after having grown 25 times in the last 12 years at a 30 percent rate of compounded growth. Therefore, studies on co-creation need to be undertaken in emerging economies like India, which has millions of active online users.
- Fifth, despite a large number of studies seeking to conceptualise value co-creation, there is an absence of studies which have operationalised the co-creation process. There is a lack of reliable and validated models on value co-creation in context of consumer-firm relationship, especially in an Indian context. This gap should be bridged through studies on model development process (Gronroos, 2012; Jaakkola et al., 2015; Rihova et al., 2015).
- Consumer satisfaction is paramount for firms wishing to achieve competitive advantage. There is limited research on measuring the impact of consumer co-created value on consumer satisfaction. Such a study would require the development of a survey instrument that measures consumer co-created value (CCV) and evaluates the significant impact of CCV on consumer satisfaction (Prebensen et al, 2015; Ha et al., 2010).

1.3. Research Scope and Motivations

Importance given by consumers to value has attracted both academics and practitioners to undertake value as a research subject. The multidimensional aspect of value has enabled researchers to study it from various viewpoints. Studies on value have covered product augmentation, consumer satisfaction and product quality, value chain, superior consumer value, consumer perceived value, and more recently, relationship and stakeholder value (Payne and Holt, 2001).

Until a few years ago, it was believed that the consumer was a passive recipient in value creation and consumer role in participation was limited to giving feedback and suggestions. However, access to information, networking and empowerment of consumers resulted in the consumer being more actively involved in value selection and creation. Firms also seek

consumer competence to lower cost, increase profitability and deliver more personalised offerings for achieving greater consumer satisfaction and loyalty. So organisations are actively involved in encouraging, organising and reorganising their cultures, systems, service encounters, operations, quality and satisfaction measure level both at tactical and strategic end (Garg et al., 2011; Chen and Lee, 2008). The literature review presented in Chapter 2 also highlights that research scholars and practitioners should also focus on the outcome of co-creation, especially consumer co-created value. Gaps identified in literature review (see Chapter 2 and Chapter 3) show that there is ample scope for future research in the area of value co-creation. Several factors may be stated as motivations behind studying consumer value co-creation:

- More than 50 referred international journals regularly feature articles on value co-creation. They also provide research directions and guidelines with explicit discussion on the subject. Various abductive, deductive and inductive studies reported by these journals are the force behind undertaking the study on value co-creation. Important among them are: Journal of Service Research, Managing Service Quality, Internet Research, Journal of Retailing, Journal of Travel Research, Tourism Management, Computers in Human Behaviour, Database Marketing & Consumer Strategy Management, International Journal of Contemporary Hospitality, Management, International Journal of Service Industry Management, Journal of Business Research, The Service Industries Journal, Brand Management, European Management Journal, Journal of Consumer Research, Journal of Marketing, International Journal of Modeling in Operations Management, International Journal of Services Sciences, and Journal of Service Marketing, among others.
- Consumer co-creation is a newer phenomenon which considers the active participation of consumers in value creation. This view is quite opposite to the good dominant logic where the producer is considered the actual value creator (Vargo and Lusch, 2004). The advent and usage of online technologies and internet has made consumer co-creation possible (Prahalad and Ramaswamy, 2004; Zwass, 2010). Thus there exists an imperative need to investigate the newly defined roles of consumers and firm, service encounter process, resources exchanged during the process, various behavioral, social and psychological outcome of consumer participation.
- Furthermore, there is lack of studies on the various aspects of value co-creation such as antecedents, process and consequences. So studies must be undertaken to analyse

the nature of value co-creation and its impact on the consumer evaluation. To bridge this gap, present research particularly focussed on the outcome of consumer participation co-creation process (Brodie and Hollebeek, 2009, Agrawal & Rahman, 2015, Chen and Wang, 2016).

- Next, the review of extant literature in Chapter 2 and Chapter 3 highlights that empirical study pertaining to value co-creation is lacking (Dong et al., 2008). Adding to it, most of the businesses are involving and engaging their consumers online, thus co-creation has now been used by organisations as a strategy. Thus online services has become significant and easy way for successful value co-creation and henceforth, subject of research (Zwass, 2010).

The study also provide rational behind adopting particular study under following sub heads:

1.3.1 Why Consumer Value Co-Creation

As discussed above it has been found that consumer has started participating actively in the value creation process. Right from idea generation, to production, delivery and consumption a wide array of roles are being performed by the consumers (Agrawal and Kaushik, 2015). Advent of newer technologies and spread of internet has enhanced the connectivity amongst the consumers, who are continuously interacting and exchanging various kind of resources amongst each other. Consumers are realising various kind of benefits to participate in co-creation process which extends from experiential, social, psychological and economic benefits. Similarly firms are also find consumers participation equally benefitting in terms of consumers engagement and long term association. Thus present study is a step forward to understand the consumer value co-creation process and how consumer is perceiving the co-created value.

1.3.2 Why E-services

Advances in technology and rise of labour cost has forced companies to look for various ways for cost efficient way for creation, communication and delivery of value (Meuter et al., 2005; Meuter et al., 2010). Apart from serving as an efficient cost reducing medium, e-services has also emerged as a platform to let consumer participate in value co-creation. Sheth and Sharma (2007) has presented a two dimensional model which helps in classification of various kinds of e-services on the basis of two dimensions as digitalisation and co-creation as follow:

Level of Digitalization	Level of Co-creation		
		Low	High
	High	Highest penetration of e-Services <ul style="list-style-type: none"> • Media • Entertainment • Communication Services 	Moderate penetration of e-Services <ul style="list-style-type: none"> • Travel • Government Services • Financial services
	Low	Lowest penetration of e-Services <ul style="list-style-type: none"> • Commodities • Consumer goods • Utilities 	e-Services penetration in Fulfillment <ul style="list-style-type: none"> • etailers • B2B services • Legal Services

Figure 1.1: Classification Framework for E-Services¹

According to the above framework in Figure 1.1 e-services have highest market penetration when there is high level of digitalisation and low level of co-creation. Netflix, Ganna.com are some of the example where users can easily download content with relatively low use of co-creation. However when examples of commodity like garments and shoes are checked, it has been observed that their digitalisation is difficult however process surrounding designing, customisation and ordering is possible making it as an area of lowest penetration of e-services. On examining the travel, banking, financial and government services they are mostly digitalised and involve high level of co-creation and similarly it was found that legal and medical examination services requires high level of co-creation.

Thus present study uses e-services and specifically example of banking where consumer co-creation is highly evident to develop conceptual model of consumer value co-creation and further testing the consumer value co-creation model using scale.

1.4. Research Objectives and Questions

The concept of value co-creation has received significant attention among both scholars and practitioners across the world. The value co-creation phenomenon has been boosted by the advent of internet and newer connective technologies which have turned the consumer from uniformed to informed, and from passive to active participant of value creation

¹ Source: Sheth and Sharma (2007)

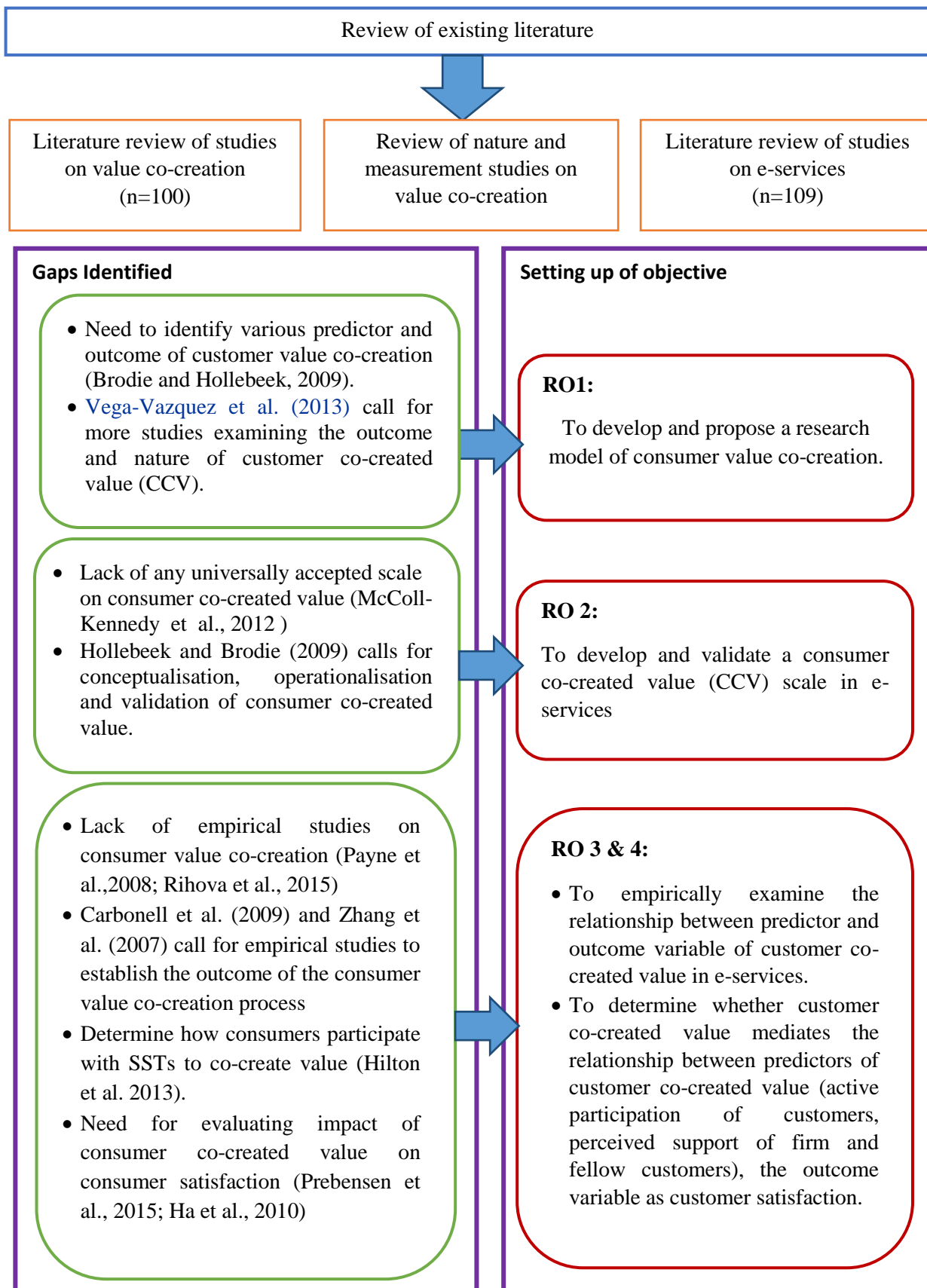


Figure 1.2: Transformation of research gaps into research objectives

Literature has also tried to distinguish co-production from co-creation as a subset of the latter (Vargo and Lush, 2004). However despite substantial efforts by researchers, there are several issues in value co-creation which still need an in-depth attention and exploration. On the basis of knowledge gaps identified in literature and importance of value in consumer service decision making, absence of any conceptual model measurement of consumer co-created value is considered an important problem posited before researchers to solve. Therefore, the present study on consumer value co-creation has tried to address some of the issues within the permissible scope of present research. This consumer value co-creation study seeks to achieve the following purposes and answer related research questions.

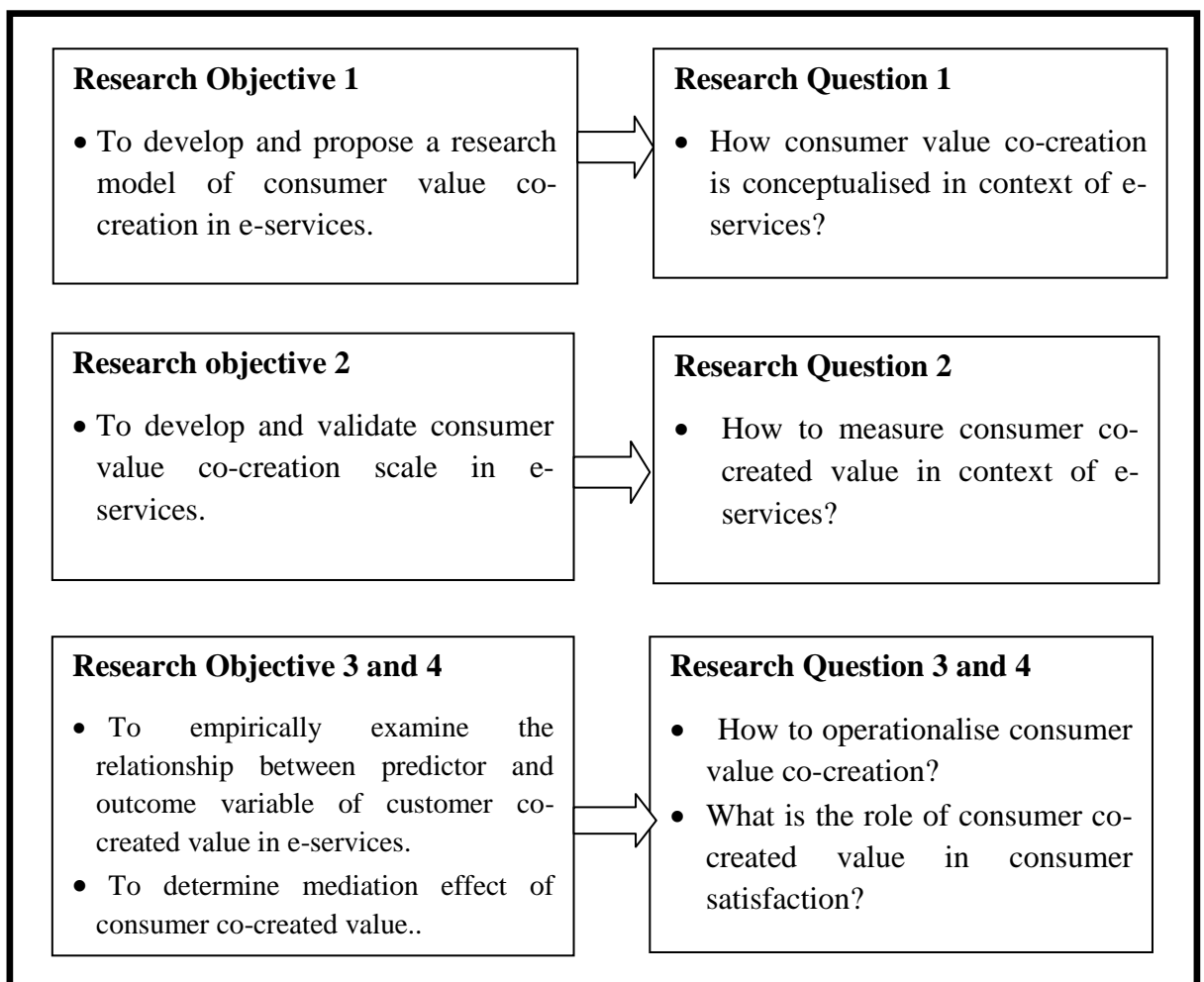


Figure 1.3: Schematic representation of research objectives and questions

A thorough examination of literature suggests an absence of studies on the outcome aspect of value co-creation. It has also been observed that while previous research has taken steps to measure co-created value, it has largely been restricted to measurement of consumer

participation in value co-creation (Yi and Gong, 2012) and co-production (Chen and Raab, 2014). Similarly, Ranjan and Read (2014) has developed the instrument for measuring the 'process' aspect of value co-creation, which was an important knowledge gap on the value co-creation subject. However, despite of previous efforts to conceptualise and measure value co-creation, the outcome of value co-creation, i.e. collaborative value or consumer co-created value in case of consumer-firm relationship still remains a grey area, in need of dire exploration. The research questions related to consumer value co-creation derived through research objective elaborated in Figure 1.2 and Figure 1.3 are as follow: (1a) How consumer value co-creation is conceptualised in context of e-services? (2) How to measure consumer co-created value? (3a) How to operationalise consumer value co-creation, and (3b) what is the role of consumer co-created value in consumer satisfaction?

The above mentioned research questions were addressed by defining the various objective of our studies as follow:

Objective 1: To develop and propose a conceptual model of consumer value co-creation in e-services.

- Various researcher like Brodie and Hollebeek (2009) and Ranjan and Read (2014) call for identification of various variable which are important from the point of value co-creation study. The study intend to develop and propose a conceptual research model of consumer value co-creation. The model comprises of various antecedents and consequence of consumer co-created value. The proposed model was based on the literature review along with various theoretical foundation. The research questions for defining conceptual boundaries of value co-creation are: (1) what are the key predictors and outcomes of co-created value and how are they related?

Objective 2: To develop a scale for measuring consumer co-created value in an e-service.

- Since value co-creation is an emerging phenomenon, extant literature on the subject at various points has pointed out the need for better operationalisation of construct. Though several researchers (such as Gronroos and Voima, 2013; Payne et al., 2008; Edvardsson et al., 2011) have asked and attempted to operationalise value co-creation, the subject still suffers from ambiguities and undefined boundaries which led to the call from Brodie and Hollebeek (2011) for measuring consumer co-created value. Further the literature suggests that the consumer is the final arbiter of value co-creation and hence there is an important

question which need to be addressed as, how consumer perceive the co-created value obtained in e-services.

Objective 3: To test the consumer value co-creation model by examining the various interrelationship amongst construct.

- Extant literature on value co-creation suggests that consumers' co-created value is a precursor to consumer satisfaction. Therefore a firm participating in co-creation seeks to enhance consumer value so that consumer satisfaction is also achieved. Although consumer value is vital to consumer satisfaction, yet in actual situations, high levels of co-created value may not be realized due to various types of self-service bias (Bendapudi and Leone, 2003). The research questions in this regard were: (a) Does consumer satisfaction exist with value co-created by consumer (b) If yes (or no), how does predictor of consumer co-created value (consumer participation, perceived service provider support and fellow consumer support) and behavioural outcomes (consumer satisfaction) are related.

Objective 4: To examine mediation effects of consumer co-created value between predictor variables and the outcome variable (consumer satisfaction).

- The third objective is to understand the mediation effect if any, produced by consumer co-created value between the three predictor variables and consumer satisfaction. Literature provides evidence in favour of the fact that all the three predictor variables have significant influence on consumer satisfaction (Bendapudi and Leone, 2003; Grisseemann and Stokburger-Sauer, 2012; Gronroos, 2012). Extant literature also suggests that value has a significant influence on consumer satisfaction. Greater expectation of consumers and their evaluation of the value potential, leads to greater satisfaction of consumer with value they create (Vega-Vazquez et al., 2013). It is posited that consumer co-created value acts as a mediating variable between predictor and outcome variables. It also means that in reality, it is the value co-created by the consumers that defines their satisfaction. Higher consumer satisfaction is achieved on active involvement firm and fellow consumers in enriching the value co-creation process through continuous interaction and exchange of resources.

1.5 Methodology of the Present Research

The key objective of this study is to: (1) To develop and propose a conceptual model of consumer value co-creation in e-services.; (2) To develop a scale for measuring consumer co-created value in an e-service.; (3) To test the consumer value co-creation model by examining the various interrelationship amongst construct.; and (4) To examine mediation effects of consumer co-created value between predictor variables and the outcome variable (consumer satisfaction). To achieve our objective, the study proceed with the standard scale development process discussed by Churchill (1979) and extended by others (Zaichkowsky, 1985; Arnold and Reynolds, 2003).

To examine the existing relationship among predictors (consumer perceived participation, perceived support of service provider and perceived support of fellow consumer) of consumer co-created value, and consumer satisfaction, the study employed exploratory and confirmatory factor analysis. The validity and reliability of scale items were examined and modelling of CCV constructs is performed. AMOS software was used to perform Confirmatory Factor Analysis (CFA) with the help of an advanced modelling technique called Structural Equations Modelling (SEM). The conceptualised research model is tested in two steps using SEM: the first step examines, whether the identified observed variable can define the underlying constructs (or latent variables); in the second step, hypothesis testing is performed wherein it latent variables fit are examined on various model fitness parameters.

Data collection procedure includes use of survey instrument in both scale development procedure and CCV modelling (Lin and Hesih, 2011). SEM is used as the primary method of data analysis in modelling and mediation effect in CCV model.

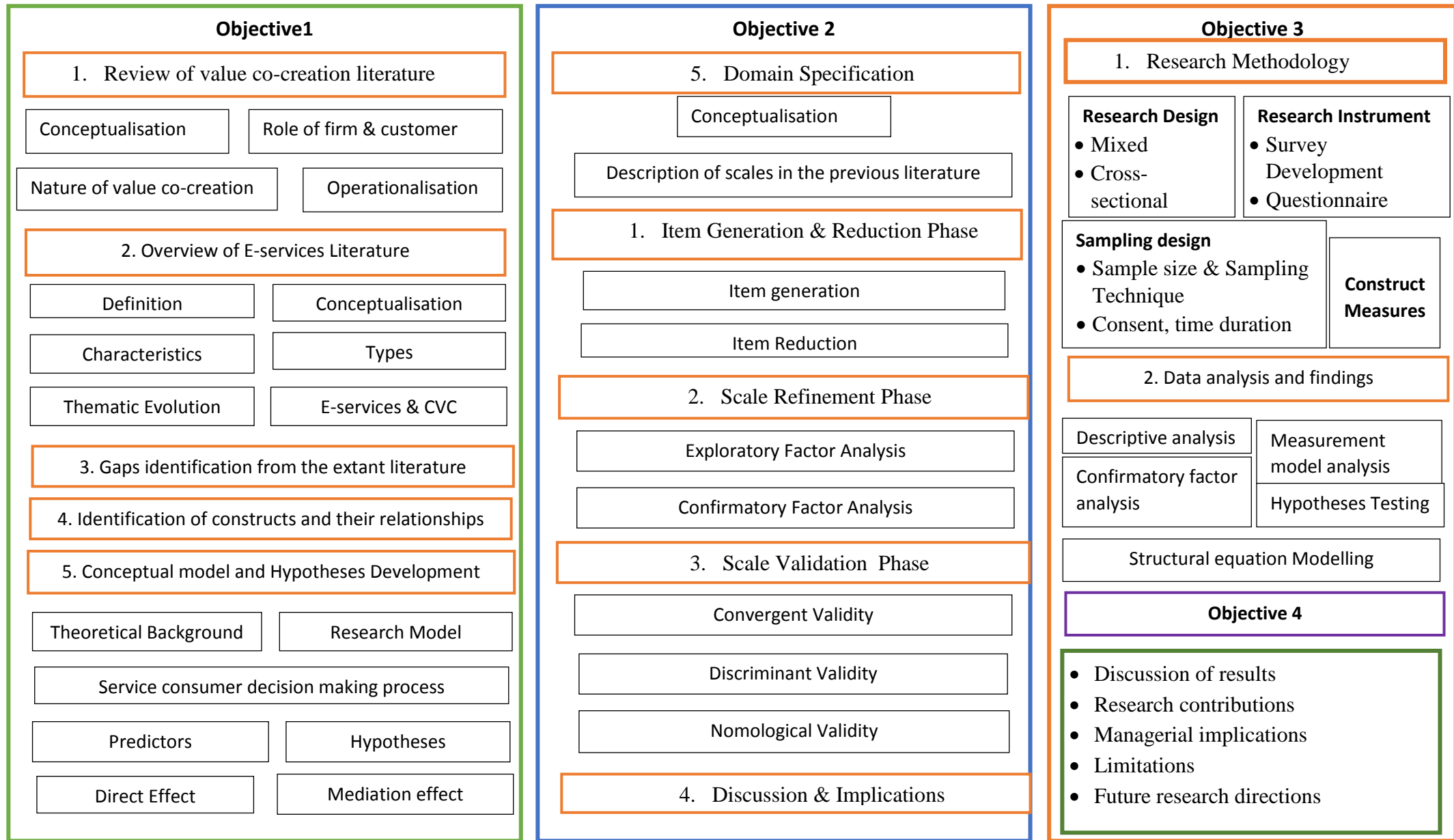
1.6 Overview of Present Research

This research initiates with a review on value co-creation and e-services and next, offers a thorough understanding of literature and an identification of knowledge gaps which form the reasons to pursue the current research as elaborated in Fig 1.4 and Fig 1.5. The critical review of literature also helps in deducing the various research gaps and establishing the need and scope of CCV measurement in online services.

This deduction and induction approach helps in the formulation of problem, building of conceptual framework, and identification of constructs and potential methods to measure

Figure 1.4: Flow Diagram of Research

Study Title: Modelling Measuring consumer value co-creation in e-services



Outcomes: Conceptualisation of customer value co-creation in e-services; Identification of various predictor and outcome of customer value co-creation; Development and validation of CCV scale; empirical testing of CVC model and confirming the mediation effect of customer co-created value in CVC model.

CCV. Following review of literature, an overall research framework has been built as illustrated in Figure 1.5 of the present chapter.

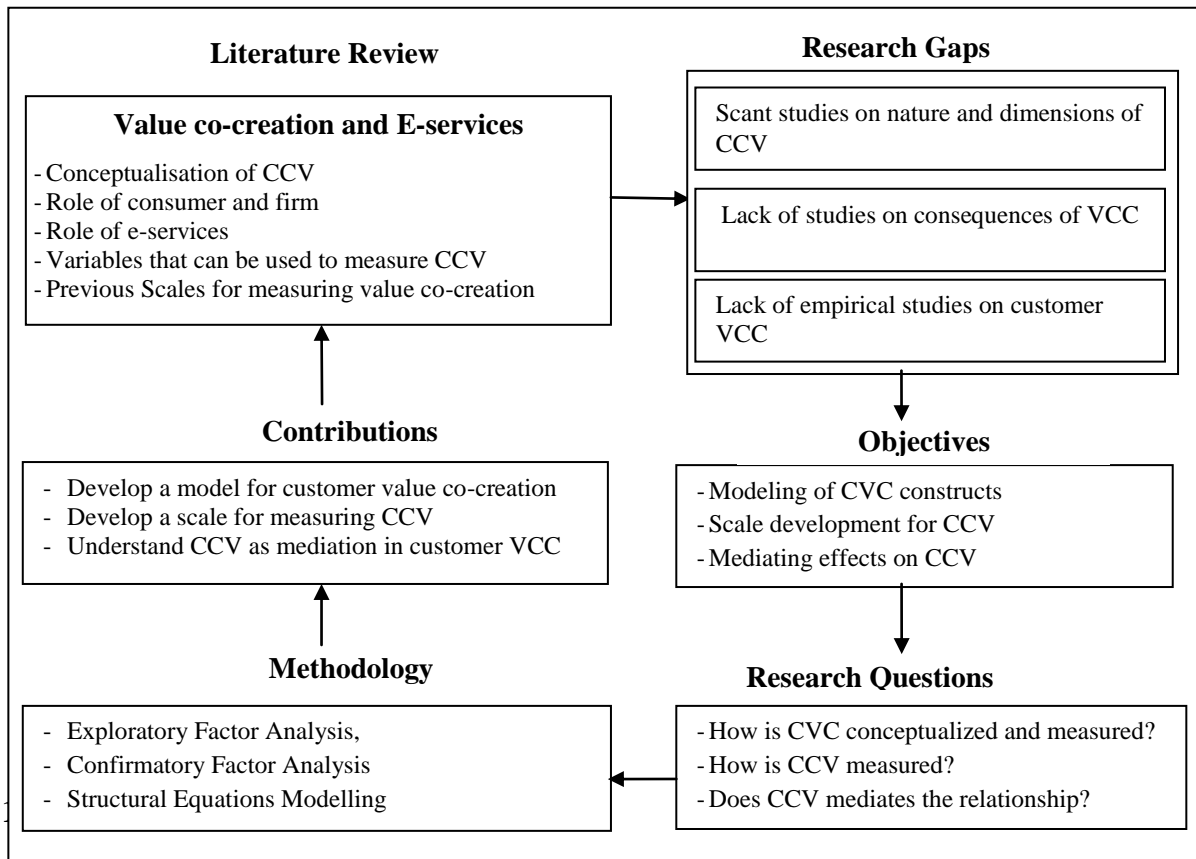


Figure 1.5: Overall Research Framework for the Present Study

1.6.1. Contributions

The current study fills knowledge gaps in existing service literature. It also makes several theoretical and managerial contributions to marketing literature.

1.6.1.1 Theoretical Contributions

This section deals with the contributions made by this study to the literature on value co-creation and service research.

1.6.1.1.1 Value co-creation literature

This research discusses consumer value co-creation in e-services and its impact on consumer satisfaction. While previous literature has focused on consumer participation behaviour in value co-creation (Yi and Gong, 2012), this study extends co-creation literature by specifically examining consumer co-created value (CCV). The consumer service decision

making process in case of consumer co-creation in e-services has not received sufficient empirical attention. Next, this study illustrates the importance of co-created value as a mediating variable between predicting variables (consumers perceived participation, perceived organisational support and fellow consumer support) and consumer satisfaction. No study has considered consumer co-created value as mediating variable in extant literature on co-creation. Study of mediating variable will help in understanding the significance of consumer co-created value as a precursor for attaining consumer satisfaction.

This study specifically focuses on the dyadic behaviour between firm and consumer. It don't take into consideration firm communities or consumer communities. The study focuses on the micro-level consumer decision making process which help us understand the detailed phenomenon of the value co-creation process. This study also encourages future research to take a macro perspective so that role of communities and network effect could be added in co-creation studies.

1.6.1.1.2 Services Literature

Apart from contributing to the consumer decision making process, the present research also makes several contributions to service literature. Since majority of co-creation activity requires integration of consumers and their resources in value creation, the present study extends the consumer participation research by focussing on the outcome aspect of co-creation. This study takes into account joint value co-creation instead of just firm or consumer co-creation in online services.

Next, adopting SD logic, this study elaborates the nature and dimensions of co-created value. Rather than focussing only on value-in use, it emphasises value-in exchange. Most of the research on co-creation has emphasised the experiential nature of the value co-created in services. However, this study takes into account various other aspects of co-created value which are perceived by consumers as critical for satisfaction. There is a need to study factors which affect consumer value co-creation. SD literature has focussed only on value in use as the consumption value created by consumers in co-creation. Role of fellow consumers and support of organisation should be studied during production and consumption of value offerings.

1.6.1.2 Methodological Contributions

Along with theoretical contributions, this study also makes methodological contributions by empirically testing consumer co-created value. Studies on the construct have been mostly conceptual in nature, thus, this study enriches existing knowledge on value co-creation.

Further, the study tries to capture consumer value co-creation in the service decision making process and takes into account all the phases before consumption of offerings in an online service context. While most of the studies are limited to the consumption phase, the literature synthesise that consumers not only co-create value in consumption, but also in the 'process' of consumer decision making. Thus, a holistic approach has been applied to understand consumer value co-creation with the firm in online services.

1.7 Chapter Organization

The present study has been undertaken for understanding consumer value co-creation, and is divided in seven chapters (including the present one). Figure 1.6 gives a schematic presentation of all the chapters. A brief description of each chapter is as follows:

Chapter One

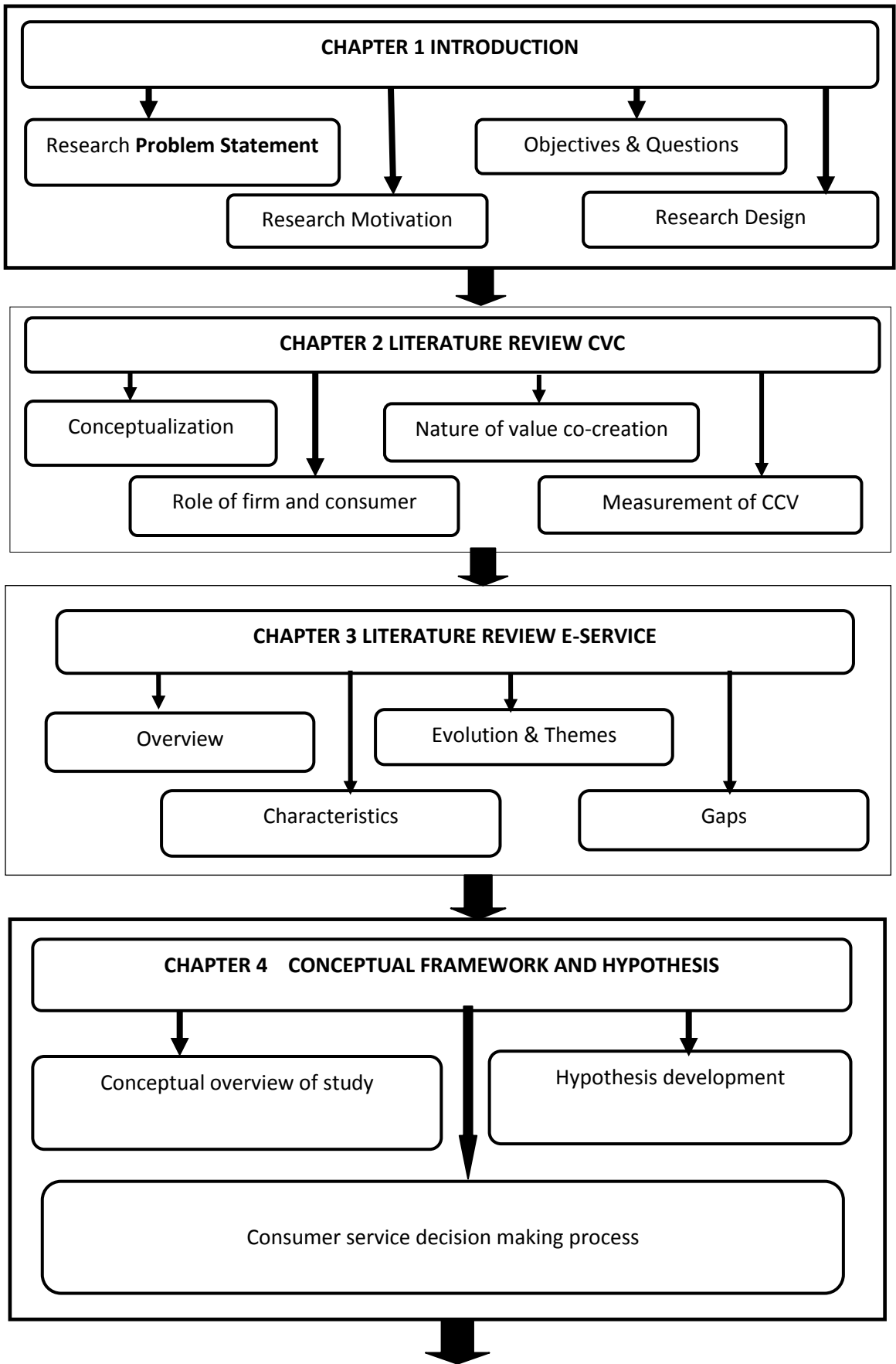
This chapter provides an introduction to the present study along with the rationale behind undertaking the present study. It also presents the research gaps and scope of study. This chapter also gives a brief overview of the thesis and its organisation.

Chapter Two

This chapter gives an in-depth review of existing literature on value co-creation concepts, theories and frameworks to identify research gaps.

Chapter Three

This chapter gives an in-depth review of existing literature on e-services concepts, theories and frameworks to identify research gaps and linkage with customer value co-creation.



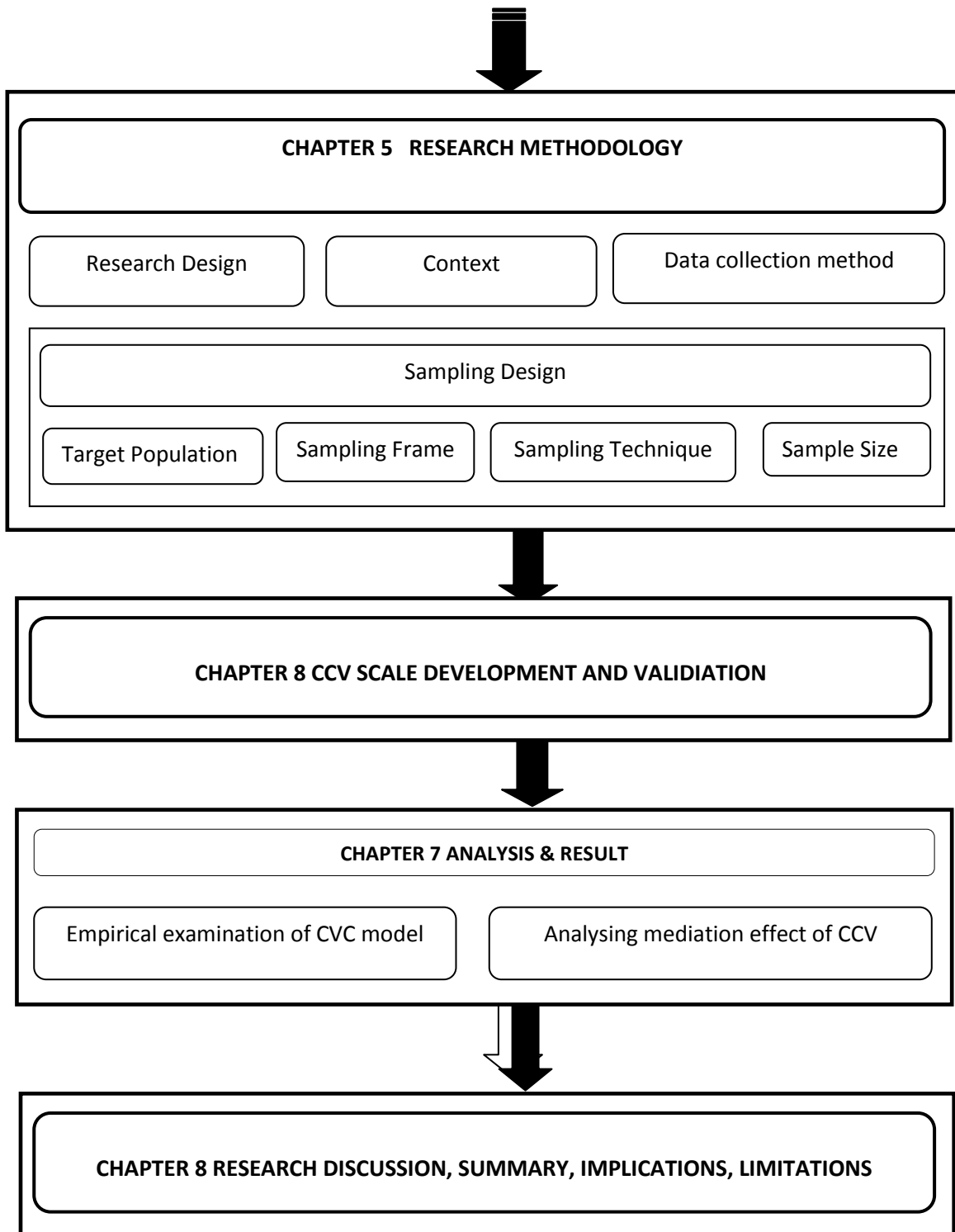


Figure 1.6: Thesis Chapter Organisation

Chapter Four

This chapter provides a conceptual framework on the basis of review of extant literature. Various hypotheses are proposed on the basis of various relationships existing among constructs important to the present study.

Chapter Five

This chapter delineates the various methodologies adopted to achieve each objective presented in the introduction section. The chapter also includes details of research design, sampling frame, and sampling unit.

Chapter Six

This chapter explains the development and validation of a scale for measuring consumer co-created value in context of e-services. The scale development process comprises three phases: phase 1 - item Generation; phase 2 - scale refinement; phase 3 - scale validation.

Chapter Seven

Chapter Seven engages in modelling of CCV by examining the relationship between predictor variables (customer perceived own participation, perceived organisational support, perceived fellow customer support) and outcome variable (customer satisfaction). Mediation analysis is also performed to understand the direct and indirect effects between predictors and outcomes.

Chapter Eight

This chapter presents the summary of major findings, and conclusions and discussions regarding the present research. In addition, managerial implications, limitations and future scope have also been provided.

1.8. Summary

The present chapter provided an introduction to this research. It highlighted the problem statement by discussing the research gaps identified from a critical review (see Chapter Two and Chapter Three). The chapter explained how the problem statement was embedded in brand equity theory and practice. Further, it briefly touched upon the conceptual framework to be tested, overall research design, context and setup for achieving the

objectives of the present study. Finally, it presented an overview of the research framework and scheme of chapters included in the thesis.

Chapter 2

Literature Review

Preview

The present chapter aims to present the detailed understanding of the conceptualization and measurement of the consumer value co-creation in an e-services. A rigorous systematic literature review of 163 studies on value co-creation is performed to accomplish our aim. Despite of few attempts undertaken to analyses and synthesize previous research, lack of structured presentation on both conceptual and empirical studies has been the biggest motivator behind undertaking of present study. The study specifically focuses on delineating the nature of collaborative value and consumer roles, henceforth contributing to the extant knowledge on value co-creation.

2.1 Introduction

The unprecedented growth of the service sector in recent times has forced marketers to look for new ways to create value for consumers. Traditionally, value was considered inherent in the possession and exchange of a good or product, but the advent of service dominant (SD) logic established the notion that value lay in the usage or consumption of the offering (Vargo and Lusch 2004). Innate multidimensionality and complexities associated with value have rendered it one of the most abstract and discussed subjects amongst scholars and practitioners around the globe. Despite innumerable definitions present, value still suffers from ambiguity with no accurate definition.

A significant revelation of modern management research is the acknowledgement of the consumer as creator and final arbiter of value. Earlier, it was believed that firms created value for consumers, and the role of consumers was limited to purchasing and consuming the offering. But the advent of SD logic (2004), and the seminal work of Prahalad and Ramaswamy (2004) on co-creation of experiences, established that instead of goods, service was exchanged among actors involved in the value creation process. SD logic further emphasizes that the consumer is a co-creator of value, with the firm merely acting as a facilitator of the value proposition. (Etgar 2008; Grissemann and Stokburger-Sauer 2012; Grönroos 1997). This shift in emphasis from goods dominant (GD) logic to SD logic has made researchers take note of this phenomenon and conduct further studies in this area.

Integration of the consumer in the value creation process implies that value co-creation is the key for gaining competitive advantage. For firms, this competitive advantage could be in the form of: increase in efficiency gained by expediting service delivery (Carbonell, Rodríguez-Escudero, and Pujari 2012) and decreasing cost & risk (Bendapudi and Leone 2003; Prahalad and Ramaswamy 2004); greater effectiveness of the co-created offering through increased willingness to pay (Chung et al. 2011; Franke et al. 2009); better revenues and profits (Ostrom et al. 2010); and higher degree of innovativeness (Füller et al. 2008; Thakur and Srivastava, 2015). Thus, involvement of the consumer in the value creation process helps in satisfying consumer needs and creating memorable consumer experiences. Although value co-creation has drawn attention of both academics and practitioners, various core issues that still need to be addressed are discussed below.

Till date, only three to four reviews are available on value co-creation, amongst which the noted ones are: Ranjan and Read (2014), elaboration about the process aspect of co-creation which consist of co-production and co-creation, however it fails to shed light on the outcome aspect of co-creation; Another study by Galvagno and Dalli (2014) performed the systematic review of value co-creation through cluster analysis approach to bring coherence in various ambiguous dimensions but owing to scope it fails to focus itself on the empirical studies conducted on the subject. Another important one was by Paredes et al. (2014) who provided the detailed review of various resources used in the value co-creation process which let exclusion of various considerations such as consumer engagement, learning, experiences getting omitted from the study. Also, there can be two possible reasons behind fewer review studies being undertaken: (i) value co-creation is a relatively new phenomenon, and (ii) a shift in logic that views the consumer as an active participant and creator of value.

Earlier studies on value co-creation have tried to conceptualize the value co-creation construct from various aspects: as an exchange, encounter process, interactive process and behavioral process. According to Vargo et al. (2008), value co-creation needs a fitting definition, and ways to measure value-in use as well as co-created experience needs to be explored.

Answering the call of various researchers, the study contribute to the existing literature in a following ways

- Offer a deeper understanding of the value co-creation concept by focusing on the role of firm and consumers in co-creation and outcome of the co-creation process.

- Try to elaborate nature of value co-creation by bringing synchronization in SD logic view, service view and servicing ecosystem view.
- Examining how value co-creation has hitherto been measured, along with suggesting how it could be measured better.

The authors, on the basis of literature reviewed, observed that there have been few attempts to integrate existing concepts of the value co-creation process, which resulted in the absence of any coherent conceptual framework that could have served as a base for the development of theoretical and empirical research (Handrich and Heidenreich 2013; Chua and Sweeney 2004).

The present chapter is structured as follows: First, a detailed methodology is provided for literature search; second, a comprehensive review of the literature on value co-creation has been done. Third, an analysis of the roles of the consumer and firm in value co-creation is presented. Fourth, the paper elaborately describes the nature of co-creation. Fifth, the way in which value co-creation has been measured in extant literature is discussed. Finally, the paper discusses and concludes the study undertaken, along with explaining its implications for researchers and managers.

2.2. Method

This section deals with the way how literature of value co-creation is researched. It elaborates the review technique as well as how the filtration of databases and articles is performed in the study (Figure 2.1).

2.2.1 Literature Search

The study adopted the review technique given by Schibrowsky et al. (2007) and Ngai (2003), with three criteria chosen for selection of appropriate databases:

- Databases should encompass a wide scope of business and management journals.
- Article selected should be under defined time frame.
- Article search should be precise and accurate, to observe appropriate result.

