

AVERTISSEMENT

Ce document est le fruit d'un long travail approuvé par le jury de soutenance et mis à disposition de l'ensemble de la communauté universitaire élargie.

Il est soumis à la propriété intellectuelle de l'auteur : ceci implique une obligation de citation et de référencement lors de l'utilisation de ce document.

D'autre part, toute contrefaçon, plagiat, reproduction illicite de ce travail expose à des poursuites pénales.

Contact : portail-publi@ut-capitole.fr

LIENS

Code la Propriété Intellectuelle – Articles L. 122-4 et L. 335-1 à L. 335-10

Loi n° 92-597 du 1^{er} juillet 1992, publiée au *Journal Officiel* du 2 juillet 1992

<http://www.cfcopies.com/V2/leg/leg-droi.php>

<http://www.culture.gouv.fr/culture/infos-pratiques/droits/protection.htm>



THÈSE

En vue de l'obtention du
DOCTORAT DE L'UNIVERSITE DE TOULOUSE

Délivré par l'Université Toulouse Capitole

École doctorale: **Sciences de Gestion**

Présentée et soutenue publiquement par

Georgios SKOURTIS

le 16 Décembre 2016

**The impact of operant resources on consumer value co-recovery
in-role behavior and co-created value**

Discipline : **Sciences de Gestion**

Spécialité : **Marketing**

Unité de recherche: **CRM (UMR 5303 CNRS)**

Directeur de thèse: **Jean-marc DECAUDIN**

Professeur des universités, IAE Université Toulouse Capitole

JURY

Rapporteurs Monsieur Dwight MERUNKA

Professeur des universités, IAE Aix Marseille Université

Madame Elisabeth TISSIER DESBORDES

Professeur, ESCP Europe

Suffragants Monsieur Denis LACOSTE

Professeur, Toulouse Business School

Madame Catherine VIOT

Professeur des universités, Université Claude Bernard Lyon 1

*«l'Université n'entend ni approuver, ni désapprouver
les opinions particulières du candidat».*

*«The University neither approves nor disproves
the opinions of the candidate. »*

«γηράσκω δ' αἰεὶ πολλὰ διδασκόμενος»

Σόλων,

translation from ancient greek:" I grow old always learning many things."

Acknowledgements

This dissertation could not have been completed without the contribution of many people. First of all, I would like to thank to my PhD supervisor, Jean-Marc DÉCAUDIN, Professeur des universités, for his understanding, encouragement, and supporting me during these three years, throughout my PhD journey. I had the luck to benefit from his expertise while parallel his trust in my abilities made me work even harder and better. Next I wish to thank, my former university research advisor, lecturer Ioannis Assiouras. Ioannis has been helpful in providing advice many times during my Ph.D. journey. Under his guidance, I successfully overcame many difficulties. I also would like to thank my collaborator, Professor Elif Karaosmanoglu, for her help and her guidance. Moreover, I would like to express my gratitude toward the members of the Center for Research in Management of the University of Toulouse 1. Special thanks to Andréas Munzel, my rapporteur in the Ph.D progress, for his valuable comments in my research and for his general support. I am also very grateful to the administrative staff of the Center for Research in Management, for their support help throughout the PhD. I would also like to thank, my friends for providing support and friendship that I needed. Last, I especially thank my family who have sacrificed their lives for and provided unconditional love and care. I couldn't have done it without their constant support and help in my every single step.

*I dedicate this thesis to all these who co-create a better
future*

Table of Contents

Chapter 1. Introduction	1
1.1 Service economy and the importance of services	1
1.2 Services in marketing literature	3
1.3 The evolving perspective of service (s)- A new paradigm	5
1.4 Consumers' motivation for co-creation	8
1.5 The importance of operant resources	9
1.6 Value co-creation behaviors in service context	10
1.7 Service failure, service recovery and customer behavior	12
1.8 Summary and identification of the research gap.....	13
1.9 Overview and scope of the thesis.....	19
1.10 Summarizing the importance of this study and the expected results	22
1.11 Overview of the methodology	22
1.12 Overview of the dissertation	23
1.13 Contribution of the appended conferences papers	24
Chapter 2. Literature Review	
A service-dominant logic view of marketing	27
2.1 Service-Dominant logic foundational premises.....	27
2.2 Service-Dominant Logic and Value Co-creation	30
2.3 The nature and definitions of co-creation.....	37
2.4 The concept of perceived value in S-D logic	43
2.5 Resources and resource integration	44
2.6. Customer co-creation behaviors	47
2.6.1 Customer co-creation participation (in-role role) behaviors.....	47
2.6.2 Customer co-creation citizenship (extra-role) behaviors	49
2.7 Research streams on co-creation	50
2.8 Co-destruction of value	72
2.9 Co-creation of service recovery	75
Service Failures and Service recovery in G-D logic.....	76
2.10 Service failures in G-D logic	76
2.11 Service recovery in G-D logic	77
Conclusion	80
Chapter 3. Conceptual Framework and Hypotheses Development	
3.1 Conceptualizing Service Failures through the lens of Service-Dominant logic: A value-based approach.....	81
3.2 Process theories as a theoretical basis for service failure	83
3.3 Towards an integrated framework for service process continuum	85
3.4 Service Recovery in S-D logic.....	89
3.5 The role of value propositions on value co-recovery process.....	90
3.6 The role of institutions on value co-recovery process	92

3.7 Research model and Hypotheses development.....	95
3.8 Motivation and consumer value co-recovery in-role behavior.....	99
3.9 Ability to co-recover and consumer value recovery in-role behavior.....	101
3.10 Consequences of value co-recovery in-role behavior.....	102
3.11 Moderators.....	103
3.11.1 Internal blame as a moderator.....	103
3.11.2 Role Clarity as a moderator.....	104
3.11.3 Trust in resolution ability as a moderator.....	105
3.11.4 Negative emotions as a moderator.....	106
3.12 Control variables.....	109
3.12.1 Education level.....	109
3.12.2 Gender.....	109
3.12.3 Age.....	110
Conclusion.....	111