Database research is conducted using the key words such as ‘value co-creation’ or ‘consumer co-creation’ in title, abstract and keywords. Following databases such as, Scopus, ProQuest, Ebsco Host, Emerald, Science Direct, and Taylor and Francis were analyzed for selection of article. The literature search was performed to find out studies published on

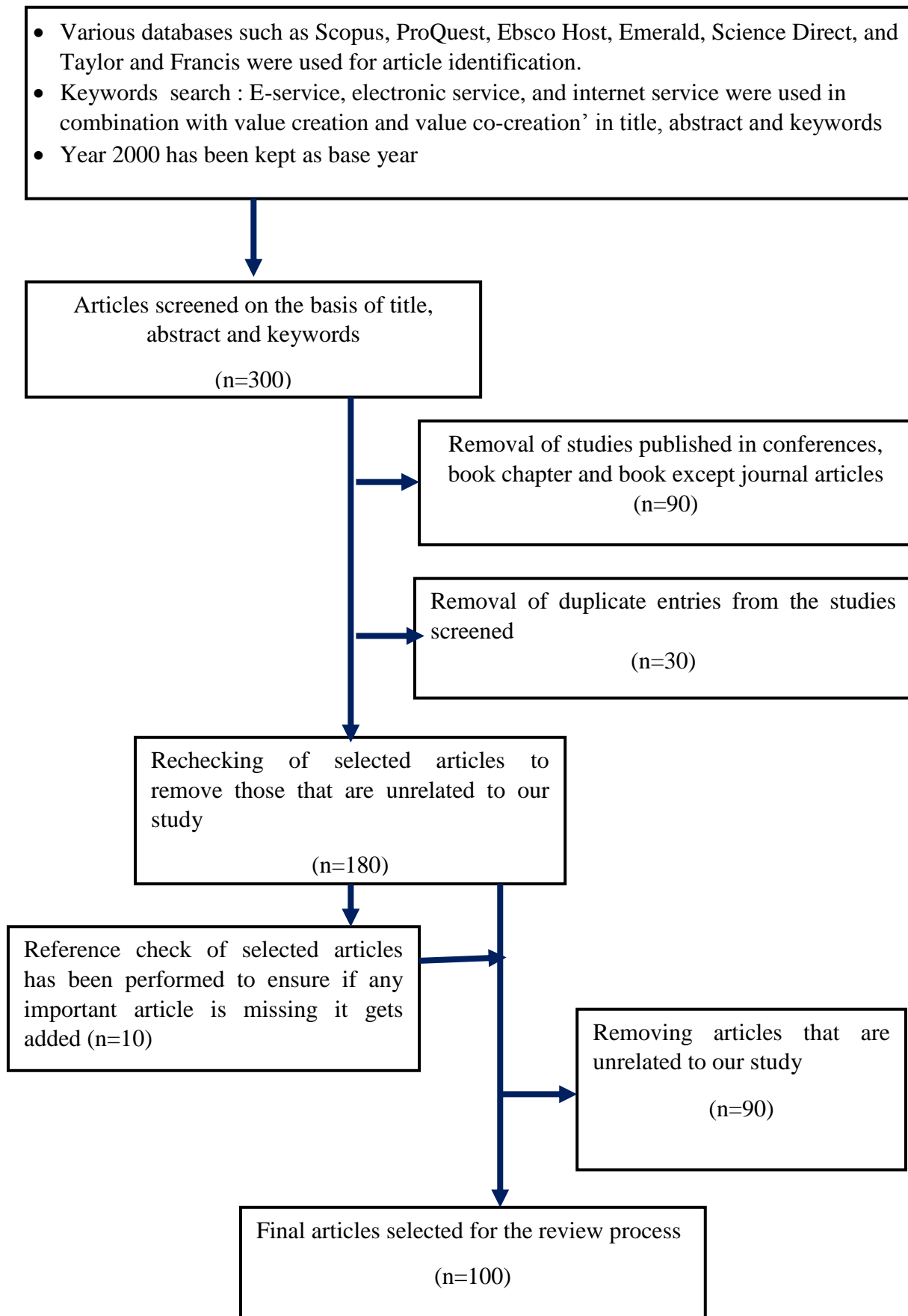


Figure: 2.1: Flow Diagram for Literature Search

Further filtration of selected articles was performed on the publications drawn from databases. Since the journal article represent the highest form of research, all the other publication except journal articles filtered through databases are removed, resulting into 210 articles. These articles were further searched to find duplicates entries. After removal of 30 duplicate articles, each of title, abstract, introduction and discussion was checked, to decide whether it serve our purpose by focusing on service and value co-creation (Denyer and Tranfield, 2009).

After done with examination of articles, the reference section of each article was re-examined to include any important article which might got excluded due to various keywords filtration process. The re-examination of reference check has led to further addition of 10 articles which are deemed important for the study. This resulted into final list comprising of 100 articles ready for further examination.

Once selection of article the research methodology is decided, analysis is performed. Articles are configured in a chronological ascending order to develop a structure, so that a better understanding could be drawn regarding value co-creation over the period of time (Gabbott, 2004). Next the collected pool of articles is investigated further to find out ways for conceptualization and measurement of articles on value co-creation.

2.3. Theoretical Background

This section deals with the understanding of the concept of value co-creation. It elaborates the concept by presenting definitions given by authors at various time period and expand the role of consumer and firm in value co-creation process.

2.3.1. Conceptualizing Value Co-creation

Value co-creation as a field of study has undergone tremendous change, refinements, conceptualization and re-conceptualization owing to a highly subjective, multidimensional and dynamic construct. These changes could be attributed to the developments in the field of value, services, market, consumers and firm behavior (Tronvoll et al. 2011). Various definitions of value co-creation and their role in expanding the SD logic has been detailed in Table 2.1, which highlight how concept of value co-creation has gradually evolved over a period of time - from a joint activity undertaken by consumer and firm, to the concept of value in-use/in-context and experiential value and every encompassing service ecosystem view.. Normann and Ramirez (1993) termed this value *highly dense, interactive, synchronic and iterative in nature* (Ramirez 1999; Vargo and Lusch 2004, 2008). Emphasizing on

resource integration, Hilton et al. (2012) argued that co-creation was not limited to the purchase process, but it extended to the entire product or service life cycle (Grönroos and Voima 2013; Lusch and Vargo 2006; Prahalad and Ramaswamy 2000, 2004; Aeron et al.,2008). Refuting the logic of Vargo and Lusch (2004) about consumer being the co-creator of value, Grönroos and Voima (2013) emphasized that a firm could become party to the co-creation process by interacting with the consumer who always was the creator of value. They conceptualized value co-creation as “joint collaborative activities by parties involved in direct interactions, aiming to contribute to the value that emerges for one or both parties.” (Grönroos, 2012 p.6).

The value co-creation definition covers two key aspects: First, the collaborative activities taking place between actors or resource integrators in the process. These actors could be stakeholders such as consumers, firms and consumer communities among others. Collaborative activities are the subject of interest amongst behavioral science researchers trying to understand the psychology behind the collaboration process, and the reasons behind the success of these activities along with their effect on consumer satisfaction and loyalty (Knoblich et al. 2011; Bratman 1992; Humphrey et al. 2001). Second, the objective of co-creation, that is to create value for the actors involved in the process. SD logic considers value obtained in co-creation as value in-use, which is phenomenological in nature (Vargo and Lusch 2004). Holbrook (2006 p.715) elaborated this phenomenological value as an “interactive, relativistic, preference experience”. Neghina et al. (2014) argued that a value co-creation activity comprises three elements: (i) co-created outcome (desired value), (ii) role of actors in the collaborative efforts, and (iii) support from other actors.

Rihova et al. (2014) insisted that value also lay in consumer to consumer interaction, and put forward two notions: ‘features and benefit approach’ and ‘value-in use’ approach. While the former is outcome oriented, the latter represents the phenomenological perspective of value co-creation. Damkuvienė et al. (2012) explored consumer perceived co-creation of value, and listed various benefits and sacrifices associated with the process. They viewed value co-creation as a “consumer's overall assessment of expected and (or) experienced benefits and sacrifices of a co-creation behavior” (p.65). However, the implications of interactions in value co-creation requires further study (Echeverri and Skålén 2011; Grönroos 2011). Yngfalk (2013) refuted the harmonious concept of value co-creation where each actor benefitted equally by interactions; Grönroos (2011) and Plé & Cáceres (2010) pointed out that interaction did not always lead to co-creation of value, and could also lead to co-destruction.

A very important idea of value co-creation was presented by Ranjan and Read (2014) who proposed that value co-creation was superordinate to customization and the co-production process, and extended beyond just production to delivery and consumption of value. Value co-creation is a combination of the co-production variable and the value-in use element, where the co-production variable is made up of 3 sub-variables - knowledge, equity and interaction, and value-in use comprises experience, personalization and relation. Apart from the above conceptualization, various theories that have influenced the value co-creation construct are: consumer culture theory (Arnould et al. 2006; Xie et al. 2008), social construction theory (Edvardsson et al. 2011; Rihovo et al. 2014; Kelleher et al. 2015), experience economy (Payne et al. 2009), social exchange (Dong et al. 2008; Füller 2010), and network theory (Gummesson, and Mele 2010; Gebauer et al. 2010; Vargo 2011; Chandler and Vargo 2011).

This chapter insists that the value co-creation process extends beyond just the functional benefits of an offering, and is in fact the co-creation of experiences that arise from the usage and consumption of the offering through participation and engagement of actors in a social network.

It conceptualizes value co-creation as interactive, relational, experiential, economic and inherently personal in nature. It means that value co-creation, if possesses the above mentioned aspects, would lead to greater consumer satisfaction and behavioural intentions. Thus, value co-creation essentially comprises participation of actors, resource integration and interaction. Co-creation leads to generation of experiences that transform into consumer knowledge and learning, which in turn retain and motivate consumers to further get involved in the co-creation process (Paswan et al. 2014; Aeron et al., 2010).

Grönroos and Ravald (2011) suggest that, to have a better understanding of co-creation, the roles played by consumers and firms in the value co-creation process need to be analysed. Next, various roles of consumers and firms as elaborated in value co-creation literature are presented.

2.3.2. Role of Consumer in Co-Creation

Consumers have long been acknowledged as key stakeholders in service production and delivery, and referred to as part time employees for their engagement in self-service activities and participation in service design and production (Bettencourt 1997; Ramirez 1999).

Table 2.1: Various Definitions of Value Co-Creation and Contribution

Authors	Value co-creation definition	Contribution to present research
Gronroos and Voima (2013)	“[...] refers to consumers’ creation of value-in-use where co-creation is a function of interaction.”	This study uses service logic to understand consumer co-creation and argue firms to join consumers in their value creation process as only consumer determines the value.
Roser et al. (2013 p.23)	“[...] an interactive, creative and social process between stakeholders that is initiated by the firm at different stages of the value creation process.	The study argue that choice of actors engaged in co-creation will influence duration and relationship strength in the co-creation process.
Ind & Coates (2013 p.92)	“[...] as a process that provides an opportunity for on-going interaction, where the organization is willing to share its world with external stakeholders and can generate in return the insight that can be derived from their engagement.	It brings out various antecedent essential for value co-creation in online community and presents a conceptual framework and contribute to existing studies.
Lambert & Enz (2012 p.1601)	“[...] as a three phase cycle comprised of (1) joint crafting of value propositions, (2) value actualisation (3) value determination.	The study tries to explore value co-creation in B2B relationship and how cross functional team involvement drives financial performance.
Gronroos (2012 p.1523)	“[...] is a joint collaborative activity by parties involved in direct interactions, aiming to contribute to the value that emerges for one or both parties.”	The study presents a conceptual model for value co-creation as an alternative to SD logic. Willingness, motivation, and skills to perform are destined as a way to co-create value.
Edvardsson et al. (2011 p.327)	“[...] is shaped by social forces, is reproduced in social structures, and can be asymmetric for the actors involved.”	The study complements the SD logic by using the concept of social constructionist theory where value is referred as value-in-social-context and that value is a social construction.
Gummesson & Mele (2010 p.190)	“[...] is enabled by Actor 2Actor (A2A) involvement and commitment. It is a time-based process which simultaneously comprises parallel and sequential phases.”	The study expands SD logic by addressing interaction and its role in the value co-creation through resource integration in relational context.
Xie et al. (2008)	“[...] Prosumption as value creation activities undertaken by the consumer that result in the production of products they eventually consume and that become their consumption experiences.”	This study also aligns with SD logic by disintegrating the producer consumer divide and treating each participant as the resource integrator in the value co-creation.
Zwick et al.	“[...] as a set of organizational strategies and discursive procedures aimed at	The study approves SD logic but takes service ecosystem into

(2008 p.184)	reconfiguring social relations of production, works through the freedom of the consumer subject with the objective of encouraging and capturing the know-how of this creative common.”	consideration where value is co-created by changing role of firms and consumers in the network.
Payne et al. (2008 p.84)	“[...] process involves the supplier creating superior value propositions, with consumers determining value when a good or service is consumed.	The study built on the existing service dominant logic to present a dyadic view or micro view of co-creation between firm and consumers.
Maglio & Spohrer (2008)	“[...]configurations of people, technology, value propositions connecting internal and external service systems, and shared information	The study enlarges the scope of SD logic literature by focusing on dynamic, recursive and interactive system of value creation through resource integration.
Wikstrom (1996 p.362)	“[...] is company-consumer interaction (social exchange) and adaptation, for the purpose of attaining added value.”	The study also enhances the existing literature on value co-creation by discarding the process of value creation in linear or sequential fashion.

Emergence of SD logic projected the consumer as a central figure in the value creation activity while limiting the role of the firm to that of a facilitator of value proposition. Value, earlier believed to be inherent in exchange framework, is now known to rest in value in-use/in-context (Vargo and Lusch 2004; Payne et al. 2008; Vargo & Lusch 2011).

Consumer participation in value co-creation depends primarily on three components: “What consumers do to participate (e.g., providing personal information or locating the business), how they participate (e.g., being friendly, indifferent, rude, or passive), and how much they participate (measured as low, moderate, or high) in coproducing the service” (Chen and Raab 2007, p. 4). The behavioural dimension of consumer participation is consumer engagement which means efforts put in by the consumer in co-creation. Brodie et al. (2011) referred to consumer engagement as co-creation of reciprocal, dynamic and recurrent service relationship process. Bolton (2011) insisted on the study of factors which could enhance consumer engagements both from the consumer’s and the organization’s perspective. Consumer efforts are in the form of operant resources integrated with the firm’s operand and operant resources. Hilton et al. (2012) suggested that consumer involvement of any degree can increase variety in offerings, so firms must understand consumer roles in context of experiences and provision of service. Further, empirical studies must be undertaken to enumerate various consumer roles (McColl-Kenned et al. 2012), and determine factors which can further enhance consumer efforts and retention along with positive service outcomes.

Eight research streams representing consumer participation in value creation were listed by Cova and Dallı (2009 p.324): collaborative innovation; consumption experience; co-production at the service encounter; service-dominant logic in marketing; consumer empowerment; consumer agency; consumer tribes; and consumer resistance. Mustak et al. (2013) comprehensively reviewed the role of consumer participation in value creation.

Historically, the role of the consumer has been considered from various perspectives, such as: a personal resource (Mills and Morris 1986); human resource (Bowen 1986); productivity enhancer (Fitzsimmons 1985; Lengnick-Hall 1996) and employee (Bowers et al. 1990; Dong et al. 2008); source of competence (Prahalad and Ramasawamy 2000; Vargo and Lusch 2004). It is clear that the scope of the role of the consumer has greatly widened over time - from being considered merely a resource, to a co-creator of value.

2.3.3. Role of Firms in Co-creation

SD logic has limited the role of the firm to co-production and facilitation of value proposition (Vargo and Lusch 2004). Since consumers create value for themselves through experiences, the role of the firms has been reduced to merely providing resources and a platform to engage and assist their consumers in value creation activities. Prahalad and Ramaswamy (2004) stressed on interaction as the locus of value creation; thus, firms must find ways to make these interactions more effective and co-create value for consumers. Distributing toolkits, design environment, open source code and software by firms can enable active consumer participation in value co-creation (Ballantyne and Varey 2006, Melancon et al 2010).

Firms are entrusted with the responsibility of building an environment for consumers and employees such that co-creation can be fostered (Gautam and Singh, 2010b). Building successful co-creation experiences requires better designing of experiences for consumers as well as employees (Ramaswamy and Gouillart 2010). To this end, firms need to facilitate consumer learning by extending the firm's resources such as skilled and competent employees, infrastructure and technical know-how to consumers. Firms must be flexible with their offerings to consumers so as to cater to a wide range of consumer needs and preferences. At the same time, firms must ensure that value co-creation is not done for one consumer, and consider each and every stakeholder in the network. A co-creation network includes stakeholders such as consumers, employees, suppliers and manufacturers participating in value creation activities (Ware et al. 2014).

Firms who are successful in integrating co-creation practices can increase consumer satisfaction, employee morale, revenue, lower cost and gain a competitive edge over competitors. Guo and Ng (2010) found that a strong relationship between firm and consumers could enhance the quality of service delivered due to better performance of actors involved in case of outcome based equipment provision services. But these relationships can only be formed in the presence of an open communication system encouraging learning, sharing and reciprocity among actors in the process. Firms need to encourage consumer learning so that they (consumers) have a clear and reasonable picture of their role in the co-creation process, thus enabling consumers to have clearly defined goals in the process (Ellinger et al. 2003; Robertson and Merriam 2005).

Providing opportunities to learn is a relatively new and effective way of ensuring consumer participation in the co-creation process (Hibbert et al. 2012). Consumers who see

these opportunities as a source of knowledge would find the offerings more valuable, and would experience a positive influence on their self-efficacy and satisfaction in the co-creation process (van Beuningen et al. 2011; Wang 2012). Therefore, to gain a competitive advantage that arises out of consumer retention (and includes consumer loyalty and implies consumer satisfaction), which in turn is a result of encouraging consumer participation, providing learning opportunities and firm's resources to consumers, firms would do well to inculcate these practices in their work culture.

2.4. The Nature of Value Co-Creation

Value creation is the fundamental purpose of any activity that includes economic exchange (Vargo et al. 2008). Traditionally, value was believed to reside in the product or service offered by the organization, and appeared during the exchange process. Later, SD logic emphasized on value in-use, which means that value emerges during the use of the offering or solution provided by the firm (Grönroos 2008; Kothandaraman and Wilson 2001; Normann and Ramirez 1993; Vargo and Lusch 2008). SD logic insisted that co-created value was experiential and phenomenological in nature (Vargo and Lusch 2004). Various authors (Payne et al. 2008, Vargo et al. 2008; Grönroos 2011) have emphasized joint value creation, but extant literature shows few studies on the various collaborative activities in value co-creation. Insisting on value as a multidimensional construct, Grönroos (2011) and Lindgreen and Wynstra (2005) stated that value should be evaluated on the following criteria: consumer use experience, value creating process and the outcome of that process (Edvardsson et al. 2012).

The value co-creation framework present in extant literature is mostly conceptual in nature and lacks empirical support (Brodie et al. 2011; Crowther and Donlan 2011). The frameworks given explain even complex relationships in networks in an overly simplistic manner, making them inappropriate to use (Edvardsson et al. 2011; Grönroos 2011). The next section provides a detailed overview of the various perspectives from which the nature of value co-creation can be observed. These perspectives offer a deeper understanding of the nature (service, interactive, collaborative, networked and contextual) of value co-creation, and help in realizing the essence of the value co-creation concept. A study of various approaches towards value co-creation could help in understanding the concept's nuances and its multidimensional nature.

2.4.1. Service View of Value Co-creation

Vargo and Lusch (2004; 2006; 2008; 2011) introduced SD logic while emphasizing that service was the fundamental unit of exchange rather than goods. They further asserted that goods were merely appliances that helped in rendering services with the firm restricted to facilitating value proposition. Thus, it was the consumers who co-created value through integration of their resources with those provided by the firm.

Two more approaches, that are somewhat similar to SD logic, exist in value co-creation literature - the service logic view, and the service science approach (Sarrijarvi et al. 2013). Service logic approach makes a clear distinction between consumer service logic and provider service logic. It states that instead of looking at the consumer as a co-creator of value, it is logically correct to view consumers as creators of value, and it is the firm's responsibility to co-create value by joining the consumer in the value creation process (Grönroos and Ravald 2011; Heinonen et al. 2010).

On the other hand, the service science approach gives a macro perspective on value co-creation. It endorses service system as value configuration that encompasses people, technology and value proposition. Based on SD logic, service science approach aims to explore the value co-creation process within, and between different service systems (Maglio and Spohrer 2008; Vargo et al. 2008; Sarrijarvi et al. 2013).

2.4.2. Collaborative and Networked Nature of Value Co-creation

Neither the consumer, nor the firm can exist in isolation; they are surrounded by other consumers and firms, and linked with each other within a social structure (Black et al. 2014). This social structure is dependent upon the exchanges taking place among actors within society. These exchanges may be understood as the collaborative and networking activities of actors in society with an aim of sharing benefits among themselves (Gummesson 2006, 2008).

Advancement in disruptive & frugal technologies (e.g. internet), open source movements (e.g. Wikipedia) and rise of consumer communities (e.g. Facebook) has led to the emergence of a collaborative and closely knit group of consumers. This proximity has encouraged shared innovation, interests and goals; it has led to a shift in perception towards the concept of value chain – from viewing it as a linear function, to understanding it as a kind of constellation, formed of collaboration between parties, suppliers and consumers (Normann

and Ramirez 1993). Collaboration with consumers and even competitors has emerged as a new way to create and sustain competitive advantage. It encourages innovation through idea generation, resource facilitation and actualization of synergies (Kristensson et al. 2006).

Existing literature has focused largely on two perspectives towards value creation: (i) it is a dyadic exercise between firm and consumer (Normann and Ramírez 1993; Prahalad and Ramaswamy 2004; Vargo and Lusch, 2004, 2008), and (ii) the consumer creates value through resource integration in the consumption process (Arnould et al. 2006; Baron et al. 2010; Schau et al. 2009). This overt focus on the consumer and the dyadic relationship has led to the neglect of the significance of the collaborative activities between the consumer and other stakeholders in the value creation process (Yngfalk 2013).

According to Romero and Molina (2011), value co-creation is being popularized by collaborative networked organizations (CNOs) and virtual consumer communities (VCCs). Collaborative network organizations are willing to open their boundaries to consumers, for getting access to new knowledge and skills while sharing resources and risk. Similarly, virtual communities are facilitating interaction between consumers and firms, thus enabling sharing of knowledge.

2.4.3. Interactive and experiential Nature of Value Co-creation

Co-creation is deemed to be a joint value realization exercise where organizations and consumers interact (Payne et al. 2008). Stressing on interaction as the locus of value creation and extraction, Prahalad and Ramaswamy (2004) considered experiences the basis of value. Not only interactions, but also, their influence on value co-creation requires deep attention (Etgar 2008; Grönroos 2006; Gummesson 2007; Payne et al. 2008; Vargo and Lusch 2004; Vargo et al. 2008). Foundational premises of SD logic stress that interaction is the key to co-creation of value, and value is not embedded exclusively in service provisions (Etgar 2008; Grönroos 1997). Thus, consumer participation in, and satisfaction from the co-creation process require effective communication among consumers, firms and other actors (Grisseemann and Stokburger-Sauer 2012).

SD logic views co-creation of experience as an individualistic activity borne out of usage of a particular offering. However, Arnold et al. (2006) perspective here is noteworthy. He said that consumer experiences arise not only out of consumption of goods, but also in a broader context of their life world, which means consumers make meaning of their involvement in unique consumption experiences (Edvardsson, et al. 2005). Carù and Cova

(2007) suggest a passive and an active way of immersing in experience. The passive way is through firm assisted experience, where a consumer experiences firm created servicescapes. The active way is individually and personally getting immersed in an experience.

The presence of a large number of choices and mediums to communicate has made consumers more vocal in expressing their personal needs and preferences (social media, online brand communities and blogs). Arnould, et al. (1998) also emphasized on communicative staging and its role in enhancement of consumer experience or value. They further argued that presence of servicescapes (both offline and online) were mediums of communication. Developments in technology and familiarity with the internet have enabled consumers today to contribute, enhance, evaluate and create learning experiences for themselves and others through interactions with other actors in the process. Regular follow ups and contacting consumers for feedback enables effective communication between firms and consumers. Tynan et al. (2010) found that active dialogue among various stakeholders resulted in personalized co-created experiences in case of luxury brands. Franke and Schreier (2010) and Füller et al. (2009) identified that providing tools for co-creation made consumer experiences more enjoyable and innovative. Payne et al. (2008) pointed out that experiences inherent in, and arising out of the co-creation process could also prove beneficial for the firm. Firms could achieve competitive advantage, consumer loyalty and satisfaction through the enhancement of these experiences (Gebauer et al. 2010).

Thus, firms should make every attempt to ‘involve’ and ‘touch’ their consumers by building meaning, pleasure and fun with the help of real and virtual means to create unique phenomenological experiences (Edvardsson et al. 2005). Helkkula and Kelleher (2010 p. 48) posit that, “the consumer service experience-value perception process does not emerge as a linear chain, rather, it emerges as a complex phenomenon, which integrates the dynamic process of experiencing and perceiving value within a circle of phenomenological understanding”.

Actors can join the value creation process with other actors through interaction (engaging, supporting, learning and benefitting). It is on the basis of this engagement among actors that social structures are made. According to Berger and Luckmann (1991), interaction works as the pivotal point for all acts and interpretations of actors within their surrounding environment. Interaction is also one of the enablers for value co-creation and experience generation (Ballantyne and Varey 2006). Thus, people create meaning of their surroundings through interaction, and also experience other peoples’ experiences vicariously.

24.4. Contextual Nature of Value Co-creation

Context has been defined as a “resource constellation that is available for consumers to enable value co-creation in a use situation” (Edvardsson et al. 2012). Consumers co-create value according to their needs and capabilities in various contexts. Edvardsson et al. (2012) proposed that value could be co-created in ‘ex-situ’ and ‘in-situ’ contexts. This means that actors could co-create value by being present (in-situ) as well as not being present (ex-situ) in a given situation. Vargo and Lusch (2008) introduced ‘value in-context’ over ‘value in-use’ to incorporate value generated through imagination or narration of stories from others instead of service providers. They suggested it was like an alternate lens and provided a more service system oriented view of value. Value in-context eliminated the structure created by organizations in the form of producers and consumers, and insisted on equivalence of all actors participating in the value creation process.

Lobler and Hahn (2013 p. 259) defined context as “all situational factors relevant to the resource-integrating process, which do not become resources”. They further argued that since all acts of resource integration are performed in certain contexts, and value is unique and phenomenologically determined by the beneficiary, the co-creation process is a context dependent activity. Vargo et al. (2010) suggested that value in-context also referred to interpretation and determination of value by the consumer in a given context of consumption experiences. For instance, Hollenbeck et al. (2008) and Minkiewicz et al. (2014), in context of a museum, stated that context helped in building lasting experiences for consumers by giving them an opportunity to physically touch and feel the objects in the museum. Multiple contexts (tourism, retailing, medical, education, etc.) for the occurrence of co-creation activities have been enumerated in management literature. Payne et al. (2008) presented a co-creation process model in the context of branding. Similarly, McColl-Kennedy et al. (2012) laid down various ways of co-creation in context of health services, such as: co-learning, co-operation, connection and co-production. Dialogue and complex interactions has emerged as key requirements for co-creation in context of luxury brand experiences (Tynan et al. 2010)

2.4.5 SD Logic Service Ecosystem View

Until recently, the focus of SD logic centred on ‘service’ as the basis of exchange through integration of resources by actors for mutual benefit or value creation. However, the emergence of relationship networks transformed the traditional roles of actors – from merely

producers or consumers, to beneficiaries, partners or integrators - roles more encompassing and evolved. These resource integrators form part of a dynamic and auto adjusting system which has the capacity to sense, respond and act over space and time. These host of actors (in this auto adjusting and dynamic system) constantly interacting and exchanging through language, symbols, institution and technologies, are referred to as service ecosystem (Vargo and Lusch, 2011).

This new perspective of service ecosystem is an extension of SD logic where dynamic system approach is used to understand the exchange of service in order to co-create value both by and amongst stakeholders or resource integrators through the process of interaction. It extends the study of value creation activities from micro to broader meso and macro levels or from dyadic and network to system and context (social and cultural). Service ecosystem approach helps us understand and broaden our knowledge about how multiple actors in multilevel markets (local, national and international) are iteratively involved in co-creation of knowledge, meaning, relationships and institutions (Akaka et al., 2013; Varga et al., 2008). Further it discards the conventional view of value creation where which insist on sequential flow of value from firm as a value creator to consumers as the destroyer of value. It also lays emphasis on institutions particularly crucial in influencing value proposed, created and destroyed amongst actors (Vargo and Lusch, 2011; Chandler et al, 2014).

The dynamic nature of service ecosystem is largely due to auto adjustable actors which consistently look for better ways of resource integration and provide value to the various actors involved. Lusch et al. (2011) argued that actor's part of one or more ecosystems continuously adapted in order to manage risk and uncertainties. Therefore during resource integration and service exchange activities, both context and nature of value co-created keep changing (Vargo et al., 2015). In sum, service ecosystem refers to value co-creation as the co-creation of solutions where actors participate to combine and recombine resources - people, organization, technology and shared information (Maglio and Sphorer, 2008) with institutions shaping up the practices of exchange and interaction.

2.5. Measuring Value Co-Creation

Keyword search of value co-creation literature yielded many studies. However, most of the studies were theoretical in nature. However after careful examination, the prominent studies which has tried to measure value co-creation have been presented in Table 2.2. Findings from existing literature on value co-creation can be divided into three stages: the

first stage comprises studies dedicated to conceptualizing the value co-creation construct; the second stage focuses on value co-creation management; and the third stage largely comprises studies attempting to measure value co-creation. Relatively lesser number of studies exists on value co-creation measurement, but this number is steadily rising, showing the growing interest of researchers in this area.

Table 2.2 gives a summary of studies conducted to measure the various dimensions of value co-creation. It highlights the various contexts in which co-creation can be viewed, such as: self-service, technological context, virtual environment, hybrid services, full services, new product development and innovation. Conventionally, two aspects of value co-creation have received more attention of researchers: (i) the process aspect, and (ii) antecedents of the co-creation process. Under the process aspect of value co-creation, more focus has been on measuring consumer participation (Yi and Gong, 2012), socialization (Dong et al., 2008), and co-production (Chen and Raab, 2014). Various antecedents such as trust, consumer characteristics, motivation, preferences, commitment, competence, willingness of consumer and company support are responsible for consumer participation in the co-creation process (Ertimur and Venkatesh 2010; Grisseman and Stokburger-Sauer 2012). These factors need further consideration when measuring value co-creation. The consumer has a dual role in value co-creation - one, as co-creator of value, and two, as an assessor of value (Vargo and Lusch 2004; Gummerus 2013). However, the role of the consumer as an assessor of value is still in initial stages.

Value created in the co-creation process is phenomenological and experiential in nature. However, only few scholars have attempted to study the co-creation outcomes. Babin et al. (1994) revealed that functional value arose from task completion while hedonic value from fun and enjoyment. Prebensen et al. (2013) studied overall experience value co-created by tourists. They used service quality, consumer involvement and servicescape to measure experience. Interaction also emerged as a way to measure co-creation as the co-creation process is inherently interactional. Actors interact with one another to support, learn and share resources (Auh et al 2007). Nambison and Baron (2009) measured value co-creation through active consumer interaction in a virtual environment provided by firms for co-creation. Various dimensions of experience (sensory, emotional, intellectual and behavioral) must be evaluated by consumers during co-creation of experiences.

The most important contribution on value co-creation measurement is made by Yi and Gong (2013), who constructed a scale to measure consumer co-creation behaviour. The scale

comprises two dimensions - consumer participation and consumer citizenship behaviour, each having four components. However, this scale has considered only the consumer's participation in co-creation, ignoring the role of the firm, which is an important stakeholder in value co-creation. Similarly, to measure experiences created in the co-creation process, Füller et al. (2011) found that quality as well as quantity of contribution from consumers in the co-creation process was significantly affected by positive experiences. A major study conducted by Dong et al. (2008) on consumer participation in service recovery process revealed that consumer intention to co-create and their satisfaction with the co-creation process depended upon their ability, role clarity and perceived value. Xu et al. (2014) has put similar efforts to understand mechanism behind employee initiated and consumer initiated co-recovery.

Lambert and Enz (2012) adopted the case study approach to investigate and measure co-creation in B2B relationships. They found that involvement of cross-functional teams gave better financial results in collaborative relationships. Fang et al. (2008) observed the influence of consumer collaboration in creating new product value in the manufacturing sector using a scale that measured level of consumer participation (2 items), and consumer participation formalities (3 items).

2.6. Gaps in the Literature

Since value co-creation is highly context specific and actor dependent, extensive research in multiple areas could be conducted to clearly define the scope and relevance of value co-creation in those fields. Understanding the value co-creation construct in various contexts such as social and cultural (in form of sign, symbol, meaning, language and technology) will help in developing better measuring scales. Further, it would shed more light on consumer co-creation behaviour and its relationship with various value outcomes such as consumer satisfaction, experience, service recovery, satisfaction, loyalty, purchase intention, purchase decision and consumption (Brodie and Hollebeek, 2009). As mentioned above, value is highly context and consumer specific; therefore, it must be evaluated on the basis of various dimensions relevant to consumers. These dimensions could be hedonic, functional, cultural or social in nature.

The list of factors and dimensions presented in Table. 2.2 is indicative and not exhaustive. It gives an overview of the various elements of co-creation which are used to measure co-creation behaviour and outcomes of the co-creation process. Many areas of co-creation still remain to be explored and measured.

Table 2.2: Measurement of Value Co-Creation

S.No	Author(s) and year	Cosntruct and items	Dependent Variable	Study design	No.	Research context
1	Yi and Gong (2013)	Consumer participation behavior: Information seeking: 3 items Information Sharing: 4 items Responsible behavior: 4 items Personal interaction: 5 items Consumer citizenship behavior: Feedback: 3 items Advocacy: 4 items Helping: 3 items Tolerance: 3 items	Consumer co-creation behaviour	Survey	296	Service encounter of consumer in retailing, full-service restaurant, hair salons, health care facilities, and travel
2	Fuller, Hutter and Faullant (2011)	Autonomy (2 items) Competence (3 items) Task of enjoyment (2 items) Sense of community (3 items) Further interest (2 items)	Co-created experiences	Online Survey	302	Virtual co-created environment.
3	Lambert and Enz (2012)	2 unit of analysis: (I) B2B relationship (II) Cross functional teamwork Cross Functional Involvement as key driver	Financial performance in collaborative function (B2B relationship)	Case Study approach (Quantitative (financial calculations) + qualitative (interview data))	8	Full-service restaurant chain and a food distribution company.
4	Dong, Evans and Zou (2008)	Consumer participation in service recovery Consumer ability (5 items) Consumer role clarity (5 items) Consumer's perceived value (4 items) Consumer intention (3 Items)	Future co-creation (3 items)	Experiment + Structured Questionnaire	231	Self Service technologies
5	Fang, Palmatier and Evans (2008)	Consumer Participation Level of Consumer participation (2 items) Consumer participation formality (3 items) Consumer (supplier) dependence (3 items)	New Product value creation (3 items)		188 manufacturers	New Product development
6	Chen and Raab (2007)	Attitudinal Participation (3 items) Information Participation (3 items) Actionable Participation (3 items)	Consumer Participation	Survey questionnaire	194	Casual dining consumers
7	Cheung and To	Consumer Involvement (4 items)	Perceived Service Performance	Questionnaires	500	Retail Banking

	(2011)	Co-production. (3 items)	(22 items)					
8	Handrich and Heidenreich (2013)	Customization (5 items) Efforts (5 items) Information Sharing(5 items)	Consumer Willingness to co-create	Scenario-based online survey.	751		Mobile App (Technology based services)	
9	Auh et al. (2007)	Affective commitment (4 items) Investment expertise (2 items) Interactional justice (4 items) Communication (4 items)	Co-Production (4 items)	Self-administered questionnaire sent by mail	100		Medical services context	
10	Chan et al. (2010)	Consumer Participation (5 items)	Consumer satisfaction (4 items) Employee job satisfaction (4 item), Employee job performance (1 item)	Questionnaire	349		Financial service context	
11	Bateson (1985)	Time Control Efforts Dependence Efficiency Human Contact Risk	Consumer Self Service Option	6 scenario based Questionnaire	1500 (Survey A) 1000 (Survey B)		Self Service Context (ATM)	
12	Bendapudi and Leon (2003)	Consumer Co-production behavior Self Service Bias Outcome dimension Process dimension	Consumer Satisfaction	Experiment	Study I: 124 under-graduate students Study II: 135 under-graduate students		6 scenario based context	
14	Nambisan and Baron (2009)	Consumer Interaction Characteristics Product-related content Member identity Human interactivity Perceived Consumer Benefits Learning benefits, Social integrative benefits, Personal integrative benefits Hedonic benefits	Consumer Participation in Value Creation	Web-based questionnaire survey	121 consumer of Microsoft and 31 of IBM		Virtual consumer environments	
15	Turner and Shockley (2014)	Shopper encounter information requirements (IR)- (4 items) Design for self-service (SS): (4 items)	Value of the self-service technology (VALUE)	Interviewing	189 shoppers		Convenience store (Retail)	

		Role stress (STRESS): (3 items) Role ability (ABILITY): (3 items)						
16	Baumann and Meunier-FitzHugh (2014):	Consumer-salesperson interaction Commitment Common goals Dialogue Sharing interests	Outcome of co-creation (i) Transaction Value (ii) Relationship Value	In-depth Interviews	18 art specialists and 13 consumers			Fine arts auction business (Service)
19	Prebensen, Vittersø and Dahl (2013)	Service quality (21 items) Involvement (23 items) Surrounding nature (1 item) Other tourist (3 items) Time spent (1 item) Resource spent (1 item) Money spent (1 item)	Overall Experience Value	Questionnaire	505 Tourist			Tourist Experience
20	Lazarus, Krishna & Dhaka (2014)	Firms' willingness to co-create (4 item) Consumers' willingness to co-create (4 item) Type of service (4 item) Level of interaction (4 item)	Extent of co-creation (3 items)	Online survey	176 student respondent			Social Media Context
21	Peña, Jamilena and Molina (2014)	Value co-creation (5 items)	Perceived value (3 items) Recommendation Intention (3 items), Repeat-purchase Intention (2 items)	Questionnaires	572 rural tourist			ICT Based

These areas include: firm's behavior in co-creation, role of fellow consumers, resource exchange process and social interaction. Also, attributes of value co-creation enumerated in the Table 2.2 warrant more research. Further, qualitative research (focus groups and personal interviews) needs to be conducted to determine the relevant and unique attributes of value co-creation. Establishing these attributes will help in development of scales to measure co-creation.

Next, extant literatures also insist on figuring out antecedents and consequences of consumer co-creation behaviour and co-created value in context of self-service and e-services. Information communication technology has emerged as a major driver of value co-creation (Polo Peña et al. 2014), albeit whole ecosystem need to be considered at one point of time. Studying of cross function and cross level teams and their participation could be one way to step forward in that direction. A major area of study could be to determine how consumers participate with various kinds of e-services to co-create value (Hilton et al 2013). Studies should be conducted to discover the benefits of co-creation and, consumers as well as firms should be educated about these benefits so that they are prepared to undertake value co-creation activities.

Future studies are encouraged to apply the co-creation conceptualization proposed in study. Further various research gaps which need to be addressed by studies on value co-creation are as follows:

Resource integrator oriented

- *Proposed areas of study:* consumer participation; consumer involvement; engagement; consumer empowerment; consumer complaint; consumer resistance; consumer community; consumer willingness; commitment; consumer control; firm participation; involvement; engagement; brand communities; prosumer; strategies for consumer involvement.

Process oriented

- *Proposed areas of study:* exchange; interaction; dialogue and communication; relationship among consumer; firm and communities in innovation; new product development; service production; experience creation; ICT; value proposition; task characteristics; operant and operand resources.

Outcome oriented

- *Proposed areas of study:* value in-use; experience; improved productivity; enhanced service performance; virtual product; service experience; service recovery; new product value.

Structured as well as unstructured methodologies should be employed to measure the components of value co-creation enumerated above.

2.7 Summary

The chapter two discusses the various definitions of value co-creation and its alignment with SD logic. It further elaborates the roles of consumer and firm in value co-creation along with nature of value co-creation. Bringing out the nuances of value co-creation, this chapter tries to bridge the gap existing in the literature and pave way for the exploring the role of e-services in consumer value co-creation (Chapter 3). It further highlights specific gaps that the present study has to address and build foundation for the proposed conceptual model and relevant hypotheses development in chapter four.

Chapter 3

Overview of E-Services

Preview

The present chapter explores the possible explanations for undertaking e-services from an application point of view and examine its relation with value co-creation. The study applies inductive logic to investigate e-service, its nature, and scope. Further role of e-services in value co-creation is examined. While previous reviews were limited to the investigation of the e-service quality dimension, the present study focus is to go beyond and investigate its role in value co-creation. The present chapter is a step to define e-service from the perspective of consumers.

3.1 Introduction

Advent of World Wide Web (www) and mobile based new technologies are changing the traditional ways of value creation. The consumer is no longer a passive recipient of value offered by the firm. Instead, equipped with technology based service, consumers have transformed into active, informed and empowered decision makers. The informed and aware consumer demands more personalised and superior service. Many of them also seek participation in value creation for themselves. This new breed of consumers has been defined as ‘prosumer’ by Toffler (1980). These consumers actively determine value through interaction, social bonding and experiences from e-services (Santos, 2003; Yang et al., 2001).

Consumers are increasingly accepting e-services as they offer convenience, choices, openness and greater quality expectation (Zhao and Gutierrez, 2001). Availability of vast information through e-services has led consumers to build more sustainable and memorable experiences (Gentile et al, 2013). Rust and Lemon (2001) defined e-service as ‘interactive information service’ (p. 86) which is not limited to providing feedbacks orders or responses rather than extending superior experience environment through access of information. Rust and Kannan (2004, p.37) viewed e-services as: “the provision of service over electronic networks”. They further argued that coverage of e-services should be extended from web based or IT to services that encompass service environment, service product, and service delivery. Thus, the emerging paradigm of e-services is paving ways for cost reduction through self-service,

enhancing efficiency and effectiveness through better service, and enabling greater revenue generation through close consumer relationships.

On an examination of e-services, it can be said that conventional IHIP (intangibility, heterogeneity, inseparability, & perishability) characteristics of services no longer stand valid in today's technological world (Moeller et al., 2013). E-service delivery differs from traditional service delivery process where through interaction with consumers, more personalised offerings could be developed and created. The underlying focus of e-services is on meeting the needs and wants of consumers precisely. For businesses, e-services provide an opportunity to gain a competitive edge over their competitors, and raises consumer expectations (Rust & Kannan, 2003). E-services also enable firms to engage with consumers through highly efficient consumer contact points during e-service usage. Higher consumer expectation also means that consumers prefer greater control and choices during e-services usage at various touch points.

In the past, companies have launched numerous e-services to increase participation of consumers and enhance their satisfaction. Many of the traditional services have given way to e-services such as electronic banking, retailing, and entertainment. These are just a few areas where e-services have expanded significantly. These changes have also revolutionised marketing. Emphasising service, Vargo and Lusch (2004) referred to service as the basis of all exchanges taking place in the market. However, despite acknowledgement of the 'service perspective' as a key to understanding consumer value creation, it has not been widely researched in context of e-services (Gummerus, 2010). Fassnacht and Koese (2006) also found scant research on value of service to consumers in e-services.

Building on the above call to investigate e-services literature, this chapter attempts to analyse and synthesise existing studies on e-service through a systematic literature review. The study contributes to existing research through presentation of various dimensions, characteristics and themes relevant to the e-service literature. In particular, the present research highlights the various conceptualisations, thematic evolution of e-services, and the role of e-service in consumer value co-creation. The study also suggests directions for future research.

The present chapter is structured in the following manner: First, the detailed methodology adopted for selection and analysis of e-service literature is presented. Second, a detailed overview of e-service literature regarding its evolution and nature is given. Third,

role of of e-service in co-creating value has been discussed. Next, contributions and research gaps of present in e-services has been presented

3.2 Research Methodology

The present study adopted a systematic literature review method, which incorporates identification, selection, and examination of publications on e-services to find, evaluate and synthesise information about the present status of the subject of the study and what still needs to be discovered (Denyer and Tranfield, 2009). Since the present study is centred on e-services and their role in value co-creation, several filters were applied for selection of publications. Next, care has been ensured so that any study significant to our research was not excluded (Schibrowsky et al., 2007). Next, various databases were identified to select publications for review in accordance with the procedure set by Denyer and Tranfield (2009) and Gabbott (2004). The articles selected from the databases were analysed in a way that met the research objectives of the study

Following the review technique given by Schibrowsky et al. (2007) and Ngai (2003), three criteria are applied for selection of appropriate databases:

- Databases should encompass a wide range of business and management journals.
- A definite time frame should be defined for articles selection
- Article search should be performed precisely to obtain appropriate result.

On the basis of above criteria, following databases were selected: Scopus, ProQuest, Ebsco Host, Emerald, Science Direct, and Taylor and Francis. Next, keywords were used for filtering relevant publications. Various keywords such as e-service, electronic service, and internet service were used in combination with value creation and value co-creation to identify pertinent studies. From these searches, 350 publications were drawn which also include journal articles, books, and conference proceedings.

Next, filtration of selected articles was performed. Since journal articles represented the highest quality of research, 110 publications except journal articles were removed in the filtration process. The selected articles were further checked for duplicates entries. After removal of 20 duplicate articles, each article's title, abstract, introduction and discussion were checked to decide whether the article was relevant to the present study on e-services and their role in value creation (Denyer and Tranfield, 2009).

- Various databases such as Scopus, ProQuest, Ebsco Host, Emerald, Science Direct, and Taylor and Francis were used for article identification.
- Keywords search : E-service, electronic service, and internet service were used in combination with value creation and value co-creation' in title, abstract and keywords
- Year 2000 has been kept as base year

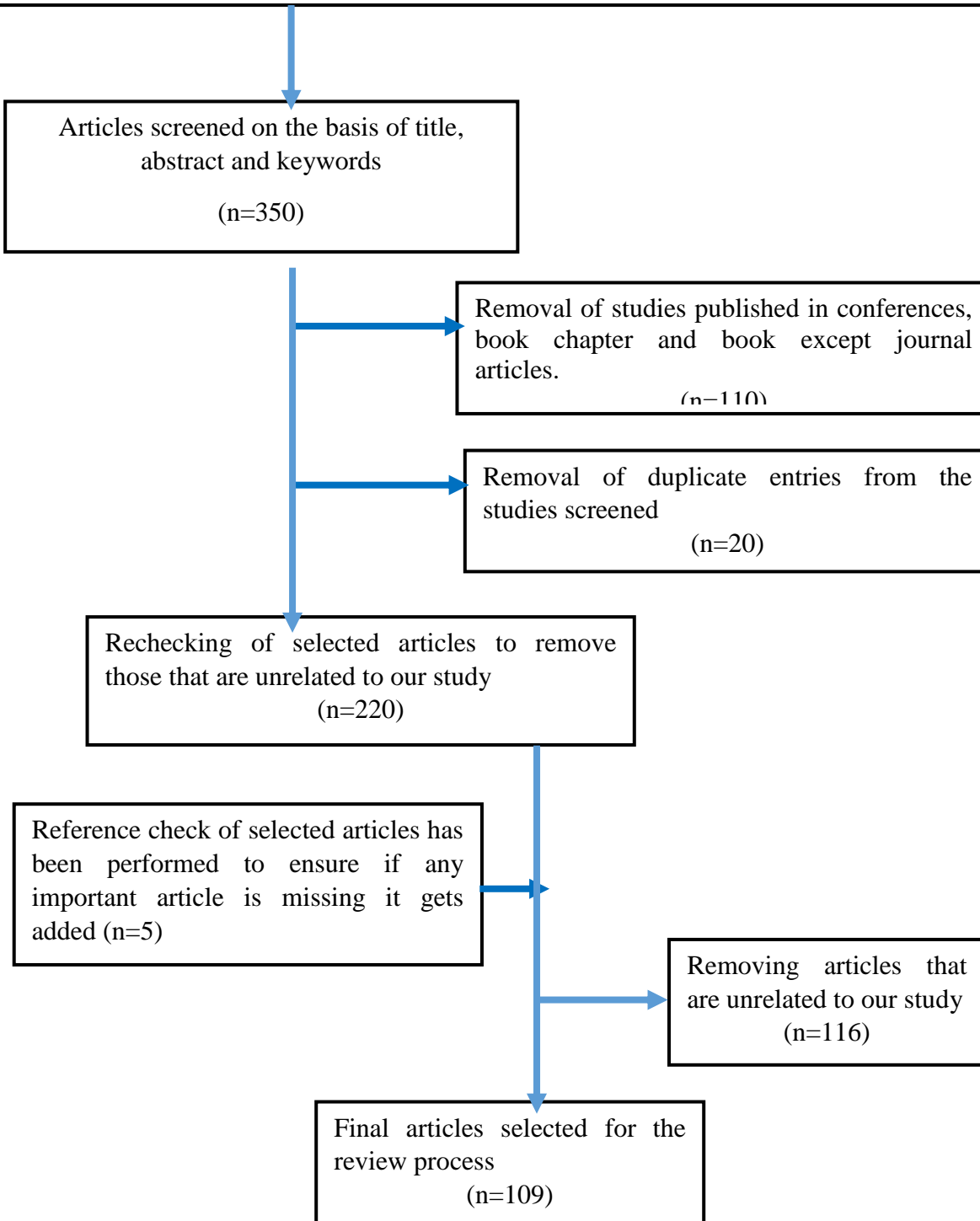


Figure 3.1: Flow Diagram of E-Service Literature

After examination of articles, the reference section of each article was re-examined to search for any important article which might have got excluded during the keyword search and filtration processes. The re-examination of references led to further addition of five articles deemed important for the study. This resulted in a final list comprising 220 articles for further examination.

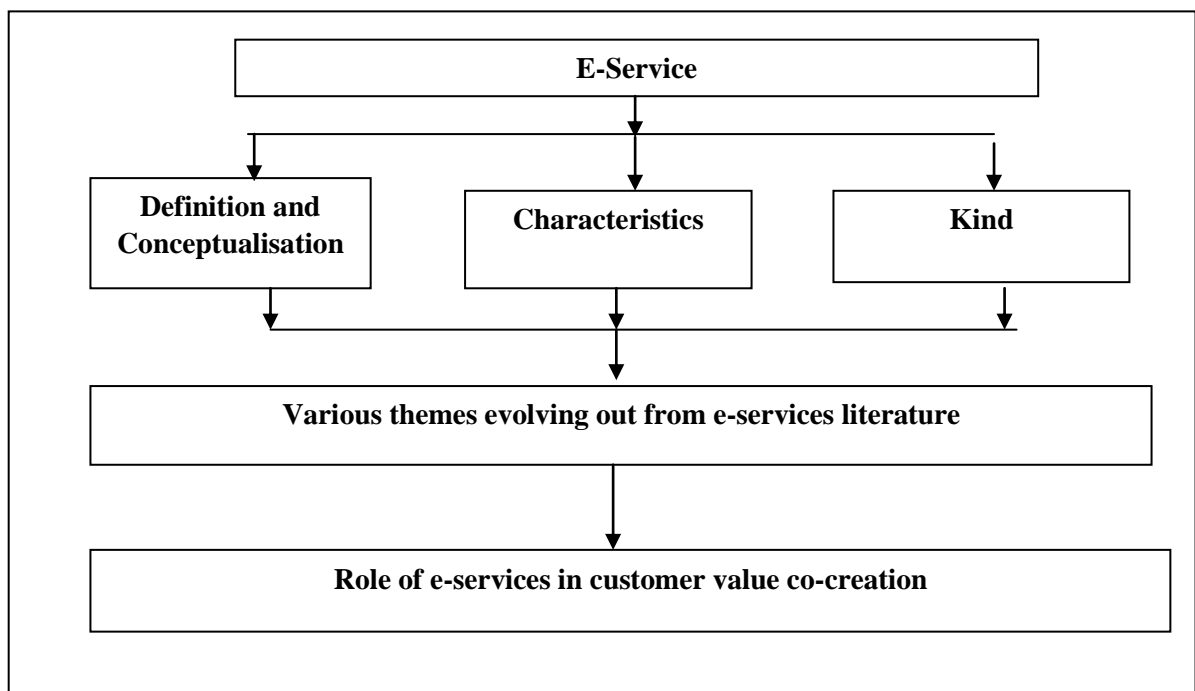
Once the necessary the reference check has been performed, reexamination of articles were performed to decide which of the studies are related to our area. This results into removal of 116 studies. Thus our final list of studies comprises of 109 articles ready for further evaluation. Conceptualization and definition of articles are presented over the period of time in order to develop a better understanding of evolution of e-services over a period of time could be obtained (Gabbott, 2004).

Next, the collected pool of articles were examined to identify various research themes and approaches so that the role of e-services in value co-creation could be established. Various theoretical and empirical methods were applied for review and analysis of e-service literature.

3.3 Overview of E-service Literature

In the present section as depicted in Figure 3.1, presents the various definitions given by authors at various time period. It further elaborates upon the conceptualisation and characteristics of e-services.

Figure 3.2: Schematic representation of E-service literature



3.3.1 E-services: Definition & Conceptualisation

Despite the inability of e-services in trading in every kind of service, it has emerged as a fascinating medium for global delivery of services. It has assisted companies to create more personalised, interactive, value laden service experiences for the consumer. Hofacker et al. (2007) argued three functions of e-services: first, as a compliment to existing offerings; second, as a substitute for offerings; and third, as altogether distinct novel core offerings. In all the above cases, instead of human interaction, offering of services is enabled through network software using programmed algorithms. Numerous examples of e-services such as e-banking, e-travel services, e-payment, e-retailing, and e-entertainment have led to a revolution in service marketing.

Inception of e-services has had a phenomenal impact on services marketing by lessening the distance between consumer and company. Though there is an absence of a universally accepted definition of e-services, yet most of the time it is referred to as interactive services delivered through the internet using technological platform and multimedia technologies (Boyer, Hallowell and Roth, 2002). Table 3.1 gives an extended list of definitions of e-services present in literature.

Considering definitions given in the above table, it is noted that definition of e-service is centred on four key themes: delivery of service electronically; outcome or value being delivered; benefits received by consumer through e-services; and process or infrastructure required to deliver an e-service.

Table 3.1: Various Definitions of E-Services in Literature

Authors	Definitions of E-services
Javalgi, Martin, and Todd (2004, p. 561)	“Services that can be delivered electronically.”
Rust and Kannan (2003, p. 38).	“Provision of services over electronic networks.”
Boyer, Hallowell and Roth (2002, p. 175)	“Interactive services that are delivered on the Internet using advanced telecommunications, information, and multimedia technologies.”
Hahn and Kauffman (2002)	E-service as: “an act or performance that creates value and provides benefits for consumers through a process that is stored as an algorithm and typically implemented by networked software.”
De Ruyter et al. (2001)	E-service is an interactive, content-centred and Internet-based consumer service, driven by the consumer and integrated with related organizational consumer support processes and technologies with the goal of strengthening the consumer-service provider relationships.

Surjadjaja et al. (2003)	E-service as the interaction between the service provider and the consumer through the Internet
Douglas et al. (2003)	E-services are classified as “hard” and “soft” e-services. hard e-service is concerned with getting the goods or services to the consumer, and soft e-services deals with Web site design, data information readiness, and transactions.
Stafford (2003)	Marketers view e-services as a natural extension of e-commerce, while technology experts see e-services as Web-based functionality
Rust and Lemon (2001)	E-service can be viewed as the role of service in cyberspace.
(Reynolds, 2000)	E-service has been defined as web-based service
(Boyer et al., 2002).	E-service is interactive services that are delivered on the Internet
Hoffman and Bateson (1997, p. 5)	“E-service is deeds, efforts or performances whose delivery is mediated by information technology (including the Web, information kiosks and mobile devices). Such e-service includes the service element of e-tailing, consumer support and service, and service delivery.”
(Zeithaml et al., 2000).	E-service is sometimes described a relatively impoverished experience, due to the absence of face-to-face interaction, which is seen as central to relationship development

Thus, the present study adopts the view of Hahn and Kauffman (2002) on e-services as “an act or performance that creates value and provides benefits for consumers through a process that is stored as an algorithm and typically implemented by networked software”. This definition incorporates all the above four themes associated with e-services. Next, the study discuss the evolution of various characteristics of e-services over time.

3.3.2 E-Service Characteristics

Over time, various service characteristics have been studied in context of e-services. Hofacker et al. (2007) and Möller (2010) tried to answer the argument taken by author over the period of time on the generalizability of IHIP (Intangibility, Heterogeneity, Inseparability and Perishability) characteristics. Citing examples of Vargo and Lusch (2004) and Lovelock and Gummesson (2004), Hofacker et al. (2007) expressed their support to the criticism of IHIP characteristics and considered e-services as “(1) complements to existing offline services and goods, (2) substitutes for existing offline services, and (3) uniquely new core services.” (p.15)

One of the defining characteristics of e-services has been the non-ownership, where benefit realisation of e-services is through accession or temporary possession, when purchase

is performed. Considering non-ownership as a unique element in differentiating goods from services, there are striking similarities and differences between e-services and goods and services, which are tabulated in Table 3.2.

Table 3.2: Distinguishing Characteristics between Goods/E-Services/Services²

S.No	Characteristics	Goods	E-services	Services
1	Tangibility	√	×	×
2	Storage	√	√	×
3	Inseparability	×	×	√
4	Patented	√	√	×
5	Standardisation	√	√	×
6	Copying	×	√	×
7	Share/Distribution	×	√	×
8	Easy Pricing	√	×	×

Unlike services which are heterogeneous in nature, e-services are rather homogenous like goods. Technology has facilitated this kind of standardisation. Similarly, e-services can be stored and distributed whenever required to make them more related to goods. In a similar fashion, it is observed that pricing of e-services is also difficult and it stands equally with services when compared to goods.

The study on e-services suggest that it is embodying the characteristics of both goods and services. It has both intangibility aspects and technological interface at its core, making it more user friendly, easy to adopt and hugely popular among masses. Next, various themes evolving from e-services literature were discussed.

3.4 Various Kinds of E-Services

According to Taherdoost et al. (2013), e-services have been classified into eleven different kinds of service applications in various areas as tabulated in Table 3.3. The below table shows various categories such as ticketing, health, reservation, banking, governance, education, networking, commerce, entertainment, and information communication services.

²Adapted from Hofacker et al. (2007)

Table 3.3: E-services categories & application³

S.No	Categories	Application
1	e-ticketing	Purchasing flight ticket Purchasing a concert ticket
2	e-health	E-health access
3	e-reservation	Hotel reservation Travel services
4	e-banking	Net Banking Transfer money Loan application Share Trading
5	e-governance	Financial Services Legal services License renewals Filing and payment of bills and taxes
6	e-education	e-library MOOCs Checking marks Downloading forms Examination and registration
7	e-networking	Social networking service (Facebook, Twitter, Instagram, LinkedIn)
8	e-commerce	E-retailing (books, cloth, electronic) E-marketing Downloading music (purchase) Commodities like cloths and books (sell) Downloading like movie (sell)
9	e-entertainment	Online TV stations Online Radio stations

³ Adapted from Taherdoost et al. (2013).

		Online Newspapers
		Online games
		Online music
		Online movies
10	Information communication services	Email
		Chat sites
		Blogs & Forum
11	Information access	Web search (Google, Yahoo, MSN)
		Scientific Journals

3.5 Thematic Evolution of E-Services

Study on e-services has been occupied with various research streams which are the amalgam of numerous elements like technology, human connectivity, relationships, and interaction. Next, the study outlined certain broader areas in which e-service research has evolved over a period of time. On the basis of literature review on e-services, Table 3.4 presents the following dominant themes which have been studied over time:

- **Concept/ theory or framework development:** Emergence of e-services has led to various modifications in existing concepts and theories on services. Lovelock and Gummesson (2004) highlighted the developments in the field of services and challenged the basic IHIP nature. Similarly, Vargo and Lusch (2004) came up with service dominant logic which delimits the boundary between goods and services. Many other concepts such as crowd sourcing and mass customisation started getting popular. Thus, the early studies on e-services deals with developing various concepts, theories or frameworks based on the interrelationships existing among various elements of e-services.
- **Strategic aspect:** Technology has become a great tool to serve consumers in a better way by reaching out to them. In a way, it has become a differentiating factor between companies and is used to achieve competitive advantage. Apart from the fact that e-services can be used strategically to delight consumers by helping them to customise their offering, and inviting them to co-create (Sawhney et al., 2005). Additionally, companies should ensure the privacy and security of consumers when inviting them to participate; these two issues govern consumer adoption of technologies (Meynhardt et al., 2016; Iqbal et al., 2003). Studies dealing with the strategic aspect of e-services

thus revolve especially around building consumer equity and consumer engagement (Rust and Lemon, 2001, Ponnampalath et al., 2015).

- **Offering and solution aspect:** Studies on e-services in recent times have focused on e-services outcomes for consumers' - value propositions, experiences and solutions. Pine and Gilmore (1999) studied the experiential outcome of consumer participation in services. Emphasising value in use as the outcome of consumer co-creation, Heinonen (2009) argued that it was obtained through consumption or usage of core offering itself. Research on e-services has further accounted for social value and consumer control when discussing various aspects of consumer participation in online networks, communities and virtual environments.
- **Quality and productivity aspects:** One of the major finding in the service arena has been the SERVQUAL or service quality by Parasuraman et al. (1985). Similarly, various measures have been developed for e-service quality (Yoo and Donthu, 2001; Santos, 2003; Parasuraman et al., 2005). Owing to its importance, service quality has been heavily researched as it has been linked to various key consumer aspects such as consumer satisfaction, experiences, expectations and loyalty. One major issue with e-service firms has been service failure and how to recover from the failure and win consumers. A number of researchers has given due concern to these issues (Holloway et al., 2005; Harris et al., 2006; Sousa et al., 2009)
- **Psychological response:** Rise of e-services and technologies has reduced personal touch between firm and consumers, hence, the psychological responses of consumers while engaging with self -service technologies has been an important area of research (Meuter et al., 2005; Bitner et al., 2000). Further, consumption behaviour, trial and adoption of technology mediated services, consumer self-efficacy, and consumer satisfaction and loyalty have been widely researched in e-services context (Bobbitt and Dabholkar, 2001; Dabholkar and Bagozzi, 2002); Gummerus et al., 2004; Chong et al. 2012).
- **Service relationship management:** Due to competition, firms have increasingly focussed on fostering better relationships with consumers. Advent of e-services has allowed firms to better understand and shape their offerings according to the needs of consumers. Availability of consumer data, tracking of online consumer behaviours, eCRM (consumer relationship management) have been the key researched areas (Walsh et al., 2010; Dutta and Segev, 1999; Shapiro and Varian, 1999). Service

ecosystem, business model, virtual market place are some important avenues which need research attention.

- **Information and technological aspects:** E-services research has focussed on key thrust areas such as online service scape, connective technologies like social media, and (SSTs) self-service technologies (ATM, self-help kiosks). Cunningham et al. (2008) and Hopkins et al. (2003) studied various aspects of SSTs and service scape, and found them critical for enhancing consumer service experiences. They further argued that these aspects were problem solving and solution providers.
- **Innovation aspect:** E-services served as a suitable option for opening the doors to technological innovations. Rise of open source innovations, creative commons, co-production, crowdsourcing and co-creation have been responsible for significant amounts of innovation (Zwass, 2010; Goldsmith, 2000). Researchers all over the world have taken great interest in understanding the resources, motivations and benefits behind participating in these kinds of innovative drives (Wind and Rangaswamy, 2001; Zwass, 2010). Hoyer et al. (2010) and Roser et al. (2013) focused on degree of co-creation in new product development and also in various contexts.
- **Process or encounter aspect:** Literature on e-services has focused on kinds of interaction taking place between firm and consumers through e-services. Literature has given key attention to both consumer-firm and consumer-consumer interaction (Rowley, 2006; Wolfinbarger and Gilly, 2003). Learning (Roca et al., 2006), resources Pardes et al, 2014), interaction (Sawhney et al, 2005), dialogue (Bolton and Saxena-Iyer, 2009) remain the dominant areas of e-service research.

3.6 E-Services and its Role in Consumer Value Co-Creation

In today's scenario, marketing is witnessing a shift from 'goods' perspective to the 'service' perspective, where value creation has become a consumer operated exercise and services are termed resource inputs in such exercise (Vargo and Lusch, 2004). Despite these efforts, the study is unable to find a wide application of the above mentioned logic in various areas. E-service seems to be one such area which has to be looked at from the service dominant logic perspective (Gummerus, 2010). The widespread application and popularity of e-services make it necessary to look upon e-services and their role in value co-creation.

Table 3.4: Key Areas under E-Service Research

Key areas	Topic under study	Illustrative Studies
Conceptual, theoretical or framework	Active consumer participation; consumer communities or participation; mass customisation, crowd sourcing; consumer value co-creation in networks; Technology trial and adoption	Sigala (2009); Meuter et al. (2005); Xue and Harker (2002); Lovelock and Gummesson (2004); Cunningham et al. (2008); Zwass (2010); Bendapudi and Leone (2003), Vargo and Lusch (2004); Brabham (2008);
Strategic aspect	Building consumer equity; Customisation; co-creation; privacy; differentiation; competitive advantage; offering of choices, consumer participation, engagement	Rust and Lemon (2001); Voss (2000); Waltner (2000); Meynhardt et al. (2016); Iqbal et al. (2003); Hofacker et al. (2007); Verma et al. (2004); Oliveira et al. (2002); Sawhney et al. (2005); Gunashekar et al. (2002b)
Offering and solution aspect	Buying experience; consumer control; personalisation; value in use; value in exchange, social value	Pine and Gilmore (1999); Novak et al. (2000); Szymanski and Hise (2000); Heinonen (2009); Goldsmith (1999); Amit et al. (2001); Huang and Benyoucef (2013)
Quality and productivity aspects	Various aspect of service qualities; service failure; service recovery; efficiency	Yoo and Donthu (2001); Santos (2003); Parasuraman, Zeithaml, and Malhotra (2005), Bauer et al. (2006); Collier and Bienstock (2006); Holloway and Beatty (2003); Harris et al. (2006); Sousa et al. (2009)
Psychological response	Satisfaction; loyalty; trust; Post adoption behaviour; consumption; self-efficacy; e-service measurement; eWOM	Meuter et al. (2005); Bitner et al. (2000); Shankar et al. (2003); Chea and Luo (2008); Turel et al. (2008); Goyette et al. (2010); Bansal et al. (2004); Bobbitt and Dabholkar (2001); Dabholkar and Bagozzi (2002); Gummerus et al. (2004);
Service relationship management	e-CRM (consumer relationship management); virtual markets, e-service ecosystem, strategic networks;; e-consumer support;	Boyer et al. (2002); Walsh et al. (2010); Dutta and Segev (1999); Shapiro and Varian (1999); Prahalad and Ramaswamy (2000)
Information and Technological aspects	Role of information technologies; Rise of connective technologies; Technologies enabled self-services; consumer empowerment; services cape	Dabholkar (1996); Meuter et al. (2005); Ding et al. (2007); Cunningham et al. (2008); Hopkins et al. (2003); Edvardsson et al. (2005); Novak et al. (2000)
Innovation aspect	Open innovation; disruptive technologies, connective technologies; new product development; consumerisation; virtual consumer environment	Goldsmith (2000); Lundkvist and Yakhlef (2004); Nambisan and Baron (2009); Libai et al. (2010); Wind and Rangaswamy (2001)
Process/encounter aspect	One to one interaction; Consumer-firm exchange; consumer-consumer exchange.	Bolton and Saxena-Iyer (2009); Gefen and Straub (2004); Rowley (2006); Wolfenbarger and Gilly (2003); Gunashekar et al. (2002a)

Extant literature on e-services is found to be silent on the role of consumer in value co-creation in context of recent paradigm change in service logic (Prahalad and Ramaswamy, 2004).

Additionally, literature has neglected kinds of value co-created in e-services (Fassnacht and Koese, 2006). Emergence of e-services has hugely conferred power to the consumers to involve, participate, create and evaluate value for themselves and others. These empowered consumers or prosumers are actively producing and consuming value by continuously interacting and integrating their resources. Next, the study dig deeper to find out how consumer co-creates value through the SD logic perspective.

3.6.1 Consumer Value Co-Creation

According to service dominant logic, value is created by consumer in a use situation or during usage of products or goods offered (Grönroos, 2006; Vargo and Lusch, 2004). It further elaborates that all the actors or resource integrators in the process are continuously engaged to maximise their value potential (Vargo and Lusch, 2008). There are two types of value created: (1) value in-exchange (functional benefits gained and cost/sacrifices made by consumers during the transactions); and (2) value in-use (hedonic benefits gained during the whole consumption process; it is communal in nature).

Considering the case of e-services, firms create value in exchange by offering value proposition in form of e-service processes and content, and consumer creates value in-use by participating and consuming these resources through interaction and communication (Sandström et al., 2008; Srivastava and Kaul, 2014). E-services process represents the service delivery process to the consumer (Parasuraman et al., 2005), and is of great importance as it primarily enables consumers to spend considerable time and energy in the co-creation process. The e-service process depends on a large number of factors such as: security and risk (Wolfenbarger and Gilly, 2003); design (Hofacker et al., 2007); ease of use (Featherman and Pavlou, 2003); and responsiveness and appearance (Liu et al., 2009). Similarly, content refers to consumer receivables in form of informational, experiential, social and interactional aspects

Acknowledging the advancement of SD logic literature, the study assert that literature on e-services, with respect to value creation and co-creation still needs further exploration. Heinonen et al., (2013) pointed out that value creation activity is shifting from firm service

processes where consumer is involved, to the more dynamic and recent trend where consumers are involving firm into their multicontextual value creating processes.

3.7 Gaps Identified From the E-Service Literature

Though consumer participation in service is not a new phenomenon, there are numerous difficulties in proper alignment of consumers with firm service processes. This obstruction has been overcome with the arrival of new e-services. Consumer value co-creation in e-services has been considered in the present study due to the presence of various knowledge gaps and calls for exploration (Zwass, 2010; Parasuraman et al., 2005; Gummerus, 2010).

Further study of extant literature on e-services opens future vistas on consumer value, which is worthy of investigation. Some of the knowledge gaps are also elaborated in APPENDIX IV. Following knowledge gaps are worthy of research:

- Consumer co-created value has been seen as critical for consumer evaluation. However, with the consumer turning as producer, consumer and evaluator of the value offering (Vargo and Lusch, 2004; Gronroos, 2008), it is still uncertain whether consumers are satisfied with their own co-creation and whether they will recommend it to others, particularly in case of e-services (Chesbrough and Spohrer, 2006).
- The nature and dimensions of co-creation value still remains unexplored due to various reasons: (1) most of the research on co-creation has focussed on the consumer participation or engagement aspect (Yi and Gong, 2012); (2) advancement of research on co-creation is a recent one and the subject is still in a nascent phase (Ranjan and Reed, 2014). Very limited research has been undertaken on co-created value aspect till date. Some studies on the topic are those of Heish (2015) and Fuller et al. (2009).
- Consumer participation in services has always been deemed important, particularly when referring to services which are high on credence (Bitner et al., 1997). However, how consumer participation in online co-creation will differ from that of offline co-creation is still a subject of investigation. What kind of resources, practices, tools, and languages are required when considering business-consumer, business-business and consumer-consumer contexts is an area of research. How the consumer will be managed in online co-creation requires deeper introspection (Payne et al. 2008; Büyüközkan et al. 2007).

- On the basis of methodology, our results exhibit that majority of studies on value co-creation are conceptual in nature (Agrawal and Rahman, 2015). However, there has been an increase in empirical studies recently, and researchers are looking into the operationalisation of various constructs important from the point of co-creation.
- Presence of ambiguities and complex nature of value and co-creation make conceptualisation difficult. Co-creation literature is filled with arguments on distinction between various similar constructs such as co-production, co-innovation and co-creation, establishing who is co-creator? (Gronroos, 2008; Vargo and Lusch, 2008). These distinctions should also be checked in the case of e-services.
- Literature has continuously focussed on interaction, resource integration, and networking of consumers as a means to co-create value. However, the experiences co-created by consumers in co-creation considering interactions among consumer, firm, and fellow consumers is still an area which has not been given due attention (Kohler et al., 2011; Prahalad and Ramaswamy, 2004).
- While experiences are paramount for any value co-created, there are various other aspects which also need to be considered, such as social, personal and economic aspects (Mathis et al., 2016). Also, whether and how co-created value mediates the relationship between participation of actors and their satisfaction is another important area which needs to be researched.

3.8 Summary

The present chapter highlighted some important knowledge gaps which are as follows: lack of SD logic application in e-services; indecisiveness regarding consumer participation and their satisfaction in e-services; and lack of empirical studies on consumer value co-creation examining the influence of co-created value on consumer satisfaction. The objective of this study is to identify the relationship among variables in the conceptual framework given in Chapter 4.

In the remainder of this thesis, the researcher will build conceptual framework, and develop and validate a consumer co-created value scale. Next, various hypotheses testing is proposed in the chapter 4, to examine the relationship between various predictor and outcome variable with consumer co-created value. Further the mediation effect of consumer co-created value is examined in the proposed research model.

Preview

The study aims to investigate the various factors that play a critical role in influencing consumer decision on co-created value. The subsequent section of the chapter delineates the consumer decision making process which includes various steps in decision making and final post purchase behaviour. The model presented in the chapter is based on review of literature in the previous chapter. The following section explicates various hypotheses in relation to the proposed research model.

4.1 Introduction

The research model presented in Figure 4.1 is based on Stimulus-Organism-Response (SOR) and social exchange theory, and it delineates the consumer decision making process through value co-creation. Key predictor of post purchase behaviour (satisfaction) is also depicted in the model.

4.2 The Theoretical Background

The various relationships amongst constructs included in the model shoot out from diverse streams of literature such as services marketing, e-commerce, information technology, consumer behaviour and industrial psychology.

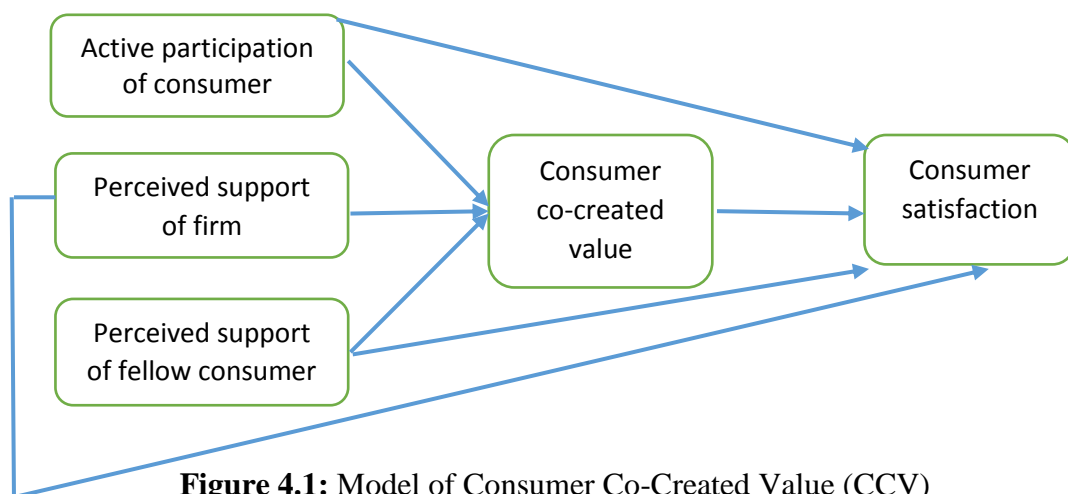


Figure 4.1: Model of Consumer Co-Created Value (CCV)

The review of literature pertaining to these fields gives us deeper insights into the consumer co-creation process and satisfaction derived from it. A schematic presentation of research model development is elaborated in Figure 4.2. The research model is divided into two important parts - the first part reflects consumer value co-creation, and the second part enumerates the behavioural outcomes of co-created value.

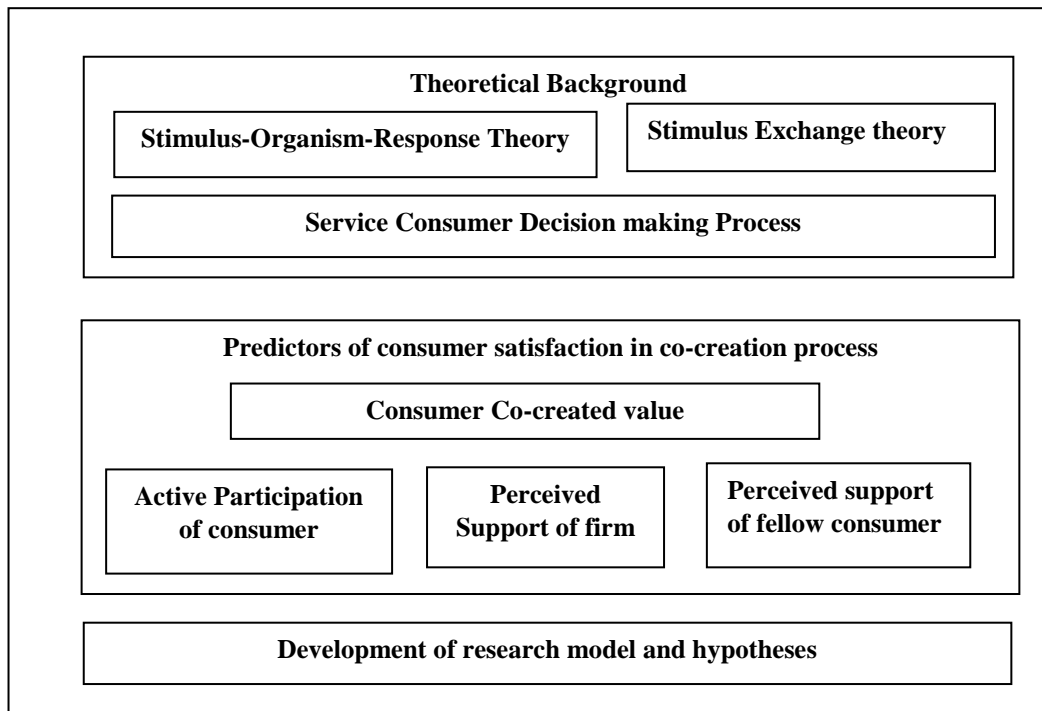


Figure 4.2: Schematic Representation of the research model development

4.2.1 The Research Model

The research model presented in Figure 4.1 portrays the relationship existing between the predictors and outcome of consumer co-created value. The model is based on the S-O-R and Social Exchange Theory which is detailed below.

4.2.2 The S-O-R Theory

The stimulus organism response (SOR) theory has been used for a very long period of time to understand the behaviour of consumers (Hoyer and MacInnis, 1997). The SOR theory was developed by Mehrabian and Russell (1974) from the perspective of environmental psychology. The theory posits that social stimulus present in the environment (stimulus) has a direct effect on cognitive and affective states of the organism (organism), which finally influences the behaviour of organism (response). The present study, in addition to the stimulus organism response (SOR) theory adopts the social exchange theory (which has also

been used for a very long time) to understand the behaviour of consumers (Hoyer and MacInnis, 1997). In context of the present study, the consumer social relationship and exchanges with the provider and other consumers can be termed as social phenomena affecting the cognitive and behavioural states of the consumer. The consumer perceived co-created value in marketing consumption can be stated as the cognitive affective state of the consumer which consequently results in post purchase decision (response) or consumer satisfaction.

4.2.3 The Social Exchange Theory

Social exchange theory plays a vital role in enumerating the significance of the role of the consumer in the light of co-creation (Grissemann and Stokburger-Sauer, 2012). Bettencourt (1997, p.387) refer to social exchanges as “voluntary actions of an unspecified nature that extend beyond basic role obligations and suggest a personal commitment to the partner”. Adding to it, support for consumers is proposed by Bettencourt (1997) as an important antecedent to social exchange theory in case of consumption. Further, Blau (1964) mentioned reciprocation as pivotal for any kind of relationship. He view social exchange relationship as the process where one party which directs its reward to the other party, would receive benefits in response to their favour, leading to a mutually beneficial outcome (Rhoades & Eisenberger, 2002). Focussing on reciprocity, three kinds of social exchange exist in the literature: service provider and consumer (Solomon et al., 1985); service employee and consumer (Bagozzi, 1995); and consumer and consumer (Rosenbaum & Massiah, 2007).

In context of the present study, consumer social relationship and exchanges with provider and other consumers can be termed as social phenomena affecting the cognitive and behavioural states of consumers. The consumer perceived co-created value in marketing consumption can be stated as the cognitive affective state of the consumer which later results into post purchase decision (response) or consumer satisfaction.

4.3 Service Consumer Decision Making Process

Learning about consumer participation during purchase and consumption of services in the decision making process has resulted into a better understanding of consumer value co-creation, (Chen & Raab, 2014). Vargo and Lusch (2004) argued that the consumer is always a co-creator and creates value-in use during the consumption of offering. Therefore, a

thorough examination of consumer decision making in services is necessary to understand value co-creation.

Erasmus, Boshoff & Rousseau (2011) proposed the following critical steps in the consumer decision making process: need recognition, evaluation of information, purchase decision, purchase, consumption and post purchase evaluation. Examining these steps in online services, it is observed that the consumer can participate and join hands with the service provider right from need recognition to consumption, and finally to post purchase evaluation of offering. Lusch and Vargo (2006) made efforts to distinguish consumer efforts in form of participation in services as 'co-production' and 'co-creation'. They described coproduction as consumer participation in creation of the core offering itself, and co-creation as value creation in the act of consumption with the firm acting as a facilitator in the process. Despite describing them as two distinct constructs, Lusch and Vargo (2006) admitted that both constructs were interlinked with co-creation of value being superordinate to co-production.

In an online setting, firms can involve consumers in need recognition stage (eg: searching for custom fit shoes online), information search (consumers look for various companies which are offering this service by browsing online), evaluating information (consumers compare various options offered for customisation like colour, texture, design), deciding to purchase (once satisfied with customised offering, consumer will select it), consumption (consumer will now use the offering designed by him and the firm can support the consumer by providing him ways to use the shoes for better life and looks), making a post purchase evaluation (consumer will be satisfied/dissatisfied with the co-created offering and can write feedback, reviews for other consumers about his experiences).

One important feature of online services is that the consumer is the simultaneously acting as both producer and consumer of the service offering. Production and consumption are no longer separate events. Troffler (1997) coined the word 'prosumer' for the consumer involved in co-creating value through simultaneous production and consumption (prosumption) of value either with other consumers or the firm. Examples of the prosumption are: Wikipedia, Youtube, Instagram, Social networking websites such as Facebook, LinkedIn, Google+).

The present model portrays both co-production and co-creation stages which involve participation of various stakeholders and co-created value (value-in use). The co-created value obtained during consumption finally results into satisfaction or dissatisfaction of

consumer (post purchase evaluation). The post purchase evaluation performed by the consumer is voluntary in nature which means it depends on the consumer whether to evaluate or not, or express grievance about their service co-creation or not. Other steps, however, require consumer participation to perform co-creation.

4.4 Predictor of Satisfaction in Co-Creation Process

The present dissertation revolves around the investigation of critical factors of the value co-creation process which lead to consumer decision making in post purchase evaluation. Though various other stages of consumer decision making are also critical in online value co-creation, focus of the dissertation will be on final post purchase evaluation which comprises satisfaction and other behavioural intentions. The present study adopts service dominant logic which emphasises that value is co-created in the consumption stage. Other previous stages can be understood as coproduction stages where both firm and consumer can collaborate to co-create core offerings (Vargo and Lusch, 2004).

Despite the of importance of other stages in co-creation, the present study specifically focuses on the satisfaction stage in post purchase evaluation as most consumers participating in co-creation are not satisfied with the co-creation process and the outcome is that they are unlikely to be part of the process again. Therefore, satisfaction constitutes the most important part of co-creation which help in sustaining consumer participation in the process. Apart from the consumer service decision making process discussed above, present dissertation also quantitatively examines the key predictors of satisfaction in the co-creation process.

In the research model presented in Figure 4.1, four sets of constructs are positioned as predictors of satisfaction in the co-creation process. The key contribution of this research is understanding the role of consumer co-created value in consumer satisfaction along with its mediating role it play between its predictor and outcome variable (consumer satisfaction). The other three sets of variables - consumer participate, perceived service provider support and perceived other consumer support - have been found to play an important role in influencing consumer satisfaction. All the four sets of above constructs are presented in the next section followed by hypotheses development.

4.4.1 Consumer Co-created Value as Organism (O)

Co-creation has emerged as a new perspective for creating value in case of online services. The co-creation concept was initially defined by Kambil et al. (1990) as joint production or co-production of value. Later, two important themes were identified by Bendapudi and Leone (2003) on co-creation: one was related to benefits and the other was associated with motivation behind participation in co-creation. The rise of modern technologies and World Wide Web (WWW) has resulted in recognition of the role of active consumer in value creation (Prahalad and Ramaswamy, 2000). According to Firat and Venkatesh (1995, pp. 50), “co-created value or consumer created value has become one of the most distinctive aspect of post-modern society which views consumers as participant in the customization of one's world”. This view represents a shift from the traditional idea of ‘inseparability’ of service which means both production and consumption take place simultaneously (Zeithaml and Bitner 1996; Dawra et al., 2012).

Citing the importance of consumer in the value creation process, Raval (2009, pp. 2) defined “co-created value as a complex whole where several actors and resources are involved and where the consumer engages in a multitude of different activities.” Echoing a similar view, McColl-Kennedy et al. (2012, pp. 6) defined consumer co-created value as "benefit realized from integration of resources through activities and interactions with collaborators in the consumer's service network". The above definitions point out that co-created value requires a series of resource integration by actors or participants in the process (Payne, 2008). Emphasising the importance of co-created value, Gummerus (2013) focussed on the processes taking place between parties involved in co-creation. He further argued that continuous participation of consumers was dependent on their previous and present experiences (Payne et al., 2008; Gentile et al., 2007). The value emerging through consumer participation could be at cognitive and subconscious levels which finally results into consumer satisfaction (Tsai, 2005).

Emphasising active consumer participation, Mascarenhas et al. (2004) termed it as an important antecedent for co-creating value. This co-created value not only leads to consumer satisfaction, but also compelling experiences for the consumer. Despite a lot of effort put in by researchers, Chan et al. (2010) found lack of empirical studies on consumer co-created value through consumer participation in business to consumer context.

4.4.2 Consumer Participation

Inseparability of consumer from the service created establishes the profound effect consumers have on the kind of offering being created and value served. Despite significance of consumers and their resource contributions, they have been restricted to participate in the value creation process by firms. However, changing business dynamics have forced firms to let consumers participate in value creation in order to achieve a competitive edge. Thus, realising the importance of consumer participation in marketing, consumption and delivery of services, firms are becoming more open for their consumers in the value creation process (Dong, Evans, & Zou, 2008).

Dabholkar (1990, p.484) defines “consumer participation as the degree to which the consumer is involved in producing and delivering the service.” Further, Mueter and Bitner (1998), on the basis of consumer participation, differentiate among the three kinds of service production: firm production, joint production, and consumer production. Based on the fundamental premises of Vargo and Lusch (2004), firm production refers to firm as the primarily responsible of value creator in form of goods. However, joint production represents the process of consumer participation in the production process through exchange of resources and inputs. Consumer production denotes value creation by consumer if firm is not present and co-creation if firm is acting as facilitator. When consumers are acting as active co-creators, firm should try to co-opt the competencies of their consumers for achieving competitive edge (Prahalad and Ramaswamy, 2000) so that their needs and preferences are better satisfied. Thus, consumer participation in the co-creation process can effectively lead to consumer satisfaction.

Extant literature on consumer participation has focussed on three major themes. Initial studies on consumer participation discuss why consumers should participate in the value creation process. Benefits associated with consumer participation, especially economic gains or productivity gains were the reasons behind firms inviting consumers as a partial employees or labour (Mills and Morris 1986). Bendapudi and Leone (2003) further investigated the psychological response of consumer participation and its impact on consumer satisfaction. The second theme of consumer participation revolved around the consumer socialisation process. According to Claycomb et al. (2001), active participation of consumer in value creation process leads to an increase in socialisation of consumers in an organisation, which further is responsible for greater service quality (Kelley et al., 1990) and consumer satisfaction (Dabholkar, 1990)

The third theme revolved around factors vital to consumer participation in consumer value co-creation in the various kinds of services. Meuter et al. (2005) demonstrated consumer readiness variable (role clarity, motivation, and ability) as a factor influencing consumer trial decision in self-service technologies, whereas Dabholkar and Bagozzi (2002) investigated various consumer traits and situational factors behind technology adoption process. Dong et al. (2008) examines consumer response in case of service failure and how it affects consumer intention to participate in future co-creation behaviour.

The present study considers active participation of consumers a crucial and indispensable antecedent of consumer co-created value which leads to consumer satisfaction. Although previous research has tried to find out how consumer participation leads to consumer satisfaction, the present study tries to determine the role of co-created value in consumer satisfaction and how consumer participation is responsible for creation of co-created value. Scarcity of empirical studies on consumer participation, particularly in context of consumer co-created value (Dong et al., 2008), has served as the motivation behind undertaking of the present study. The previous studies therefore, act as important stepping stones for establishing the theoretical foundation of the proposed research framework of our study.

4.4.3 Perceived Support of Firm

Advent of co-creation has led to widespread consumer involvement in the value creation process which earlier was thought to be the sole responsibility of the firm. (Fuchs and Schreier, 2011). However, involvement of consumers into service operations has also resulted in higher variability in the service process. Grisseemann and Stokburger-Sauer (2012) identified five kinds of variability arising due to consumer participation: arrival variability (demand at various time periods); request variability (various customised need of consumer); subjective variability (various opinion of consumers); capability variability (various competencies required from consumer); and efforts variability (difference in the efforts of consumers). Thus, support of service provider became eminent to control the above mentioned variability arising due to participation of consumer which required constant communication between firm and consumer.

Firms used to communicate with consumers earlier also, but this communication was merely unidirectional in nature. This one way communication was representative of the goods-dominant view where firm used to influence consumers through mails or

advertisements. SD logic on the other hand, has constantly focussed on reciprocating behaviour between firm and consumers (Vargo and Lusch, 2008). It centred on dialogue between firm and consumer for joint value creation. It emphasized that service provider should always look for opportunities to support consumers by exchanging information and requisite resources (Payne, Storbacka, & Frow, 2008).

Regular communication between consumer and firm through interaction leads to development of social bonding which ensures long term relationships and enhanced service quality (Grisseman and Stokburger-Sauer, 2012; Tynan et al., 2010). For communicating effectively with consumers and engaging them, service provider should use various communication channels (personal and impersonal in nature) (Auh et al. 2007). Service provider should work actively to support consumer co-creation by providing consumers with various toolkits in order to make their experiences more compelling and memorable (Franke and Schreier, 2010; Füller et al., 2009).

Social exchange theory plays an important role in understanding service provider support in the co-creation phenomenon. It has been referred by Bettencourt (1997, p. 387) as “voluntary actions of an unspecified nature that extend beyond basic role obligations and suggest a personal commitment to the partner”. He further referred to perceived support as an important antecedent of co-creation of value through social exchange in context of consumption. According to Bagozzi (1995), perceived service provider support leads to greater consumer willingness in maintaining bonding with consumers and increased participation of consumer.

4.4.4. Perceived Fellow Consumer Support

In the co-creation process, apart from creating value for themselves, consumers also display voluntary helping behaviour towards other consumers in the form of reviews, blogs and feedback. A consumer participating in the co-creation process also anticipates support from other consumers. Gremler and Brown (1999) stated that consumers who were benefited from other consumers’ citizenship behaviour tended to display similar behaviour. Bettencourt (1997) termed it ‘voluntary consumer performance’ exhibited in the form of spreading word of mouth (WOM), offering suggestions for improvement, displaying courtesy in form of co-operation, etc.

According to Yi and Gong (2009, p.1516) “perceived consumer support is defined as the degree of consideration expressed by other consumers”. Perceived consumer support is

contingent upon certain essential conditions in the service encounter, such as: (1) presence of high interaction; (2) presence of greater physical proximity; and (3) presence of relationship amongst members. Zeithaml and Bitner (2003) argued that satisfying above conditions led to creation of conducive social environment for value co-creation which further contributed to increased performance and satisfaction of focal consumers. Gronroos (2012) defined the role of fellow consumers as resource integrators and find their influence significant in shaping up co-created value through servuction model. Interaction among focal consumers and fellow consumers has been considered to improve co-ordination and satisfaction with co-created value (Glaman et al., 2002). Extant literature on fellow consumer support emphasises that various kinds of support like companionship, socio-emotional and instrumental support result in feeling of satisfaction and loyalty (Rosenbaum and Massiah, 2007; Sherony and Green, 2002).

During co-creation of value, perceived support of fellow consumers leads to active exchange among consumers and enabling of effective service delivery, which stimulate consumer satisfaction.

4.5 Hypotheses

The present section present the various hypothesised relationship existing amongst the predictor variable of consumer satisfaction (Figure 4.3).