Chapter 4. Research design and methodology

4.1 Introduction.....	112
4.2 Study1- Qualitative Research.....	112
4.2.1 Justification for semi-structured in-depth interviews.....	112
4.2.2 Interviews Protocol.....	114
4.2.3 Interview procedure.....	115
4.2.4 Sample & Data collection of interviews.....	116
4.2.5 Interviews analysis.....	116
4.2.6 Refinement of the questionnaire based on interviews results.....	117
4.2.7 Measurement of Constructs.....	118
4.2.8 Pre-Test of the Survey Instrument.....	122
4.3 Study2- Quantitative Research.....	122
4.3.1 Justification for using non-based online services.....	122
4.3.2 Survey Methodology.....	123
4.3.3 Responce Condition.....	124
4.3.4 Demographic Factors.....	125
4.3.4.1 Gender.....	125
4.3.4.2 Age.....	126
4.3.4.3 Educational Level.....	126
4.3.4.4 Employment Status.....	127
4.3.5 Research Instrument Reliability.....	128
4.3.5.1 Reliability for internal blame.....	129
4.3.5.2 Reliability for Negative- Concern Emotions.....	130
4.3.5.3 Reliability for Role Clarity.....	130
Conclusion.....	131

Chapter 5. Data analysis and results

5.1 Introduction.....	132
5.2 Exploratory Factor Analysis (EFA) Procedure.....	132
5.3 Exploratory Factor Analysis (EFA) Results.....	133
5.3.1 Extrinsic motivation (EM).....	133

5.3.2	Intrinsic motivation (IM)	136
5.3.3	Consumer value co-recovery in-role behavior (CVCRIRB).....	140
5.3.4	Trust in service providers' resolution ability	144
5.3.5	Negative- discontent emotions.....	146
5.3.6	Ability to co-recover (AB)	148
5.3.7	Utilitarian value (UV)	150
5.3.8	Hedonic value (HV)	152
5.3.9	Construct Validity and Confirmatory Factor Analysis (CFA)	155
5.4	Structure Equation Modeling	155
5.5	Evaluating the fitness of a measurement model	156
5.6	Assessment of the Normality	157
5.7	Analysis and Results of Structural Equation Modeling.....	159
5.7.1	Stage one: Measurement model.....	160
5.7.1.1	Consumer value co-recovery in-role behavior	160
5.7.1.2	Extrinsic motivation.....	162
5.7.1.3	Intrinsic motivation	165
5.7.1.4	Ability to co-recover.....	168
5.7.1.5	Utilitarian Value.....	170
5.7.1.6	Hedonic Value	171
5.7.1.7	Trust in Resolution Ability	174
5.7.1.8	Negative Discontent Emotions	176
5.8	Overall Measurement Model Evaluation.....	178
5.9	Measurement Invariance Analyses	182
5.9.1	Measurement Invariance tests for low and high blamers	183
5.9.2	Measurement Invariance Analyses for low and high clarity	185
5.9.3	Measurement Invariance Analyses for low and high negative- discontent- emotions	186
5.9.4	Measurement Invariance Analyses for low and high negative-concern- emotions	187
5.9.5	Measurement Invariance Analyses for low and high trusters	189
5.10	Realibility and Validity of the constructs	190
5.11	Stage Two: Structural Model (Testing of the Hypotheses).....	193
5.11.1	Structural Model One (The hypothesized model)	194
5.11.2	Structural Model Two (The modified Structural Model)	196
5.12	Test of Hypotheses	198
5.13	Mediation Analysis.....	200
5.13.1	Stage 1: Variable Analyses.....	202
5.13.2	Stage 2: Independent variable to mediators	203
5.13.3	Stage 3: Independent variable to mediators	205
5.14	Moderating effects.....	207
5.14.1	Internal Blame	208
5.14.2	Role Clarity.....	216
5.14.3	Trust in service provider's resolution ability	224
5.14.4.1	Negative- Discontent Emotions	231
5.14.4.2	Negative-Concern Emotions	240
5.15	Testing of Control Variables.....	248
	Conclusion	249

Chapter 6. Discussion and Conclusion.....	253
6.1 Discussion	253
6.1.1 Theoretical findings	253
6.1.2 Empirical findings.....	256
6.2 Theoretical and managerial implications	264
6.2.1 Theoretical implications.....	264
6.2.2 Managerial implications.....	267
6.3 Limitations and future research	271
References.....	274
Appendix-Interview Example	308
Appendix Questionnaire.....	315
English summary	320
French summary	320

List of tables.....	
1.1 Contributions of the conference papers	24
2.1 Service-Dominant logic Foundational Premises.....	29
2.2 Service Dominant logic and Service logic/most cited papers.....	32
2.3 Definitions of Value Co-creation.....	38
2.4 Summary of literature review of Co-Creation	51
3.1 An overview of the major differences between G-D logic and S-D logic related to service recovery	94
3.2 List of Hypotheses	108
4.1 Response Condition	125
4.2 Description of Gender.....	125
4.3 Description of Age.....	126
4.4 Description of Educational Level	127
4.5 Description of Employment Status	127
4.6 Research Instrument Reliability.....	128
4.7 Correlation between internal blame items	129
4.8 Correlation between concern emotions items	130
4.9 Correlation between role clarity items	131
5.1 Eigenvalues of extrinsic motivation (EM).....	133
5.2 EFA for extrinsic motivation	135
5.3 Reliability of extrinsic motivation factors	136
5.4 Eigenvalues of intrinsic motivation (IM)	137
5.5 EFA of intrinsic motivation	138
5.6 Reliability of intrinsic motivation factors	139
5.7 Eigenvalues of consumer value co-recovery in-role behavior.....	140
5.8 EFA of consumer value co-recovery in-role behavior.....	143
5.9 Reliability of consumer value co-recovery in-role behavior	144

5.10 Eigenvalues of trust in resolution ability (TR)	144
5.11 EFA of trust in resolution ability (TR)	145
5.12 Eigenvalues of negative discontent-emotions.....	146
5.13 EFA result- negative discontent emotions (NDE)	148
5.14 Eigenvalues of ability to co-recover (AB)	149
5.15 EFA of ability to co-recover (AB)	150
5.16 Eigenvalues of utilitarian value (UV)	151
5.17 EFA result - utilitarian value (UV)	152
5.18 Eigenvalues of hedonic value (HV)	153
5.19 EFA results of hedonic value (HV)	154
5.20 Summary of Goodness-of-Fit Indices	156
5.21 Assessment of normality	158
5.22: Co-recovery in-role behavior items and their description	160
5.23: Extrinsic motivation items and their description	163
5.24 : Intrinsic motivation items and their description	165
5.25 : Ability to co-recover items and their description	168
5.26 : Utilitarian Value items and their description	170
5.27 : Hedonic Value items and their description.....	172
5.28 : Trust in resolution ability items and their description	174
5.29: Negative Discontent Emotions items and their description.....	176
5.30 : Descriptive Statistics of Measurement Scale.....	181
5.31 : Zero-Order Correlations Between Variable.....	181
5.32 : Measurement Invariance tests for low and high blamers	183
5.33 : Measurement Invariance tests for low and high role clarity.....	185
5.34 : Measurement Invariance tests for low and high negative-discontent emotions	186
5.35 : Measurement Invariance tests for low and high negative- concern emotions.	187
5.36 : Measurement Invariance tests for low and high trusters	189
5.37 : Measurement Model Evaluation	191
5.38: Discriminant Validity of Constructs	192
5.39: Underlying Hypotheses (Direct Effect)	193
5.40: Comparison of Two Structural Models	197
5.41: Results of structural equation modelling.	199
5.42: Direct effect without mediator	203
5.43: Effect of ability to co-recover on extrinsic and intrinsic motivation.....	204
5.44 :Mediation effects.	205
5.45: Comparison of chi-square and df values for blamers	213
5.46: Moderating role of Internal Blame	214
5.47: Comparison of chi-square and df values for role clarity	221
5.48: Moderating role of Role Clarity.....	223
5.49: Comparison of chi-square and df values for trust in resolution ability	229
5.50: Moderating role of Trust in resolution ability	230
5.51: Comparison of chi-square and df values for negative-discontent emotions.....	237
5.52: Moderating role of Negative-Discontent Emotions.....	238
5.53: Comparison of chi-square and df values of concern emotions	245
5.54: Moderating role of Negative- Concern Emotions.....	246
5.55: Table of control variables	249
5.56: Results of Hypotheses testing	250

List of figures.....

Figure 2-1 Antecedents of customer citizenship behavior.....49

Figure 3-1 An input-process-output approach to service 86

Figure 3-2 Research model of the underlying mechanism of motivation between operant resources and consequences of consumer value co-recovery in-role behavior98

Figure 5-1 Scree plot - extrinsic motivation 134

Figure 5-2 Scree plot - extrinsic motivation 138

Figure 5-3 Scree plot - consumer value co-recovery in-role behavior 142

Figure 5-4 Scree plot - Trust in resolution ability(TR)..... 145

Figure 5-5 Scree plot - negative-discontent emotions 147

Figure 5-6 Scree plot - Ability to co-recover (AB)..... 149

Figure 5-7 Scree plot - Utilitarian value (UV)..... 151

Figure 5-8 Scree plot - Hedonic value 153

Figure 5-9 A modified CFA Measurement Model of Consumer Value Co-Recovery in-Role Behavior..... 162

Figure 5-10 A CFA Measurement Model of Consumer Extrinsic motivation 164

Figure 5-11 A CFA measurement model for intrinsic motivation..... 167

Figure 5-12 A modified CFA Measurement Model of ability to co-recover..... 169

Figure 5-13 A CFA Measurement Model of Utilitarian Value..... 171

Figure 5-14 A CFA Measurement Model of Hedonic Value 173

Figure 5-15 A CFA Measurement Model of Trust in resolution ability..... 175

Figure 5-16 A CFA Measurement Model of Negative Discontent Emotions 177

Figure 5-17 Overall Measurement Model..... 180

Figure 5-18 The hypothesized model 195

Figure 5-19 The Modified Structural Model 197

Figure 5-20 Simple mediation Analysis 200

Figure 5-21 Direct effect without mediator 202

Figure 5-22 Effect of ability to co-recover on extrinsic and intrinsic motivation 204

Figure 5-23 Direct effects with extrinsic motivation as mediator and indirect Effect 206

Figure 5-24 Direct effects with intrinsic motivation as mediator and indirect Effect.....207

Figure 5-25 The Baseline Model (Multiple-Group Analysis) for low internal blamers with standardized Estimates..... 209

Figure 5-26 The Baseline Model (Multiple-Group Analysis) for high internal blamers with standardized Estimates..... 210

Figure 5-27 The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for low internal blamers 211

Figure 5-28 The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for high internal blamers 212

Figure 5-29 The Baseline Model (Multiple-Group Analysis) for low role clarity with standardized Estimates..... 217

Figure 5-30 The Baseline Model (Multiple-Group Analysis) for high role clarity with standardized Estimates..... 218

Figure 5-31 The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for low role clarity subjects..... 219

Figure 5-32 The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for high role clarity subjects..... 220

Figure 5-33 The Baseline Model (Multiple-Group Analysis) for low trust in resolution ability with standardized Estimates 225

Figure 5-34 The Baseline Model (Multiple-Group Analysis) for high trust in resolution ability with standardized Estimates 226