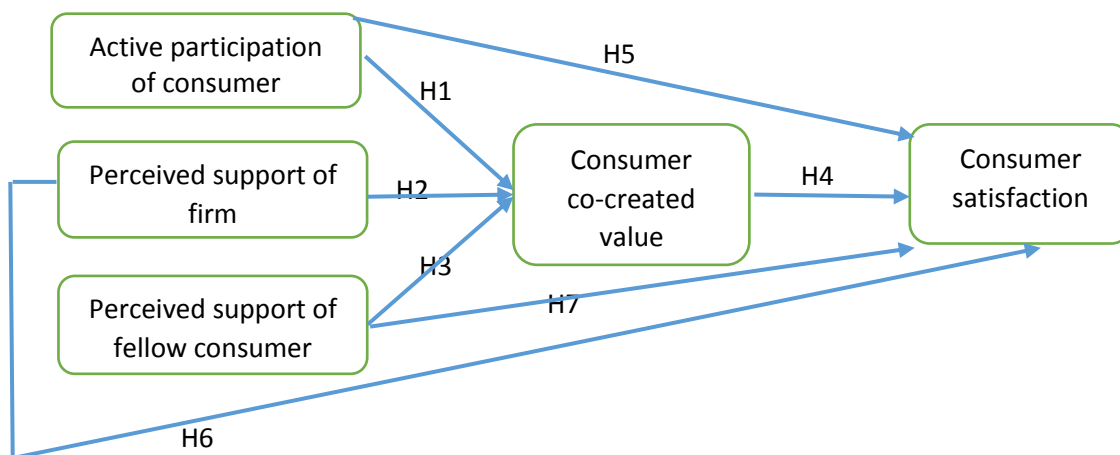


Figure 4.3: Hypothesised relationships

4.5.1 Consumer Participation Hypothesis

According to Cermak, File and Prince (1994), consumer participation could be referred to the degree of consumers’ mental and physical involvement in service production and delivery. While previous research on consumer participation has been centred on

different motivations behind consumer participation in service production, studies tend to be more skewed towards economic aspects of participation. Later, Bendapudi and Leone (2003) examined the physiological responses of consumer participation in service production and delivery process. Firat, Dholakia, and Venkatesh (1995) pointed out that consumers had the potential to customize their own world as participants. Thus, firms need to be more open to encourage consumer participation in the value creation process, and satisfy them. Multiple studies (Czepiel, 1990; Kelley et al., 1990; Van Raaij and Pruyn, 1998) have suggested that consumer participation is important for their satisfaction. However, this has still not been empirically validated (Wu, 2011).

Consumers receive various benefits by participating in value co-creation such as trust, commitment, satisfaction, new relationships and decrease in the cost of consumption (Van Doorn et al., 2010) whereas the company is benefitted with greater value, return on investment, knowledge and income from loyalty and satisfaction of consumers.

Thus, the following hypotheses are proposed:

H1: Active participation of consumer positively affect consumer co-created value.

H5: Active participation of consumer positively affect consumer satisfaction.

4.5.2 Perceived Support of Firm Hypothesis

Despite the pivotal role of consumers in value co-creation, firm's role remains critical. According to Ballantyne and Varey (2006) and Grönroos (2011), value is not only created in use situations but also through reciprocal interaction between firms and consumers. Studies by Grewal et al. (2009) and Verhoef et al. (2009) identified various factors important for firms to design and enhance consumer co-created value. They further argued that firm support was critical for achieving satisfaction and loyalty of consumers (Klaus and Maklan, 2012; Rudawska, 2014). Hence, in the process of co-creation, firm should look for ways to encourage participation of consumers so that holistic co-created value creation is possible (Payne et al. 2008).

Firms should constantly look for opportunities to design and test its processes in order to make them more consumers friendly. Higher level of flexibility and ease allows consumers to participate and co-create value. Also, at the company end their participation requires constant interaction and resource exchange with the consumers so that their needs are met successfully and satisfaction is achieved (Chathoth et al. 2013). However, firm support

depends on the requirements and needs of consumers. Thus in new service paradigm, firm still holds an important position in value creation activity.

On the basis of the discussion above, following hypotheses were proposed:

H2: Perceived support of firm has positive effect on consumer co-created value.

H7: Perceived support of firm has positive effect on consumer satisfaction.

4.5.3 Perceived Fellow Consumer Support Hypothesis

Role of fellow consumer support is evident where other consumers give feedback, reviews, ideas and knowledge which helps co-creation of value. A lot of information has been voluntarily exchanged by consumers through/in the form of travel memoirs, feedback regarding hospitality services, product information, movie reviews, software codes, and exchange of various types of knowledge. According to Rosenbaum and Massiah (2007), many service firms appreciate and invite consumer voluntary performance or helping behaviour as it not only leads to consumer loyalty, but also enables better quality and service performance. IMDb rating is also one example where rating by consumers helps in increasing the popularity of a movie or TV series. Bettencourt (1997) argued that consumer voluntary performance for service firms also results in consumer satisfaction and commitment for the firm.

Foa (1971) provided six different types of resources extended by people in exchange relationships and gave reasons for their exchange. Adelman and Ahuvia (1995) emphasised social support as a necessary element for exchange. Gronroos (2012) proposed interaction with fellow consumers as a defining characteristic of value creation.

Based on these previous studies, the study posit that role of fellow consumers is very important in collaborative value creation and satisfaction of consumers. Therefore following hypotheses were proposed:

H3 Perceived support of fellow consumer has a positive effect on consumer co-created value.

H7 Perceived support of fellow consumer has a positive effect on consumer satisfaction.

4.5.4 Co-created value hypothesis

Value has always been a defining criterion for achieving satisfaction of the customer. Customers who perceive higher value in firm offerings tend to be satisfied and loyal to firms.

Thus, value has been a pre-cursor to customer satisfaction and other behavioural intentions. However, when investigating customer co-creation, it is worth knowing whether the same happens for co-created or collaborative value also. Customer co-created value represents the customer perspective of attaining higher value through collaboration. Previous literature has argued customer value as perceived value which encompasses: functional, hedonic, social aspects in business to customer context (Rudawska et al. 2015).

Customer gives high regard to interaction as it leads to enhancement of value. In case of online services, customers interact with travel firms to prepare holiday packages for themselves. Similarly, experiences are co-created by customers when they participate in an online contest or design competition. Edvardsson et al. (2008) and Payne emphasised the relational and social aspects of value co-creation. According to them, value is created in a relational fabric and the customer's remains in co-creation for longer duration if they find relational bonding or social ties valuable. Personal aspects of value are mostly related to customer personal aspects such as fun, love, and esteem whereas economic aspects are related to cost, time and efforts of the customer involved in co-creation.

Thus, customers indulge in co-creation as they want to create a more personalised world in order to satisfy their needs. Based on the discussion above, study propose:

H4: Customer co-created value positively affects satisfaction of customer.

4.5.5 Mediating effect hypothesis

As represented in Figure 4.2, the research model indicates that the co-created value mediates the relationship between the customer participation, perceived customer support, perceived organisational support and consumer satisfaction. Review of extant literature clearly exhibits the presence of a strong relationship between customer satisfaction and the customer participation due to value perceived by customers (Chen and Wang, 2016; Yang & Peterson, 2004). According to Chen and Wang (2016), if customer perceive mix of different kind of value such as social, economic, personal and experiential, they are more likely to participate and satisfied with the co-creation process. Yim et al. (2012) emphasise on hedonic or experiential value as major contributor behind customer satisfaction. Similarly, literature has an ample evidence where constant support of firm in form of operand and operant resources has helped in enhancing various value dimensions, which ultimately enables satisfying experiences for the customers (Payne et al., 2008; Sirmon et al., 2007; Baron and

Warnaby, 2011). Customer co-created value are the benefits generated between firm and customer through their active, creative, and social participation (Ind et al., 2013). Conner (1991) argue that primary pursuit of firm is value creation which is derived through the firm resources. Therefore customer co-created value get enhanced through input and support it receive from the firm.

Role of fellow customer and customer communities has become the most dominant force in shaping up the customer co-created value. Customer is also referred as the production resources by Harris and Baron (2004) which means various interpersonal encounter between customers can drastically influence the customer experiences (Bitner, 1992). Martin (1996) attribute quality relationship and willingness to help in customer to customer interaction as the key reason behind customer satisfaction and future patronage. Murphy (2001) suggest social interaction as important factor which shape up tourist experiences and overall value it co-create. Hence support of fellow customers has key role to play in customer satisfaction. On the basis of above relationship, the study posit following hypotheses:

H8: Customer co-created value mediate the relationship between the customer participation, and customer satisfaction.

H9: Customer co-created value mediate the relationship between the perceived service provider support and customer satisfaction.

H10: Customer co-created value mediate the relationship between the perceived fellow customer support and customer satisfaction.

4.6 Summary

The present chapter offers a research model built on the existing theories in management and social sciences literature. The model delineates three important predictors of consumer co-created value and its relationship with satisfaction as an outcome. The study further proposes detailed hypotheses existing between various constructs. The model hypothesizes the mediating effect of co-created value between satisfaction and three antecedents (consumer participation, perceived service provider support, and perceived consumer support). The key predictors of consumer co-created value are developed through a literature review presented in chapter two and chapter three. The next chapter 5 describes the research methodology adopted for the research model conceptualised in the present chapter.

Preview

The present chapter elaborates and explicates the blueprint undertaken to achieve the primary objective of the research. The succeeding sections give a detailed view of, and justification for the research design and methods used for survey instrument designing, construct measure, sampling, data collection and data analysis employed in development of value co-created scale and further modeling and moderation analysis of consumer value co-creation.

5.1 Introduction

Present study has undertaken quantitative cross survey research design for understanding consumer value co-creation process. Hypotheses mentioned in chapter four were tested through banking ATM intercept personal survey. The subsequent section describes the rationale behind cross-sectional research design, context of the study and sampling procedures.

5.1.1 Rationale for a Cross-Sectional Survey Design

A research design acts as a guide for establishing the essential goals of any research undertaken. It provides a course of action for the researcher (Tsang and Antony, 2001; Antony et al., 2002). Developing a research design requires a clear understanding of the research problem and the manner in which to address the problem. Rather than depending on methodology, research design emphasises purpose of research and ways in which invalidity or non-reliability may be reduced. The soul objective of a research design is to look for clear and unambiguous answers to questions asked. Evidence gathered in the form of responses should not only be limited to supporting the result, but also used for alternative explanations.

For the present research, the cross sectional survey design is selected to collect data for testing hypotheses coined in chapter four. There are a number of advantages of using survey design over other methodological alternatives present. First, it is an efficient way to collect data from a diverse range and backgrounds of respondents (Babbie, 1989), and

generate large samples for generalisation of the study (Kerlinger, 1986). Second, a greater number of variables can be measured and investigated in an effective manner through survey research (Churchill, 1995; Kerlinger, 1986). Third, usage of survey research methodology helps in investigation of the phenomenon in its natural form. Thus, consumer participation in any online co-creation process to create collaborative value can be through survey research. Finally, survey research has proved to be economical on the ground of quantity and quality of information it extends (Kerlinger, 1986).

Despite advantages of survey research, there also are various limitations to the methodology. First, the conclusions drawn through the survey research for causal relationships are correlational in nature rather than definite. This is because in survey research, there is a possibility of an extraneous variable impacting causal relationship, thus affecting the ability of survey research to explain causality accurately. Second, use of standard scales in survey research may restrict some important factors important for respondents of the study undertaken (Babbie, 1989). Thus, to ensure that survey results capture the important factors associated with consumer value co-creation, an in-depth interview and pretesting of questionnaires has been performed before the beginning of actual survey. Third, during the survey, respondents may suffer from various biases like social desirability or agreement. Thus, standard scales with proven reliability and validity were used for most constructs. Data from respondents were kept confidential to lower the effect of biasness due to social desirability.

Another important point to be kept in mind, when undertaking any project is that the design to be undertaken in research should be cross-sectional or longitudinal in nature. The cross-sectional design examines any phenomenon at one point of time, whereas longitudinal design captures the phenomenon over a period of time through data from same set of respondents. The present study focuses primarily on consumption and satisfaction steps in the consumer decision making process. The focus on consumer consumption and satisfaction limits the study to focus on consumer behaviour over a period of time. The survey asks respondents to give insights into their past behaviour during participation in online co-creation and future ideas to participate in co-creation. Also time and monetary investment were key constraint behind taking up longitudinal study on the subject.

Considering all advantages and disadvantages associated with cross-sectional survey research, it is found to be best suited for the present study as it allows data collection from

large samples both cost effectively and judiciously. Also, a greater number of variables can be taken into account in survey research for the study to be performed in natural settings.

5.1.2 Context

One of the most important considerations in finalizing a research design is deciding the context for the study undertaken. The present research on consumer value co-creation takes into account several criteria for deciding e-services as context for the present study in order to test the hypotheses enumerated in Chapter four. The first criterion is that online services must exist as an alternative to offline services for consumers involved in co-creating value. Second, there should be both consumers and non-consumers for online services. Third, a consumer should refer to recently used e-services type when citing the reason behind participation or non-participation in any kind of co-creation online.

Taking these criteria into account, the context for the present study was established - consumers participating in online banking and co-creating value for themselves. The consumer has a choice to use offline or online banking for creating demand draft, transferring money, or creating portfolio for investing in financial product. An individual consumer participating in co-creation here represents the unit of analysis. The study has typically focussed on online consumers due to widespread growth of internet users across the world. According to BCG Report (2015) India stands the third largest country with 190 million internet users after USA and China. Internet usage has transformed the way businesses were performed traditionally (Meuter et al., 2005). Maklan and Klaus (2011) too held internet responsible for consumer participation in co-creational activities. Acknowledging the impact of internet on collaborative engagement, Ramaswamy (2010) calls for understanding this relatively new phenomenon. Also, due to its advantage of saving time and money of consumers, it is believed that scope and participation of consumers in co-creation is likely to increase multi fold in coming years.

In the present study, a mixed approach has been used which includes combination of exploratory and descriptive designs. It results into a holistic and well-structured elucidation in response to the research problem under consideration. Amartunga et al. (2001) opined that mixed approach is appropriate for generating better results.

5.2 Data Collection Methods

Since value co-creation is an emerging field in management literature, majority of studies taken up initially were conceptual in nature. However with the progression and increased interest of scholar, lots of empirical studies has started being taken up on the subject. Bulk of the empirical studies on value co-creation has used the questionnaire survey method to collect data. Various reason could be attributed to the use of questionnaire survey, prominent ones are: First, respondent get easily well versed with the problem under consideration and thereby respond appropriately. Second, chances of biasness in response get reduced as the issue of privacy and anonymity of respondent is promised as the key priority of the researcher. Third, according to various researcher (Cresswell, 2003; Zikmund et al., 2000) questionnaire survey is inexpensive, accurate and covers wide range. Intercept personal interview through self-administered questionnaire was used to collect data from consumers who are arriving at banking ATMs (Malhotra, 2004; Churchill, 1979).

5.2.1 Scaling Techniques

According to Malhotra & Dash (2009) “*Scaling involves creating a continuum upon which measured objects are located*”. Scaling techniques involves two categories which are: comparative scaling and non-comparative scaling. For the present study 7-point Likert scale has been undertaken to collect the data.

Various reasons are responsible for using Likert scale are convenience in constructing, structuring and administering the survey instrument. Also it is very suitable to collect data when using personal interview for collecting data (Malhotra & Dash, 2009). Majority of quantitative studies on value co-creation studies used Likert scale to collect data (Gentile et al., 2009; Prebensen et al., 2013; Vega-Vazquez et al., 2013)

5.2.2 Questionnaire Design

The questionnaire was used for collecting data in order to test hypothesis elaborated in chapter seven. The present section explains the questionnaire designing process. The development of survey instrument includes a multi-step process, which was later administered to the consumers using banking ATMs. First step is to perform literature review in order to frame a research model to give direction for collection of data. Second step: A preliminary survey was conducted consisting of 35 questions across 5 constructs. Which was later

reviewed by subject experts on online services? On the basis of recommendation given by subject experts, refinement of survey instrument was performed largely on the terminologies that are easier for consumer to understand. Next, convenience sampling was used to perform pre-testing of questionnaire so that any problem with the sentences or words of questionnaire could be identified. 50 participants who were using ATMs were selected from Indian Institute of Technology Roorkee for pre-testing of questionnaire, so that readability and clarity of can further be improved.

Later questionnaire again was pre-tested with a small group of 15 online banking users (B.Tech and PhD Student) at Roorkee. Respondents were asked to understand the question carefully and give at least 10 minutes to it. Later they were asked to give their perception about questionnaire. Adaptation of wording and ambiguities in questionnaire were removed. Reliability assessment is performed to remove low item-to total correlation. Thus after final pre-testing process, final questionnaire consist of 32 questions with 5 different kind of constructs. This process resulted in refinement of measures and makes it more concise.

The questionnaire designed consists of structured question to measure various construct under study. This includes consumer satisfaction, co-created value (comprises of five construct: personal, relational, economic, experiential, and interactional), and consumer participation. While consumer participation and satisfaction constructs were operationalised through adoption of existing multi-item scale. The consumer co-created scale was created through established procedure laid down by Churchill (1979) and Peter (1979). This scale development also requires in-depth interview relevant according to the context. All of items for construct assessment were measured on seven point Likert scale. The final questionnaire prepared is included as Appendix II.

5.2.3 Sampling Design

The next step after designing of questionnaire is selection of suitable sample to collect data about particular information (Churchill, 1979). Thus it quite clear that sampling has a significant role in identification of population group from which the information can be retrieved and employed in achieving our research objectives. Zikmund and Babin (2007) has referred to numerous technique to decide sampling. These techniques can be broadly classified into categories as: non-probability sampling and probability sampling.

Five steps of sampling design process were used to design the sample for this study. The steps are enumerated as follow: First, defining the target population; second, determine

the sampling frame; third, selecting the suitable sampling technique; fourth, determining the adequate sample size and last, executing the whole sample process (Malhotra and Dash, 2009).

5.2.4 Target Population

Malhotra and Dash (2009) define three criteria for define target population as: elements, sampling units, extent and time. For the present study the target population is as follow:

Elements –Bank consumers

Sampling units –Banking ATMs in the vicinity of railway stations and bus stand.

Time - April 2014 to July 2015;

Extent – Delhi.

5.2.4.1 Elements- Bank Consumers

There are different types of banking consumers in India, such as corporate banking consumers, commercial banking consumers, wholesale banking consumers, retail banking consumers, etc. Only retail banking consumers in Delhi were targeted for data collection, particularly those consumers who use retail banking ATMs. Total usable response collected from consumers using banking ATM service are 351.

5.2.4.2 Sampling Units- Banking ATMs

The present study involves data collection from consumers using banking ATMs in the vicinity of 23 railways stations and 3 bus stands in Delhi. Reasons for choosing them as sampling units are as follows:

- Banking is one of the prominent areas where technology has played a significant role in enabling participation of consumers. Some key studies on e-banking are as follows: Heinonen, (2004); Lähteenmäki and Nätti, (2013); Rabino, Onufrey and Moskowitz (2009); Olorunniwo and Hsu (2006); Wisskirchen et al. (2006).
- A large base of consumers perform retail banking activities through ATM every day is another reason behind the selection. The ATM intercept interview allows convenience of meeting and enabling consumers to participate in survey, and is way easy compared to other methods of data collection.
- As per data released by (RBI, 2016), total number of ATMs in Delhi are 8729 where

ATMs from public sector banks are 5294, private sector bank are 3311 and foreign bank ATMs in Delhi are 124 in number.

- ATM located in the vicinity of 23 railway stations and bus terminals in Delhi are picked for data collection. The 23 railway station and 3 bus stands are spread across the Delhi region and from here a large diverse population travels to different states and city. Therefore, railway station and bus stand became an appropriate place for data collection. Total of 30 ATM are located for data collection.

Table 5.1: Places of data collection

List of Railway Station in Delhi			
S.No.	Station Code	Railway Station in Delhi	Address
1	ANDI	Adarsh Nagar	Adarsh Nagar
2	ANVR	Anand Vihar	Anand Vihar
3	BHD	Badli	Badli
4	BWSN	Bijwasan	New Delhi
5	DLI	Delhi	Delhi
6	DEC	Delhi Cantonment	Delhi
7	DKZ	Delhi Kishanganj	Delhi Kishanganj
8	DSJ	Delhi Safdarjung	Delhi Safdarjung
9	DEE	Delhi Sarai Rohilla	Delhi Sarai Rohilla
10	DSA	Delhi Shahdara	Delhi Shahdara
11	NZM	Hazrat Nizamuddin	Hazrat Nizamuddin
12	MGLP	Mangolpuri	Mangolpuri
13	NNO	Nangloi	Nangloi
14	NUR	Narela	Narela
15	NDLS	New Delhi	New Delhi
16	OKA	Okhla	Okhla
17	PM	Palam	Palam
18	SSB	Shakurbasti	Shakurbasti
19	CSB	Shivaji Bridge	Shivaji Bridge
20	SZM	Subzi Mandi	Subzi Mandi
21	TKJ	Tilak Bridge	Tilak Bridge
22	TKD	Tuglakabad	Tuglakabad
23	VVB	Viveka Vihar	Viveka Vihar
List of Bus Terminals in Delhi			
24	Maharana Pratap ISBT		Kashmere Gate
25	Swami Vivekanand ISBT		Anand Vihar
26	Vir Hakikat Rai ISBT		Sarai Kale Khan

- ATM intercept interview enables researcher to reach to various age groups of consumer for collecting data, which otherwise could be daunting task in any another industry. It also enables us to understand co-creation phenomenon at various age group. Therefore, in case of model development it was highly feasible and sensible to collect the experiences of the retail consumers.

5.2.4.3 Time- April, 2014-July, 2015

This study involves primary data collection through banking ATM intercept method. The intercept method is quite popular among researchers over the world and has been used frequently in the area of value creation and co-creation (Lin and Hseih, 2006; Lee, 2015; Siu and Chang, 2015; Davis, Lang and Gautam, 2013). As the researcher was personally involved in data collection, more time was taken. Based on the sampling schedule, the researcher collected data at various points of time such as morning, afternoon, and evening in peak hours and off peak hours during weekday and weekends.. Pilot testing was also performed at Indian Institute of Technology Roorkee, before an actual data is collected. Data collection took almost one year and was performed at Delhi-NCR.

5.2.4.4 Extent- Delhi region

The researcher selected Delhi as a geographical areas for study. Reasons for the selection are as follows:

- Delhi officially known as National Capital Region and is considered the second largest metropolitan city in India, and eighth in the world in terms of population with 12.25 million inhabitants (<http://en.wikipedia.org>).
- Delhi is one of the largest NCR regions of the world and has territorial jurisdiction of four states including Delhi, Haryana, UP and Rajasthan. Its rural-urban region has 37.1 million people living in 108 towns (NCR Planning Board annual report, 2008-09).
- Delhi is largely multicultural, multilinguistic and cosmopolitan in nature due to the large number of migrated people from all over India in search of work, and education. Thus, it acts as a microcosm of the Indian population.
- A report from The Times of India (2010) states that residents of Delhi are availing best quality of life in terms of demographics, education, health & medical standards,

safety, housing, socio-cultural & political environment, and economic environment. Best quality of life also implies that residents of Delhi are enjoying best services from organisations. According to the report of Institute of Competitiveness (CII-IFC, 2010), Delhi ranks first among the most competitive cities based on metropolitan infrastructure and business environment. Thus, competitive business environment is also a reason behind best quality services. This way, Delhi-NCR provided a fitting context for carrying out the study and generating consumer insight about consumer participation in online services.

5.3 Data Collection Procedure

The present study is based on collection of primary data. Primary data were collected from consumers using online banking services to co-create various kinds of value for themselves. Steps were taken to identify consumers who used (and those who did not) online banking services. Since banks can't reveal information about consumers engaged in online banking, it is hard to identify consumers using e-services. For this reason, an attempt was made to identify consumers using banking ATMs at 23 railway stations and 3 bus terminals in Delhi state. According to Kaushik et al. (2015), consumers using one kind of SSTs have greater propensity to use other kinds of SSTs also, such as online banking facilities.

Data were collected personally and judgement sampling is used for collecting data from consumers visiting and using these banking ATMs at various railway stations and bus terminals. The study relied on the information given by consumers to find out who were not using online banking services. The survey instrument was used for collecting data in order to test hypotheses elaborated in chapter four.

5.4 Data Analysis Procedure

On the basis of objective of our study, a multi-step procedure has been adopted for the analysis of data. To investigate how consumer co-created value mediates the relationship between predictor variables and consumer satisfaction in online services, the data has been analyzed with the help of SPSS software version 20. Next, AMOS 20 to analyze and testing data for proposed model. Following steps has been undertaken to conduct data analysis:

(1) *Data Screening and Preliminary analysis*

Objective of data screening is to remove unusual observations. The non-normal item present in the data could be potential outliers. Therefore metric-scale item was examined by its standard scores (Z score) to check outliers (Hair et al., 2006). Normality of data also suggests the distribution of data and possible flaws. Normality of construct was assessed through skewness and kurtosis value (Field, 2005). The accepted absolute value for Z score and skewness index, as suggested by previous researcher should be between 3 and kurtosis index 10.

(2) *Descriptive Analysis*

Demographic profiles of respondent or such sample characteristics as (age, gender, education, income) was evaluated through frequency and percentage ratio, to distribute them into various sub-group

(3) *Structure equation modelling (SEM)*

On the basis of the objectives of the present study, a multi-step procedure has been adopted for analysis of data. To investigate how consumer co-created value mediates consumer participation and consumer satisfaction in online services, data analysis is conducted with the help of SPSS statistics software version 20 and AMOS 20.

Another important concern with SEM analysis is deciding the appropriate sample size. It is essential to decide the sample size as accuracy of the results generated greatly relies on the size of data (Reinartz, et al. 2009; Hair, et al. 2010). There are various views on sample size: For eg: Reinartz, et al. (2009) said that it should be greater than 200; according to Schumacher and Lomax (2004), it should be around 250; in view of (Chin & Newsted, 1995; Cho, & Park, 2001; Mahdavi et al., 2008), SEM works well for reflective model and the minimum sample size should be at least 10 times the number of items. 351 usable responses were collected from consumers using various banking ATMs so that meaningful insights can be gained. Various reliability and validity tests were conducted to analyze and validate both the measurement and structural models.

SEM is an outcome of gradual development in multi-equation modeling to solve problems in economics. It later came to be used in psychology and sociology. The initial development of SEM is based on regression analysis followed by factor, confirmatory and path analysis (Schumacher and Lomax, 2004).

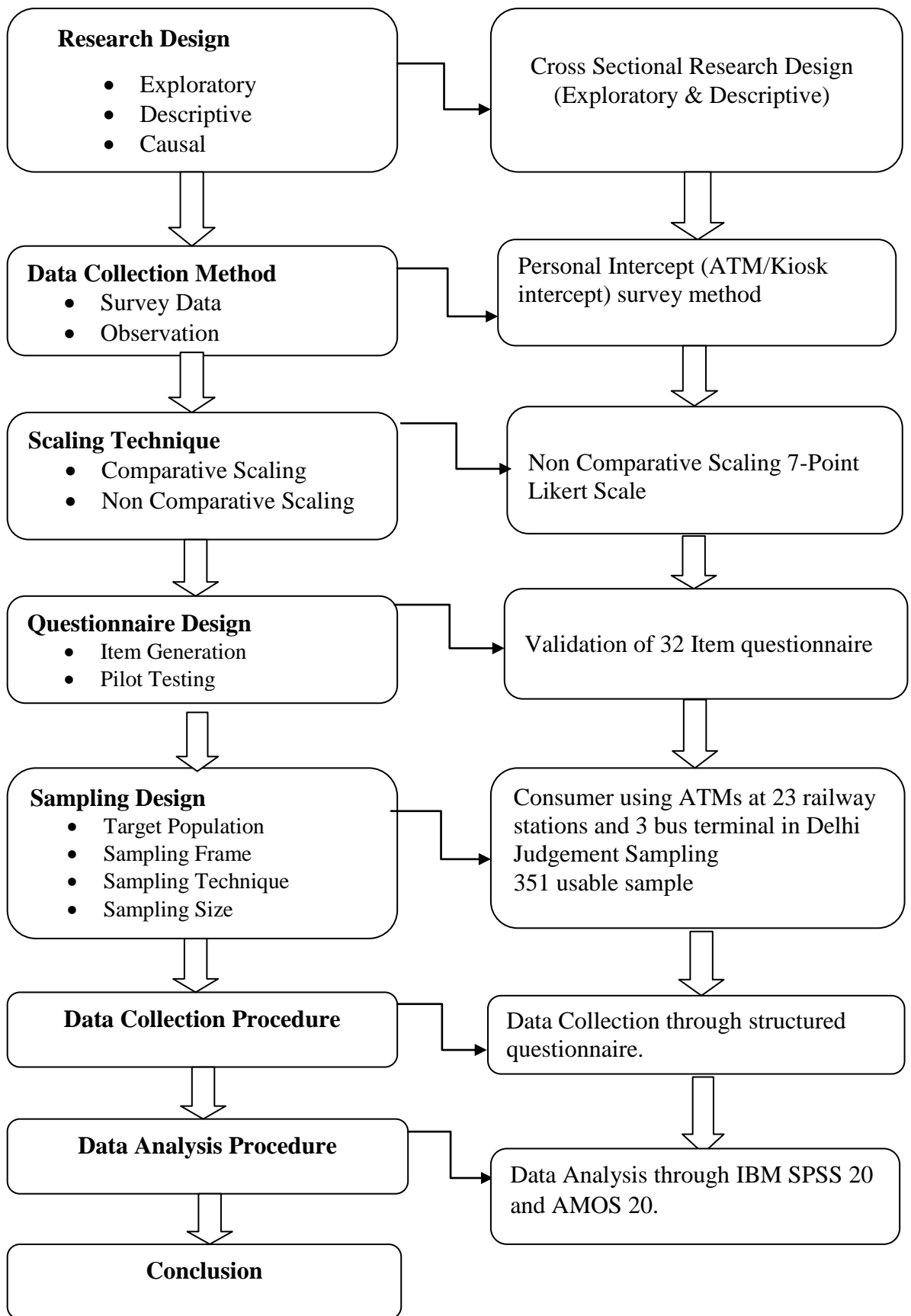


Fig 5.1: Flow chart of research methodology

Various advantages of using SEM are: (1) both endogenous and exogenous variables are treated as random variable with errors; (2) latent constructs with multiple indicators; (3) test of overall model rather than individual co-efficient; and (4) modeling of mediating variable (Golob, 2003).

5.5. Summary

This chapter starts with the rationale behind using the cross sectional research design. Further, study provides reasons for using banking ATMs. The latter section of the chapter discusses various steps involved in the research methodology to achieve the third and fourth objective of the study. These steps include research design, data collection methods, scaling techniques, questionnaire design, sampling design and data analysis procedure. A detailed description of the data analysis process is also given in the subsequent chapter 7 of the thesis.

Chapter 6

CCV Scale Development

Preview

This chapter presents the procedure to develop scale aims to conceptualize, structure, refine and empirically validate consumer co-created value (CCV) scale. Two stage approach was undertaken for conceptualizing value co-creation: stage 1 involved initial item generation for CCV through qualitative research and purification through exploratory factor analysis; stage 2 comprised validation of CCV using confirmatory factor analysis and structural equation modelling. Total 19 items were classified into the following five dimensions of CCV: relational, personal, economic, interactive, and experiential. Findings of the study reveal that co-created value significantly affects consumer satisfaction. Based on various reliability and validity tests, the considered scale exhibits good psychometric properties. The study seeks to conceptualize and empirically measure value co-created in e-services context.

6.1 Introduction

Although ‘value’ has been studied as a concept, since 18th century (Smith 1776), it gained research prominence only after the pioneering work of Thaler (1985) on value functions. Both practitioners and academics the world over have acknowledged the importance of value in gaining competitive advantage and ensuring consumer satisfaction. Despite the generally accepted significance of value, the definition of the term still remains vague. The multidimensional and complex nature of value may be a key reason behind the absence of a universally accepted definition. Though researchers have tried to analyze and conceptualize value as added value, value chain analysis, superior value, perceived value, relationship value, stakeholder value, value-in exchange and value-in-use. (Payne and Holt 2001; Woodruff 1997; Sánchez-Fernández, and Iniesta-Bonillo 2007), yet the subjectivity and complexity associated with value warrants further research.

Haksever et al. (2004, p.292) defined value as “the capacity of goods and services or activity to satisfy a need or provide a benefit to a person or legal entity”. Value has been considered one of the most critical factors behind the success of any firm and a source of competitive advantage (Sánchez-Fernández, and Iniesta-Bonillo 2006; Woodruff, 1997). Vital to any marketing activity, value is overtly used as a tool to attract, satisfy and retain

consumers by firms (Wang et al. 2004). Earlier, it was thought that firms alone were responsible for creation of value, however, with change in perception towards value and a better understanding of the value creation process, consumers came to be accepted as creators and arbiters of value (Preim 2007).

Over the last decade, the role of consumer has undergone a major transformation due to digitalization and advancement in connective technologies; consumers today are more active, connected, and informed. Further this technological advancement has enabled consumers to become active participants in value creation. This transformation in consumer role is highly evident in various e-services where consumers produce, create and consume value. A few examples of consumers' active participation in creation of value in context of e services are: online money management, online investments, online banking, maintaining blogs (e.g. Huffington Post), creating videos (e.g. YouTube), sharing photos (e.g. Instagram), creating content and socializing on social media (e.g. Facebook, LinkedIn, Google+), getting involved in organization sponsored personalized designing of offerings (Nike). Thus, it is clear that changes in technology, consumer behaviour and consumer roles have given rise to a new concept of value co-creation.

Service dominant (SD) logic emphasized the concept of value co-creation and asserted that service was fundamental to any exchange process while goods or offerings of companies were merely appliances or tools to deliver value or services to consumers (Vargo and Lusch 2004). SD logic affected a paradigm shift in perspectives and resulted in a change in emphasis from goods to services which led to a general acceptance of the value co-creation concept (Smaliukiene et al. 2015). A salient feature of service is considered to be the inseparability of consumers with the service provider during service production, which means that consumers have a strong influence on the value creation process (Chen and Raab 2014). However, SD logic insists that consumers don't just influence the value creation process, rather, they are essentially co-creators of value. This standpoint limits the role of the firm to being a mere facilitator of value proposition.

Lorena et al. (2014) defined value co-creation as a joint value creation activity that takes place through interaction among all participating actors, especially firm and consumers. Vargo and Lusch (2004) stressed that SD logic marked the transition of concept of value from an 'exchange perspective' to a 'use perspective'. While various researchers (Arnould and Price 1993; Fournier 1998; Holt 1995), emphasized more the notion of value-in-use, Peñaloza and Venkatesh (2006) argued that along with value-in use, value-in-exchange was an integral

part of the market phenomenon. They insisted that value was created “by marketers and consumers in their activities and discourses via an enacted process, a social construction that takes place prior to, during and after the actual exchange and use(s) take place” (p 303). Broadening the scope of value created in the co-creation process, Vargo and Lusch (2004), in their tenth foundational premise, explain the nature of value as “idiosyncratic, experiential, contextual, and meaning laden”.

Despite the gradual expansion of literature on value co-creation, Vega-Vazquez et al. (2013) call for more studies examining the outcome and nature of co-created value (CCV). Much of the earlier work on value co-creation is conceptual and qualitative in nature, and discusses several perspectives such as: management perspective (Vargo and Lusch 2004; Prahalad and Ramaswamy 2000; Gronroos 2008); innovation and new product/service development (O’Hern and Rindfleisch 2008; Altun et al., 2007); service dominant logic and service logic perspective (Edavrdsson et al. 2005; Vargo 2008); and virtual consumer environment perspective (Nambisan and Baron 2009). Carbonell et al. (2009) and Zhang et al. (2007) demanded that more empirical studies be undertaken to establish the outcome of the value co-creation process as such studies were scant. Bolton and Saxena-Iyer (2009) suggested that value was created not only in consumer-company or during consumer interaction, but also in a digital communication environment such as the internet. Hollebeek and Brodie (2009), in context of consumer engagement, strongly recommended that co-created value be conceptualized, operationalized and validated.

Responding to the call of Hollebeek and Brodie (2009), the present study seeks to conceptualize, operationalize and validate co-created value in the context of e-services. To this end, the nature of value as a function and an outcome of the co-creation process have been examined. Further, co-created value scale in context of e-services has been developed and tested through empirical data. The proposed scale incorporates both exchange and use contexts while measuring co-created value, enabling practitioners to create more compelling, interactive and participative services for their consumers through its use. Researchers may use the scale in to measure collaborative value in different contexts and sectors. The subsequent sections of this chapter give a detailed description of the procedures followed for the scale development.

6.2 Scale Development Procedures

A traditional scale development process involves four phases which includes: (1) domain specification of construct, (2) item generation & reduction, (3) scale purification, and (4) scale reliability and validity assessment (Check Figure 6.1). Most influential study on scale development was given by Churchill, (1979) and it was further augmented by other researchers (e.g. Peter, 1981; Anderson and Gerbing, 1982; Nunnally and Bernstein, 1994; Zaichkowsky, 1985; Arnold and Reynolds, 2003).

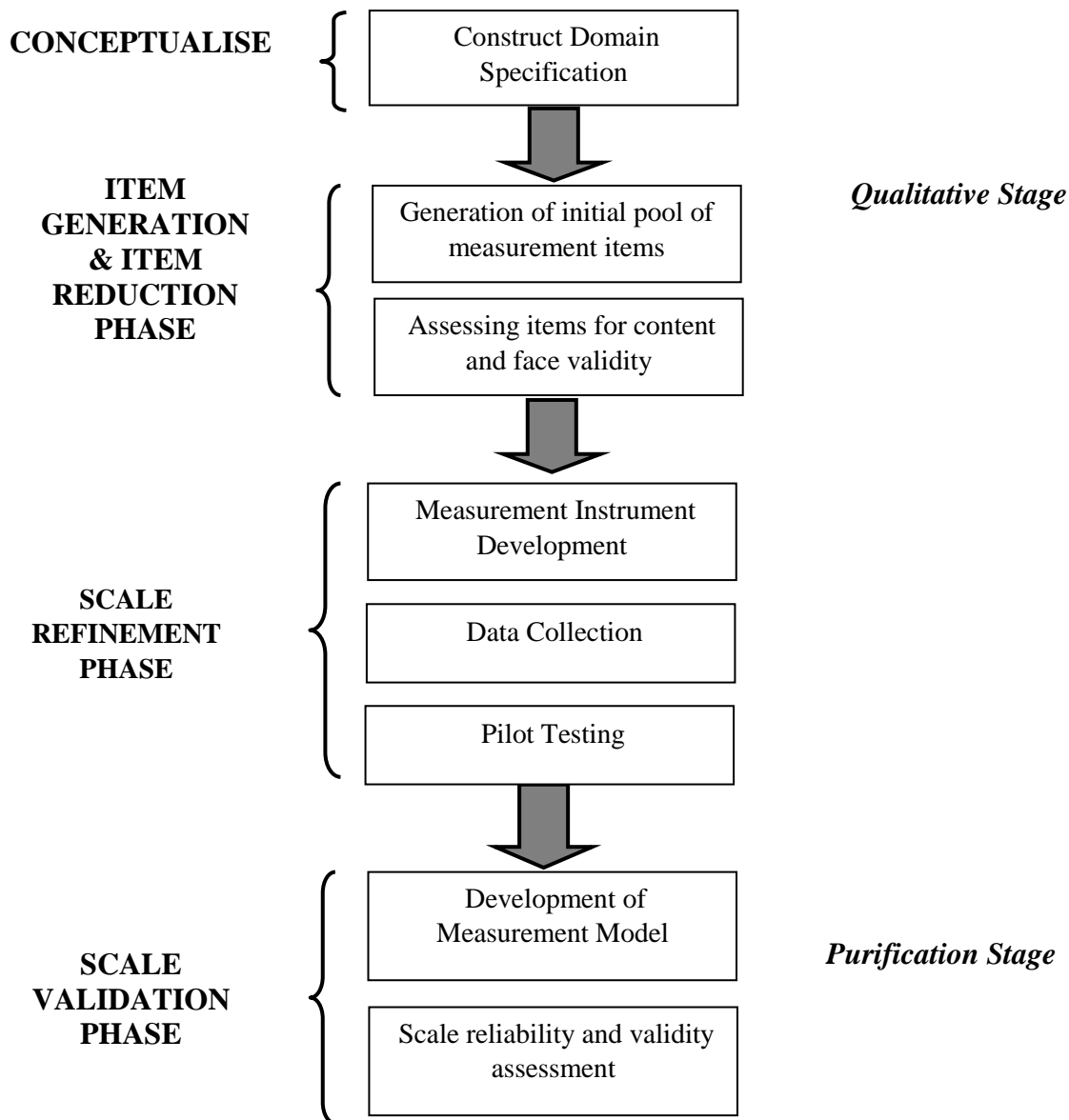


Figure 6.1: Scale Development Framework

Domain specification is the first step towards the process of scale development, which includes the explanation of measurement construct on the basis of conceptualisation present in the literature. The second step includes generating pool of initial measurement items and again reducing those items by subject experts and industry experts in order to assess their content and face validity. The third steps includes scale refinement, where measurement items were further refined through pilot testing and experts opinion. The final and fourth steps involve item purification which involves testing of items for a measurement model and examine its reliability and various validities. The reliability of scales it tested for unidimensionality and composite reliability whereas validity encompasses convergent discriminant and nomological validity. The proceeding section elaborates the procedure adopted for the CCV scale development.

6.3 Domain Specification

The key objective of the present scale development process is to identify the set of items that could be used to measure the reliable and valid domain consumer value co-creation in online services. Prior to the identification of measurement items the construct domain should be specified (Churchill, 1979).

6.3.1 Value Co-Creation

Value co-creation is a highly subjective, multidimensional and dynamic construct due to which it has been subject to tremendous change, refinement, conceptualization and reconceptualization. These changes could be attributed to developments in the field of value, services, market, consumers and firm behaviour (Tronvoll et al., 2011). Normann and Ramirez (1993) termed value created in co-creation as “highly dense, interactive, synchronic and iterative in nature”. Emphasizing resource integration, Hilton, Hughes and Chalcraft (2012) argued that co-creation was not limited to the purchase process only, rather, it extended to the entire product or service life cycle (Grönroos and Voima 2013; Prahalad and Ramaswamy, 2000 2004). Refuting the logic of Vargo and Lusch (2004) about consumer being the co-creator of value, Grönroos and Voima (2013) emphasized that a firm could become party to the co-creation process by interacting with the consumer who always was the creator of value. Grönroos (2012, p.6) conceptualized value co-creation as “joint collaborative activities by parties involved in direct interactions, aiming to contribute to the value that emerges for one or both parties”.

The value co-creation definition covers two key aspects: First, the collaborative activities taking place between actors or resource integrators in the process. These actors could be stakeholders such as consumers, firms and consumer communities among others. Collaborative activities are the subject of interest amongst behavioural science researchers trying to understand the psychology behind the collaboration process, and the reasons behind the success of these activities along with their effect on consumer satisfaction and loyalty (Knoblich et al. 2011; Bratman 1992). Second, the objective of co-creation, which is to create value for the actors involved in the process. SD logic considers value obtained in co-creation as a use value, which is phenomenological in nature (Vargo and Lusch, 2004). Holbrook (2006 p.715) elaborated this phenomenological value as an “interactive, relativistic, preference experience”. Neghina et al. (2014) argued that a value co-creation activity comprises three elements: (i) co-created outcome (desired value); (ii) role of actors in the collaborative efforts; and (iii) support from other actors.

Thus, value co-creation essentially involves participation of actors, resource integration and interaction. Co-creation leads to generation of experiences that transform into consumer knowledge and learning, which in turn retain and motivate consumers to further get involved in the co-creation process (Paswan et al. 2014).

6.3.2 Conceptualizing Co-Created Value

Understanding of value generated through the co-creation process requires a broader definition, which includes various aspects of value. The traditional good dominant logic views value as inherent in the offering by the company (Bagozzi 1975; Vargo and Lusch 2004), which makes value tangible and easy to measure. However, according to SD logic (Vargo and Lusch 2004; 2008a; 2008b; 2011), value resides in the process aspect and exchange of resources. They further considered value as a function of service determined by the beneficiary and unique and phenomenological in nature (Vargo and Lusch, 2008b).

Emphasising experiences rather than service as a function of value, Ramaswamy (2011) stressed that value arose from interaction among actors in various contexts. Verhoef et al. (2009) call for understanding the relationship that forms as a result of such interaction, as a critical factor which directly or indirectly influences consumers. Rihova et al. (2014) insisted that value lay in consumer to consumer interaction, and put forward two notions: ‘features and benefit approach’ and ‘value-in use’ approach. While the former is outcome oriented, the latter represents the phenomenological perspective of value co-creation. Damkuvieni et al.

(2012) explored consumer perceived co-creation of value, and listed various benefits and sacrifices associated with the process. They viewed value co-creation as “a consumer's overall assessment of expected and (or) experienced benefits and sacrifices of a co-creation behavior” (p.65). However, the implications of interactions in value co-creation require further study (Echeverri and Skålén, 2011; Grönroos, 2011). Yngfalk (2013) refuted the harmonious concept of value co-creation where each actor benefitted equally by interactions; Grönroos (2011) and Plé and Cáceres (2010) pointed out that interaction did not always lead to co-creation of value, and could also result in co-destruction.

Considering co-created value as value-in exchange or value-in use would be insufficient for understanding the nature and composition of the construct. Therefore, a deeper investigation into the concept of co-created value is required for building upon, and expanding the existing body of literary work. The present study examines co-created value in context of e-services, as internet and new technologies have been the major factors behind consumer participation in the co-creation process. Most of the studies hitherto have tried to explain co-created value in terms of phenomenological or experiential value while ignoring the various types of exchange value or economic value created in the co-creation process. This study argues that both types of value are equally important in consumer co-creation of value in context of e-services. Further, this study stresses that value-in-use does not necessarily emerge after value-in-exchange, for example, in case of online services, consumers find searching online before actual purchase or consumption equally experiential in nature. Thus, it is found that co-created value is not only part of the final outcome, but also of the interaction process.

This study conceptualizes co-created value as interactive, relational, experiential, economic and inherently personal in nature. It means that value co-creation, if possesses the above mentioned aspects, would lead to greater consumer satisfaction and behavioural intentions.