Figure 5-35 The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for low trust in resolution ability..... 227

Figure 5-36 The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for high trust in resolution ability 228

Figure 5-37 The Baseline Model (Multiple-Group Analysis) for low negative emotions with standardized Estimates 232

Figure 5-38 The Baseline Model (Multiple-Group Analysis) for high negative emotions with standardized Estimates 233

Figure 5-39 The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for low negative emotions..... 235

Figure 5-40 The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for high negative emotions..... 236

Figure 5-41 The Baseline Model (Multiple-Group Analysis) for low concern emotions with standardized Estimates..... 241

Figure 5-42 The Baseline Model (Multiple-Group Analysis) for high concern emotions with standardized Estimates 242

Figure 5-43 The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for low concern emotions..... 243

Figure 5-44 The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for high concern emotions..... 244

GLOSSARY OF ABBREVIATIONS

The following table describes the significance of various abbreviations and acronyms used throughout the thesis. Nonstandard acronyms that are used in some places to abbreviate the names of certain white matter structures are not in this list.

Abbreviation	Meaning
CR/ CVCRIRB	Consumer value co-recovery in-role behavior
UV	Utilitarian value
HV	Hedonic Value
AB	Ability to co-recover
Ext.moti/EM	Extrinsic motivation
Int.mot/IM	Intrinsic motivation
RC	Role Clarity
TR	Trust in the service provider’s resolution ability

DEFINITIONS OF CONCEPTS

Concept or abbreviation	Definition in this dissertation
Resource integration process, co-creation, co-creation process	The collaborative process between firms and customers (and/or other stakeholders) in which they combine both operand and operant resources, in order to produce a mutually valued outcome
Value co-destruction, Value co-destruction process	The resource integration process in which collaboration between firms and customers (and/or other stakeholders) fails (traditionally the service failure process).
Value co-recovery/value-in recovery	Consumers' perceived outcome of the co-recovery process, i.e utilitarian and hedonic value
Operant resources	The skills and knowledge in the form of ability to perform a task
Operand resources	Any tangible resources that consumers integrate in the co-creation process (e.g money, raw materials)
Ability to co-recovery	The skills and knowledge needed for interacting with service providers to co-create a solution
Trust in the service provider's resolution ability	The consumers' perceptions of employees' ability to respond to their problems efficiently
Co-recovery	A collaborative process of creating a solution between a firm and its customers
Consumer value co-recovery in-role behavior	The totality of behaviors which are required for successful value co-recovery such as the seeking and sharing of information, responsible behavior, and personal interactions
Value -in-use	A consumer's positive evaluation of resource integration process.
Value-in-context	A consumer's positive evaluation of resource integration process, which always depends on the specific context.
Value-in-reduction	A consumer's evaluation of reduce value acquiring from resource integration process.
Value-through-misuse	A consumer's negative evaluation of resource integration process.
Value propositions	Firms offerings that have potential value
Internal Blame	Consumers' responsibility for the service failure
Actor	An actor is an entity who has the ability to act (e.g consumer, an employee, a firm, etc.)
Service Ecosystem	A relatively system of resource-integrating actors that are connected by shared institutional logics and mutual value creation through service exchange

Introduction

The present dissertation deals with the integration of service failure and service recovery, within the service dominant logic framework. I seek to present a different approach of service failure and recovery through this mindset. These research topics are all important topics due to the fact that in our era, in a service economy era service sector represent the basis for economic development. Thus understanding the service failure and recovery through S-D logic provide a novel approach in order to establish more effective recovery strategies from a firm perspective as well as help to understand customer behavior in service recovery process. Since service recovery is important for both firms and consumer, understanding how and when as well as under which circumstances consumers are willing to participate in service recovery is an important and also neglected topic. Furthermore the motivation and the consumers' value perception during service recovery process is also examined.

These current developments were the main basis for the realization of the present dissertation. In this section I will present the main topics of the dissertation, their importance, the research questions, the overview of the methodology, the overview and the scope of this thesis, the importance of this study and the expected results, the contributions of the papers as well as the structure of the thesis.

1.1 Service economy and the importance of services

Our era is characterized by a rapid growth of scientific advances such as information technology, engineering, technological and business model innovations (Maglio *et al.*, 2010), whereby production is largely replaced by service (Solberg Søylen, 2012). In this era that global economy is entering into a service economy, which is composed by service industry and service trade (Zhou, 2016), services represent the most important sector of the economy both in terms of economic performance and labor utilization (Pugh, and Subramony, 2016). The successfulness of this transition from an essentially industrial society is reflected on the fact that today more than 70 percent of most Western economies are now in the service sector, whether measured in terms of income or numbers employed (McDonald, Frow, and Payne, 2011).

The service sector in OECD countries has maintained a remarkable growth and has been the most important sector in OECD countries in terms of quantity, while service trade development has been the most rapidly growing part of international trade (Zhou, 2016). According to World Bank's world development indicators 2010, the scale of global service industry has reached 28.1 trillion in 2008, with its added value accounting for 69 % of total GDP (Zhou, 2016). Parallel, the service trade development has been the most rapidly growing part of international trade. From 1980 to 2011, global service trade rises from \$767.4 billion to \$8017.5 billion, increasing as much as 9.4 times (cited by Zhou, 2016). Thus, the importance of service sector is undoubtedly.

Traditionally economists argue that service sector, include government, education, medical and healthcare, banking and insurance, business consulting, information technology services, retail and wholesale, tourism and hospitality, entertainment, transportation and logistics, and legal among others (Maglio *et al.*, 2010). Although service sector include a range of activities, from public to private, however much confusion exists, regarding the definition of what actually service is. Furthermore, the evolution of services over the years makes things more complicated.