6.3.1.1 Conceptual Background

Role of the consumer in creating value had been acknowledged long back in service research (Lovelock and Young 1979; Mills, Chase, and Margulies 1983), however, the seminal work performed by Prahalad and Ramaswamy (2004), and Vargo and Lusch (2004) established that consumers were active participants in the value co-creation process. Technology also has played a vital role in providing consumers with more choices and

empowering them to electronically create value for themselves and others (Heidenreich & Handrich 2015). While Wikipedia, YouTube, Facebook, Instagram and others exemplify how consumers co-create value electronically, a way of accurately measuring co-created value still remains unexplored. Although the value co-creation scale (Yi and Gong 2012) serves as an important instrument to measure consumer participation, it overlooks the most important component - value generated in the co-creation process. Value co-creation process between consumer-firm is more prominent in case of online services as compared to the offline context (Witell et al. 2011). The absence of an appropriate measure of co-created value in context of e-services is a major gap in existing literature (Harwood and Gary 2010). Keeping in view the emergence of this new context (e-services), conventional measures of collaborative value need to be redeveloped (Heinonen 2004, 2009). There are some studies that have measured value in respect of service quality (Parasuraman, Zeithaml, and Malhotra 2005) however, such studies are scant. The newly empowered consumer collaboration due to technological platforms such as internet and mobile apps has resulted in an urgent need to develop a scale that systematically and psychometrically measures co-created value through consumer-firm interaction in a technology based service setting (Thakur and Srivastava, 2014).

The present study considers the work of numerous scholars (See Table 6.1) to analyse and unravel the nature of co-created value. The seminal work undertaken by Prahalad and Ramaswamy (2004) has been the foundation for explicating the dimensions of co-created value, which according to them are inherently interactional and reciprocal in nature, and are based on a continuous exchange of dialogue and information to create memorable experiences for consumers. Gronross (2011) elaborates interaction as a process of mutuality where two or more parties have an effect on each other (Gummesson and Mele 2010). Information and communication technology (ICT) can be effectively used in enabling interaction among actors (Purvis & Purvis 2012). Saarijärvi et al (2013) call for a discussion on the multidimensionality of co-created value to establish whether it is utilitarian, hedonic, or both, or is characterised by some different value dimensions (Babin et al. 1994; Rintamäki et al. 2006; Sheth et al. 1991). Vargo and Lusch (2004) viewed co-created value as phenomenological, idiosyncratic, experiential and meaning laden in nature. Holbrook and Hirschman (1982) argued that the experiential component of value included symbolic, hedonic and aesthetic aspects of the consumption process. They stressed on goal orientation, task relation and utility driven aspects of the value creation process. Later, Holbrook (2006)

enumerated the following dimensions of value: (a) interactive; (b) relative; and (c) preferential.

Consistent with conventional views on consumer value, co-created value is also considered multidimensional in nature. Park and Ha (2015) emphasised dual dimensions of co-created value – efficiency & usefulness (utilitarian), and enjoyment (hedonic), in context of service recovery. While they stressed on the interactional and experiential aspects of co-created value, several other authors (Edvardsson et al. 2011; Chandler and Wieland 2010) integrated the social or relational aspect of value with the aforementioned dimensions to assert that collaboration and relationship were essential for inducing successful value co-creation. Paulin and Ferguson (2010) stressed that relationships develop into long term association between partners. Palmatier et al. (2007) opined that virtual environment directly influenced exchange performance amongst actors in a relationship. Relationship norm and social exchanges have the potential to forge trusting relationships and ensure deeper participation of consumers in the value co-creation process.

Kim, Kim and Han (2007) said that besides relationships, monetary saving was an important economic factor behind consumers participating in online value co-creation. While Davis (1989) proposed ease of use as an important factor behind consumer efforts in online co-creation, Rogers (2003) put forward perceived complexity as another. Convenience, speed, access, and efficiency were also believed to be vital aspects of utilitarian value for consumers in an online value co-creation context (Sweeney and Soutar 2001). Personal value is an important aspect of co-created value where personal involvement in value co-creation can lead to consumers' well-being through enhancement of their personal status, accomplishment, self-esteem and satisfaction. However it can also be destructive if the resources infused by consumers do not have the desired result, resulting in frustration and negative word of mouth (Plé and Cáceres 2010).

On the basis of the discussion above, the present study develops, validates and replicates consumer co-created value (ccv) scale in a firm-consumer relationship in context of online services. This study demonstrates co-created value as collaborative value which is inherently interactive, shaped up by social forces and norms, and results into unique personalised experiences (both utilitarian and hedonic in nature). Table 6.1 provides a summary of the several other studies that have not been discussed above for the sake of brevity.

Table 6.1: Various Dimension and Context Enumerated in Previous Value Co-Creation Studies

Author	Objective	Context	Conclusion	Dimension				
				Interactional	Relational	Experiential	Economic	Personal
Holbrook and Hirschman (1982)	Experiential aspects of consumption	General	Focuses on the symbolic, hedonic, and aesthetic nature of consumption.			√		
Prahalad and Ramaswamy (2004)	Co-creation of experiences	General	Proposes that personalized co-creation experience reflects the way individual chooses to interact with the firm facilitated experience environment.	√		√	√	
Vargo and Lusch 2004	Service Dominant (SD) Logic	Services	Proposes that consumer is always the co-creator of value with firm as facilitator. Co-created value is unique and phenomenological in nature and created in value -in use.			√	√	
Jaakkola et al. (2015)	Explaining tenth fundamental premises of SD logic	Online services	Experience value is intrasubjective, socially-intersubjective, context and situation specific phenomenon			√		√
Moeller et al. (2013)	Consumer co-creation behaviour	Services	Proposed various dimensions of consumer co-creation behaviour: Configuration, Solution, and network	√	√	√		√
Chan et al. (2010)	Resource exchange	Online services	Reciprocity has significant effects on social system maintenance by enhancing commitment to community & intention to co-shop	√	√	√	√	√

Vargo et al. (2008)	Presenting an intersection of service science and service-dominant (S-D) logic	Services	Synthesize that value is fundamentally derived and determined in use.	√	√	√		√
Fuller et al. (2011)	Exploring the impact of co-creation experience on the content contributed by consumer.	Online competition	Systematically explored various dimensions of co-creation experiences in jewellery design competition on user participation, quality and quantity of contribution	√	√	√	√	√
Saarijärvi et al. (2013)	Approaches of value co-creation	General	Proposed that consumer input should not be taken for granted and firm's activities must be performed in a way that is enticing and beneficial for both parties.	√	√	√	√	√
Kohler et al. (2011)	Consumer co-creation experience	Online services	Proposes various dimension of consumer co-creation experiences: use experience, hedonic experience, pragmatic experience, sociability experience	√	√	√	√	√
Hsieh (2014)	Consumer co-created value in community	Online brand community (OBC) services	Consumer OBC value co-creation scale development	√	√	√		√
Park and Ha (2015)	Consumer co-created value	Service recovery	Emphasised dual dimensions of co-created value – efficiency & usefulness (utilitarian), and enjoyment (hedonic)				√	√

6.4 Phases of Scale Development

The current process of scale development uses psychometric procedures forwarded by scholars from different fields of management, marketing, sociology and psychology (e.g., Bagozzi, Yi, and Phillips 1991; Churchill 1979; Hinkin 1998). The proposed scale was developed in three distinct phases, and it required data to be collected in five rounds. The phases involved in scale development have been described below.

6.4.1 Phase 1 Generation and Reduction of Scale Items

This section deals with the procedure of item generation through extensive literature search and qualitative techniques. Further a systematic procedure is used to screen out the scale items.

6.4.1.1 Item Generation

Existing literature on value co-creation was taken as basis for the present study. Potential items were developed after an extensive literature review and in-depth interviews with four focus groups comprising 40 consumers (Table 6.2) involved in online value co-creation. Interviews were conducted in accordance with the standard procedure detailed in Malhotra and Das (2009,) in two phases at Indian Institute of Technology Roorkee. Each phase involved interviews with two focus groups. In the first phase, two focus groups with total 20 participants were interviewed, while the other 20 respondents belonging to the other two focus groups were interviewed in the second phase.

Table 6.2. Sample Characteristics of Focus Group

Participant	Age	Education	Profession	Participation in co-creation service online
Male (24)	18-30	Under-	Students,	Hospital
	30-45	graduate,	Professionals,	Travel
	45-60	Graduate, Post-	Lecturers,	Social Media
	>60	Graduate, PhD	Retired professionals,	Education
Female (16)	18-30	Under-	Students,	Hospital
	30-45	graduate,	Professionals,	Travel
	45-60	Graduate, Post-	Housewife	Social Media
	>60	graduate, PhD	Retired professionals,	Education

The respondents as depicted in Table 6.2 came from diverse backgrounds in terms of age, gender and education. Participants from the first two focus groups were asked to respond to questions on their participation in online services in general: why/when/what type of online services they used, the kind of benefits they received, whether the participation was great, enjoyable or difficult, and their level of satisfaction with co-created value (Lin and Hsieh 2011). The focus group was moderated by an experienced faculty and assisted by two PhD scholars.

Further, they were asked how they perceived co-created value. Participants were also asked to identify favourable/unfavourable factors in evaluating co-created value, give logic behind selection of these factors, and rank these factors as they prioritized them. In the second phase, the other two focus groups were interviewed to get broader perspectives and deeper insights so that the chances of generating valid measures increased (Churchill 1979)

6.4.1.2 Item Reduction

From the above process, 193 items were initially generated which were further reviewed by six subject experts (PhDs in the field of services/e-service areas) to narrow down. Procedures adopted by Hardesty and Bearden (2004) and Zaichkowsky (1985) were followed to ensure face/content validity. Subject experts were given a list of individual items and asked to rate each item as “true representative,” “somewhat representative,” or “not representative”. The items marked “true representative” or “somewhat representative” by 80 percent of the judges were retained. This process resulted in the retention of 48 items which were re-evaluated by experts, one item at a time. After this round of evaluation, 22 items were finally retained as depicted in Table 6.3

Table 6.3: Number of Items per Construct (Prior EFA)

Items distributed according to consumer co-created value			
Constructs	Initial	Revised	Final
Relational value	46	09	5
Personal value	32	13	5
Economic value	12	10	5
Interactional value	21	07	3
Experiential value	60	09	4
	193	48	22

To increase familiarity with the way items were phrased, three more subject experts in the field of services/e-services were requested to review the items and give their comments (Hinkin 1998). Precautions were taken to ensure that all items remained short, concise, and one item addressed one issue.

6.4.2 Phase 2 Scale Refinement

The scale refinement process includes designing of questionnaire, collection of data, pilot testing and data analysis using exploratory factor analysis (EFA). Confirmatory factor analysis (CFA) along with various reliability and validity tests (Churchill, 1979; Arnold & Reynolds, 2003). The EFA was initial used to eliminate superfluous items, if present, then a confirmatory factor analysis has been performed using IBM SPSS AMOS 22. However before that data collection was done through questionnaire survey. The questionnaire consisting of items question were evaluated on 7 point Likert scale, where 1 represent meant highly disagreed and 7 meant highly agreed.

A 22 item questionnaire on consumer co-created value in context of online services was prepared and ATM intercept interview was conducted at the 23 railway station and 3 bus terminals in Delhi, India. The final sample consisted of 396 respondents which included 75% male and 28% female respondents falling between below 20 to 66 years and above of age (for details of online services used by respondents, and type of value co-created by them, see Appendix III). The demographic segmentation of these consumers is shown in Table 6.4.

Table 6.4. Demographic Profile of the Respondents (n=396)

Demographic Variable	Frequency	Percentage
Gender		
Male	297	75
Female	99	25
Marital Status		
Unmarried	340	85.8
Married	56	14.2
Age in Years		
Under 20	36	09
21-35	156	39.4
36-50	73	18.4

51-65	56	14.1
66 and over	14	19.1
Education level		
High School and Below	90	22.7
Graduate	162	40.9
Post Graduate	86	21.7
Above than postgraduate	62	14.7
Income (monthly)		
< 10,000/-	58	14.6
10,000/- to 30,000/-	94	23.7
30,000/- to 50,000/-	160	40.4
> 50,000/-	84	21.3

For data reduction, exploratory factor analysis (EFA) was employed. Principal component analysis with varimax rotation was performed on the initial 22 items, with 0.40 weight assigned as a minimum cut-off for any factor to be retained (Hinkin 1995). Items exhibiting cross-loading above 0.30 were also removed (Hair et al. 1998). Next, items with low item-to-total correlations were removed. The process resulted in three items being dropped from the pool of items. The final five dimensions (D₁-D₅) consisting of 19 items were arrived at as depicted in Table 6.5. Following varimax rotation, average pairwise correlation among the five dimensions came out to be 0.21. High factor loadings with low correlations suggest that value co-created in e-services has five unique facets.

Good internal consistency was seen among items due to higher value of reliability coefficient (range from .81 to .93). The combined reliability was found to be 0.84 for the 19-item scale which is above the acceptable limit. The five factors accounted for 78 percent of the total variance in the items, and the value of item-to-total correlations lay in the range of 0.30 to 0.52 (Hair et al. 1998 suggested value above 0.3). These 19 items were then subjected to CFA (Table 6.5).

5.4.2.1 Confirmatory Factor Analyses (CFA)

Refinement of scale requires repeated iteration of CFA for obtaining improved psychometric measurement properties of the scale (Lin and Hsieh 2011). SPSS AMOS was used to estimate the 19-item, seven dimension confirmatory model. The results obtained through CFA procedures are $\chi^2 (142) = 297.436$ $p < .00$; CMIN/DF= 2.095, RMSEA=.053,

NFI=.947, CFI=.971, GFI=.927, and AGFI=.902 respectively. Some of the fit indices of CFA were below the acceptable limits, so modification indices were inspected. Further, each item was checked for domain specification as laid down by Nunnally and Bernstein (1994).

Correlation was established between error term two and four, & three and four, and CFA was again performed in AMOS graphics. This resulted in the final confirmatory model (Fig 6.2) having 19 items with an excellent overall fit ($\chi^2 (140) = 245.335$ $p < .00$; CMIN/DF= 1.752, RMSEA=.044, NFI=.956, CFI=.981, GFI=.939, and AGFI=.917). All MIs were found to be low, and squared multiple correlations (SMCs) ranged from 0.46 to 0.93. Table 6.5 presents the final 19-item co-created value scale.

After a thorough examination of final items under the five dimensions of CCV scale, following labels were suggested: Personal, Relational, Economic, Interactional, and Experiential. Personal value represents the personal aspects of co-created value such as self-esteem, influence, control, and feeling of accomplishment derived during task completion. Relational value describes the forging of friendships and connections between firm and consumers, & consumers and consumers. Interactional value refers to the value created in interpersonal communication, dialogue, reciprocation and exchange of ideas and values. Economic value portrays the exchange value of time, efforts and money put in by the consumer in co-creation. It could be in the form of lower prices and higher quality of offerings, and greater satisfaction. Experiential value stands for the phenomenological aspect of value where value is created in the process, and is an outcome of co-creation. It is mostly hedonic, memorable and deeply satisfying in nature.

The five dimensions presented above capture all the variables discussed in the conceptual background of value co-creation section. The composite reliability of the 19-item CCV scale comes out to be 0.89 which is significantly above the prescribed limit (as depicted in Table 6.6). All the co-efficient alphas for the subscales were found to be above 0.80, indicating high internal consistency.

Table 6.5: EFA/CFA Results and Final CCV scale

Dimens ion	Items^a	Final Label	EFA item loading	Final CFA item loadings	Squared Multiple correlation
D ₁	Participation in online service helps me develop proximity with the service provider. (REL1)	Relational	0.951	0.96	0.918
	I derive satisfaction from increasing firm and other participants' knowledge in the online co-creation (REL2)		0.946	0.93	0.868
	I can enhance my status/reputation as an expert in the online co-creation (REL3)		0.923	0.93	0.869
	I can influence other people's knowledge of brand matters in the online co-creation (REL 4)		0.921	0.90	0.812
D ₂	I derived satisfaction from influencing e- product/service usage by other customers.(PER1)	Personal	0.858	0.85	0.714
	I derived satisfaction from influencing e-product/service design and development. (PER2)		0.812	0.79	0.617
	It provides me with feelings of worthwhile accomplishment (PER3)		0.786	0.74	0.549
	I had an impact on the degree to which my preferences were met (PER4)		0.771	0.72	0.516
	I had control over the quality in online co-creation process (PER5)		0.766	0.70	0.494

D ₃	I get better prices than others for efforts I made in online co-creation (ECO1)	Economic	0.897	0.90	0.802
	I get faster service than most customers efforts I made in online co-creation (ECO2)		0.884	0.88	0.771
	Online participation help me get more personalised solutions to my need (ECO3)		0.868	0.82	0.679
	I get higher quality of service in online co-creation (ECO4)		0.763	0.68	0.465
D ₄	I like to exchange information and interpersonal exchanges with firm and other customers in online co-creation (INTER1)	Interactional	0.925	0.95	0.900
	My involvement with firm and other customers makes the service interaction more enjoyable (INTER2)		0.923	0.93	0.858
	I would like to continue giving my contribution to any online co-creation process. (INTER3)		0.854	0.81	0.652
D _{5d}	I enjoyed the use of my skills and knowledge in online co-creation (EXP1)	Experiential	0.873	0.85	0.724
	I enjoy immersion in exciting new information or services in online co-creation (EXP2)		0.824	0.81	0.664
	I enjoy it for its own sake, not for what it will get me. (EXP3)		0.822	0.69	0.478

^a Scale ranges from “Strongly Disagree” to “Strongly agree” on a seven point scale.

Table 6.6: Calculation of Validity and Reliability

	CR	AVE	MSV	ASV	Inter	Relate	Person	Eco	Exp
Inter	0.924	0.804	0.100	0.063	0.897				
Relate	0.963	0.866	0.100	0.040	0.317	0.931			
Person	0.869	0.571	0.059	0.041	0.243	0.077	0.756		
Eco	0.892	0.676	0.071	0.039	0.105	0.128	0.242	0.822	
Exp	0.828	0.617	0.081	0.057	0.285	0.192	0.198	0.266	0.786

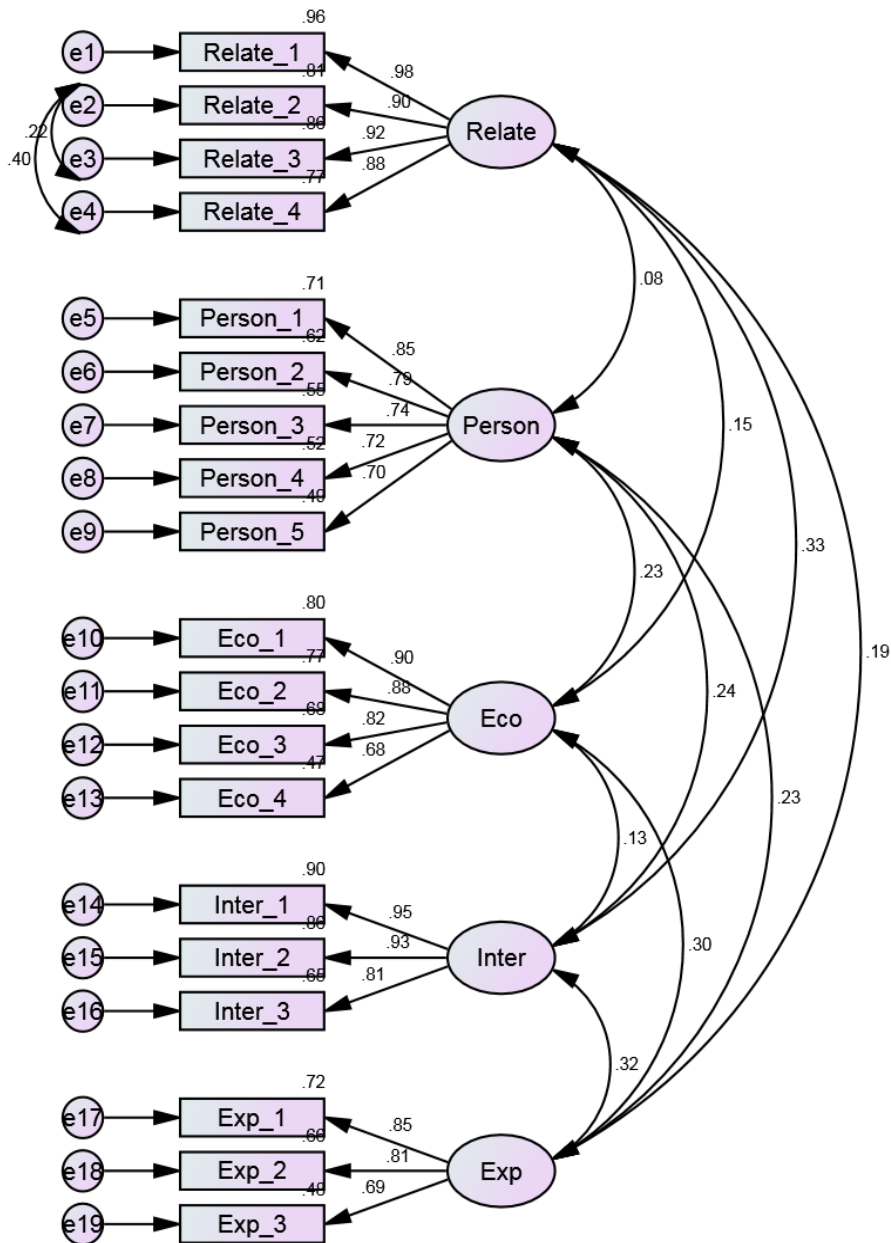


Figure 6.2: Confirmatory Factor Models

6.4.3 Phase 3 Scale Validation

A questionnaire (APPENDIX I) was prepared which incorporated all the 19 items of co-created value. An ATM intercept interview was performed at ATMs in the vicinity of 23 railway stations and 3 bus terminals in Delhi. The judgement sampling procedure was used to collect the data from the consumer who were visiting these ATMs. The sampling schedule considered was data collection during morning, afternoon and evening. Respondents were then evenly distributed (Lin and Hsieh, 2011) among five specific types of online services (see Appendix III) to signify broader cross-section of online service participants. The sample included 305 respondents (77% males and 23% female within the age group of below 20-66 and above years). Graduate and above constitute the biggest segment of people involved in co-creation online. Participants then evaluated co-created value through their own participative efforts. The demographic segmentation of these consumers is shown in Table 6.7.

Table 6.7: Demographic Profile of the Respondents (n=305)

Demographic Variable	Frequency	Percentage
Gender		
Male	236	77.3
Female	69	22.7
Marital Status		
Unmarried	180	59
Married	125	41
Age in Years		
Under 20	28	09
21-35	144	47.2
36-50	62	20.3
51-65	36	11.8
66 and over	35	11.7
Education level		
High School and Below	68	22.3
Graduate	124	40.7
Post Graduate	59	19.3
Above than postgraduate	54	17.7

Income (monthly)		
< 10,000/-	34	11.2
10,000/- to 30,000/-	68	22.3
30,000/- to 50,000/-	136	44.6
> 50,000/-	67	21.9

6.4.3.1 Convergent, Discriminant and Nomological Validity

Numerous methods were used to examine the proposed CCV scale validity. CFA was initially performed ($\chi^2 (140) = 172.901, p < .00; CMIN/DF = 1.235, RMSEA = .028, NFI = .960, CFI = .992, GFI = .944, AGFI = .925$) which indicated that all coefficient alphas were higher than the 0.70 level. *t*-test was used to assess the convergent validity of all factor loadings which more than doubled their standard error (Anderson and Gerbing 1988). For successful measurement of any construct, the items falling under the construct should display a high level of convergence on the construct. All factor loadings passed the above criterion in the present study. The average variance extracted (AVEs) demonstrated by all the five dimensions were pretty high (above 0.50 level) (see Table 6.8). It also suggests existence of unidimensionality.

Table 6.8: Calculation of Validity and Reliability

	CR	AVE	MSV	ASV	Inter	Relate	Person	Eco	Exp
Inter	0.925	0.804	0.110	0.072	0.897				
Relate	0.957	0.848	0.110	0.044	0.332	0.921			
Person	0.872	0.578	0.059	0.042	0.243	0.080	0.760		
Eco	0.894	0.679	0.091	0.045	0.127	0.149	0.225	0.824	
Exp	0.830	0.622	0.103	0.071	0.321	0.193	0.230	0.302	0.789

Further, relationship between CCV scale and a single factor (measured through one item of overall co-created value) was tested in a second order confirmatory factor model (Homburg and Rudolph, 2001; Byrne, 1994; Yang et al., 2005) in Figure 6.3. The value of SMC (square multiple correlation) in second order CFA emerged to be 0.61, denoting more than half of variance in the overall co-created value explained. The model fit values of CCV

were under acceptable limits ($\chi^2(164) = 272.532, p < .00$; CMIN/DF= 1.662, RMSEA = .047, NFI = .940, CFI = .975, GFI = .918, AGFI = .895) and significant (see Fig. 6.3), supporting the hypothesized structure and convergent validity of the scale.

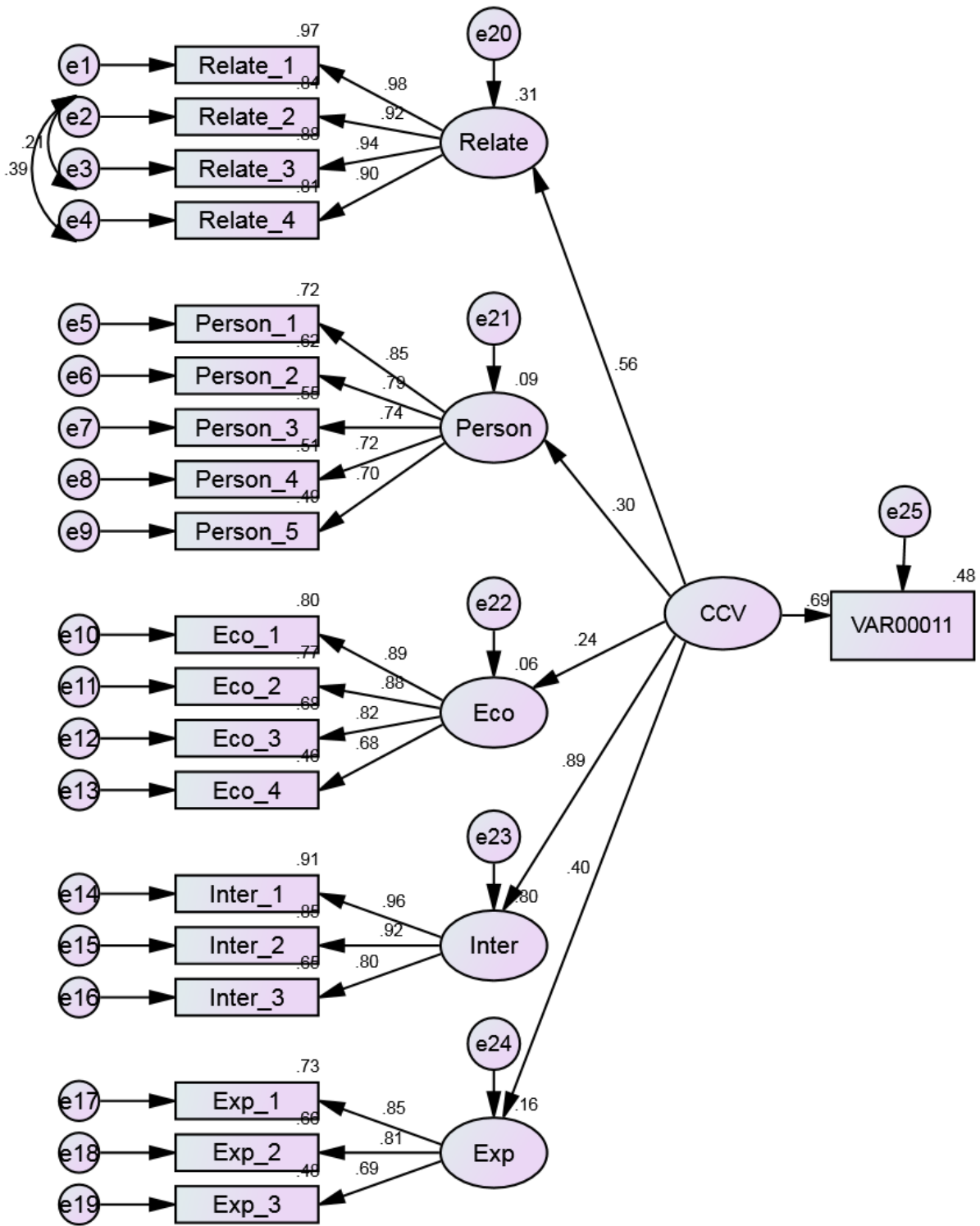


Figure.6.3: Causal Model Relating CCV Construct to a Single Factor

For assessing discriminant validity, chi-square difference test was performed on each pair of constructs – once by considering the model with correlation among constructs and then, without it (Segars, 1997). The value of chi-square for the model with zero correlation was found to be significantly higher than the model with correlation. It authenticates the existence of discriminant validity among constructs in the model. In addition, the average variance extracted (AVEs) is compared with the squared interconstruct correlations among the five dimensions of CCV (Fornell and Larcker 1981).

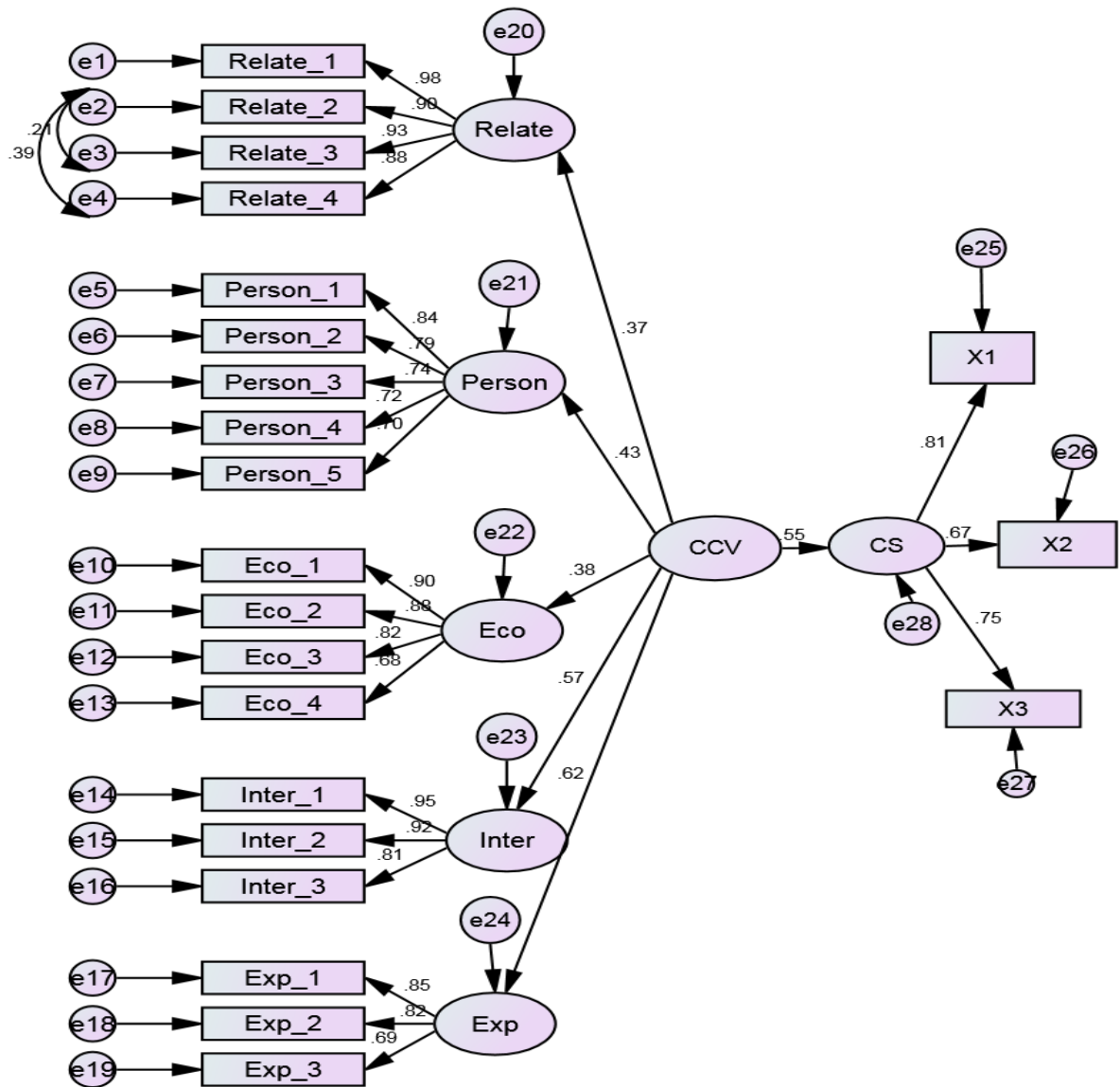


Figure 6.4: Model for nomological validity assessment

The rule of thumb is that all construct AVE should be greater than their squared interconstruct correlation (SIC). The interconstruct correlation (IC) estimate indicates that all

AVE estimated ranges from 0.57 to 0.84 were larger than the corresponding highest SIC (0.33), demonstrating discriminant validity (see Table 6.8)

Nomological validity was assessed by testing for the existence of any relationship between the five dimensions of CCV and a theoretically related variable – consumer satisfaction. Existing literature provides ample evidence to support a link between consumer CCV and consumer satisfaction (Prahalad and Ramaswamy 2004; Grönroos, 2008, Flores and Vasquez-Parraga 2015). Significant research on value co-creation in context of technological environment has revealed CCV to be significantly related with consumer satisfaction (e.g., Vega-Vazquez et al., 2014). Items of consumer satisfaction were adopted from Prebensen et al. (2015), and were subjected to regression analysis using AMOS. This method verifies the ability of our scale in explaining and predicting other dependent variables (Lin and Hsieh, 2011). The structural model shows all path loadings significant which indicates a good model fit ($\chi^2(202) = 304.204$, $p < .00$; CMIN/DF= 1.506, RMSEA = .041, NFI = .936, CFI = .977, GFI = .919, AGFI = .898). Consumer rating on the CCV scale explains 55 % (Pearson correlation=0.77) of consumer behavioural intention (Figure 6.4). On the basis of evidence generated, it can be concluded that CCV scale demonstrates criterion related authenticity of nomological validity. Figure 6.4 depicts the nomological validity of our scale.

6.5 Summary

The review of literature presented in chapter two and three present the need for the development and validation of measure for consumer co-created value. In a rigorous scale development process, the model presented in this study is tested and validated with data collected in several phases from various samples. The standard scale development procedure was used to remove any kind of biasness if present. The scale has been empirically validated and found robust in online context. The scale prepared in this chapter will be further used in testing and analysing the research model empirically in context of e-services in chapter seven.

Chapter 7

Analysis & Result

Preview

In the present chapter analysis of the data is performed and their result is presented. First the description of respondents who have participated in the survey research were assessed. Next, a comprehensive description of measurement model refinement and purification process were explained. And finally the result of SEM were presented in order to support the research model and various hypothesis given in chapter 4

7.1 Introduction

In the present chapter, data was collected from the consumer who are using ATM in the state of Delhi, which was further analysed for testing the conceptual model with consumer co-created value as a mediator. Analysis of data was performed and following are presented: (a) useable response rate generated through survey (b) demographic profile of the respondent (c) reliability and validity measure of the constructs

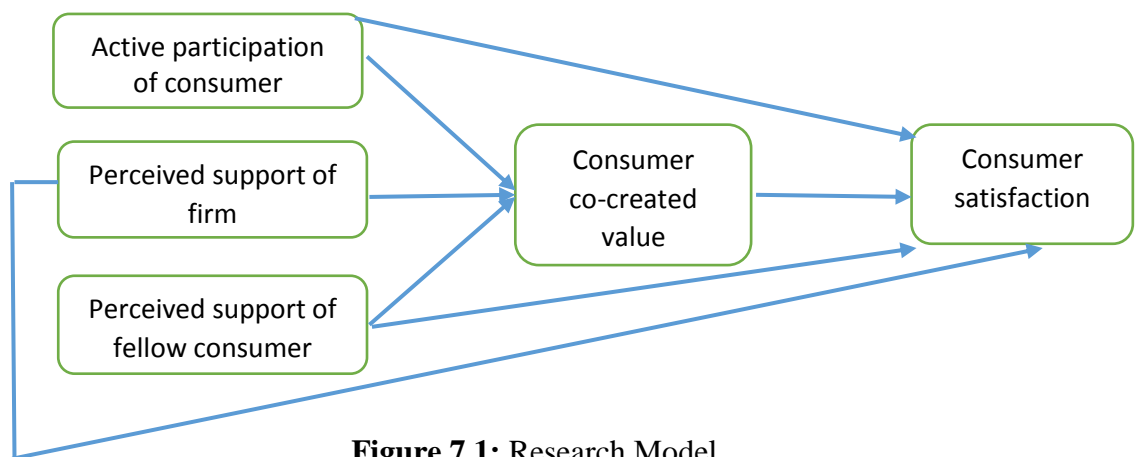


Figure 7.1: Research Model

Next, hypothesised measurement model was tested. Reliability measures of constructs were assessed through Cronbach's standardized alpha. Relationship among variables were examined using structural equation modelling. Further, the mediation effect of consumer co-created value between predictor and outcome variable was also examined.

7.2 Useable response rate for the survey

For the present study, the data collection has resulted in 380 responses from the consumer who are using ATMs in Delhi. However out of 380 only 351 responses were found to be usable for final analysis. Table 7.1 exhibit the basic demographic segmentation of the respondents. All these demographic variables help us in better understanding the consumer value co-creation process in e-services.

7.3 Demographic segmentation

One striking feature of the 351 usable responses are majorly from the male participant during data collection phase. Despite of efforts being made to contact both male and female respondents equally, getting response from the female e-service user was extremely difficult. During the survey it was that almost 15 females not mentioned their age or income or in some case both in the questionnaire given to them. Therefore all such responses has to be excluded as there was absence of any kind of information through which respondents could be contacted again. Age of the respondent ranges from below 20 to above 66, where 41% of the respondent belong to the age group of 21-35 years of age, representing the young respondents to be highly participative in value co-creation. Majority of the respondents are either graduate or postgraduate and above constituting 73% of the respondents. Income figure was found to be high between 10,000-50000.

Table 7.1. Demographic segmentation

Demographic Profile of the Respondents (n=351)		
Demographic Variable	Frequency	Percentage
Gender		
Male	264	75.2
Female	87	24.7
Marital Status		
Unmarried	220	62.6
Married	131	37.4
Age in Years		
Under 20	45	12.8
21-35	145	41.3

36-50	82	23.3
51-65	49	13.9
66 and over	30	8.54
Education level		
High School and Below	75	24.7
Graduate	133	37.8
Post Graduate Degree	66	21.6
Above than Post Graduate	45	15.6
Income (monthly)		
< 10,000/-	43	12.5
10,000/- to 30,000/-	123	35.1
30,000/- to 50,000/-	122	34.7
> 50,000/-	63	18.1

7.4 Non response biasness

Non response biasness has been examined by the researcher using one way ANOVA test (Armstrong and Overton, 1977). For the bias examination ‘early’ and ‘late’ responses of the 50 participant were compared. In ANOVA means were compared of all the 32 observed variables. Result exhibited in Table 7.2 rules out presence of any non-response biasness with respect to response time period.

Table 7.2: Non Response Bias Test

Variables		Sum of Squares	df	Mean Square	F	Sig.
Eco_3	Between Groups	0	1	0	0	0.999
	Within Groups	898.484	349	2.574		
	Total	898.484	350			
Eco_2	Between Groups	0.703	1	0.703	0.316	0.574
	Within Groups	776.379	349	2.225		
	Total	777.083	350			
Eco_1	Between Groups	0.039	1	0.039	0.016	0.9
	Within Groups	854.223	349	2.448		
	Total	854.262	350			
Eco_4	Between Groups	0.001	1	0.001	0	0.985
	Within Groups	945.897	349	2.71		
	Total	945.897	350			

Inter_1	Between Groups	0.57	1	0.57	0.13	0.718
	Within Groups	1528.097	349	4.379		
	Total	1528.667	350			
Inter_2	Between Groups	0.215	1	0.215	0.049	0.824
	Within Groups	1516.304	349	4.345		
	Total	1516.519	350			
Inter_3	Between Groups	0.658	1	0.658	0.166	0.684
	Within Groups	1386.886	349	3.974		
	Total	1387.544	350			
Person_5	Between Groups	2.241	1	2.241	1.077	0.3
	Within Groups	726.056	349	2.08		
	Total	728.296	350			
Person_3	Between Groups	2.641	1	2.641	1.392	0.239
	Within Groups	662.219	349	1.897		
	Total	664.86	350			
Person_1	Between Groups	1.779	1	1.779	0.939	0.333
	Within Groups	661.304	349	1.895		
	Total	663.083	350			
Person_4	Between Groups	1.568	1	1.568	0.749	0.387
	Within Groups	731.053	349	2.095		
	Total	732.621	350			
Person_2	Between Groups	2.415	1	2.415	1.052	0.306
	Within Groups	800.668	349	2.294		
	Total	803.083	350			
EXP_2	Between Groups	0.081	1	0.081	0.03	0.862
	Within Groups	936.688	349	2.684		
	Total	936.769	350			
EXP_1	Between Groups	1.815	1	1.815	0.581	0.447
	Within Groups	1090.824	349	3.126		
	Total	1092.638	350			
EXP_3	Between Groups	0.271	1	0.271	0.151	0.698
	Within Groups	626.589	349	1.795		
	Total	626.86	350			
Relate_3	Between Groups	2.485	1	2.485	0.803	0.371
	Within Groups	1079.589	349	3.093		
	Total	1082.074	350			
Relate_1	Between Groups	4.601	1	4.601	1.455	0.229
	Within Groups	1103.884	349	3.163		
	Total	1108.484	350			
Relate_4	Between Groups	3.705	1	3.705	1.485	0.224
	Within Groups	870.933	349	2.496		
	Total	874.638	350			
Relate_2	Between Groups	2.934	1	2.934	1.321	0.251

	Within Groups	775.26	349	2.221		
	Total	778.194	350			
FCS2	Between Groups	1.568	1	1.568	0.399	0.528
	Within Groups	1371.053	349	3.929		
	Total	1372.621	350			
FCS3	Between Groups	2.752	1	2.752	0.833	0.362
	Within Groups	1153.015	349	3.304		
	Total	1155.766	350			
FCS1	Between Groups	3.553	1	3.553	1.009	0.316
	Within Groups	1229.529	349	3.523		
	Total	1233.083	350			
CP1	Between Groups	0.003	1	0.003	0.001	0.97
	Within Groups	640.824	349	1.836		
	Total	640.826	350			
CP2	Between Groups	0	1	0	0	0.996
	Within Groups	637.436	349	1.826		
	Total	637.436	350			
CP3	Between Groups	0.003	1	0.003	0.002	0.969
	Within Groups	676.481	349	1.938		
	Total	676.484	350			
CP4	Between Groups	0.053	1	0.053	0.028	0.867
	Within Groups	655.178	349	1.877		
	Total	655.231	350			
FS2	Between Groups	0.579	1	0.579	0.285	0.594
	Within Groups	710.19	349	2.035		
	Total	710.769	350			
FS1	Between Groups	0	1	0	0	0.999
	Within Groups	784.484	349	2.248		
	Total	784.484	350			
FS3	Between Groups	2.986	1	2.986	1.366	0.243
	Within Groups	762.968	349	2.186		
	Total	765.954	350			
CS1	Between Groups	1.659	1	1.659	1.074	0.301
	Within Groups	539.219	349	1.545		
	Total	540.877	350			
CS3	Between Groups	1.495	1	1.495	0.976	0.324
	Within Groups	534.402	349	1.531		
	Total	535.897	350			
CS2	Between Groups	1.361	1	1.361	0.851	0.357
	Within Groups	558.012	349	1.599		
	Total	559.373	350			

7.5 Methodology

7.5.1 Measurement

The study used adopted scales for various construct from previous research. Apart from other adopted scale, only one 19-item scale for consumer co-created value construct was developed and validated in previous chapter. Rest all the scale were derived from extant literature. Consumer active participation was measured through 4-item scale given by Uz Kurt (2010). Similarly perceived support of company is measured through 3-item scale given by Yi and Gong (2009) and House (1981). Similarly 3-item perceived support of fellow consumer scale was adopted from Yi and Gong (2009) and House (1981). To measure consumer satisfaction 3-item scale was used (Vega-Vazquez et al., 2014). This scale represents the assessment of collaborative value perceived by consumer in co-creation process.

Next questionnaire was constructed using all the scale mentioned above. Pre-testing of questionnaire were performed three times to make sure that it is measuring exactly what it was supposed to. It also enables us to understand its suitability for data collection through survey research. A seven point Likert scale which ranges from “strongly disagree” (1) and “strongly agree” (7) is used to collect data.

7.5.2 Data collection

An ATM intercept method was used to collect data from various location in New Delhi. The sample was performed at various location in north, south, east and west Delhi. Respondent were randomly selected at various time frames and at various places where ATMs are located. Both peak and off periods were identified for ATM usage and sampling schedule was prepared accordingly. Sample respondents were approached and given information about why they were approached and then they were asked to fill self-administered questionnaire. Participants were asked to evaluate co-created value and their satisfaction with value when performing online banking. It was ensured that people who are transacting at ATM are well aware with online banking and have performed it online for themselves.

The survey yielded 351 usable responses for online banking services with 75 % of respondents were male and 25 % female. Participants fell between age groups 18 to 65. Four types of co-creation areas where consumers are involved are in case of online banking are service development, reviews/feedbacks, blogs and forums.

7.6 Test of the hypothesized model

In the present chapter, two stage modelling approach is used which includes: first, establishing measurement model and next, the structural model (James, Mulaik, & Brett, 1982). It is essential that, all the variable pertinent to structural model were examined before heading for data analysis.

Measurement model purification has been performed through CFA and reliability has been tested through Cronbach's alpha coefficient. The process resulted into items that are purified and can measure each construct effectively. After purification these scales are ready to test the hypothesised relationship model.

7.6.1 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis is popularly used to state the relationship existing in between the measures and their latent constructs (Anderson and Gerbing 1988). Further various validities can also be drawn through confirmatory model such as convergent and discriminant (Campbell and Fiske 1959). For evaluating the overall fit of data with the proposed model, chi-square test is the most popular test to check fit adequacy. However even with large sample sizes, chi-square test too sometimes falsely indicate an accepted model to be unacceptable. Therefore various other fit indices were also included to overcome this limitation. Test such as Comparative Fit Index (CFI) and Bentler and Bonett's Non-normed Fit Index (NNFI) gives better response for overall measurement fit of the model along with chi-square test for large sample sizes (Bentler 1990; Bentler and Bonett 1980). According to rule of thumb acceptable fit score for CFI and NNFI should be higher than .90. Also score of 2-3 for chi-square to degree of freedom represent an acceptable fit.