In their work Weber and Burri (2012) provide several definitions for services revised by SNA (the System of National Accounts) which reflect in a manner this evolution. Initial definitions, of services include the followings:

“The term services cover a heterogeneous range of intangible products and activities that are difficult to encapsulate within a simple definition. Services are also often difficult to separate from goods with which they may be associated in varying degrees”, (cited in Weber and Burri, 2012, page 30).

“Services are not separate entities over which ownership rights can be established. They cannot be traded separately from their production. Services are heterogeneous outputs produced to order and typically consist of changes in the condition of the consuming units realized by the activities of the producers at the demand of the customers. By the time their production is completed they must have been provided to the consumers”, (cited in Weber and Burri, 2012, page 30).

A more recent definition of services by the System of National Accounts (SNA) in 2008 posited that: “Services are the result of a production activity that changes the conditions of the consuming units, or facilitates the exchange of products or financial assets. These types of service may be described as change-effecting services and margin services, respectively. Change-effecting services are outputs produced to order and typically consist of changes in the conditions of the consuming units realized by the activities of producers at the demand of the consumers. They can also be referred to as ‘transformation services’. Change-effecting services are not separate entities over which ownership rights can be established. They cannot be traded separately from their production. By the time their production is completed, they must have been provided to the consumers. Margin services result when one institutional unit facilitates the change of ownership of goods, knowledge-capturing products, some services or financial assets between two other institutional units. Margin services are provided by wholesalers and retailers and by many types of financial institutions. Margin services resemble change-effecting services in that they are not separate entities over which ownership rights can be established. They cannot be traded separately from their production. By the time their production is completed, they must have been provided to the consumers” (*cited in Weber and Burri, 201, page 30*).

Moreover, based on the literature Weber and Burri, (2012) classified services in the following categories: 1) Business services, 2) communication services, 3) construction and related services, 4) distribution services, 5) educational services, 6) environmental services, 7) financial services, 8) health related and social services, 9) tourism and travel related services, 10) recreational, cultural and sporting services, 11) transportation services and 12) other services that do not include anywhere. As noted, since importance to services is undoubtedly for the economy of a country, it is necessary to understand services in marketing research.

1.2 Services in marketing literature

Marketing’s traditional focus on the provision of products as the basis for economic exchange has been gradually replaced by an emphasis on the provision of services (McDonald, Frow, and Payne, 2011). In marketing literature, there was an increasingly interesting in services especially after 1980.

What contributes to this interesting in services was the development of the deregulation of service industries, and the interaction among participants at a series of American Marketing Association conferences (Brown, Fisk, and Bitner, 1994). Brown, Fisk, and Bitner, (1994) tracked the evolution of the services marketing literature across three metaphorical stages: pre-1980, 1980-1985, after 1986-1993. In the first stage, also called as crawling out, services were given relatively little attention, while it includes beginnings of the services marketing literature in 1953 and continues through the goods marketing versus services marketing debate. The second stage, also called as scurrying about period, was a time of high interest and enthusiasm in services marketing, where the services versus goods debate began to wane. Last, the third stage also called as walking erect, was characterized as a period of growing interest in publications around marketing services while the literature has focused on specific marketing problems of service businesses rather than the debate of whether services are different from goods.

Dominant in the evolution of marketing services and the developments was the notion of authors that services have unique characteristics that differentiate them from goods or manufactured products. These characteristics also known as 'IHIP', were: 1) intangibility (services are to a large extent abstract and intangible), 2) heterogeneity (services are non-standard and highly variable), 3) inseparability (services are typically produced and consumed at the same time, with customer participation in the process), and 4) perishability (it is not possible to store services in inventory) (McDonald, Frow, and Payne, 2011). These key characteristics have become the foundational building blocks of most of the services marketing research, and are perhaps as fundamental to the study of services marketing as the "4 Ps" are to the field of marketing in general (Martin, 1999). Thus, contributions were made based on this notion of characteristics of services. For example, Zeithaml *et al.*, (1985) summarized the unique characteristics of services. They reported the findings from a survey of service managers concerning the strategies used to respond to marketing problems. Smith (1990) studied way the four distinguishing characteristics of services-intangibility, inseparability, heterogeneity and perishability affect clients' perceptions of quality service from banks. She found that intensifying competition and increasing customer expectations have created a climate where 'quality' is considered to be a major strategic variable for improving customer satisfaction and thus the profitability of financial service providers. In the same vein, Hartman and Lindgren (1993) investigated the importance of four

characteristics of services to consumers; intangibility, inseparability, heterogeneity and perishability, while Onkvisit and Shaw (1991) suggest that services are “time dependent” and “time important” which make them very perishable, and consider that heterogeneity offers the opportunity to provide a degree of flexibility and customization of the service. Other researchers have focused on intangibility of services e.g Zeithaml (1981) who highlight the fact that degree of tangibility has implications for the ease with which consumers can evaluate services and products. Some others have focused on inseparability (e.g Grönroos, 1978; Zeithaml, 1981), on heterogeneity (e.g Wyckham *et al.* 1975) and perishability (e.g Onkvisit and Shaw, 1991). As seen, it was widely accepted between marketing scholars (e.g Zeithaml, 1981, 1985; Smith, 1990) that the research into the characteristics of the services was the basis for developing marketing activities and also examining customer behaviour (Wolak, Kalafatis, and Harris 1998). However, this early service consumer behavior literature applied paradigms and approaches taken from the literature on goods (Tsiotsou, and Wirtz, 2012). It is important to note that services were treated as an intangible form of goods, as units of outputs that provided customers with value (Vargo and Lusch, 2008c). Thus the utility of services were created and delivered to customers by the firms, while customers acquire the service value during the consumption of the service.