Next, various validity and reliability of the measurement model comprising of latent constructs and their measures were assessed. Next, convergent and discriminant validity was examined before going ahead for SEM. According to Anderson and Gerbing (1988) and Steenkamp and Trijp (1991) convergent validity is evident when the measures as expected loads significantly on the respective constructs. Similarly, Bagozzi and Warshaw (1990) posit that discriminant validity is evident when value of correlation is less than 1 but higher than double of standard error. Reliability is measured through examination of Cronbach's alpha coefficient which should be equal to or higher than 0.70.

To examine fitness of overall measurement model, various validities such as convergent and discriminant are checked along with reliabilities of each items. The final confirmatory model includes comprises of all the five constructs in all one model. Any

variable which is measured by single items were dropped out. Analysis of standardized factor loading, standardized residual matrix, and item-to-total correlations was performed and insufficient items were left out. Final CFA model was accepted once it conform with all criteria as discussed above

The proposed relationship existing among latent variables and their measured indices are depicted in Figure 7.1. The structural model comprises of five latent variables, which include: active consumer participation, firm support, fellow consumer support, consumer co-created value (CCV), and consumer satisfaction. All of these latent variable are having multiple measure indicators.

7.7 Result of Confirmatory Factor Analysis

In this section we present result obtained through examination of the model fitness. Next we assess various kind of validity and reliability to ascertain that whether model can be examined through SEM.

7.7.1 Measurement model

The consumer value co-creation measurement model consists of 32 observed indicators: active consumer participation measured by four latent indicator, perceived organisational support measured by three indicators, consumer satisfaction is measured by three measurement items, however consumer co-created value construct being a second order construct is measured by five dimension (Personal, Relational, Economic, Experiential and Interactional) consisting of 19 items. After validating CCV scale in previous chapter, aggregation of scale was performed. Each of the measurement indices and their respective variables are closely examined to ascertain their importance in the present hypothesised research model.

Finally, 32 indicator CFA includes active participation of consumer (4 indicators), perceived support of company (3 indicators), perceived support of fellow consumers (3 items), consumer co-created value (19 items), and consumer satisfaction (3 items) were employed for the total measurement model depicted in Figure 7.2. The results of the CFA exhibits a good model fit (χ^2 (428) = 623.58 $p < .00$; CMIN/DF= 1.457, RMSEA=.036, NFI=.942, CFI=.981, GFI=.900, and AGFI=.877). Next, the correlation between the constructs were presented.

Next, examination of correlations between construct is performed and presented in Table 7.3. The reliabilities for all the constructs exceeded the acceptable limit of 0.70

reflecting the good internal consistency. After examination of reliability, validity of constructs were evaluated. Firstly convergent validity was assessed by examining the factor loadings of the measurement model (Anderson and Gerbing, 1988; Kumar et al., 1998). All the factor loading emerged to be significant (all t values at $p = 0.01$ level) and thereby confirming the convergent validity of the measurement model.

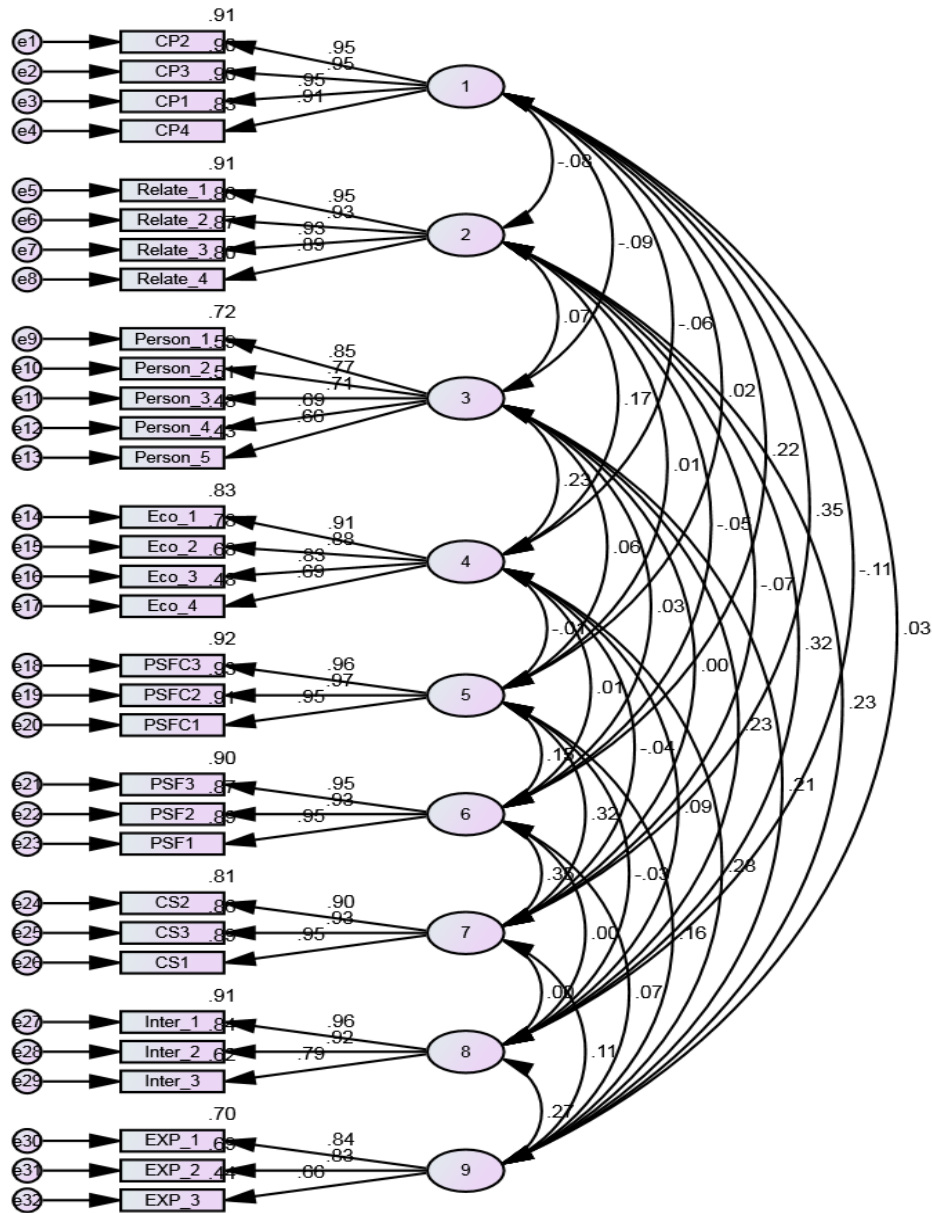


Fig 7.2. Confirmatory Factor Model

Secondly, the discriminant validity of the total measurement model was assessed by examining the value of significance for inter construct correlation. The value was found to be less than 1 (Bagozzi and Heatherton, 1994). Chi-square difference test was performed on each construct pair was performed, where in one correlation were drawn and in another model

correlation were absent. The value of chi-square for the model with zero correlation was found to be significantly higher than the model with correlation. It authenticates the existence of discriminant validity among constructs in the model (Segars, 1997).

Table 7.3 Correlation Matrix

	CR	AVE	MSV	INTER	CP	REL	PERS	ECO	PSFC	PSF	CS	EXP
INTER	0.92	0.79	0.10	0.89								
CP	0.97	0.88	0.13	-0.11	0.94							
REL	0.96	0.86	0.10	0.32	-0.08	0.93						
PER	0.86	0.55	0.05	0.23	-0.09	0.07	0.74					
ECO	0.90	0.69	0.08	0.09	-0.07	0.17	0.23	0.83				
PSFC	0.97	0.92	0.10	-0.03	0.02	0.01	0.06	-0.01	0.96			
PSF	0.96	0.89	0.12	0.00	0.22	-0.05	0.03	0.01	0.15	0.94		
CS	0.95	0.86	0.13	0.00	0.35	-0.07	0.00	-0.04	0.32	0.35	0.92	
EXP	0.82	0.61	0.08	0.27	0.03	0.23	0.21	0.28	0.16	0.07	0.11	0.78

The value of chi-square for the model with zero correlation was found to be significantly higher than the model with correlation. It authenticates the existence of discriminant validity among constructs in the model. In addition, the average variance extracted (AVEs) was compared with the squared inter construct correlations among the five dimensions of CCV (Fornell and Larcker, 1981). The rule of thumb is that all construct AVE should be greater than their squared inter construct correlation (SIC). The inter construct correlation (IC) estimate indicates that all AVE estimated ranges from 0.57 to 0.84 were larger than the corresponding highest SIC (0.33), demonstrating discriminant validity.

7.7.2 Examining common method bias

One of the prominent source of errors which inflict the data analysis procedures are method biasness. It could be both random and systematic in nature and it impedes the conclusion drawn from the measures used in data collection. Podsakoff et al. (2003) found both kind of error to be for inaccuracies. However, it is the systematic measurement error which is primarily responsible for producing spurious association among constructs in measurement model. Common method bias has been the major concern for the survey based

research and that too particularly where self-reported instrument has been used (Podsakoff et al., 2003; Spector, 2006). According to various studies taken up by researchers (Campbell and Fiske, 1959; Williams, Cote, and Buckley, 1989; Doty and Glick, 1998) has found one-fourth of variance or measurement error in survey based studies could be attributed to common method biases (Cote and Buckley, 1987).

In order to minimize common method biasness (CMB), the present study adopted the procedures suggested by Podsakoff et al. (2003), wherein use of statistical and study design technique is helpful in controlling CMB. Biasness could enter in the present study through transient mood state where transient mood refers to influences of the recent events on the manner in which respondent view themselves and the world present around them (Podsakoff et al., 2003). Thus for receiving honest responses, a positive assurance is given to the respondents that their responses would be kept anonymous. Harman's single factor test was performed where all the items are subjected to exploratory factor analysis (EFA). The CMB is assumed to be present if (i) unrotated factor solution leads to one single factor (ii) majority of variation is explained by first factor. The result of exploratory factor analysis shows that unrotated single factor explains only 18% of variation, which means 78% of variation is explained by rest other factors. Hence absence of common method bias.

However, Kemery and Dunlap (1986) in their study expressly stated that single-factor technique is extremely unreliable as they found that with increase in number of latent factors increases, it is less likely that one factor is responsible for the explaining majority of the variance in the manifested variables. Therefore another statistical measure which is deemed appropriate in reducing CMB is the single unmeasured latent method factor. In this technique single unmeasured latent factor is modelled with measures instead of latent construct. This factor help in identifying and measuring specific factors that are chiefly responsible for the method effects. The method is used in the present study and during the aggregation of factor score weight, common latent factor is kept till end. Using this method, the spurious effect of CMB can be reduced to certain extent. Thus result emerged after using above methods has led to elimination of any systematic biases originating due to methods used.

7.7.3 Structural model results

After confirming the total measurement model, the structural model shown in Figure 1 was estimated. The overall fit statistics as presented in Table 7.4 indicates an acceptable level

of fit between the hypothesized model and the data. Estimated structural coefficients were next examined to evaluate the individual hypotheses listed in Table 7.5 below. On the basis of the research model, the study proposes three paths existing amongst the antecedents of consumer value co-creation and co-created value, and one path between co-created value its outcome.

Table 7.4. Path estimate for proposed model

Hypothesis	Path	Path Coefficient	<i>p</i> -value	Decision
H1	CP→CCV	0.28	0.001	Supported
H2	PSF→CCV	0.28	0.001	Supported
H3	PSFC→CCV	0.32	0.001	Supported
H4	CCV→CS	0.41	0.001	Supported
H3	CP→CS	0.12	0.001	Supported
H6	PSF→CS	0.10	0.001	Supported
H7	PSFC→CS	0.08	0.001	Supported
Model Fit				
	X^2			220.847
	<i>df</i>			125
	CMIN			1.767
	GFI			0.931
	AGFI			0.905
	NFI			0.921
	CFI			0.964
	RMSEA			0.050

The study finding suggest that all the relationships hypothesised in this research model were significant. As evident in Table 7.4, all the predictor variable CusPar ($\beta= 0.28$, $p>0.05$), FirmSupp ($\beta= 0.28$, $p>0.05$), FellCusSupp ($\beta= 0.32$, $p>0.05$) has positive influence on the CCV. Furthers results also confers that CCV has positive influence on the CusSat as well ($\beta=0.41$, $p>0.05$).

Thus all these results suggest the importance of consumers, firm and fellow consumer participation in co-creation of value co-created and ultimately determining consumer satisfaction. Thus all the hypothesis were found to be true and hence there was found to be significant relationship among constructs.

Table 7.5. List of hypotheses

Hypotheses	
H1	Active participation of consumer is positively affect consumer co-created value.
H2	Perceived support of firm has positive effect on consumer co-created value.
H3	Perceived support of fellow consumers has positive effect on consumer co-created value.
H4	Consumer co-created value positive affect satisfaction of the consumer
H5	Active participation of consumer is positively affect consumer satisfaction.
H6	Perceived support of firm has a positive effect on consumer satisfaction.
H7	Perceived support of fellow consumers is positively related to consumer satisfaction.
H8	Consumer co-created value mediate the relationship between active consumer participation and consumer satisfaction
H9	Consumer co-created value mediate the relationship between perceived support of firm and consumer satisfaction
H10	Consumer co-created value mediate the relationship between perceived support of fellow consumers and consumer satisfaction

7.8 Mediation Analysis

Mediation analysis was performed to determine whether consumer co-created value mediate the relationship existing between the three predictor variables and outcomes of consumer co-creation. The current study adopts the bootstrap procedure using SEM through AMOS for analysing mediation analysis, which also helps in overcome the certain key problem associated with Baron and Kenny (1986) approach (unable to explain and provide statistical test for indirect effect caused by independent variable on dependent variable through proposed mediating variable); and Sobel test for mediation (undefined assumption of normality in case of small samples and possible of Type I error) (Shrout & Bolger, 2002; Preacher & Hayes, 2004; MacKinnon, Lockwood, & Williams, 2004).

Further MacKinnon et al. (2002) ask to test indirect effect produced by exogenous variable on the endogenous variable through mediating variable. He also reported that while evaluating significance of indirect effect, problem of standard error also get surfaced. Therefore Shrout and Bolger (2002) recommended using bootstrap method to rectify standard error. It also enables an empirical way to determine the significance of statistical estimates (Efron & Tibshirani, 1993), where results will report the significance of mean indirect effect at 95% confidence interval (CI). Indirect effect will be considered significant at 95% level if CI does not include zero.

Ho (2014) considered determination of mediation effect as an important aspects in path modelling. However instead of using determining mediation effect through Ordinary Least Squares (OLS) through SPSS, SEM is used in AMOS using Maximum Likelihood Estimation, to examine the magnitude and direction of direct and indirect effect that one variable has on another, in accordance to hypotheses.

In a bootstrap method, random sampling using replacement procedure is used to create 1000 samples from original data set (Shrout & Bolger, 2002). Next SEM model was tested using these bootstrapped procedure to produce 1000 estimates of each path coefficient. Further indirect effect of predictor variable is estimated through the output from 1000 estimates of each path coefficient.

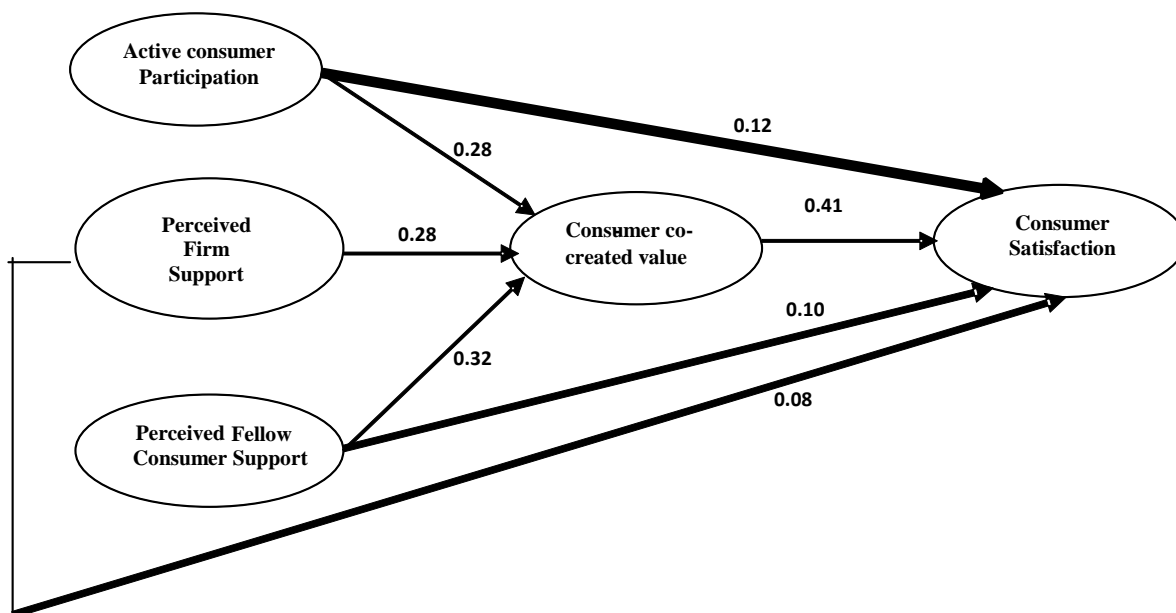


Figure 7.3: Structural model

The effect of mediating variable is observed through three effects i.e. total effect, indirect effect, and direct effect. The total effect refers to the extent to which change in IV affects DV. Similarly, indirect effect is the change in IV would lead to change in DV through mediator. In a same way direct effect is the extent to which a change in IV is direct effecting DV. Table 7.6 exhibits the overall result of mediation analysis while Fig presents the results of structural model with CCV as a mediator.

Table 7.6 Mediation Table

S.N.	Hypotheses	Direct Effect	Indirect Effect	Total Effect	Degree of Mediation
H8	CP→CCV→CS	0.119*	0.114 ***	0.233	Partial
H9	PSP→CCV→CS	0.102(ns)	0.112 ***	0.214	Full
H10	PSFC→CCV→CS	0.077(ns)	0.130 ***	0.207	Full

Note: ***= p< 0.001; *= p<0.05, ns= “non-significant”, N=351

Results of bootstrapping mediation analysis (Figure 7.3) indicates that consumer co-created value mediates the all the relationship existing between predictor variables (CP, PSP, PSFC) and consumer satisfaction as indirect effect of all the hypothesised path has significant value. However on comparing the degree of mediation in each case, it stood out differently. As pointed out by above Table 7.4 consumer co-created value partially mediates between consumer participation and their satisfaction, where as in case of perceived support of firm and fellow consumer, co-created value fully mediates the consumer satisfaction. The partial mediation of consumer co-created value signifies that despite of active consumer participation, the consumer value depends upon their level of participation. If consumer is not involved at high level, then chances of co-created value would be less. Additionally, self-service bias could also be one reason for the partial mediation of consumer co-created value. In a self-service bias consumer want to take responsibility if service co-creation is successful however, in case of failure, consumer wants to transfer the responsibility of failure to firm or fellow consumers.

7.9 Summary

The present chapter explains the data analysis procedure adopted along with the methodology to test the research model empirically. It initially presents the demographic profile of the respondents followed with presentation of all the measures of the constructs which is used to collect the survey response. The primary objective of this chapter is to provide findings from the empirical assessment of various hypotheses developed in Chapter

four. The next and the final chapter provides various findings and implication for both academicians and managers along with limitation and future research directions.

Chapter 8

Discussion and Conclusions

Preview

The present chapter initially gives an overview of the research undertaken. Next, It enumerates the major findings of the study undertaken and discusses the outcomes. It delineates various findings with theoretical and managerial implications, and points out various limitations along with directions for future research.

8.1 Introduction

‘Value’ has emerged as a major element for both consumers and marketers. While the consumer was regarded as the key influencer in shaping the value proposition, it is only recently that the consumer came to be acknowledged as ‘active participant’ or ‘creator’ of value. This shift in perspective can be attributed to: first, emergence of SD logic (Vargo and Lusch, 2004) which has been instrumental in replacing the traditional mind set of GD logic; and second, advances in information technology which enabled consumers to participate directly in value creation processes such as SSTs.

Moving ahead with the understanding of consumer value co-creation process and its influence on shaping value proposition, this study helps in understanding the reasons behind consumer participation in consumer decision making process. The present study apart from considering active participation of consumers in value co-creation, also brings in support of firm and fellow consumers on consumer co-created value and consumer satisfaction. This study also explores dimensions of co-created value such as interactional, relational, personal, economic, and experiential.

The value co-creation process is centred on firm as the creator of superior value proposition and consumer as the arbiter and creator of value through consumption. According to Payne et al. (2008), “value co-creation demands a change in dominant logic of marketing from ‘making’, ‘selling’ and ‘servicing’ to ‘listening’, ‘customizing’ and ‘co-creating’ (p. 89).” Therefore, the process of value co-creation is interactive, collaborative and integrates various service systems and actors which are in a continuous process of exchange of their resources, skill and competencies and integrating these resources in their context of reality (Prahalad and Ramaswamy, 2004).

Results of the present study indicate that consumer participation positively influences consumer satisfaction and co-created value. Companies should also focus on their and fellow consumer contributions to enhance consumer co-created value which also result in consumer satisfaction. It is the kind of value co-created by consumers which defines their satisfaction and desire to stay in the co-creation process. It is not only the outcome through which consumers derive value, but also the process undertaken to co-create value which is equally phenomenological in nature.

8.2 Outline of the Present Research

The current study is an attempt to address some specific lacunae identified in extant literature on consumer value co-creation. The study is a step towards understanding the consumer value co-creation process with core focus on value co-created in e-services. To attain the objectives of the study, a research model is built based on existing theories (Chapter four). The model presents an interrelationship among the predictor and outcome variables of consumer co-created value. Based on the research model, the study attempt to develop and validate a scale for consumer co-created value in e-services (Chapter six). Next, the scale developed is also used to test the research model and various hypotheses presented in (Chapter three)

Highlights of the current study are as follows:

- Extensive and inclusive review of literature on value co-creation has been performed. The literature review includes: evolution, definitions, conceptualisation, nature, theories, and measurement. The review brought to light various issues, gaps and agendas warranting attention from the research fraternity.
- Review of methodologies adopted in co-creation shows that popular methods comprise both qualitative and quantitative techniques. While qualitative methods consist of in depth interview, case study and laddering technique, quantitative methodologies include questionnaire based methodology, regression analysis, ANOVA, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) and SEM (Structural Equation Modelling).
- Review of literature on e-services was carried out to understand their importance, definitions, evolution, nature, and emerging themes. Literature was deeply reviewed to understand the role of e-services in value creation and co-creation.

- Based on SOR, social exchange and SD logic, study tries to develop a research model which is centred on consumer co-created value. The model exhibits both predictors and outcomes of co-created value. Further, various hypotheses were proposed based on the relationship among various constructs.
- Based on research model, the present study attempt to develop a scale for one of the constructs - consumer co-created value. A well-defined and standard scale development procedure was adopted to develop the CCV scale. The scale captures five dimensions on which consumers evaluate value co-created.
- For developing CCV scale, an initial pool of items was generated through an extensive literature review. Next, item deletion process was carried out and face and content validity checked with the help of experts. Finally, a questionnaire was prepared which was subjected to pre-testing for initial refinement. Data were collected through a refined questionnaire from 396 graduates, post-graduate students and faculty. Later, EFA and reliability test were carried out to confirm standardization of scale.
- CFA was performed to purify the developed scale. Data were collected from 305 consumers using banking SSTs. Further, reliability and various validity such as convergent, discriminant, and nomological were verified. Finally, a 19 item scale with five dimensions was developed to measure consumer co-created value. In nomological validity, relationship between co-created value and consumer satisfaction was tested.
- Next, the above mentioned CCV scale is used in the hypothesised research model to test various relationships. Various hypotheses proposed in the research model (Chapter 3) are tested. Other than CCV, adopted scales were used from literature for various constructs. Instead of EFA, the study directly used CFA to collect data from 351 consumers are using ATMs at various places in New Delhi. Next, reliability and validity of the model are assessed. Further, common method bias is tested for any external error in our model. Further, the measurement model was subjected to imputation and path analysis was performed through SEM.
- All hypotheses were found to be valid in path analysis which reflects significant relationship among constructs. Next, mediation analysis is performed, wherein CCV emerged as the mediating variable between predictors of consumer value co-creation and satisfaction. It further reinforced that it is the value jointly created by the consumer which defines satisfaction of consumers.

8.3 Discussion

The present study develops a research model and proposes a set of hypotheses related to consumer value co-creation, in chapter four. These hypotheses are related to association among the predictors of consumer co-created value and its outcome. Further, all the hypothesis intent to determine the consumer co-creation behavior and their behavioral intention toward e-services. The present study elaborate the discussion on these hypotheses through findings generated in the previous chapter.

8.3.1 Consumer co-created value as a mediator

One of the key objective of the present research is the consumer co-created value and its role as a mediating variable in the present research model. Previous studies has found consumer perceived value having a strong relationship between consumer participation and consumer satisfaction (Chen and Wang, 2016; Yang & Peterson, 2004). However, in the present studies, it was found that consumer co-created value is partially mediating relationship between consumer participation and satisfaction. This suggest that consumer participation depends upon the level of their participation, whether it high, low or medium. If the participation level of consumers are low, their satisfaction with the co-created value will be equally same. Hence it also means that if consumer is physically and mentally participating in the value co-creation process and are having deeper interaction & exchange, then they perceive higher value and derive greater satisfaction from the process

However, in the present study suggests that if consumer perceive that there is support of firm and fellow consumer, even if it high or low, it would leads to greater co-created value and their satisfaction. They find role of firm and fellow consumer to be facilitator by assisting consumer in generating more enduring experiences, exchanging resources both operand and operant. Thus consumer perceive greater co-created value if firm and fellow consumers are participating in the value co-creation process. Thus all the hypotheses proposed are supported and it is found that consumer co-created value is truly acting as a mediator between the predictors and consumer satisfaction.

8.3.2 Predictor of consumer co-created value and satisfaction

The present study suggest that all three predictors i.e. active participation of consumers, perceived support of firm and perceived support of fellow consumers has direct significant effect on the consumer co-created value as well as on their satisfaction. All the hypotheses examined are found to be having significant relationship and accepted. Studies in

past has reflected that consumer participation can lead to their satisfaction (Czepiel, 1990; Kelley et al., 1990). However their participation was limited to merely providing feedback and inputs, which limit their role as passive participant in value creation process. However, in today's time consumer today want to have more autonomy, choices and information. Instead of recipient they too want to be active participant in the value creation process. Thus consumer are actively involved in value creation process by investing their time, resources and efforts in the value co-creation process. These active consumer co-creator are perceiving higher co-created or collaborative value in form of social ties, experiences, interaction, personal benefits as well as economic benefits. The consumer find their participation as the way to the more personalized world of their own creation. This personalized world helps in deriving greater value and satisfaction for their consumers. Consumers are finding their information, activities and inputs getting realized into more tangible outcomes. They are realizing their potential as the co-creator of content, meaning, experiences and services.

Likewise, finding of the study supports that the perceived support of the firm has a significant direct relationship with the consumer co-created value and consumer satisfaction. Though, now days firms are taking backseat, but eventually, their importance cannot be ignored as they have reservoir of resources both operand (skills and competencies) as well as operand (tangible resources). Firms can greatly enhance the co-created value in form of experiences and interaction by assisting them with training and manual aid. Companies like Lego, source forge and google are providing with source codes and beta versions for the users to bring in their own personalization and innovation for greater product performance and improvement. Users from all over the world can freely access to these firm facilitated resources. Thus consumer perceive support from firm as significantly important in deriving greater co-created value. Even support from firm act as an important factor behind consumer satisfaction. YouTube are increasingly realizing satisfaction of the co-creator by gifting them their share of money it obtained through content created by consumers. Advent of social media and networking websites has enhanced consumer satisfaction by empowering them with the network, information, choices and control.

One important hypothesis is associated with the perceived support of fellow consumer and their role in co-created value and consumer satisfaction. The study finding supports the existence of a direct significant relationship between perceived support of fellow consumers and consumer satisfaction. It clearly signifies that fellow consumer's helps consumer in realizing various kind of value especially relational value. Consumer rating and feedbacks

such as IMDb and TripAdvisor are greatly assisting consumer in deciding whether to make purchase or not. These ratings and feedbacks are greatly enhancing the consumer experiences in form of prior knowledge about the functionality and value associated with their participation. In a normal co-creation, fellow consumer can be a great source of knowledge, reservoir of resources and information. With their honest feedback, it can help consumer realize their true potential and make further changes in the value they are creating. It also emerge as a great source of keeping the consumer to stay in the co-creation process for longer duration. The acknowledgement and their appreciation can not only motivate focal consumer but can also inspire other consumer to take the challenge of co-creation. Further fellow consumer appreciation also help in garnering consumer satisfaction. The consumer found social appreciation of their personalized offering as the token of social influence. Additionally, fellow consumers help in suggesting further modifications to make the co-created offering suited to larger base of consumer.

In this way all the three predictors are having significant role in achieving greater consumer co-created value and their satisfaction.

8.3.3 Consumer satisfaction

The study finding suggest that consumer satisfaction has direct and significant effect on consumer satisfaction. Consumer satisfaction is defined as the feeling of pleasure or disappointment as result of trade-off between consumer expectation and perceived performance of offering (Kotler et al., 2010). The value co-creation being an experience creation process, would result into consumer satisfaction, if it is managed properly and assured of sufficient benefits.

8.4 Contributions

The study immensely contribute to the emerging literature of value co-creation by presenting presenting a research model based on existing and emerging theories in literature. The model is further tested through adopted scales as well as the newly developed scale in context of e-services. The proposed model and scale seek to bridge the gaps identified in literature and also help in accomplishment of the objectives.

Various significant contributions and key findings of the present research are as follows:

- Most of the work on consumer value co-creation has been either discussed from the consumer participation end or firm participation, which leads to the absence of any

comprehensive study on consumer value co-creation which has considered it from the outcome end or consumer co-created value. It defines consumer co-created value as a multidimensional construct and tries to explore the consumer value co-creation and define its nature and dimensions. This conceptualisation might help researcher in better conceptualisation of e-services.

- After a detailed review of literature on consumer value co-creation, e-services was identified as an important area where co-creation was highly evident. Therefore, a review of e-services was performed on the literature to understand how it has evolved and e-services defined. Further, the study tried to determine the linkage between e-services and consumer value co-creation. Through review, it was found that scant studies has attempted to understand how consumers co-create value in e-services. Most of the studies on e-services have been limited to quality dimensions and consumer participation, neglecting consumer value, especially when it is created by the consumer himself. Since e-services provide ample opportunity for consumers to participate, interact and exchange resources, study and facilitation of e-services could enrich consumer experiences and their stay in the process.
- Though consumer participation is inherent in value creation in context of services, it has only recently been realized by firms that consumer participation is much more than ‘partial employee’ and ‘free labour’, and involves active participation of consumers. Indeed, the advent of the internet and advancements in technology have enabled this active involvement of consumers. The study adds to existing body of knowledge on co-created value by presenting a research model which includes both theories on consumer decision making and service literature (SD logic). This study specifically reveals the various dimensions perceived important by consumers in evaluating value co-created across several online services.
- The present study is first of its kind which seeks to conceptualize, construct, and test a multidimensional CCV scale that can be used to measure the collaborative value created in the value co-creation process in context of e-services. The study suggests that consumers ground their perception of co-created value on five primary dimensions: *relational, personal, economic, interactive, and experiential*. Therefore a firm aiming for consumer satisfaction and loyalty in the collaborative value creation process needs to work rigorously on these five dimensions. Out of the aforementioned

five dimensions, interactional and experiential dimensions are specifically important in any value co-creation process. Through constant interaction with consumers in the form of dialogue, firms can build trust, stimulate emotions and enhance participation of consumers. Firms can help consumers in building memorable experiences through sharing their content, stories, games, and reviews.

- Movement of consumer from passive buyer or consumer to active participant in value co-creation has been possible because of various benefits and incentives perceived by consumers in their involvement. The outcome or benefits from co-creation could help in better understanding consumer behaviour and perception about co-created value in the consumption process. The present research examines the consumer value co-creation process in e-services by investigating how active consumer participation in co-creation process is a driver of consumer satisfaction. It also examines role of perceived support of consumer in driving consumer satisfaction. Previous literature has greatly emphasized role of support of fellow consumers in shaping consumer satisfaction. However, the degree of influence of these enablers was found to be significantly depends on how consumers perceive co-created value. This co-created value integrates both the process aspect as well as outcome aspect. The higher this value perceived by consumers, the more likely they are to be satisfied with the efforts put in by them.
- Analysis of the data exhibits existence of significant relationship between predictors of consumer value co-creation and consumer satisfaction. Additionally, relationship existing among predictor variables and consumer co-created value was found positively significant. The study also found significant positive influence of consumer co-created value on consumer satisfaction. These results emphasize the important role played by consumer co-created value and its predictors in consumer satisfaction. Though previous studies tried to find a link between consumer participation and satisfaction, these attempts only served to establish a simple relationship. The aspect of co-created or collaborative value due to active participation of consumers was completely ignored. Previous studies were also weak on developing a comprehensive framework of consumer co-creation specifically emphasising co-created value. This study tries to fill this gap by empirically examining the consumer value co-creation process in e-services.

- This study is an attempt to investigate the causal and mediating relationship amongst constructs considered. All the relationships existing in the research model are found to be significant and positive. Consumer co-created value better explains consumer satisfaction with consumer participation in service creation and delivery. Desire to get enhanced, benefit laden, experientially rich and interactive value is the key reason behind consumer participation. The study holds the benefits of consumer co-created value as the key reason behind consumer participation and satisfaction in e-services consumption. This finding has many implications which need to be assessed both theoretically and empirically in future.

8.5. Implications

The current research carries several implications for researchers and practitioners concerned with consumer satisfaction. First, it offers a valid and reliable scale to measure consumer co-created value and second, it presents an empirical model of the consumer-value co-creation (CVC) process. Besides replication of the CCV scale in other online services, the model provides guidelines for evaluating consumer participation as an essential element for co-creating value which leads to consumer satisfaction. The following sections highlight the theoretical and managerial implications of this research.

8.5.1 Theoretical Implications

The present research puts consumer co-created value as a focal point of study. This study is based on stimulus-organism-response (SOR) theory; it identifies and develops a model on consumer value co-creation process, linking CCV construct with active consumer participation construct and consumer satisfaction construct. The present study offers a deep examination of consumer value co-creation in online services and a practical implementation of consumer value co-creation model through understating of the relationship existing among key constructs such as active consumer participation, CCV and consumer satisfaction. The present study particularly discusses the online co-creation behaviour of consumers in emerging markets like India. Further, the study carries key research implications as follows:

- Thorough examination of consumer value co-creation model based on level of co-created value offers deeper understanding of variations in the model relationships. Researcher could link perceived consumer co-created value with analysis of consumer

performance, predicting their future participation in co-creation, and analysing long term relationships with consumers in gaining consumer loyalty.

- By establishing linkage amongst the different constructs of consumer value co-creation model, the study provides a reliable and valid model for measuring consumer co-created value and satisfaction in online services which can further be replicated in offline services and manufacturing industries. The present study has tried to generalise the consumer co-created value scale in e-banking contexts to enable researchers to apply the scale in different contexts for assessing consumer satisfaction.
- Though recent studies on value co-creation have focussed on network effect and consumer or brand communities, this study has emphasized consumer-firm relationship thus attempting to provide a better idea of how value is co-created in dyadic relationship. Hence, researcher could further examine the studies in respect to service ecosystem view or in network. Large number of stakeholders can be incorporated and their effects could be evaluated on service decision making process.
- The present study ascertains key consumer value co-creation constructs to predict consumer decision making in online services. It concludes that consumer co-created value arises from active participation of consumers and results in consumer satisfaction. This conceptualisation is supported by SOR framework where perceived active participation of consumer acts as stimulus for consumer co-created value which represents the cognitive and affective state of consumer as organism, and results in behavioural outcome or consumer satisfaction as response. The researcher could further take individual dimensions of CCV scale to elaborate and conceptualise each dimension in context of e-services.

8.5.2 Managerial Implications

The present study has numerous implication, considering increasing number of firms are opting for co-creation in order to get a competitive edge over competing firms. First and foremost implication is firm should stay away from involving all the consumers in co-creation instead focus on consumers who wants to actively participate in co-creation process. Firm should also work on the support and facilitation to extend to the consumer in the co-creation process. Extension of tools, information, software codes, and data can increasingly encourage

consumers to participate and stay in co-creation. Firm should work extensively for allowing fellow consumer in form of individual consumer as well as brand and consumer communities to assist consumer in value co-creation process. Consumer co-creation in e-services also mean that consumer is well verse with this medium. Consumer either earlier adopted and used or presently using e-services for value creation. Firm should also ensure interface for creating value co-creation in e-service are simple, user friendly and enhances consumer comfort and participation in form of guidance, mentoring, encouragement. Firm should stay away from managing consumers as an employee or labour to reduce cost. Though these are important befits of co-creation but firm should accept consumer as important active participant and final arbiter of value created jointly.

Second, firm should focus on enhancing co-created value by evaluating all its dimensions (Personal, relation, economic, interaction, and experience) in order to improve the satisfaction level of consumer who are participating actively in the co-creation process. Firm should vigorously work on establish dialogue and easy communication linkage in order to foster the environment which is interactive and experiential in nature. Support of firm and fellow consumer help in building long term relationship and bondage which further assist consumer in identifying social identification and status. Firm should ensure engaging consumers, sharing economic benefits and delivering extra benefits to consumers for their active participation. It would readily help in build trust, delegate control and responsibilities to their consumer so that they could further stay in the process and build positive word of mouth for the company. E-services can be used by firms to understand how preferences of consumers are changing over period of time, which can also ensure firm to build flexibility over a period of time to better tailor itself according to personalised preferences of the consumers. Firm should find out various touch point where it can enhance the experiences of consumer to make it more

Finally, e-services are valuable tools or interface for consumer to create connection with firm, fellow consumers and their communities. It also enables choice for consumers as previously offline interaction was the only option left with consumer. However firm should be cautious in their approach and should not force consumer to participate in co-creation process. Firm should also ensure that before encouraging consumers to participate, consumer is having adequate training, knowledge, and learning about its role in co-creation. If not, he should be trained and educated, so that there should not be any chances of role disconformity and negative perception and evaluation of co-created value.

8.6 Limitations

Like any study, the present study too has several limitations which could provide future research directions. The major limitation of the study is it has tried to judge the online behaviour of consumer co-creation through their participation in consumer. Therefore future studies must take various types of online co-creation behaviour, such as internet, ATM, mobile banking so that better insights could be garnered.

First such constraint is related to sampling. Though the sample has been collected from several groups of respondents, yet it may not be a truly random and representative sample of an online users. A bigger sample size of consumers interacting mutually and with the firm, and integrating resources in online services could possibly give a deeper understanding of the various dimensions consumers perceive as important for value co-creation. Also, sample has been collected from Delhi state, hence comparison could not be drawn between the consumer behaviour from various other adjacent state, which raises the issue of generalisation.

Second, steps must be taken so that participants clearly understand the language and nature of questionnaires. This would include exchange of information (oral communication regarding the topic of research to put the respondents at ease, and create an environment conducive to free exchange of information) prior to distribution of the research instrument.

Third, the degree of consumer participation in co-created value may vary with different phases of idea generation, production and consumption (service decision making process). The range of consumer experiences may also differ with region and country. Use of longitudinal studies might be helpful in elucidating the relative significance of all the five dimensions of co-created value. As evident value being a multidimensional construct is perceived differently by every single consumer, therefore in order to satisfy their consumer, firms has to work on superior value, which means firms has to interact, provide training, built relationship, enable communities, and enhance experiences of consumer in a cost effective manner.

One more limitation of the study was the response rate of females. It was found that it was hard to generate response from female respondent in ATM intercept interview. Though they were usually ATMs large in number but they were usually not interested in giving response. Hence online data collection could be a better mean to get their response.

Finally, the present study presents a cross sectional view of Indian consumers. However, CCV being dynamic, can be viewed as iterative and reciprocal in nature which

requires constant nurturing from firms for ensuring continuous consumer participation. Longitudinal studies may be undertaken in future to shed light on the importance of the duration of time in which a consumer remains involved in the value co-creation process.

8.7 Suggestions for Future Research

The present services has number of challenges which has to be taken care off. The current single study has been performed in e-banking which has not undertaken various other e-services such travel, entertainment, government, retailing). So future studies should be take data from various e-service users and in sufficient numbers so that a better understanding and generalise findings could be derived. Also steps should be taken to compare the offline and online value co-creation process in terms of similarities, dissimilarities and factor critical for both of these contexts.

Also the study was built on the insight from Kaushik et al. (2015) which suggests that if a consumer is using one kind of SSTs then there are greater chances of using another kind of SSTs. Hence, the present study has tried to take the offline consumer behaviour to test the online behaviour of the consumer. Thus future studies should find ways to take the real on time online behaviour data from the consumer. Qualitative techniques should be a better mean to collect such kind of data.

Consumer value co-creation has been a novel approach to recent marketing literature which has emerged due to shift in the marketing approach to emphasise on service rather than goods as a basis of exchange. Therefore the present study has attempted to understand consumer participation and evaluation of co-creation process. However, many other psychographic and behavioural factors were not examined which can be considered important for value co-creation such as trust, willingness to pay, word of mouth, quality (Gebau et al., 2013; Zwass, 2012; Randall et al., 2011). Incorporating various additional factors which are critical for value co-creation will enhance the understanding of managers as well as scholars.

Future focus should be made on each of consumer segment specifically to generate insight regrading segment which is more attractive for co-creation and proper strategies could be made to target those users. Future researchers may incorporate financial measures such as profitability and return on investment (ROI) to measure co-created value with consumer participation. This kind of research would help firm to decide whether they should participate or not. What is the cost involved in training and development of consumer as a participant in co-creation and what are the stakeholder returns is after consumer participated in such firm initiated co-creation.

Research on value co-creation is still in a nascent phase. Future researchers should try to perform empirical studies in context of consumer-consumer co-creation apart from business to business and business to consumer co-creation. Success of many consumer co-created projects such as Wikipedia, YouTube and social media network, means that consumers and consumer communities have a major role to play in the value creation process. Therefore it is highly recommended that researchers should take various other stakeholders who are critical for understanding consumer behaviour and appraisal of human knowledge.

Summary

The present chapter elaborates various finding suggested by the empirical examination of the hypotheses proposed in the chapter four. Based on these finding, research contribution has been made. These contribution are thoroughly discussed and both research and managerial implications are proposed. Further, various limitations of the studies are enumerated along with future research area.

References

1. Addis, M., & Holbrook, M. B. (2001). On the conceptual link between mass customisation and experiential consumption: an explosion of subjectivity. *Journal of Consumer Behaviour*, 1(1), 50-66.
2. Adelman, M. B., & Ahuvia, A. C. (1995). Social support in the service sector: the antecedents, processes, and outcomes of social support in an introductory service. *Journal of Business Research*, 32(3), 273-282.
3. Aeron, H., Bhaskar, T., Sundararajan, R., Kumar, A., & Moorthy, J. (2008). A metric for customer lifetime value of credit card customers. *Journal of Database Marketing & Customer Strategy Management*, 15(3), 153-168.
4. Aeron, H., Kumar, A., & Janakiraman, M. (2010). Application of data mining techniques for customer lifetime value parameters: a review. *International Journal of Business Information Systems*, 6(4), 514-529.
5. Agrawal, A. K., & Rahman, Z. (2015). Roles and Resource Contributions of Customers in Value Co-creation. *International Strategic Management Review*, 3(1), 144-160.
6. Akaka, M. A., Vargo, S. L., & Lusch, R. L. (2013). The complexity of context: A service ecosystems approach for international marketing. *Journal of Marketing Research*, 21(4), 1-20.
7. Altun, K., Dereli, T., & Baykasoglu, A. (2013). Development of a framework for customer co-creation in NPD through multi-issue negotiation with issue trade-offs. *Expert Systems with Applications*, 40(3), 873-880.
8. Amaratunga, D., Baldry, D., Sarshar, M., & Newton, R. (2002). Quantitative and qualitative research in the built environment: application of “mixed” research approach. *Work study*, 51(1), 17-31.
9. Amit, R., & Zott, C. (2001). Value Creation in E-Business. *Strategic Management Journal*, 22 (6/7), 493-520.
10. Anderson, J. C., & David W. G. (1988). Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychological Bulletin*, 103(3), 411-23.

11. Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
12. Antony, J., & Banuelas, R. (2002). Key ingredients for the effective implementation of Six Sigma program. *Measuring business excellence*, 6(4), 20-27.
13. Arnold, M. J., & Reynolds, K. E. (2003). Hedonic shopping motivations. *Journal of Retailing*, 79(2), 77-95.
14. Arnould E. J., Price L. L., & Malshe, A. (2006). Toward a cultural resource-based theory of the customer In S. L. Vargo & R. F. Lusch (Eds.), *The Service-Dominant Logic of marketing: Dialog debate and directions* (pp. 91–204). New York: ME Sharpe.
15. Arnould E. J., Price L. L., & Tierney, P. (1998). Communicative staging of the wilderness servicescape. *Service Industries Journal*, 18(3), 90-115
16. Arnould, E. J., & Price, L. L. (1993). River Magic: Extraordinary Experience and the Extended Service Encounter. *Journal of Consumer Research*, 20(1), 24-45.
17. Arvind Ltd bets on custom clothing for e-commerce. (2014, March 4). *The Economic Times*, Retrieved From: http://economictimes.indiatimes.com/articleshow/31393311.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst.
18. Auh, S., Bell, S. J., McLeod, C. S., & Shih, E. (2007). Co-production and customer loyalty in financial services. *Journal of Retailing*, 83(3), 359–370.
19. Babbie, E. R. (1989). *The practice of social research*. USA: Wadsworth Publishing Company.
20. Babin, B. J., Darden, W. R., & Griffin, M. (1994). Work and/or fun: measuring hedonic and utilitarian shopping value. *Journal of Consumer Research*, 20(4), 644-656.
21. Bagozzi, R. P. (1975). Marketing as Exchange. *Journal of Marketing*, 39(4), 32-39.
22. Bagozzi, R. P. (1995). Reflections on relationship marketing in consumer markets. *Journal of the Academy of Marketing Science*, 23(4), 272-277.
23. Bagozzi, R. P. (1995). Reflections on relationship marketing in consumer markets. *Journal of the Academy of Marketing Science*, 23(4), 272-277.
24. Bagozzi, R. P., & Heatherton, T. F. (1994). A General Approach to Representing Multifaceted Personality Constructs: Application to State Self-Esteem. *Structural*

- Equation Modeling: A Multidisciplinary Journal*, 1(1), 35-67.
25. Bagozzi, R. P., & Warshaw, P. R. (1990). Trying to consume. *Journal of Consumer Research*, 127-140.
 26. Bagozzi, R. P., Youjae Y., & Phillips, L. W. (1991). Assessing Construct Validity in Organizational Research. *Administrative Science Quarterly*, 36(3), 421-58.
 27. Ballantyne, D., & Varey, R. J. (2006). Creating value-in-use through marketing interaction: the exchange logic of relating communicating and knowing. *Marketing Theory*, 6(3) 335-348.
 28. Bansal, H. S., McDougall, G. H., Dikolli, S. S., & Sedatole, K. L. (2004). Relating E-Satisfaction to Behavioral Outcomes: An Empirical Study. *Journal of Services Marketing*, 18 (4), 290-302.
 29. Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173.
 30. Baron, S., & Warnaby, G. (2011). Individual customers' use and integration of resources: Empirical findings and organizational implications in the context of value co-creation. *Industrial Marketing Management*, 40(2), 211-218.
 31. Baron, S., Patterson, A., Warnaby, G., & Harris, K. (2010). Service-Dominant Logic: Marketing research implications and opportunities. *Journal of Customer Behaviour*. 9(3), 253–264.
 32. Bateson, J. E. (1985). Self-service consumer: An exploratory study. *Journal of Retailing* 61(3), 49-76.
 33. Bauer, H. H., Falk, T., & Hammerschmidt, M. (2006). eTransQual: A transaction process-based approach for capturing service quality in online shopping. *Journal of Business Research*, 59(7), 866-875.
 34. Baumann, J., & Le Meunier-FitzHugh, K. (2015). Making value co-creation a reality–exploring the co-creative value processes in customer–salesperson interaction. *Journal of Marketing Management*, 31(3-4), 289-316.
 35. Bendapudi, N., & Leone, R. P. (2003). Psychological Implications of Customer Participation on Co-Production. *Journal of Marketing*, 67(1), 14-28.
 36. Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238-246.

37. Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588.
38. Berger, P. L., & Luckmann, T. (1991). *The social construction of reality: A treatise in the sociology of knowledge*. UK: Penguin.
39. Bettencourt, L. A. (1997). Customer voluntary performance: customers as partners in service delivery. *Journal of Retailing*, 73(3), 383-406.
40. Bharti, K., Agrawal, R., & Sharma, V. (2014). What drives the customer of world's largest market to participate in value co-creation? *Marketing Intelligence & Planning*, 32(4), 413-435.
41. Bharti, K., Agrawal, R., & Sharma, V. (2015). Value co-creation Literature review and proposed conceptual framework. *International Journal of Market Research*, 57(4), 571-603.
42. Bitner, M. J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing*, 56 (2), 57-71
43. Bitner, M. J., Brown, S. W., & Meuter, M. L. (2000). Technology infusion in service encounters. *Journal of the Academy of Marketing Science*, 28(1), 138-149.
44. Bitner, M. J., Faranda, W. T., Hubbert, A. R., & Zeithaml, V. A. (1997). Customer contributions and roles in service delivery. *International Journal of Service Industry Management*, 8(3), 193-205.
45. Black, H. G., Vincent, L. H., & Skinner, S.J. (2014). Customers helping customers: payoffs for linking customers. *Journal of Services Marketing*, 28(5), 391-401.
46. Blasco-Arcas, L., Hernandez-Ortega, B., & Jimenez-Martinez, J. (2014). The online purchase as a context for co-creating experiences. Drivers of and consequences for customer behavior. *Internet Research*, 24(3), 393-412.
47. Blau, P. M. (1964). *Exchange and power in social life*. New York: Transaction Publishers.
48. Bobbitt, L. M., & Dabholkar, P. A. (2001). Integrating attitudinal theories to understand and predict use of technology-based self-service: the internet as an illustration. *International Journal of Service Industry Management*, 12(5), 423-450.
49. Bolton, R. N. (2011). Comment: Customer Engagement: Opportunities and Challenges for Organizations. *Journal of Service Research*, 14(3), 272-274.
50. Bolton, R., & Saxena-Iyer, S. (2009). Interactive Services: A Framework, Synthesis and Research Directions. *Journal of Interactive Marketing*, 23(1), 91-104.

51. Bowen, D. E. (1986). Managing customers as human resources in service organizations. *Human Resource Management*, 25(3), 371-383.
52. Bowers, M. R., Martin, C. L., & Luker, A. (1990). Trading places: employees as customers customers as employees. *Journal of Services Marketing*, 4(2), 55-69.
53. Boyer, K. K., Hallowell, R., & Roth, A. V. (2002). E-services: operating strategy—a case study and a method for analyzing operational benefits. *Journal of Operations Management*, 20(2), 175-188.
54. Boyer, K. K., Hallowell, R., & Roth, A. V. (2002). E-services: operating strategy—a case study and a method for analyzing operational benefits. *Journal of Operations Management*, 20(2), 175-188.
55. Brabham, D. C. (2008). Crowdsourcing as a model for problem solving an introduction and cases. *Convergence: the international journal of research into new media technologies*, 14(1), 75-90.
56. Bratman, M. E. (1992). Shared Cooperative Activity. *The Philosophical Review* 101(2), 327–341.
57. Breakwell, G. M., Fife-Schaw, C., Lee, T., & Spencer, J. (1986). Attitudes to new technology in relation to social beliefs and group memberships: A preliminary investigation. *Current Psychology*, 5(1), 34-47.
58. Breidbach, C. F., & Maglio, P. P. (2016). Technology-enabled value co-creation: An empirical analysis of actors, resources, and practices. *Industrial Marketing Management*.(Article in press).
59. Brodie, R. J., Hollebeek, L. D., Juric, B., & Ilic, A. (2011). Customer engagement: conceptual domain fundamental propositions and implications for research. *Journal of Service Research*, 14(3), 1-20.
60. Brodie, R. J., Saren, M., & Pels, J. (2011). Theorizing about the Service Dominant Logic: The bridging role of middle range theory. *Marketing Theory*, 11(1), 75–91.
61. Büyüközkan, G., Baykasoğlu, A., & Dereli, T. (2007). Integration of Internet and web-based tools in new product development process. *Production Planning and Control*, 18(1), 44-53.
62. Byrne, B. M. (2001). Structural equation modeling with AMOS, EQS, and LISREL: Comparative approaches to testing for the factorial validity of a measuring instrument. *International Journal of Testing*, 1(1), 55-86.

63. Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56(2), 81-105.
64. Carbonell, P., Rodríguez-Escudero, A. I., & Pujari, D. (2009). Customer Involvement in New Service Development: An Examination of Antecedents and Outcomes*. *Journal of Product Innovation Management*, 26(5), 536-550.
65. Carbonell, P., Rodríguez-Escudero, A. I., & Pujari, D. (2012). Performance effects of inviting lead users and close customers in new service development. *Journal of Services Marketing*, 26(7), 497-509.
66. Carù, A., & Cova, B. (2007). *Consuming experience*. New York: Routledge
67. Cermak, D. S., File, K. M., & Prince, R. A. (1994). Customer participation in service specification and delivery. *Journal of Applied Business Research*, 10(2), 90-97.
68. Chan, K. W., Yim, C. K., & Lam, S. S. (2010). Is customer participation in value creation a double-edged sword? Evidence from professional financial services across cultures. *Journal of marketing*. 74(3), 48-64.
69. Chandler, J. D., & Lusch, R. F. (2015). Service Systems A Broadened Framework and Research Agenda on Value Propositions, Engagement, and Service Experience. *Journal of Service Research*, 18(1), 6-22.
70. Chandler, J. D., & Vargo, S. L. (2011). Contextualization and value-in context: how context frames exchange. *Marketing Theory*, 11(1), 35–49.
71. Chandler, J. D., & Wieland, H. (2010). Embedded Relationships: Implications for Networks, Innovation, and Ecosystems. *Journal of Business Market Management*, 4(4), 199-215.
72. Chathoth, P., Altinay, L., Harrington, R. J., Okumus, F., & Chan, E. S. (2013). Co-production versus co-creation: A process based continuum in the hotel service context. *International Journal of Hospitality Management*, 32, 11-20.
73. Chea, S., & Luo, M. M. (2008). Post-adoption behaviors of e-service customers: The interplay of cognition and emotion. *International Journal of Electronic Commerce*, 12(3), 29-56.
74. Chen, C. F., & Wang, J. P. (2016). Customer participation, value co-creation and customer loyalty—A case of airline online check-in system. *Computers in Human Behavior*, 62, 346-352.
75. Chen, S. C., & Raab, C. (2014). Construction and Validation of the Customer Participation Scale. *Journal of Hospitality & Tourism Research*, (Article in Press).

76. Chen, S. Y., & Lee, T. R. (2008). The corresponding strategic marketing mix to the relationships between national culture and consumer value. *International Journal of Management and Enterprise Development*, 5(3), 356-369.
77. Chen, Z. X., Aryee, S., & Lee, C. (2005). Test of a mediation model of perceived organizational support. *Journal of Vocational Behavior*, 66(3), 457-470.
78. Chesbrough, H., & Spohrer, J. (2006). A research manifesto for services science. *Communications of the ACM*, 49(7), 35-40.
79. Cheung, M. F., & To, W. M. (2011). Customer involvement and perceptions: The moderating role of customer co-production. *Journal of Retailing and Consumer Services*, 18(4), 271-277.
80. Chin, W. W., & Newsted, P. R. (1995). Research report-The importance of specification in causal modeling: the case of end-user computing satisfaction. *Information Systems Research*, 6(1), 73-81.
81. Chong, A. Y. L., Chan, F. T., & Ooi, K. B. (2012). Predicting consumer decisions to adopt mobile commerce: Cross country empirical examination between China and Malaysia. *Decision Support Systems*, 53(1), 34-43.
82. Chua, C., & Sweeney, L. (2004). Measuring Customer Participation in Recreational Services: Effects on Customer Perceptions of Value. AMA Winter Educators' Conference Proceedings, 15, 266-267, Business Source Complete EBSCOhost.
83. Chung, J. Y., Kyle, G. T., Petrick, J. F., & Absher, J. D. (2011). Fairness of prices user fee policy and willingness to pay among visitors to a national forest. *Tourism Management*, 32(5), 1038–1046.
84. Churchill, G. A. (1979). A Paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research*, 16(1), 64-73.
85. Churchill, G. A. Jr. (1995). *Marketing Research: Methodological Foundations*. Fort Worth, TX: Dryden Press.
86. CII-IFC (2010). *2010 Liveability Index*, Retrieved from <http://www.businessstandard.com/india/news/delhi-offersbest-8217qualitylife8217-ciiifc-liveability-index-2010/387882/> [Accessed on Dec 1, 2016].
87. Claycomb, C., Lengnick-Hall, C. A., & Inks, L. W. (2001). The customer as a productive resource: a pilot study and strategic implications. *Journal of Business Strategies*, 18(1), 47-69.

88. Collier, J. E., & Bienstock, C. C. (2006). Measuring service quality in e-retailing. *Journal of Service Research*, 8(3), 260-275.
89. Conner, K. (1991). A historical comparison of resource-based logic and five schools of thought within industrial organization economics: Do we have a new theory of the firm? *Journal of Management*, 17: 121–154.
90. Cova, B., & Dalli, D. (2009). Working Consumers: The Next Step in Marketing Theory? *Marketing Theory*, 9(3), 315-339.
91. Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. USA: Sage publications.
92. Crowther, P., & Donlan, L. (2011). Value-creation space: The role of events in a service dominant marketing paradigm. *Journal of Marketing Management*, 27(13/14), 1444–1463.
93. Cunningham, L. F., Young, C. E., & Gerlach, J. H. (2008). Consumer views of self-service technologies. *The Service Industries Journal*, 28(6), 719-732.
94. Czepiel, J. A. (1990). Service encounters and service relationships: implications for research. *Journal of Business Research*, 20(1), 13-21.
95. Dabholkar, P. A. (1990). How to Improve Perceived Service Quality by Increasing Customer Participation. In B.J. Dunlap (ed.) *Developments in Marketing Science*, 13 (pp. 438-487), Cullowhee, NC: Academy of Marketing Science.
96. Dabholkar, P. A. (1996). Consumer Evaluation of New Technology-Based Self-Service Options: An Investigation of Alternative Models of Service Quality. *International Journal of Research in Marketing*, 13(1), 29-51.
97. Dabholkar, P. A., & Bagozzi, R. P. (2002). An attitudinal model of technology-based self-service: moderating effects of consumer traits and situational factors. *Journal of the Academy of Marketing Science*, 30(3), 184-201.
98. Damkuvienė, M., Tijušaitienė, R., Petukienė, E., & Bersenaite, J. (2012). Customer Perceived Co-creation Value: Synthesis of the Extant Literature. *Socialiniai tyrimai / Social Research*, 4(29), 59-68.
99. Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319-40.
100. Davis, R., Lang, B., & Gautam, N. (2013). Modeling utilitarian-hedonic dual mediation (UHDM) in the purchase and use of games. *Internet Research*, 23(2), 229-256.

101. Dawra, J., Katyal, K., & Reddy, M. N. (2012). Perturbation model for a product of joint consumption. *Journal of Targeting, Measurement and Analysis for Marketing*, 20(3), 145-157.
102. De Ruyter, K., Wetzels, M., & Kleijnen, M. (2001). Customer adoption of e-service: an experimental study. *International Journal of Service Industry Management*, 12(2), 184-207.
103. Denyer, D., & Tranfield, D. (2009). Producing a systematic review. In D. A. Buchanan and A. Bryman (Eds), *The SAGE Handbook of Organizational Research Methods* (pp. 671-689). London: SAGE Publications Ltd.
104. Ding, X., Verma, R., & Iqbal, Z. (2007). Self-service technology and online financial service choice. *International Journal of Service Industry Management*, 18(3), 246-268.
105. Dong, B., Evans, K. R., & Zou, S. (2008). The effects of customer participation in co-created service recovery. *Journal of the Academy of Marketing Science*, 36(1), 123–137.
106. Douglas, A., Muir, L., & Meehan, K. (2003). E-quality in the e-services provision of legal practices. *Managing Service Quality: An International Journal*, 13(6), 483-491.
107. Drucker, P. F. (1964). *Managing for results*. London: Pan Books, Ltd.
108. Dutta, S., & Segev, A. (1999). Business transformation on the Internet. *European Management Journal*, 17(5), 466-476.
109. Echeverri, P., & Skålén, P. (2011). Co-creation and co-destruction: A practice-theory based study of interactive value formation. *Marketing Theory*, 11(3), 351–373.
110. Edvardsson, B., Enquist, B., & Johnston, R. (2005). Co-creating Customer Value through Hyperreality in the Prepurchase Service Experience. *Journal of Service Research*, 8(2), 149-161.
111. Edvardsson, B., Kristensson, P., Magnusson, P., & Sundström, E. (2012). Customer integration within service development-A review of methods and an analysis of in situ and ex situ contributions. *Technovation*, 32(7), 419-429.
112. Edvardsson, B., Tronvoll, B., & Gruber, T. (2011). Expanding understanding of service exchange and value co-creation: A social construction approach. *Journal of the Academy of Marketing Science*, 39(2); 327–339.

113. Ellinger, A. D., Ellinger, A. E., & Keller, S. B. (2003). Supervisory coaching behavior employee satisfaction and warehouse employee performance: A dyadic perspective in the distribution industry. *Human Resource Development Quarterly*, 14(4), 435-458.
114. Erasmus, A. C., Boshoff, E., & Rousseau, G. G. (2001). Consumer decision-making models within the discipline of consumer science: a critical approach. *Journal of Family Ecology and Consumer Sciences*, 29(1), 82-90.
115. Ertimur, B., & Venkatesh, A. (2010). Opportunism in co-production: Implications for value co-creation. *Australasian Marketing Journal*, 18(4), 256-263.
116. Etgar, M. (2008). A descriptive model of the consumer co-production process. *Journal of the Academy of Marketing Science*, 36(1), 97-108.
117. Fang, E., Palmatier, R. W., & Evans, K. R. (2008). Influence of customer participation on creating and sharing of new product value. *Journal of the Academy of Marketing Science* 36(3), 322-336.
118. Fassnacht, M., & Koese, I. (2006). Quality of electronic services conceptualizing and testing a hierarchical model. *Journal of service research*, 9(1), 19-37.
119. Featherman, M. S., & Pavlou, P. A. (2003). Predicting e-services adoption: a perceived risk facets perspective. *International journal of human-computer studies*, 59(4), 451-474.
120. Field, A. (2005). *Discovering statistics with SPSS*. India: Pearson India.
121. Firat, A. F., & Venkatesh, A. (1995). Liberatory postmodernism and the reenchantment of consumption. *Journal of Consumer Research*, 22(3), 239-267.
122. Firat, A., Dholakia, N., & Venkatesh, A. (1995). Marketing in a postmodern world. *European Journal of Marketing*, 29(1), 40-56.
123. Fitzsimmons, J.A. (1985). Consumer participation and productivity in service operations. *Interfaces*, 15(3), 60-67.
124. Flores, J., & Vasquez-Parraga, A. Z. (2015). The impact of choice on co-produced customer value creation and satisfaction. *Journal of Consumer Marketing*, 32(1), 15-25.
125. Foa, U. G. (1971). Interpersonal and economic resources. *Science*, 171(3969), 345-351.
126. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.

127. Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382-388.
128. Fournier, S. (1998). Consumers and Their Brands: Developing Relationship Theory in Consumer Research. *Journal of Consumer Research*, 24(4), 343-73.
129. Franke, N., & Schreier, M. (2010). Why customers value self-designed products: the importance of process effort and enjoyment. *Journal of Product Innovation Management*, 27(7), 1020–1031.
130. Franke, N., Keinz, P., & Steger, C. J. (2009). Testing the value of customization: when do customers really prefer products tailored to their preferences? *Journal of Marketing*, 73(5), 103–121.
131. Fred Van Raaij, W., & Pruyn, A. T. (1998). Customer control and evaluation of service validity and reliability. *Psychology & Marketing (1986-1998)*, 15(8), 811-833.
132. Fuchs, C., & Schreier, M. (2011). Customer empowerment in new product development*. *Journal of Product Innovation Management*, 28(1), 17-32.
133. Füller, J. (2010). Refining virtual co-creation from a consumer perspective. *California Management Review*, 52(2), 98–122.
134. Füller, J., Hutter, K., & Faullant, R. (2011). Why co-creation experience matters? Creative experience and its impact on the quantity and quality of creative contributions. *R&D Management*, 41(3), 259-273.
135. Füller, J., Matzler, K., & Hoe, M. (2008). Brand community members as a source of innovation. *Journal of Product Innovation Management*, 25(6), 608–619.
136. Füller, J., Mühlbacher, H., Matzler, K., & Jawecki, G. (2009). Consumer empowerment through internet-based co-creation. *Journal of Management Information Systems*, 26(3), 71-102.
137. Fyrberg Y. A. (2013). ‘It’s Not Us, It’s Them!’ - Rethinking Value Co-Creation among Multiple Actors. *Journal of Marketing Management*, 29(9-10), 1163-81.
138. Gabbott, M. (2004). Undertaking a literature review in marketing. *The Marketing Review*, 4(4), 411-429.
139. Galvagno M., & Dalli, D. (2014). Theory of value co-creation: a systematic literature review. *Managing Service Quality*, 24(6), 643-683.
140. Garg, R., Rahman, Z., & Kumar, I. (2011). Customer experience: a critical literature review and research agenda. *International Journal of Services Sciences*, 4(2), 146-173.

141. Gautam, R., & Singh, A. (2010). Corporate social responsibility practices in India: A study of top 500 companies. *Global Business and Management Research: An International Journal*, 2(1), 41-56.
142. Gautam, R., & Singh, A. (2010). Critical environmental indicators used to assess environmental performance of business. *Global Business and Management Research*, 2(2-3), 224-236.
143. Gebauer, H., Johnson, M., & Enquist, B. (2010). Value co-creation as a determinant of success in public transport services: A study of the Swiss Federal Railway operator (SBB). *Managing Service Quality*, 20(6), 511-530.
144. Gefen, D., & Straub, D. W. (2004). Consumer trust in B2C e-Commerce and the importance of social presence: experiments in e-Products and e-Services. *Omega*, 32(6), 407-424.
145. Gentile, C., Spiller, N., & Noci, G. (2007). How to sustain the customer experience: An overview of experience components that co-create value with the customer. *European Management Journal*, 25(5), 395-410.
146. Glaman, J. M., Jones, A. P. and Rozelle, R. M. 2002. Competitiveness and the similarity of preferred coworkers. *Journal of Applied Social Psychology*, 32(1): 142–158.
147. Goldsmith, R. E., & Goldsmith, E. B. (2002). Buying apparel over the Internet. *Journal of Product & Brand Management*, 11(2), 89-102.
148. Goldsmith, Ronald E. (2000), "How Innovativeness Distinguishes Online Buyers," *Quarterly Journal of Electronic Commerce*, 1 (4), 323-333.
149. Golob, T.F. (2003). Structural equation modeling for travel behaviour research, *Transport Research Part B*, 37, 1-25.
150. Goyette, I., Ricard, L., Bergeron, J., & Marticotte, F. (2010). e-WOM Scale: word-of-mouth measurement scale for e-services context. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 27(1), 5-23.
151. Gremler, D. D., & Brown, S. W. (1999). The loyalty ripple effect: appreciating the full value of customers. *International Journal of Service Industry Management*, 10(3), 271-293.
152. Grewal, D., Levy, M., & Kumar, V. (2009). Customer experience management in retailing: An organizing framework. *Journal of Retailing*, 85(1), 1-14.

153. Grice, J. W. (2001). Computing and evaluating factor scores. *Psychological methods*, 6(4), 430-450.
154. Grisseemann, U. S., & Stokburger-Sauer, N. E. (2012). Customer co-creation of travel services: The role of company support and customer satisfaction with the co-creation performance. *Tourism Management*, 33(6), 1483-1492.
155. Grisseemann, U. S., & Stokburger-Sauer, N. E. (2012). Customer co-creation of travel services: The role of company support and customer satisfaction with the co-creation performance. *Tourism Management*, 33(6), 1483-1492.
156. Grönroos, C. (1994). From marketing mix to relationship marketing: Towards a paradigm shift in marketing. *Management Decision*, 32(2), 4–20.
157. Grönroos, C. (1996). Relationship marketing: Strategic and tactical implications. *Management Decision*, 34(3), 5–14.
158. Grönroos, C. (1997). Value-driven relational marketing: From products to resources and competencies. *Journal of marketing management*, 13(5), 407-419.
159. Grönroos, C. (2000). Creating a relationship dialogue: Communication, interaction and value. *Marketing Review*, 1, 5–14.
160. Grönroos, C. (2004). The relationship marketing process: Communication, interaction, dialogue, value. *Journal of Business and Industrial Marketing*, 19(2), 99–113.
161. Grönroos, C. (2006). On defining marketing: finding a new roadmap for marketing. *Marketing Theory*, 6(4), 395-417,
162. Grönroos, C. (2008). Service logic revisited: who creates value? And who co-creates? *European Business Review*, (4), 298-314.
163. Grönroos, C. (2011). A service perspective on business relationships: The value creation interaction and marketing interface. *Industrial Marketing Management*, 40(2), 240-247.
164. Grönroos, C. (2011). Value co-creation in service logic: a critical analysis. *Marketing Theory*, 11(3), 279-301.
165. Grönroos, C. (2012). Conceptualising value co-creation: A journey to the 1970s and back to the future. *Journal of Marketing Management*, 28(13-14), 1520-1534.
166. Grönroos, C., & Ravald, A. (2011). Service as a business logic: implications for value creation and marketing. *Journal of Service Management*, 22(1), 5-22.
167. Grönroos, C., & Voima, P. (2013). Critical service logic: making sense of value creation and co-creation. *Journal of the Academy of Marketing Science*, 4(2), 133-150.

168. Gummerus, J. (2010). E-services as resources in customer value creation: A service logic approach. *Managing Service Quality: An International Journal*, 20(5), 425-439.
169. Gummerus, J. (2013). Value Creation Processes and Value Outcomes in Marketing Theory. *Marketing Theory*, 13(1), 19-46.
170. Gummerus, J., Liljander, V., Pura, M., & Van Riel, A. (2004). Customer loyalty to content-based web sites: the case of an online health-care service. *Journal of services Marketing*, 18(3), 175-186.
171. Gummesson, E. (1996). Relationship marketing and imaginary organizations: a synthesis. *European journal of Marketing*, 30(2), 31-44.
172. Gummesson, E. (2000). Internal marketing in the light of relationship marketing and network organizations. *Internal marketing: Directions for management*, 27-42.
173. Gummesson, E. (2006). Many to many marketing as grand theory: A Nordic School contribution. In S.L. Vargo & R.F. Lusch (Eds.), *The Service-Dominant Logic of marketing: Dialog debate and directions*, (pp 339-353). New York: ME Sharpe.
174. Gummesson, E. (2007). Exit services marketing-enter service marketing. *Journal of Customer Behaviour*, 6(2), 113-141.
175. Gummesson, E. (2008). Extending the service-dominant logic: from customer centricity to balanced centricity. *Journal of the Academy of Marketing Science*, 36(1)15-17.
176. Gummesson, E., & Mele, C. (2010). Marketing as value co-creation through network interaction and resource integration. *Journal of Business Market Management*, 4(4), 181-198.
177. Gunasekaran, A., Marri, H. B., McGaughey, R. E., & Nebhwani, M. D. (2002). E-commerce and its impact on operations management. *International Journal of Production Economics*, 75(1), 185-197.
178. Gunasekaran, A., McNeil, R. D., & Shaul, D. (2002). E-learning: research and applications. *Industrial and Commercial Training*, 34(2), 44-53.
179. Guo, L., & Ng, I. (2011). The co-production of equipment-based services: An interpersonal approach. *European Management Journal*, 29(1), 43-50.
180. Ha, J., & Jang, S. S. (2010). Perceived values, satisfaction, and behavioral intentions: The role of familiarity in Korean restaurants. *International Journal of Hospitality Management*, 29(1), 2-13.

181. Hahn, J., & Kauffman, R. J. (2002). Information Foraging in Internet-Based Selling: A System Design Value Assessment Framework. In M. J. Shaw (Ed.), *E-Business Management* (pp. 195-230). New York: Springer.
182. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (Vol. 6). Upper Saddle River, NJ: Pearson Prentice Hall.
183. Haksever, C., Chaganti, R., & Ronald, G. C. (2004). A Model of Value Creation: Strategic View. *Journal of Business Ethics*, 49(3), 291-305.
184. Handrich, M., & Heidenreich, S. (2013). The Willingness Of A Customer To Co-Create Innovative Technology-Based Services: Conceptualisation and Measurement. *International Journal of Innovation Management*, 17(4), 1-36.
185. Hardesty, D. M., & Bearden, W. O. (2004). The Use of Expert Judges in Scale Development: Implications for Improving Face Validity of Measures of Unobservable Constructs. *Journal of Business Research*, 57(2), 98-107.
186. Harris, K. E., Grewal, D., Mohr, L. A., & Bernhardt, K. L. (2006). Consumer responses to service recovery strategies: the moderating role of online versus offline environment. *Journal of Business Research*, 59(4), 425-431.
187. Harris, L. C., & Goode, M. M. (2004). The four levels of loyalty and the pivotal role of trust: a study of online service dynamics. *Journal of Retailing*, 80(2), 139-158.
188. Harwood, T., & Garry, T. (2010). 'It's Mine!' – Participation and Ownership within Virtual Co-Creation Environments. *Journal of Marketing Management*, 26(3-4), 290-301.
189. Heidenreich, S. & Handrich, M. (2015). Adoption of Technology-Based Services: The Role of Customers' Willingness to Co-Create. *Journal of Service Management*, 26(1), 44-71.
190. Heinonen, K. (2004). Reconceptualizing customer perceived value: the value of time and place. *Managing Service Quality: An International Journal*, 14(2/3), 205-215.
191. Heinonen, K. (2009). The influence of customer activity on e-service value-in-use. *International Journal of Electronic Business*, 7(2), 190-214.
192. Heinonen, K., Strandvik, T., & Voima, P. (2013). Customer Dominant Value Formation in Service. *European Business Review*, 25(2), 104-23.
193. Heinonen, K., Strandvik, T., Mickelsson, K.J., Edvardsson. B., Sundström, E., & Andersson, P. (2010). A customer-dominant logic of service. *Journal of Service Management*, 21(4), 531-548.

194. Helkkula, A., & Kelleher, C. (2010). Circularity of customer service experience and customer perceived value. *Journal of Customer Behaviour*, 9(1), 37–53.
195. Hibbert, S., Winklhofer, H., & Temerak, M. S. (2012). Customers as resource integrators toward a model of customer learning. *Journal of Service Research*, 15(3), 247-261.
196. Hilton, T., Hughes, T., & Chalcraft, D. (2012). Service co-creation and value realization. *Journal of Marketing Management*, 28(13-14), 1504-1519.
197. Hilton, T., Hughes, T., Little, E., & Marandi, E. (2013). Adopting self-service technology to do more with less. *Journal of Services Marketing*, 27(1), 3-12.
198. Hing Yee Tsang, J., & Antony, J. (2001). Total quality management in UK service organisations: some key findings from a survey. *Managing Service Quality: An International Journal*, 11(2), 132-141.
199. Hinkin, T. R. (1995). A Review of Scale Development Practices in the Study of Organizations. *Journal of Management*, 21(5), 967-88.
200. Hinkin, T. R. (1998). "A Brief Tutorial on the Development of Measures for Use in Survey Questionnaires." *Organizational Research Methods* 1(1), 104-21.
201. Hofacker, C. F., Goldsmith, R. E., Bridges, E., & Swilley, E. (2007). E-services: a synthesis and research agenda. In H. Evanschitzky & G. R. Iyer (Eds.), *E-Services* (pp. 13-44). Germany: DUV.
202. Hoffman, K., & Bateson, J. (2010). *Services marketing: concepts, strategies, & cases*. Cengage Learning.
203. Holbrook, M. B. (2006). Consumption Experience, Customer Value, and Subjective Personal Introspection: An Illustrative Photographic Essay. *Journal of Business Research*, 59(6), 714-25.
204. Holbrook, M. B., & Hirschman, E. C. (1982). The Experiential Aspects of Consumption: Consumer Fantasies, Feelings, and Fun. *Journal of Consumer Research* 9(2), 132-40.
205. Holbrook, M.B. (2006). Consumption experience, customer value, and subjective personal introspection: An illustrative photographic essay. *Journal of Business Research*, 59(6), 714-725.
206. Hollebeek, L. D. & Brodie, R. J. (2009). Wine Service Marketing, Value Co-Creation and Involvement: Research Issues. *International Journal of Wine Business Research* 21(4), 339-53.

207. Hollenbeck, C. R., Peters, C., & Zinkhan, G. M. (2008). Retail spectacles and brand meaning: Insights from a brand museum case study. *Journal of Retailing*, 84(3), 334-353.
208. Holloway, B. B., & Beatty, S. E. (2003). Service failure in online retailing a recovery opportunity. *Journal of Service Research*, 6(1), 92-105.
209. Holloway, B. B., Wang, S., & Parish, J. T. (2005). The role of cumulative online purchasing experience in service recovery management. *Journal of Interactive Marketing*, 19(3), 54-66.
210. Holt, D. B. (1995). How consumers consume: A typology of consumption practices. *Journal of consumer research*, 22(1), 1-16.
211. Hoyer, W. D., & Macinnis, D. J. (1997). *Customer Behavior*. Boston: Houghton Mifflin Company
212. Hoyer, W. D., Chandy, R., Dorotic, M., Krafft, M., & Singh, S. S. (2010). Consumer co-creation in new product development. *Journal of Service Research*, 13(3), 283-296.
213. Hsieh, P. L. (2015). Encounters in an Online Brand Community: Development and Validation of a Metric for Value Co-Creation by Customers. *Cyberpsychology, Behavior, and Social Networking*, 18(5), 286-295.
214. http://en.wikipedia.org/wiki/List_of_Indian_states_by_GDP [Accessed on 1st Dec, 2015].
215. Huang, Z., & Benyoucef, M. (2013). From e-commerce to social commerce: A close look at design features. *Electronic Commerce Research and Applications*, 12(4), 246-259.
216. Humphreys, P. K., Shiu, W. K., & Chan, F. T. S. (2001). Collaborative buyer-supplier relationships in Hong Kong manufacturing firms. *Supply Chain Management: An International Journal*, 6(4), 152-162.
217. Ind, N., & Coates, N. (2013). The meanings of co-creation. *European Business Review*, 25(1), 86-95.
218. Ind, N., Iglesias, O., & Schultz, M. (2013). Building brands together: emergence and outcomes of co-creation. *California Management Review*, 55(3), 5-26.
219. Iqbal, Z., Verma, R., & Baran, R. (2003). Understanding consumer choices and preferences in transaction-based e-services. *Journal of Service Research*, 6(1), 51-65.
220. Jaakkola, E., Helkkula, A., & Aarikka-Stenroos, L. (2015). Service experience co-creation: conceptualization, implications, and future research directions. *Journal of*

Service Management, 26(2), 182-205.

221. James, L. R., Mulaik, S. A., & Brett, J. (1982). *Causal analysis: Models, assumptions, and data*. Beverly Hills: Sage.
222. Javalgi, R. G., Martin, C. L., & Todd, P. R. (2004). The export of e-services in the age of technology transformation: challenges and implications for international service providers. *Journal of Services Marketing*, 18(7), 560-573.
223. Kambil, A., Friesen, G. B., & Sundaram, A. (1999). Co-creation: A new source of value. *Outlook Magazine*, 3(2), 23-29.
224. Karahasanović, A., Brandtzæg, P. B., Heim, J., Lüders, M., Vermeir, L., Pierson, J., Lievens, B., Jeroen Vanattenhoven, J., & Jans, G. (2009). Co-creation and user-generated content—elderly people’s user requirements. *Computers in Human Behavior*, 25(3), 655-678.
225. Kaushik, A. K., Agrawal, A. K., & Rahman, Z. (2015). Tourist behaviour towards self-service hotel technology adoption: Trust and subjective norm as key antecedents. *Tourism Management Perspectives*, 16, 278-289.
226. Kelleher, C., Wilson, H., & Peppard, J. (2015). The Score is not the Music: Practices and Value in Collaborative Consumption Contexts. In *Ideas in Marketing: Finding the New and Polishing the Old* (pp. 23-23). New York: Springer International Publishing.
227. Kelley, S. W., Donnelly, J. H., & Skinner, S. J. (1990). Customer participation in service production and delivery. *Journal of Retailing*, 66(3), 315-335.
228. Kerlinger, F. N. (1986). *Foundations of Behavioral Research*. New York: Wadsworth Publishing.
229. Khalifa, A.S. (2004). Customer value: a review of recent literature and an integrative configuration. *Management decision*, 42(5), 645-666.
230. Kim, D. J., Kim, W. G., & Han, J. S. (2007). A perceptual mapping of online travel agencies and preference attributes. *Tourism management*, 28(2), 591-603.
231. Klaus, P. P., & Maklan, S. (2012). EXQ: a multiple-item scale for assessing service experience. *Journal of Service Management*, 23(1), 5-33.
232. Knoblich, G., Butterfill, S., & Sebanz, N. (2011). Psychological research on joint action: theory and data. *Psychology of Learning and Motivation-Advances in Research and Theory*, 54, 59–101.
233. Kohler, T., Fueller, J., Matzler, K., & Stieger, D. (2011). Co-creation in virtual worlds: the design of the user experience. *MIS quarterly*, 35(3), 773-788.

234. Kothandaraman, P., & Wilson, D. T. (2001). The future of competition: value-creating networks. *Industrial Marketing Management*, 30(4), 379-389.
235. Kotler, P., Kartajaya, H., & Setiawan, I. (2010). *Marketing 3.0. From products to customers to the human spirit*. New Jersey: Wiley & Sons.
236. Kristensson, P., Matthing, J., & Johansson, N. (2008). Key strategies for the successful involvement of customers in the co-creation of new technology-based services. *International Journal of Service Industry Management*, 19(4), 474-491.
237. Lähteenmäki, I., & Nätti, S. (2013). Obstacles to upgrading customer value-in-use in retail banking. *International Journal of Bank Marketing*, 31(5), 334-347.
238. Lambert, D. M., & Enz, M. G. (2012). Managing and measuring value co-creation in business-to-business relationships. *Journal of Marketing Management*, 28(13-14), 1588-1625.
239. Lazarus, D., Krishna, A., & Dhaka, S. (2014). Co-creation Willingness Matrix and Capability Continuum for Classification and Scaling of Services. *Journal of Global Marketing*, 27(4), 213-225.
240. Lee, H. J. (2015). Consumer-to-store employee and consumer-to-self-service technology (SST) interactions in a retail setting. *International Journal of Retail & Distribution Management*, 43(8), 676-692.
241. Lee, T. R., Lin, J. H., & Koh, S. L. (2007). Strategising customer voice-based quality improvement for logistics service providers. *International Journal of Value Chain Management*, 1(3), 266-280.
242. Lengnick-Hall, C. A. (1996). Customer contributions to quality: A different view of the customer-oriented firm. *Academy of Management Review*, 21(3), 791-824.
243. Levitt, T. (1960). Marketing myopia. *Harvard Business Review*, 38(4), 45-56.
244. Libai, B., Bolton, R., Bügel, M. S., De Ruyter, K., Götz, O., Risselada, H., & Stephen, A. T. (2010). Customer-to-customer interactions: broadening the scope of word of mouth research. *Journal of Service Research*, 13(3), 267-282.
245. Limayem, M., Khalifa, M., & Frini, A. (2000). What makes consumers buy from Internet? A longitudinal study of online shopping. *IEEE Transactions on Systems, Man, and Cybernetics - Part A: Systems and Humans*, 30(4), 421-432.
246. Lin, J. S. C., & Hsieh, P. L. (2011). Assessing the self-service technology encounters: development and validation of SSTQUAL scale. *Journal of Retailing*, 87(2), 194-206.

247. Lindgreen, A., & Wynstra, F. (2005). Value in business markets: What do we know? Where are we going? *Industrial Marketing Management*, 34(7), 732-748.
248. Liu, C., Li, Q., & Zhao, X. (2009). Challenges and opportunities in collaborative business process management: Overview of recent advances and introduction to the special issue. *Information Systems Frontiers*, 11(3), 201-209.
249. Löbner, H., & Hahn, M. (2013). Measuring Value-in-Context from a Service-Dominant Logic's Perspective. In N.K. Malhotra (Ed.), *Review of Marketing Research*, 10(pp.255-282), Emerald Group Publishing Limited.
250. Lovelock, C. H., & Young, R. F. (1979). Look to consumers to increase productivity. *Harvard Business Review*, 57(3), 168-178.
251. Lovelock, C., & Gummesson, E. (2004). Whither services marketing? In search of a new paradigm and fresh perspectives. *Journal of Service Research*, 7(1), 20-41.
252. Lundkvist, A., & Yakhlef, A. (2004). Customer involvement in new service development: a conversational approach. *Managing Service Quality: An International Journal*, 14(2/3), 249-257.
253. Lusch, R. F., & Vargo, S. L. (2006). Service-dominant logic: reactions, reflections and refinements. *Marketing theory*, 6(3), 281-288.
254. MacCallum, R. C., Roznowski, M., & Necowitz, L. B. (1992). Model modifications in covariance structure analysis: the problem of capitalization on chance. *Psychological bulletin*, 111(3), 490-504.
255. Maglio, P. P., & Spohrer, J. (2008). Fundamentals of service science. *Journal of the Academy of Marketing Science*, 36(1), 18-20.
256. Mahdavi, I., Mahdavi-Amiri, N., Heidarzade, A., & Nourifar, R. (2008). Designing a model of fuzzy TOPSIS in multiple criteria decision making. *Applied Mathematics and Computation*, 206(2), 607-617.
257. Malhotra, N. (2004). *Marketing Research and SPSS 11.0 Package*. USA: Pearson Education
258. Malhotra, N. K., & Das, S. (2009). *Marketing research: An applied orientation*, 5/e. Pearson Education India.
259. Mascarenhas, O. A., Kesavan, R., & Bernacchi, M. (2004). Customer value-chain involvement for co-creating customer delight. *Journal of Consumer Marketing*, 21(7), 486-496.

260. Mathis, E. F., Kim, H. L., Uysal, M., Sirgy, J. M., & Prebensen, N. K. (2016). The effect of co-creation experience on outcome variable. *Annals of Tourism Research*, 57, 62-75.
261. Matsuno, K., Mentzer, J. T., & Özsomer, A. (2002). The effects of entrepreneurial proclivity and market orientation on business performance. *Journal of Marketing*, 66(3), 18-32.
262. McColl-Kennedy, J. R., Vargo, S. L., Dagger, T. S., Sweeney, J. C., & van Kasteren, Y. (2012). Health care customer value co-creation practice styles. *Journal of Service Research*, 15(4), 370-389.
263. Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. USA: The MIT Press.
264. Melancon, J. P., Griffith, D. A., Noble, S. M., & Chen, Q. (2010). Synergistic effects of operant knowledge resources. *Journal of Services Marketing*, 24(5), 400-411.
265. Meuter, M. L., Bitner, M. J., Ostrom, A. L., & Brown, S. W. (2005). Choosing among alternative service delivery modes: An investigation of customer trial of self-service technologies. *Journal of Marketing*, 69(2), 61-83.
266. Meynhardt, T., Chandler, J. D., & Strathoff, P. (2016). Systemic principles of value co-creation: Synergetics of value and service ecosystems. *Journal of Business Research* (Article in Press).
267. Mills, P. K., & Morris, J. H. (1986). Clients as “partial” employees of service organizations: Role development in client participation. *Academy of Management Review*, 11(4), 726-735.
268. Mills, P. K., Chase, R. B., & Margulies, N. (1983). Motivating the client/employee system as a service production strategy. *Academy of Management Review*, 8(2), 301-310.
269. Minkiewicz, J., Evans, J., & Bridson, K. (2014). How do consumers co-create their experiences? An exploration in the heritage sector. *Journal of Marketing Management*, 30(1-2), 30-59.
270. Moeller, S. (2010). Characteristics of services-a new approach uncovers their value. *Journal of Services Marketing*, 24(5), 359-368.
271. Moeller, S., Ciuchita, R., Mahr, D., Odekerken-Schröder, G., & Fassnacht, M. (2013). Uncovering collaborative value creation patterns and establishing corresponding

- customer roles. *Journal of Service Research*, 16(4), 471-487.
272. Mohd-Any, A. A., Winklhofer, H., & Ennew, C. (2015). Measuring Users' Value Experience on a Travel Website (e-Value) What Value Is Cocreated by the User?. *Journal of Travel Research*, 54(4), 496-510.
273. Mustak, M., Jaakkola, E., & Halinen, A. (2013). Customer participation and value creation: a systematic review and research implications. *Managing Service Quality: An International Journal*, 23(4), 341-359.
274. Nambisan, S., & Baron, R. A. (2009). Virtual customer environments: testing a model of voluntary participation in value co-creation activities. *Journal of Product Innovation Management*, 26(4), 388-406.
275. Naseri, M. B., & Elliott, G. (2011). Role of demographics, social connectedness and prior internet experience in adoption of online shopping: Applications for direct marketing. *Journal of Targeting, Measurement and Analysis for Marketing*, 19(2), 69-84.
276. National Capital Region Planning Board (2008-2009). 2008 *Annual Report*. Retrieved from http://ncrpb.nic.in/pdf_files/AR-2008-09.pdf [Accessed on Dec 1, 2016].
277. Neghina, C., Caniëls, M. C., Bloemer, J. M., & van Birgelen, M. J. (2014). Value cocreation in service interactions Dimensions and antecedents. *Marketing Theory*, 15(2), 221-242.
278. Ng, I. C. L. (2010). Value and systems perspectives in combining human and automated services: commentary on "seven challenges to combining human and automated service". *Canadian Journal of Administrative Sciences*, 27(1), 81-84.
279. Ngai, E.W. (2003). Internet marketing research (1987-2000): a literature review and classification. *European Journal of Marketing*, 37(1/2), 24-49.
280. Normann, R., & Ramirez, R. (1993). From value chain to value constellation: Designing Interactive Strategy. *Harvard Business Review*, 71(4), 65-77.
281. Novak, T. P., Hoffman, D. L., & Yung, Y. F. (2000). Measuring the customer experience in online environments: A structural modeling approach. *Marketing Science*, 19(1), 22-42.
282. Nunnally, J. C., Bernstein, I. H., & Berge, J. M. T. (1967). *Psychometric theory* (Vol. 226). New York: McGraw-Hill.
283. O'hern, M., & Rindfleisch, A. (2010). Customer co-creation. In (Ed.) N.K. Malhotra, *Review of Marketing Research* 6, (84-106). Emerald Group Publishing Limited.

284. Oliveira, P., Roth, A.V., & Gilland, W. (2002). Achieving competitive capabilities in e-services. *Technological Forecasting and Social Change*, 69(7), 721-739.
285. Olorunniwo, F., Hsu, M. K., & Udo, G. J. (2006). Service quality, customer satisfaction, and behavioral intentions in the service factory. *Journal of Services Marketing*, 20(1), 59-72.
286. Ostrom, A. L., Bitner, M. J., Brown, S. W., Burkhard, K.A., Goul, M., Smith-Daniels, V., Demirkan, H., & Rabinovich, E. (2010). Moving forward and making a difference: research priorities for the science of service. *Journal of Service Research*. 13(1), 4–30.
287. Palmatier, R. W., Dant, R.P., & Grewal, D. (2007). A comparative longitudinal analysis of theoretical perspectives of inter-organizational relationship performance. *Journal of Marketing*, 71(4), 172-194.
288. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). Servqual. *Journal of Retailing*, 64(1), 12-40.
289. Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). ES-QUAL a multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213-233.
290. Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). ES-QUAL a multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213-233.
291. Paredes, M. R., Barrutia, J. M., & Echebarria, C. (2014). Resources for value co-creation in e-commerce: a review. *Electronic Commerce Research*, 14(2), 111-136.
292. Park, J., & Ha, S. (2016). Co-creation of service recovery: Utilitarian and hedonic value and post-recovery responses. *Journal of Retailing and Consumer Services*, 28, 310-316.
293. Paswan, A. K., D'Souza, D., & Rajamma, R. K. (2014). Value co-creation through knowledge exchange in franchising. *Journal of Services Marketing*, 28(2), 116-125.
294. Paulin, M., & Ferguson, R. J. (2010). Relational norms in interfirm exchanges: From transactional cost economics to the service-dominant logic. *Journal of Business-to-Business Marketing*, 17(4), 365-405.
295. Payne, A. F., Storbacka, K., & Frow, P. (2008). Managing the co-creation of value. *Journal of the Academy of Marketing Science*, 36(1), 83-96.