1.3 The evolving perspective of service (s)- A new paradigm

Gradually, contributions by authors based on the aforementioned characteristics of services were challenged. Evolution of the services marketing literature changes dramatically the traditional view that both academics and practitioners have adopted for services. First, two articles by Vargo and Lusch and Lovelock and Gummesson which were published in 2004, reflect this challenge and the call for reconsideration. In the first article, Lovelock and Gummesson, (2004) challenge the validity and continued usefulness of its core paradigm, namely, the assertion that four specific characteristics—intangibility, heterogeneity, inseparability, and perishability—make services uniquely different from goods. Alternatively, they proposed that services offer benefits through access or temporary possession, instead of ownership, with payments taking the form of rentals or access fees. In the second article, the authors (Vargo and Lusch, 2004b) argued that these characteristics (a) do not distinguish services from goods, (b) only have meaning from a manufacturing perspective, and (c) imply inappropriate normative strategies.

Parallel, some years before, contributions from the French and Nordic school of thought also consider a different approach to services. First, an important contribution was made by Eiglier and Langeard (1987) (French school model) who developed the servuction model in marketing services according to which a service consists of two parts: visible and invisible areas to customers. The servuction model emphasizes the involvement of customer in the creation of service and adopts the view that customer is internal part of the value creation process, (*cited in* Yi, 2014). For the Nordic school of thought, in the 2000s, Grönroos and Gummesson, (1985), were progressing towards a new science (or logic) of service as value-creation abandoning the production-centric goods manufacturing versus a service sector divide. Furthermore, Grönroos (2000) proposes that process is one of the main characteristics of services, in addition to simultaneous production and consumption and the customer's participation in the service production process. Later, in another article, Grönroos (2001) defines the service concept "as an activity or series of activities of a more or less intangible nature that normally, but not necessarily, take place in the interaction between the customer and service employees and/or physical resources or goods and/or systems of the service provider, which are provided as solutions to customer problems".

A process-oriented view was also given from the US-led school of thought (Vargo and Lusch, 2004a; 2008). In their publication in *Journal of Marketing*, Vargo and Lusch, (2004a p. 2) have defined service as "...the application of specialized competences (knowledge and skills), through deeds, processes, and performances for the benefit of another entity or the entity itself". From this point, this process orientation of service rather than an output orientation, started to be an ongoing issue at the debates among marketing scholars (e.g Gummesson, 2007; Edvardsson *et al.*, 2012). For example recently, in the service recovery context Tronvoll (2007; 2012) argue that customer complaint behaviour should be seen as a dynamic process from the perspective of S-D logic and not as a post-failure activity (static nature, as an output).

Nevertheless, the publication of Vargo and Lusch (2004a) was not only a call for reconsideration of traditional view of services but also a repositioning for the marketing activities in general. This so-called "service-dominant logic" of marketing except of the adoption of process-oriented view changed drastically the rules of the game. Among other concepts, integration of resources (resource integration) and value co-creation, between stakeholders gave an active role to customers (Gummesson and Grönroos, 2012), and gain

increasingly in importance. Co-creation of value, varies in definitions, includes meanings from the customer participation literature (e.g Rajah *et al.*, 2008), co-production literature (e.g Bendapudi and Leone, 2003), prosumption literature (e.g Xie *et al.*, 2008), involvement (e.g Gebauer *et al.*, 2010), engagement (e.g Ramaswamy, 2011) et.c. As become clear, the term "co-creation", or "value co-creation", or "co-creation of value" has been used as a concept in order to denotes the process (e.g participation process, involvement process, et.c) and not the outcome. Similarly, in this dissertation, the term "value co-creation", or "co-creation process", or "resource integration process", or simply "co-creation" will be defined *as the collaborative process between firms and customers (and/or other stakeholders) in which the involved actors combine both tangibles and intagibles resources, in order to produce a mutually valued outcome.* The actors "*are entities that have agency, the ability to act purposefully*" (Lusch and Vargo, 2014 p.56). Consider, a simple example, in which the customer needs to communicate very often with his or her friends and/or family. Consumer interacts with buyer seller (collaborative process), in order to decide which communication device to buy (e.g smartphone, tablet et.c), which serves better his or her needs. During this collaboration consumer and seller integrate their intangible resources (e.g his/her experience and knowledge in smartphones, and or tablets, available information) with tangible resources (specific application, equipment of devices) in order to co-create the service. Thus, they both combine their resources in a mutuall process.

Interestingly, research on the value co-creation has recently been receiving a significant amount of attention in marketing (Prahalad and Ramaswamy, 2004a; Ballantyne and Varey, 2006, 2008; Cova and Dalli, 2009; Gummesson and Mele, 2010; Salloum *et al.*, 2014; Hatch and Schultz, 2010; Grönroos 2011; Witell *et al.*, 2011), because of the benefits both customers (Nambisan and Baron, 2009; O'Hern and Rindfleisch 2009; Füller 2010) and firms (Maklan, Knox and Ryals, 2008). Co-creation may leads to greater customer satisfaction (Nambisan and Baron, 2007) and reduced risk for the firm (Maklan, Knox and Ryals, 2008). Firms through value co-creation, can increase their productivity by reducing operational costs, and parallel to improved their effectiveness (Hull 2004; Payne, Storbacka, and Frow 2008; Prahalad and Ramaswamy 2000).