296. Payne, A. F., Storbacka, K., Frow, P., & Knox, S. (2009). Co-creating brands: Diagnosing and designing the relationship experience. *Journal of Business Research*, 62(3), 379-389.
297. Payne, A., & Holt, S. (2001). Diagnosing customer value: integrating the value process and relationship marketing. *British Journal of Management*, 12(2), 159-182.
298. Peñaloza, L., & Venkatesh, A. (2006). Further evolving the new dominant logic of marketing: from services to the social construction of markets. *Marketing Theory*, 6(3), 299-316.
299. Peter, J. P. (1979). Reliability: A review of psychometric basics and recent marketing practices. *Journal of Marketing Research*, 6-17.
300. Pine, B. J., & Gilmore, J. H. (1999). *The Experience Economy: Work Is Theatre & Every Business A Stage*. USA: Harvard Business Press.
301. Plé, L., & Chumpitaz Cáceres, R. (2010). Not always co-creation: introducing interactional co-destruction of value in service-dominant logic. *Journal of Services Marketing*, 24(6), 430-437.
302. Polo Peña, A. I., Frías Jamilena, D. M., & Rodríguez Molina, M.Á. (2014). Value co-creation via information and communications technology. *The Service Industries Journal*, 34(13), 1043-1059.
303. Ponnampalath, A., Balaji, M. S., & Dawra, J. (2015). Fostering a motivational perspective of customer-based brand equity. *The Marketing Review*, 15(1), 3-16.
304. Prahalad, C. K., & Ramaswamy, V. (2000). Co-opting customer competence. *Harvard Business Review*, 78(1), 79-90.
305. Prahalad, C. K., & Ramaswamy, V. (2004a). Co-creation experiences: The next practice in value creation. *Journal of Interactive Marketing*, 18(3), 5-14.
306. Prahalad, C. K., & Ramaswamy, V. (2004b). Co-creating unique value with customers. *Strategy & Leadership*, 32(3), 4-9.
307. Prebensen, N. K., Kim, H. L., & Uysal, M. (2015). Co-creation as moderator between the experience value and satisfaction relationship. *Journal of Travel Research*, (Article in Press).
308. Prebensen, N. K., Vittersø, J., & Dahl, T. I. (2013). Value co-creation significance of tourist resources. *Annals of Tourism Research*, 42, 240-261.
309. Priem, R. L. (2007). A consumer perspective on value creation. *Academy of Management Review*, 32(1), 219-235.

310. Raajpoot, N.A., & Sharma, A. (2006). Perceptions of incompatibility in customer-to-customer interactions: examining individual level differences. *Journal of Services Marketing*, 20(5), 324-332.
311. Ramaswamy, V. (2010). Competing through co-creation: innovation at two companies. *Strategy & Leadership*, 38(2), 22-29.
312. Ramaswamy, V. (2011). It's about human experiences... and beyond, to co-creation. *Industrial Marketing Management*, 40(2), 195-196.
313. Ramaswamy, V., & Gouillart, F. (2010). Building the co-creative enterprise. *Harvard Business Review*, 88(10), 100-109.
314. Ramirez, R. (1999). Value co-production: intellectual origins and implications for practice and research. *Strategic Management Journal*, 20(1), 49-65.
315. Ranjan, K. R., & Read, S. (2014). Value co-creation: concept and measurement. *Journal of the Academy of Marketing Science*, 44(3), 290-315.
316. Ravald, A. (2009, June 16-19). The Consumer's Process of Value Creation. Paper presented at *The 2009 Naples Forum on Service. Service-Dominant logic, service science and network theory*. Capri, Italy.
317. Reinartz, W., Haenlein, M., & Henseler, J. (2009). An empirical comparison of the efficacy of covariance-based and variance-based SEM. *International Journal of Research in Marketing*, 26(4), 332-344.
318. Reynolds, J., & Mofazali, R. (2000). *The complete e-commerce book: design, build, and maintain a successful web-based business*. New York: CMP Books.
319. Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: a review of the literature. *Journal of Applied Psychology*, 87(4), 698.
320. Rihova, I., Buhalis, D., Moital, M., & Gouthro, M. B. (2015). Conceptualising Customer-to-customer Value Co-creation in Tourism. *International Journal of Tourism Research*, 17(4), 356-363.
321. Rintamäki, T., Kanto, A., Kuusela, H., & Spence, M. T. (2006). Decomposing the value of department store shopping into utilitarian, hedonic and social dimensions: Evidence from Finland. *International Journal of Retail & Distribution Management*, 34(1), 6-24.
322. Roberson, D. N., & Merriam, S. B. (2005). The self-directed learning process of older, rural adults. *Adult Education Quarterly*, 55(4), 269-287.

323. Roca, J. C., Chiu, C. M., & Martínez, F. J. (2006). Understanding e-learning continuance intention: An extension of the Technology Acceptance Model. *International Journal of Human-Computer Studies*, 64(8), 683-696.
324. Rogers, E. M. (2003), *Diffusion of Innovations, 5th Edition*. New York: Free Press.
325. Romero, D., & Molina, A. (2011). Collaborative networked organisations and customer communities: value co-creation and co-innovation in the networking era. *Production Planning & Control*, 22(5-6), 447-472.
326. Rosenbaum, M. S., & Massiah, C. A. (2007). When customers receive support from other customers: exploring the influence of intercustomer social support on customer voluntary performance. *Journal of Service Research*, 9(3), 257-270.
327. Roser, T., DeFillippi, R., & Samson, A. (2013). Managing your co-creation mix: co-creation ventures in distinctive contexts. *European Business Review*, 25(1), 20-41.
328. Rowley, J. (2006). An analysis of the e-service literature: towards a research agenda. *Internet Research*, 16(3), 339-359.
329. Rudawska, E. (2014). Customer loyalty towards traditional products—Polish market experience. *British Food Journal*, 116(11), 1710-1725.
330. Rudawska, E., Petljak, K., & Stulec, I. (2015). Hedonic or utilitarian buying behaviours-what values do young adult customers seek in online group buying?. *International Journal of Business Performance Management*, 16(2-3), 182-197.
331. Rust, R. T., & Kannan, P. K. (2003). E-service: a new paradigm for business in the electronic environment. *Communications of the ACM*, 46(6), 36-42.
332. Rust, R. T., & Lemon, K. N. (2001). E-service and the consumer. *International Journal of Electronic Commerce*, 5(3), 85-101.
333. Saarijärvi, H., Kannan, P. K., & Kuusela, H. (2013). Value Co-creation: Theoretical Approaches and Practical Implications. *European Business Review*, 25(1), 6-19.
334. Sánchez-Fernández, R., & Iniesta-Bonillo, M.Á. (2007). The concept of perceived value: a systematic review of the research. *Marketing theory*, 7(4), 427-451.
335. Sánchez-González, G., & Herrera, L. (2014). Effects of customer cooperation on knowledge generation activities and innovation results of firms. *BRQ Business Research Quarterly*, 17(4), 292-302.
336. Sandström, S., Edvardsson, B., Kristensson, P., & Magnusson, P. (2008). Value in use through service experience. *Managing Service Quality: An International Journal*, 18(2), 112-126.

337. Santos, J. (2003). E-service quality: a model of virtual service quality dimensions. *Managing Service Quality: An International Journal*, 13(3), 233-246.
338. Sawhney, M., Verona, G., & Prandelli, E. (2005). Collaborating to create: The Internet as a platform for customer engagement in product innovation. *Journal of Interactive Marketing*, 19(4), 4-17.
339. Schau, H.J., Muñiz Jr, A. M., & Arnould, E. J. (2009). How brand community practices create value. *Journal of Marketing*, 73(5), 30-51.
340. Schibrowsky, J. A., Peltier, J. W., & Nill, A. (2007). The state of internet marketing research: A review of the literature and future research directions. *European Journal of Marketing*, 41(7/8), 722-733.
341. Schumacher, R. E., & Lomax, R.G. (2004). *A Beginner's Guide to Structural Equation Modeling 2nd Ed.*, New Jersey: Lawrence Erlbaum Associates.
342. Segars, A. H. (1997). Assessing the unidimensionality of measurement: A paradigm and illustration within the context of information systems research. *Omega*, 25(1), 107-121.
343. Sethuraman, R., Kerin, R. A., & Cron, W. L. (2005). A field study comparing online and offline data collection methods for identifying product attribute preferences using conjoint analysis. *Journal of Business Research*, 58(5), 602-610.
344. Shankar, V., Smith, A. K., & Rangaswamy, A. (2003). Customer satisfaction and loyalty in online and offline environments. *International Journal of Research in Marketing*, 20(2), 153-175.
345. Shapiro, C., & Varian, H. R. (1999). The art of standards wars. *California management review*, 41(2), 8-32.
346. Sherony, K. M. and Green, S. G. 2002. Coworker exchange: Relationship between coworkers, leader-member exchange, and work attitudes. *Journal of Applied Psychology*, 87(3): 542-548.
347. Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of Business Research*, 22(2), 159-170.
348. Sheth, J.N., Parvatiyar, A., & Sinha, M. (2012). The conceptual foundations of relationship marketing: *Review and synthesis. Economic Sociology*, 13(3), 4-26.
349. Sigala, M. (2009). E-service quality and Web 2.0: expanding quality models to include customer participation and inter-customer support. *The Service Industries Journal*, 29(10), 1341-1358.

350. Slater, S.F. (1997). Developing a customer value-based theory of the firm. *Journal of the Academy Of Marketing Science*, 25(2), 162-167.
351. Smaliukiene, R., Chi-Shiun, L., & Sizovaite, I. (2015). Consumer value co-creation in online business: the case of global travel services. *Journal of Business Economics and Management*, 16(2), 325-339.
352. Smith, A. (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations / by Adam Smith*. London: Printed for W. Strahan and T. Cadell.
353. Solomon, M. R., Surprenant, C., Czepiel, J. A., & Gutman, E. G. (1985). A role theory perspective on dyadic interactions: the service encounter. *The Journal of Marketing*, 49(1), 99-111.
354. Sousa, R., & Voss, C. A. (2006). Service quality in multichannel services employing virtual channels. *Journal of Service Research*, 8(4), 356-371.
355. Sousa, R., & Voss, C. A. (2009). The effects of service failures and recovery on customer loyalty in e-services: An empirical investigation. *International Journal of Operations & Production Management*, 29(8), 834-864.
356. Srivastava, M., & Kaul, D. (2014). Social interaction, convenience and customer satisfaction: The mediating effect of customer experience. *Journal of Retailing and Consumer Services*, 21(6), 1028-1037.
357. Stafford, T. F. (2003). E-services. *Communications of the ACM*, 46(6), 26-28.
358. Steenkamp, J. B. E., & Van Trijp, H. C. (1991). The use of LISREL in validating marketing constructs. *International Journal of Research in Marketing*, 8(4), 283-299.
359. Strandvik, T., Holmlund, M., and Edvardsson, B. (2012). Customer needing: A challenge for the seller offering. *Journal of Business & Industrial Marketing*, 27(2), 132-41.
360. Surjadjaja, H., Ghosh, S., & Antony, J. (2003). Determining and assessing the determinants of e-service operations. *Managing Service Quality: An International Journal*, 13(1), 39-53.
361. Sweeney, J. C., & Soutar, G.N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of Retailing*, 77(2), 203-220.
362. Szymanski, D. M., & Hise, R. T. (2000). E-satisfaction: an initial examination. *Journal of Retailing*, 76(3), 309-322.

363. Taghizadeh, S. K., Jayaraman, K., Ismail, I., & Rahman, S. A. (2016). Scale development and validation for DART model of value co-creation process on innovation strategy. *Journal of Business & Industrial Marketing*, 31(1).
364. Taherdoost, H., Sahibuddin, S., & Jalaliyoon, N. (2013). E-Services Usage Evaluation; Applications' level of Co-Creation and Digitalization. *International Journal of Academic Research in Management (IJARM)*, 2(1), 10-18.
365. Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*, 6(2), 144-176.
366. Thakur, R., & Srivastava, M. (2014). Adoption readiness, personal innovativeness, perceived risk and usage intention across customer groups for mobile payment services in India. *Internet Research*, 24(3), 369-392.
367. Thakur, R., & Srivastava, M. (2015). A study on the impact of consumer risk perception and innovativeness on online shopping in India. *International Journal of Retail & Distribution Management*, 43(2), 148-166.
368. Thaler, R. (1985). Mental accounting and consumer choice. *Marketing Science*, 4(3), 199-214.
369. The Boston Consultancy Group BCG. (2015). *India@ Digital Bharat-Creating a \$200 Billion Internet Economy*. Retrieved from www.bcgindia.com/documents/file180687.pdf
370. The Times of India (2016). *2016 Mumbai tops, Delhi 6th among cities which deliver better quality of life*. Retrieved from <http://timesofindia.indiatimes.com/india/Mumbai-tops-Delhi-6th-among-cities-which-deliver-better-quality-of-life/articleshow/51401822.cms> (Accessed on March 15, 2016]
371. Toffler, A. (1980). *The third wave*. New York: Morrow, 27-28.
372. Tronvoll, B., Brown, S. W., Gremler, D. D., & Edvardsson, B. (2011). Paradigms in service research. *Journal of Service Management*, 22(5), 560-585.
373. Tsai, S. P. (2005). Integrated marketing as management of holistic consumer experience. *Business Horizons*, 48(5), 431-441.
374. Turel, O., Yuan, Y., & Connelly, C. E. (2008). In justice we trust: predicting user acceptance of e-customer services. *Journal of Management Information Systems*, 24(4), 123-151.

375. Turner, T., & Shockley, J. (2014). Creating shopper value: Co-creation roles, in-store self-service technology use, and value differentiation. *Journal of Promotion Management*, 20(3), 311-327.
376. Tynan, C., McKechnie, S., & Chhuon, C. (2010). Co-creating value for luxury brands. *Journal of Business Research*, 63(11), 1156-1163.
377. Tynan, C., McKechnie, S., & Chhuon, C. (2010). Co-creating value for luxury brands. *Journal of Business Research*, 63(11), 1156-1163.
378. Uzkurt, C. (2009). Customer participation in the service process: a model and research propositions. *International Journal of Services and Operations Management*, 6(1), 17-37.
379. van Beuningen, J., de Ruyter, K., & Wetzels, M. (2010). The power of self-efficacy change during service provision: making your customers feel better about themselves pays off. *Journal of Service Research*, 14(1)108-125.
380. Van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer engagement behavior: Theoretical foundations and research directions. *Journal of Service Research*, 13(3), 253-266.
381. Vargo S. L., & Lusch R. F. (2011), Service-dominant logic: a necessary step. *European Journal of Marketing*, 45(7/8), 1298-309.
382. Vargo S. L., & Lusch, R. F. (2006). Service-dominant logic: what it is, what is not, what it might be. In R.F. Lusch & S.L. Vargo (Eds.) *The Service-dominant Logic of Marketing: Dialog Debate and Directions* (pp. 43-56). New York: ME Sharpe.
383. Vargo, S. L. (2008). Customer Integration and Value Creation: Paradigmatic Traps and Perspectives. *Journal of Service Research*, 11(2), 211-215.
384. Vargo, S. L. (2011). Market systems stakeholders and value propositions: Toward a service-dominant logic-based theory of the market. *European Journal of Marketing*, 45(1/2), 217-222.
385. Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(1), 1-17.
386. Vargo, S. L., & Lusch, R. F. (2008). From goods to service (s): Divergences and convergences of logics. *Industrial Marketing Management*, 37(3), 254-259.
387. Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1), 1-10.
388. Vargo, S. L., & Lusch, R. F. (2011). It's all B2B... and beyond: Toward a systems

- perspective of the market. *Industrial Marketing Management*, 40(2), 181-187.
389. Vargo, S. L., Lusch, R. F., Akaka, M. A., He, Y. (2010). Service-Dominant Logic. In N. K Malhotra (ed.), *Review of Marketing Research*, 6, (pp.125-167). Emerald Group Publishing Limited.
390. Vargo, S. L., Maglio, P. P., & Akaka, M. A. (2008). On value and value co-creation: A service systems and service logic perspective. *European Management Journal*, 26(3), 145-152.
391. Vargo, S. L., Wieland, H., & Akaka, M. A. (2015). Innovation through institutionalization: A service ecosystems perspective. *Industrial Marketing Management*, 44, 63-72.
392. Vega-Vazquez, M., Revilla-Camacho, M. A., & Cossío-Silva, F. J. (2013). The value co-creation process as a determinant of customer satisfaction. *Management Decision*, 51(10), 1945-1953.
393. Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of Retailing*, 85(1), 31-41.
394. Verleye, K. (2015). The co-creation experience from the customer perspective: its measurement and determinants. *Journal of Service Management*, 26(2), 321-342.
395. Verma, R., Iqbal, Z., & Plaschka, G. (2004). Understanding customer choices in e-financial services. *California Management Review*, 46(4), 43-67.
396. Vilnai-Yavetz, I. & Rafaeli, A. (2006). Aesthetics and Professionalism of Virtual Servicescapes. *Journal of Service Research*, 8(3), 245-59.
397. Voss, C. (2000). Developing an eService strategy. *Business Strategy Review*, 11(1), 21-33.
398. Walsh, G., Hennig-Thurau, T., Sassenberg, K., & Bornemann, D. (2010). Does relationship quality matter in e-services? A comparison of online and offline retailing. *Journal of Retailing and Consumer Services*, 17(2), 130-142.
399. Waltner, C. (2000). Web commerce means e-service. *Informationweek*. 12, 68-72.
400. Wang, C., Harris, J., & Patterson, P. G. (2012). Customer choice of self-service technology: the roles of situational influences and past experience. *Journal of Service Management*, 23(1), 54-78.
401. Wang, Y., Po Lo, H., Chi, R., & Yang, Y. (2004). An integrated framework for customer value and customer-relationship-management performance: a customer-

- based perspective from China. *Managing Service Quality: An International Journal*, 14(2/3), 169-182.
402. Ware, N. R., Singh, S. P., & Banwet, D. K. (2014). Modeling flexible supplier selection framework. *Global Journal of Flexible Systems Management*, 15(3), 261-274.
403. Ware, N., Sing, S., & Banwet, D. (2012). Supplier selection problem: A state-of-the-art review. *Management Science Letters*, 2(5), 1465-1490.
404. Wikström, S. (1996). The customer as co-producer. *European Journal of Marketing*, 30(4), 6-19.
405. Wind, J., & Rangaswamy, A. (2001). Customerization: The next revolution in mass customization. *Journal of Interactive Marketing*, 15(1), 13-32.
406. Wisskirchen, C., Vater, D., Wright, T., De Backer, P., & Detrick, C. (2006). The customer-led bank: converting customers from defectors into fans. *Strategy & Leadership*, 34(2), 10-20.
407. Witell, L., Kristensson, P., Gustafsson, A., & Löfgren, M. (2011). Idea generation: customer co-creation versus traditional market research techniques. *Journal of Service Management*, 22(2), 140-159.
408. Wolfenbarger, M., & Gilly, M. (2003). E-TailQ: dimensionalizing, measuring and predicting e-tail quality. *Journal of Retailing*, 27, 183-98.
409. Woodall, T. (2003). Conceptualising 'value for the customer': an attributional, structural and dispositional analysis. *Academy of marketing science review* 12(1), 1-42.
410. Woodruff, R. B. (1997). Customer value: the next source for competitive advantage. *Journal of the Academy Of Marketing Science*, 25(2), 139-153.
411. Woodruff, R. B., & Flint, D. J. (2006). Marketing's service-dominant logic and customer value. In R. F. Lusch & S. L. Vargo (Eds.), *The Service-Dominant Logic of Marketing: Dialog Debate and Directions* (pp 183-195), New York: ME Sharpe.
412. Wu, C. H. J. (2011). A re-examination of the antecedents and impact of customer participation in service. *The Service Industries Journal*, 31(6), 863-876.
413. Xie, C., Bagozzi, R. P., & Troye, S.V. (2008). Trying to Prosume: Toward a theory of consumers as co-creators of value. *Journal of the Academy of Marketing Science*, 36(1), 109-122.

414. Xu, Y., Marshall, R., Edvardsson, B., & Tronvoll, B. (2014). Show you care: initiating co-creation in service recovery. *Journal of Service Management*, 25(3), 369-387.
415. Xue, M., & Harker, P. T. (2002). Customer efficiency concept and its impact on e-business management. *Journal of Service Research*, 4(4), 253-267.
416. Yang, Z., & Peterson, R.T. (2004). Customer perceived value, satisfaction, and loyalty: the role of switching costs. *Psychology & Marketing*, 21(10), 799–822.
417. Yi, Y., & Gong, T. (2009). An integrated model of customer social exchange relationship: the moderating role of customer experience. *The service industries journal*, 29(11), 1513-1528.
418. Yi, Y., & Gong, T. (2013). Customer value co-creation behavior: Scale development and validation. *Journal of Business Research*, 66(9), 1279-1284.
419. Yim, C.K., Chan, K.W., & Lam, S.K. (2012). Do customers and employees enjoy service participation? Synergistic effects of self- and other-efficacy. *Journal of Marketing*, 76, 121–140
420. Yngfalk A. F. (2013). ‘It’s not us, it’s them!’—Rethinking value co-creation among multiple actors. *Journal of Marketing Management*, 29(9-10), 1163-1181.
421. Yoo, B., & Donthu, N. (2001). Developing and validating a multidimensional consumer-based brand equity scale. *Journal of Business Research*, 52(1), 1-14.
422. Zaichkowsky, J. L. (1985). Measuring the involvement construct. *Journal of Consumer Research*, 341-352.
423. Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2-22.
424. Zeithaml, V. A. (2000). Service quality, profitability, and the economic worth of customers: what we know and what we need to learn. *Journal of the Academy of Marketing Science*, 28(1), 67-85.
425. Zeithaml, V. A. and Bitner, M. J. 2003. *Services marketing: Integrating customer focus across the firm*, 3, Boston, MA: McGraw-Hill Companies.
426. Zeithaml, V. A., Bitner, M. J., Gremler, D. D., & Pandit, A. (2006). *Services Marketing: Integrating Customer Focus across the Firm 6th edition*. New Delhi: McGraw Hill Education India.
427. Zhang, X., & Chen, R. (2008). Examining the mechanism of the value co-creation with customers. *International Journal of Production Economics*, 116(2), 242-250.

428. Zhao, Z., & Gutierrez, J. (2001). *The fundamental perspectives in e-commerce. E-Commerce Diffusion: Strategies and Challenges*, Melbourne: Heidelberg Press.
429. Zikmund, W. G., & Babin, B. J. (2007). *Exploring Marketing Research*. USA: Cengage Learning.
430. Zikmund, W., Babin, B., Carr, J., & Griffin, M. (2012). *Business research methods*. USA: Cengage Learning.
431. Zolfagharian, M. A., & Sheng, X. (2012). The CCP scale: Measuring customer co-production of services. *Services Marketing Quarterly*, 33(3), 211-229.
432. Zwass, V. (2010). Co-creation: Toward a taxonomy and an integrated research perspective. *International Journal of Electronic Commerce*, 15(1), 11-48.
433. Zwick, D., Bonsu, S. K., & Darmody, A. (2008). Putting consumers to work co-creation and new marketing govern-mentality. *Journal of Consumer Culture*, 8(2), 163-196.

Publication from the Present Research

Publication Accepted in Refereed International Journals

- Agrawal, A. K. and Rahman, Z. (2015), “Roles and Resource Contributions of Customers in Value Co-creation”, *International Strategic Management Review*, 3(1-2), 144-160 {Sciencedirect}.

Publications under review in International Journals

- Agrawal, A. K. and Rahman, Z. (2016), “Value co-creation: concept, nature and measurement”, *Service Science* {INFORMS} (Second Revision Submitted).
- Agrawal, A. K. and Rahman, Z. (2016), “CCV scale: Development and validation of customer value co-creation in e-services”, *Computers in Human Behavior* {First Revision Submitted}
- Agrawal, A. K. and Rahman, Z. (2016), "E-Services and Customer Value Co-creation: A Systematic Review", *International Review on Public and Non Profit Marketing* {Under Review}
- Agrawal, A. K. and Rahman, Z. (2016), "Developing a conceptual model of customer value co-creation in e-services", *Journal of Interactive Marketing* {Under Review}

Conferences

- Agrawal, A.K., Rahman, Z. (2016). Developing a model of customer experience co-creation through customer SSTs innovativeness in context of India. *National Seminar on Make in India: Strategies for Sustainable Growth & Development*, Organized by IMS Dehradun, Jan, 6-8.
- Agrawal, A.K., Rahman, Z. (2013). Understanding the role of ‘Process’ in value co-creation. *3rd Biennial Conference of the Indian Academy of Management (IAM)*, organized by IIM Ahmedabad, Dec 12-14.

- Agrawal, A.K., Rahman, Z. (2014). Co-creation of values through the act of altruism. *Vedic Foundations of Indian Management: New Insights on Co-creation and Entrepreneurship*, Organised by Vedic Foundation of Indian Management (A unit of ISOL research foundation) and IIT Roorkee, Nov 28.

APPENDIX I

	<p style="text-align: center;">Department of Management Studies Indian Institute of Technology Roorkee, Roorkee Phone: Tel: 01332-285014, 285617, Fax: 01332-285565</p>
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QUESTIONNAIRE FOR MEASURING CONSUMER CO-CREATED VALUE

Dear Participant,

My name is Amit Kumar Agrawal and I am a research scholar in the Department of Management Studies, Indian Institute of Technology Roorkee. I want your assistance in concluding my research work. If you could spare 20-30 minutes to complete the attached survey instrument, I would be highly thankful to you. Complete confidentiality will be maintained for the information furnished by you.

My research work is to model and measure consumer value co-creation in e-services. For this purpose we are studying the online co-creation behaviour of consumer and therefore we are interested in understanding the online co-creation behaviour of consumers. We are very much interested to know why you participate in an online value co-creation. What are motivations behind your online co-creation?

We value your response and ready to answer any question if you find it hard to understand the language. The aggregate responses shall only be used for academic purposes. So, please indicate your views in the required format.

Thanking you.

Section –I

PERSONAL INFORMATION

1. Please mention your name: _____
2. Please indicate your gender: Male Female
3. Please indicate your marital status: Single Married
4. Please indicate your age (in years):
 Under 20 21-35 36-50 51-65 60 and over
5. Please indicate your qualification:
 Xth & below Diploma Bachelor Degree Master Degree Professional

6. Please indicate your monthly income (in Rupees):

- < 10,000 10,000-30,000 30,000-50,000 50,000 & above None

7. Please indicate the type of online services used by you:

- Hospitality Social Media Travel Education
 Financial Services Other Services

8. Please indicate the types of customer co-creation

- Feedback/Reviews Blog Forums New service/content Development


Section- II

For each of the statements listed below, please tick the appropriate circle, where 1= Strongly disagree (SD); 2=Somewhat disagree (D); 3=Disagree; 4=Neither agree nor disagree (N); 5=Somewhat Agree (A); 6= Agree; 7= Strongly agree (SA).

S.No.	Questions	1	2	3	4	5	6	7
1	Participation in online service helps me develop proximity with the service provider.							
2	I derive satisfaction from increasing firm and other participants' knowledge in the online co-creation							
3	I can enhance my status/reputation as an expert in the online co-creation							
4	I can influence other people's knowledge of brand matters in the online co-creation							
5	I derived satisfaction from influencing e- product/service usage by other customers.							
6	I derived satisfaction from influencing e-product/service design and development.							
7	It provides me with feelings of worthwhile accomplishment.							
8	I had an impact on the degree to which my preferences were met.							
9	I had control over the quality in online co-creation process.							
10	I get better prices than others for efforts I made in online co-creation.							
11	I get faster service than most customer's efforts I made in online co-creation.							
12	Online participation help me get more personalised solutions to my need.							
13	I get higher quality of service in online co-creation.							
14	I like to exchange information and interpersonal exchanges with firm and other customers in online co-creation.							
15	My involvement with firm and other customers makes the service interaction more enjoyable.							
16	I would like to continue giving my contribution to any online co-creation process.							
17	I enjoyed the use of my skills and knowledge in online co-creation							
18	I enjoy immersion in exciting new information or services in online co-creation.							
19	I enjoy it for its own sake, not for what it will get me.							

Notes: respondents were asked to indicate their agreement or disagreement with each of the items listed here, using a 7-point scale ranging from —strongly disagree to —strongly agree, with a midpoint labelled —neither agree nor disagree.

APPENDIX II

	<p style="text-align: center;">Department of Management Studies Indian Institute of Technology Roorkee, Roorkee Phone: Tel: 01332-285014, 285617, Fax: 01332-285565</p>
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QUESTIONNAIRE FOR MEASURING CONSUMER VALUE CO-CREATION

Dear Participant,

My name is Amit Kumar Agrawal and I am a research scholar in the Department of Management Studies, Indian Institute of Technology Roorkee. I want your assistance in concluding my research work. If you could spare 20-30 minutes to complete the attached survey instrument, I would be highly thankful to you. Complete confidentiality will be maintained for the information furnished by you.

My research work is to model and measure consumer value co-creation in e-services. For this purpose we are studying the online co-creation behaviour of consumer and therefore we are interested in understanding the online co-creation behaviour of consumers. We are very much interested to know why you participate in an online value co-creation. What are motivations behind your online co-creation? How much are you satisfied with value?

We value your response and ready to answer any question if you find it hard to understand the language. The aggregate responses shall only be used for academic purposes. So, please indicate your views in the required format.

Thanking you.

Section –I

PERSONAL INFORMATION

1. Please mention your name: _____
2. Please indicate your gender: Male Female
3. Please indicate your marital status: Single Married
4. Please indicate your age (in years):
 Under 20 21-35 36-50 51-65 60 and over
5. Please indicate your qualification:

Xth & below Diploma Bachelor Degree Master Degree Professional

6. Please indicate your monthly income (in Rupees):

< 10,000 10,000-30,000 30,000-50,000 50,000 & above None

7. Please indicate the type of online services used by you:

Hospitality Social Media Travel Education
 Financial Services Other Services

8. Please indicate the types of customer co-creation

Feedback/Reviews Blog Forums New service/content Development

Section- II

For each of the statements listed below, please tick the appropriate circle, where 1= Strongly disagree (SD); 2=Somewhat disagree (D); 3=Disagree; 4=Neither agree nor disagree (N); 5=Somewhat Agree (A); 6= Agree; 7= Strongly agree (SA).

S.No.	Questions	1	2	3	4	5	6	7
1	I actively participate in the online activity							
2	I spend a lot of time engaging in the website							
3	I provide feedback related to participation in the community							
4	I engage in communications with other customers about the company's services/products							
5	My company is very concerned about the welfare of his customers.							
6	My company is willing to listen to my participation problems'.							
7	My company can be relied on when I have problems during participation.							
8	Extent to which fellow customers can be relied on when facing problems in online activity							
9	Extent to which co-customers are willing to listen to problems during online co-creation.							
10	Extent to which co-customers are helpful with the general co-creation process.							
11	Participation in online service helps me develop proximity with the service provider.							
12	I derive satisfaction from increasing firm and other participants' knowledge in the online co-creation							
13	I can enhance my status/reputation as an expert in the online co-creation							
14	I can influence other people's knowledge of brand matters in the online co-creation							
15	I derived satisfaction from influencing e- product/service usage by other customers.							
16	I derived satisfaction from influencing e-product/service design and development.							
17	It provides me with feelings of worthwhile accomplishment.							
18	I had an impact on the degree to which my preferences were met.							

19	I had control over the quality in online co-creation process.								
20	I get better prices than others for efforts I made in online co-creation.								
21	I get faster service than most customer's efforts I made in online co-creation.								
22	Online participation help me get more personalised solutions to my need.								
23	I get higher quality of service in online co-creation.								
24	I like to exchange information and interpersonal exchanges with firm and other customers in online co-creation.								
25	My involvement with firm and other customers makes the service interaction more enjoyable.								
26	I would like to continue giving my contribution to any online co-creation process.								
27	I enjoyed the use of my skills and knowledge in online co-creation								
28	I enjoy immersion in exciting new information or services in online co-creation.								
29	I enjoy it for its own sake, not for what it will get me.								
30	I am satisfied with the decision to participate in this experience.								
31	I will participate in similar types of experiences in the future.								
32	I will recommend this experience to others.								

Notes: respondents were asked to indicate their agreement or disagreement with each of the items listed here, using a 7-point scale ranging from —strongly disagree to —strongly agree, with a midpoint labelled —neither agree nor disagree

APPENDIX III:

E-services used and various types of customer co-creation samples in each phases

Phase 1 (n=40)			
Hospitality	8%	Social Media	30%
Travel	22%	Education	18%
Financial Services	16%	Other Services	6%
Types of customer co-creation			
Feedback/Reviews	24%	Blogs	16%
Content Development	36%	Forums	24%
Phase 2 (n=396)			
Hospitality	10.10%	Social Media	24.75%
Travel	20.45%	Education	17.42%
Financial Services	18.18%	Other Services	9.09%
Types of customer co-creation			
Feedback/Reviews	24.49%	Blogs	18.43%
Content Development	30.30%	Forums	26.77%
Phase 3 (n=305)			
Entertainment	9.81%	Social Media	24.68%
Travel	20.57%	Contest	15.51%
Gaming	21.52%	Other Services	7.91%
Types of customer co-creation			
Feedback/Reviews	20.57%	Blogs	25.32%
Content Development	27.53%	Forums	26.58%
Sample 1: E-Banking (n=351)			
Types of customer co-creation			
Service Development	29.75%	Blogs	23.10%
Feedback/Reviews	27.53%	Forums	19.62%

APPENDIX IV

Significant Research Contribution and Gaps

Table 1: Summary of selected literature survey, major findings and gaps identified.

S. No	Title	Author	Journal	Type of study	Objective	Conclusion	Gap/future research
1	Managing the co-creation of value	A. F. Payne, K. Storbacka and P. Frow	Journal of the academy of Marketing Science	Conceptual	To develop a conceptual framework and explain the application of value co-creation framework.	The given process based framework provides an approach to managing value co-creation. It also explain the firm, customer value creation process along with encounter.	<ol style="list-style-type: none"> 1.Examining the consumption situation or behaviour from traditional manufacturing point of view 2. Empirical analysis of customer mapping process. 3. Understanding the role of intermediaries in co-creation
2	Evolving to a new dominant logic of Marketing	S.L. Vargo and R.F. Lusch	Journal of Marketing	Conceptual	The study is an attempt to understand services as the basis of any kind of value creation instead of exchange of goods.	The study enunciates a shift from goods to intangibles, such as skills, information, and knowledge as an apparatus of value creation.The orientation has shifted from the producer to the consumer.	Eight Fundamental premises has been proposed by author and each of them need further study and validation.
3	Conceptualising Value Co-Creation: A journey to the 1970s and back to the future	C Gronroos	Journal of Marketing Management	Conceptual + Operationalization	Objective of the study is to develop a conceptual model that incorporate essential elements to understand, plan and respond to customer-firm interaction and supporting their value creation.	The study offers a resource categorisation of servuction model and action oriented interactive marketing model that leads to the development of strong foundation for value co-creation model that includes both co-creation resource categories and co-creation activity categories.	<ol style="list-style-type: none"> 1. The various elements of value co-creation require further study 2. How exchange between fellow customers and firm present in service process affects value creation.

4	From Value Chain to Value Constellation: Designing Interactive strategy	Richard Normann and Rafel Ramirez	Harvard Business Review	Conceptual	To understand the nature of value created in the network.	Value creation takes place in value constellation and not as a linear activity, with aim to mobilize their customers from their present role.	1. Further study should aim to understand various factors which are essential for mobilizing customer 2. Exploring the challenges of new roles and responsibilities for both firm and customer.
5	The Antecedents and consequences of customer centric Marketing	Jagdish Seth, Rajendra S. Sisodia, Arun Sharma	Academy of Marketing Science	Conceptual	The study aims to understand the shift in marketing functions from mass marketing to segmented marketing in 20th century.	The customer centric marketing will change the ways in which customer is approached by the firms. Firm should foster relationship in order to create a long term association.	Future study should make efforts to understand how a CCM firm is more likely to go for co-creation than a non CCM firm
6	Co-innovation through multiple social identity processes The story of a South African co-op owned business	Hannelize Jacobs	European Business Review	Conceptual	To Investigate the relationship between “social identities” and “innovation as a collective act create positive commitment and motivation for collaborative innovation (co-innovation).	The case study synthesizes that the success of the firm depends upon the ability of the organization and its members to construct and maintain a common organizational identity of innovation and to innovate collectively.	Future innovation studies can focus on understanding ways in which organisations can use innovation to satisfy multiple stakeholders’ interests in the organisation, and justify the organisation’s collective action in order to legitimise the organisation’s fundamental character.
7	Differentiating market offerings using complexity and co-creation	Olaf Plo¨tner, Jan Lakotta, Frank Jacob	European Business Review	Conceptual	The purpose of this paper is to explain variation in customer decision-making uncertainty.	The paper demonstrates that customer decision-making uncertainty is mostly evident in complex offerings characterized by high degrees of co-creation.	Future research should aim to empirically validate the proposed contingency framework and find ways to mitigate customer DMU

8	Managing your co-creation mix: co-creation ventures in distinctive contexts	Thorsten Roser, Robert DeFillippi, Alain Samson	European Business Review	Conceptual	<ol style="list-style-type: none"> To develop a conceptual model to comparing how various organizations organize and manage their co-creation ventures. To apply the above model to four different cases that illustrate the differences in co-creation practice within different co-creation environments. 	<p>The developed reference model offers a set of useful dimensions for case-based inquiry.</p> <p>The case comparisons exhibit that firms may decide to systematise and manage a mix of co-creation activities within B2B versus B2C contexts, utilising either crowd-sourced or non-crowd-sourced approaches.</p>	<ol style="list-style-type: none"> How firm can engage co-creator and decide appropriate approaches and tool to manage the actors in value creation process. Governance of co-creation between two parties: Market Governance, Hierarchal Governance and Relational Governance.
9	The meanings of co-creation	Nicholas Ind, Nick Coates	European Business Review	Review/Conceptual	<ol style="list-style-type: none"> Exploring the antecedents of the modern interpretation of co-creation. Understanding alternative views to co-creation which are rooted in psychotherapy, critical theory, software development and design to understand the meaning of co-creation. 	<p>The present study tries to understand co-creation from the perspective of consumers and other stakeholders instead of firm.</p> <p>The study also make a move from idea of co-creation away from a strongly rational approach to one that is more spontaneous and playful.</p>	<p>To study new opportunities for co-creation: in areas such as</p> <p>Participatory Design which involves end user leads and reducing risk;</p> <p>Open source movement: Enabling people to create meaning or utility generates reciprocal behaviour and strengthens the sense of community;</p> <p>Colaborative innovation – breakthroughs come from wisdom of the group or crowd rather than individual efforts.</p>
10	Value co-creation: theoretical approaches and practical Implications	Hannu Saarijärvi, P.K. Kannan, Hannu Kuusela	European Business Review	Conceptual	<ol style="list-style-type: none"> The study aims to identify the sources of the differing approaches for value co-creation. Developing a business-oriented analytical framework for assessing the opportunities presented by value co-creation 	<p>The multifaceted nature of value co-creation arises due to differing approaches to determines the value, the co-, and the creation elements of the concept,</p> <p>The proposed framework and the guiding questions will help firms understand the central characteristics of the phenomenon and consider whether their customers possess resources so that they can participate.</p>	<p>Fututre study should address multidimensionality of value, which includes kind of value is created in value co-creation as; Hedonic, Utilatrian or charcaterised by other value dimension.</p> <p>Study for whom value is created? Who is involved in joint value creation and what resources are deployed in that joint creation (B2B, B2c, C2B, C2c)</p>

11	Co-creation of meaning as prerequisite for market-focussed strategic flexibility	Cathrina Gylling, Richard Elliot, Marja Toivonen	European Journal of Marketing	Conceptual	<ol style="list-style-type: none"> 1. To understand the perspective of shared meaning as a prerequisite for the formation of market-focused strategic flexibility. 2. To study flexibility from the perspective of co-creation of meaning. 	<p>The study find that the lack of common understanding may lead to poor service quality even though the provider aims at meeting clients' needs.</p> <p>The study concludes that a common lexicon and the conscious use of human narrative capability facilitate the achievement of this goal.</p>	Significance of common meaning for market oriented flexibility can favour mutually tight linkage in a network. # Hindrance of Market oriented Flexibility Formation in a sub culture
12	A Descriptive model of consumer co-production process	Michael Etgar	Journal of Academy of Marketing Science	Conceptual	<ol style="list-style-type: none"> 1.To understand the meaning of co-production. 2.Understand difference between coproduction and customization. 3.To propose framework and component of co-production. 	<p>The article discusses the basic linkages between co-production and customization and presents co-production as a dynamic process which is composed of five distinct stages.</p> <p>It also specifies five distinct phases of the production activity chain where consumers can become involved in co-production.</p>	<p>Extending the model by adding internal mental and emotional consumer process into framework.</p> <ol style="list-style-type: none"> 1. Empirical testing of each of the motivational drivers (2nd stage) that induce firm to engage in co-production. 2. Determine empirically relative importance of each of the various preconditions presented inn 1st stage.
13	Characterization of value as an experience: An implication for service researchers and managers	Anu Helkkula, Carol Kelleher, Minna Pihlstrom	Journal of Service research	Conceptual	<ol style="list-style-type: none"> 1. Explaining in detail 10th Fundamental premise of S D Logic " Value is always uniquely and phenomenological determined by the beneficiary 2. Systematic characterisation of value in experience is presented with 4 theoretical propositions. 	<p>Four theoretical propositions were outlined that describe what value in the experience is. The article contributes to the service literature by characterizing value in the experience as an ongoing, iterative circular process of individual, and collective customer sense making, as opposed to a linear, cognitive process restricted to isolated service encounters.</p>	<ol style="list-style-type: none"> 1. The nature of C2C value co-creation and social value experience has been considered with limited degree. 2. How do customer context affect customer value in experience. 3. Does individually constructed perceived value differ from socially constructed value in experience. 4. How is value in experience shared with others?

14	How to sustain customer experience: An overview of experience components that co-create value with the customer.	Chira Gentile, Nicola Spiller, Giuliano Noci	European Management Journal	Conceptual +Empirical (Survey both exploratory and descriptive carried out on likert scale)	1. An analysis of specific role played by the experiential features in a sample of innovative products with respect to the outcomes of their introduction in the market. 2. A interpretative model aimed to support a company in the process of devising contexts and artifacts that are conducive of a experience and which can then be used by a consumer to co-produce their own experience.	The experience factor plays an increasingly important role in determining the success of a company's offering. The study sheds some light on the concept of Customer Experience, and on how the right environment and setting for the desired Customer Experience should be created in such a way as to contribute to the value creation for customers and the company itself.	Still there is a lack of consistent definition of customer experience despite of various models, interpretation and conceptualisation of customer experience
15	The value co-creation process as a determinant of customer satisfaction	Manuela Vega-Vazquez, Mari'a Angeles Revilla-Camacho and Francisco J. Cossío-Silva	Management Decision	Empirical study	Measuring of co-creation from the perspective of the customers themselves and proposes that there is a direct relationship between value co-creation behavior and customer satisfaction with the service experience.	Positive relation between value co-creation and customer satisfaction. Study suggests that service firms dedicated to personal care should foster the customers' active participation in the value creation process.	Future study should be on comparing the firm's perspective in order to investigate to what extent this contributes to the value generation and what the customer's active participation in the process is
16	Virtual Customer Environments: Testing a Model of Voluntary Participation in Value Co-creation Activities	Satish Nambisan and Robert A. Baron	Journal of Product Innovation Management	Exploratory and Empirical Study	Presenting an integrated, theoretical model of customer motivations and their interaction-based antecedents in the VCE, to enhance customer participation in product support, to devise and deploy virtual "innovating experience environments"	Customers do not participate in these online forums purely on the basis of "altruistic" or "citizenship" motives; rather, they expect—and reasonably so—to attain significant benefits from such participation (enhanced product knowledge, communication with other knowledgeable customers, enhanced reputation, and cognitive stimulation and enjoyment).	To study the influence of customers' VCE interactions on the nature of customers' relationships with the organization. To study influenced of external interactions (with, e.g., the product, the host firm) with customers' participation in the VCE as a future research agenda

17.	Customer co-creation of travel services: The role of company support and customer satisfaction with the co-creation performance	Ursula S. Grisseemann, Nicola E. Stokburger-Sauer	Tourism Management	Conceptual and Empirical	To empirically examine conceptual model of antecedents and consequences of customer co-creation in tourism services.	The study suggests that a highly satisfied customers (with their own co-creation performance) may not exhibit higher satisfaction with the service company than the customers who are less satisfied with their own co-creation performance.	Future study should examine relationship of company support and customers' actual service co-creation activities and the effects of these activities on firm outcomes. Further study should explore drivers of co-creation activities in terms of firm actions and processes.
18	Is Customer Participation in Value Creation a Double-Edged Sword? Evidence from Professional Financial Services Across Cultures	Kimmy Wa Chan, Chi Kin (Bennett) Yim, and Simon S.K. Lam	Journal of Marketing	Conceptual and Empirical study.	This study empirically examines the effects of customer participation (CP) on value creation and satisfaction for both customers and employees with different cultural value orientations in the context of professional financial services	The study concludes that customers and employees must interact and work together to co-create value; their attitudes and emotional responses are likely to affect each other in the co-creation process The study also finds that CP effect on value creation are dependent on individual cultural value orientations which means that customers (employees) with higher collectivist and power distance value orientations perceive less economic value (less job stress) and more relational value from CP	The study insists on longitudinal studies would determine whether co-created values (economic and relational) persist in the long run, particularly with regard to the relationship-building component Further studies can consider different other services of a similar nature (e.g., medical, legal), as well as other service contexts, to ascertain the generalizability of the results. There can be other dimensions (e.g., psychological, relational) of CP which is worthy of study.