1.4 Consumers' motivation for co-creation

Based on the benefits for both firms and customers (Maglio *et al.*, 2009; Edvardsson *et al.*, 2011), service providers are trying to engage customers more and more on co-creation activities. Indeed, understanding value creation and co-creation emphasizes the need to further study customers' motivations to engage in the process (Fernandes and Remelhe, 2015). Nevertheless, only limited research has been done on consumer motivation for participation in co-creation (e.g Nambisan and Baron 2009; Füller, 2006, 2010; Hoyer *et al.*, 2010; Roberts *et al.*, 2014). Füller (2010) studied consumer's motives in co-creation. Fuller's study show that consumers engage in virtual co-creation for several factors: curiosity, dissatisfaction with the existing products, intrinsic interest in innovation, to gain knowledge, to show ideas or to get monetary rewards. From another perspective, Hoyer *et al.*, (2010), see the motivation of consumers as an antecedent of the degree of co-creation, distinguish four types of motivation: financial, social, technical, and psychological, while Bhalla (2011) discusses the importance of understanding motives, as it is naïve to believe that consumers in the co-creation process are merely motivated by altruistic reasons. As seen, the consumer motivation literature focuses mainly on why and how individuals engage in different co-creation activities. Understanding the principles behind this phenomenon is essential as help firms to enhance consumer's motivation for engagement in co-creation process. Because, as literature reveals motivation could be both extrinsic and intrinsic (Füller, 2010), in case of customer co-creation, it is also worthwhile, to note that in order to be sustainable co-creation as a practice, people should be not only extrinsically but also intrinsically motivated (Ind *et al.*, 2013). Consequently, considering the importance of both extrinsic and intrinsic motivation is necessary in order to have a more holistic idea of why customers engage each time in co-creation process.

Another important element which is closely related to co-creation is trust, as it reflects the foundation for consumers' willingness to share ideas and to interact (Ind *et al.*, 2013). Without trust, no co-creation process would evolve (Ind *et al.*, 2013). In their study, Ind *et al.*, (2013) propose that participation increases as consumers begin to trust one another. It is therefore essential to encourage interaction from the beginning in order to foster the development of trust among the actors (Ind *et al.*, 2013). In the same vein other authors (Read *et al.*, 2014) consider trust as an enabler of value co-creation, while some other argue that co-

creation inherently implies, and possibly subsumes, trust and commitment (Randall *et al.*, 2011). More specifically, Read *et al.*, (2014) argue that relationships which offer unique value co-creation require a high level of trust while parallel notice that in order to emerge trust both sides of a buyer/supplier dyad should repeatedly exhibit trustworthiness. Randall *et al.*, (2011) argue that trust in the dialogue between stakeholders, is increased through co-creation. Thus, becomes clear that except of motivation for engagement in co-creation activities trust is also an important aspect that firms should built between them and the customers. Understanding customers' motivation and built trust with them facilitates all co-creation activities.

1.5 The importance of operant resources

Service-Dominant logic recognizes two distinct types of resources, operand (intangibles) and operand (tangibles). Operand resources are potential resources, static and tangible resources, such as natural resources (Lusch and Vargo, 2014). Examples of operand resources are buildings, machinery, computer software. In this dissertation, *operand resources will be defined as any tangible resources that consumers integrate in the co-creation process*. On the other hand, operant resources are intangible and dynamic resources that are capable of acting to create benefit (Lusch and Vargo, 2014). Operant resources, especially “know-how,” are the essential component of differentiation (Lusch *et al.*, 2007) and a source of competitive advantage. This is because operant resources act upon operand resources in order to produce a favorable experience. Even an operand resource, such as the smartphone in the above example, is just an intermediary in the provision of service (communication). In this example, a smartphone or a tablet can be conceptualized as the integration of large amounts of mostly operant resources. These operant resources include the ability to design, assemble, and distribute the smartphone (operant resources of provider and its suppliers), the ability to use a smartphone (operant resources of customer), the ability to build and maintain network communication technology (operant resources of mobile network operators), and the ability to produce and distribute smartphone applications (apps) (operant resources of mobile application builder). It becomes clear that without operant resources (e.g ability) co-creation is impossible. In this dissertation, operant resources will be defined *as the skills and knowledge in the form of ability to perform a task*. Furthermore, at this point it is important to notice, that regarding the role of resources a major implication of this evolving

logic is that resources do not have value per se, value is co-created with customers when resources are used, (Edvardsson *et al.*, 2001), is evaluated at the time of its use (Ballantyne and Varey 2006), while always is depending on context (Edvardsson, Skålén, and Tronvoll, 2011). For example, when someone rents a car from a car hire agency car has only a potential value and not value per se. However, when he/she drives the car in a large highway and he/she feels good with speed of the car, comfortable with its features (e.g telescoping steering wheel/adjustable pedals, seat DVD player) therefore different forms of value may emerge simultaneously, e.g hedonic (due to car characteristics) as well as and utilitarian value (go to his/her job). Nevertheless, in order to acquire value, he/she should know how to drive the specific car (i.e abilities, know-how). Without abilities (know-how to drive) even he/she has the best car he/she cannot benefit from its value. Thus, value is not created and delivered by the firms, in terms of output value but is always co-created between firms, customers, and other stakeholders. Furthermore, goods (e.g car) and/or services (communication with the service provider) are used as vehicles for service provision. What is more in the aforementioned example, major role plays the highway. If the highway is bad-holes, land slides, asphalt missing, mud and water holes, the driver could not achieve the speed that he/she wanted. Thus, the high way affect consumers' value creation and co-creation process. The highway, can be consider as the specific context. Additionally, when driver integrates his operant resources (ability) and act upon the operand resources (car), to produce value always with the contribution of other actors (e.g service provider) this also called resource integration.

The most important contribution of this mindset is that customer becomes from passive active, who always co-create value with firms as well as other stakeholders. Thus this new research stream, changes the role of customers. This shift, has important implications for all service activities, including a variety range from service delivery to service failures and service recovery.

1.6 Value co-creation behaviors in service context

As become clear until now, operant resources are necessary for all resource integration activities. For that purpose, customers need to obtain the know-how and appropriate skills to be effective resource integrators (Yi, 2014). Because operant resources

are prerequisites for each resource integration activity, there are also necessary when customers create value for themselves through the resource integration process i.e when they engaged in value creation behavior (Hibbert *et al.*, 2012), or value co-creation behavior (Yi and Gong, 2013). In this way customers' apply their abilities in operand resources and co-create value for themselves. In line with creation and co-creation behaviors Yi (2014) by reviewing service marketing literature reveals two different types of co-creation behaviors, customer participation behaviors (Kelley *et al.*, 1992; Cermak *et al.*, 1994; Claycomb *et al.*, 2001; Lloyd, 2003; Skaggs and Huffman, 2003; Hausman, 2004) and customer citizenships behaviors (Bettencourt 1997; Groth 2005; Aherne *et al.*, 2005; Yi and Gong 2008; Bove *et al.*, 2009; Johnson and Rapp, 2010; Bartikowski and Walsh, 2011). An important contribution in value creation or co-creation behaviors was made by Yi and Gong (2013). First, the authors defined customer participation or in-role behavior as "the required (in-role) behavior necessary for successful value co-creation" and customer citizenship behavior, as the "voluntary (extra-role) behavior that provides extraordinary value to the firm but is not necessarily required for value co-creation" (Yi and Gong, 2013 pp.1-2). From the definition becomes clear that in-role behaviors include the necessary behaviors for value creation in order to provide value for the customers themselves while the extra-role behaviors provide value for the firms. Moreover, Yi and Gong (2013) conceptualized value co-creation behavior as a two dimensional construct consists of the aforementioned dimension in-role and extra role behaviors. As I mentioned above, despite the ongoing importance, for both customers and firms, to understand customers co-creation behavior in order to engage them in co-creation process, research on customer value co-creation behavior is still in its infancy. What is more very little empirical research exists in line with customers' motivation to engage in creation and co-creation behaviors, while it is not yet known under which circumstances customers' will engage in different behaviors. Studying customers behaviors on Service-Dominant logic concept provides fruitful insights and an opportunity for firms to facilitate customers' value creation process. Now, it is important to see how the implications of the emerging S-D logic change traditional view not only in service delivery, innovation, etc, but also in service failure and service recovery process.

1.7 Service failure, service recovery and customer behavior

Service failures are inevitable even for the best firm, can be characterized as any service delivery that does not match consumers' expectations (Smith *et al.*, 1999), and may vary in gravity from being something serious, such as a food poisoning incident, to something trivial, such as a short delay (Kelley and Davis, 1994). Service failures have negative effects on customer loyalty (Hays and Hill, 1999; McCollough *et al.*, 2000; Roos, 1999), on customer satisfaction (Chuang *et al.*, 2012) and emotional responses (Smith and Bolton, 2002). Because service recovery is profitable for both firms (Hart *et al.*, 1990) and customers (Lovelock *et al.*, 2002), firms are trying to focus on the more effective recovery strategies in order to achieve customer retention. Service recovery literature follows the evolution of the services in the marketing literature. In the beginning of the literature several authors argue that is critical for firms to have effective recovery strategies (e.g apology, compensation, speed of response) in order to correct a problem following a service failure (Davidow, 2000; Gelbrich and Roschk, 2011; Karatepe, 2006; Smith *et al.*, 1999). This happens because firms deliver services that do not match consumers' expectations (Smith *et al.*, 1999). Becomes clear the notion that because firms deliver services with the premise of customers' satisfaction there are also responsible for the recovery of this satisfaction in case of complaints. The treatment that service recovery is absolutely a firm responsibility makes consumers passive recipient of service recovery as well as of the service delivery. Thus as Krishna, Dangayach, and Jain, (2011) argued this literature has focused on the positive effects of service recovery (e.g Wirtz and Mattila, 2004) in restoring not only satisfaction but also leading in service recovery paradox (Boshoff, 1997; Halstead and Page, 1992), where loyalty can be build faster than if no failure had occurred.

However, because service recovery strategies are not always succeed and then also have negative effects such as retaliatory behaviors and revenge intentions towards the firm (Grégoire *et al.*, 2009; Grégoire *et al.*, 2010), managers need an adequate understanding of how customers react to service recovery strategies (Roth and Menor, 2003). At the same time, fundamental problems arise regarding the successfulness of service recovery. In a manner of understanding why service recovery often fails some authors state that:

“Effective recovery management requires starting with what we already know to be the key fundamentals to be achieved and then actually implementing them by an integrated approach

based upon service logic, value and strategy-driven approaches....”, (Michel, Bowen, and Johnston, 2009, p. 267). In this article, Michel *et al.*, (2009) noticed the importance that managers should strive to integrate service recovery efforts based upon “*service logic*”, by involved also the customer as co-producer. Some authors have already stated the firms' benefits of including customers in the service recovery efforts rather than just deliver a solution. For example, Mattila and Cranage, (2005) introduce a new antecedent to service recovery – that is customers' choice over some components of the service delivery process and argued that giving customers some control over the service delivery process will make them feel partly responsible should a failure occur. In the same vein, some other authors started to include customers in the service recovery process as a co-creators (Dong *et al.*, 2008; Roggeveen *et al.*, 2012; Xu *et al.*, 2014a,b) and examine customer behaviors and their reactions. By using different theories such as justice, expectation-disconfirmation theory, they investigated both the positive and negative effects of customer co-creation in service recovery. Generally, these studies have demonstrated that customers' co-creation in service recovery influence the co-recovery outcome (e.g post-recovery evaluations). Thus, customers' reactions in service recovery may differ, depending on their participation in previous service delivery (Heidenreich *et al.*, 2014), their justice perceptions (Xu *et al.*, 2014b; Guo *et al.*, 2015), the failure severity (Roggeveen *et al.*, 2012) on evaluating the service recovery process in terms of satisfaction. It is clear that since customer is co-creator of value in resource integration process, becomes automatically co-creator in case of service failure and of course in case of service recovery. Thus traditional the traditional view of service recovery process, i.e just provision of compensation, or apology by the firm, is not enough for a successful recovery outcome. Little research has been conducted, while a more careful evaluation is needed in order to understand customers' behaviors in service failure and service recovery context. Thus, I describe bellow the purpose of this dissertation and the research questions arise from the previous study.

1.8 Summary and identification of the research gap

Firms are seeking ways to engage customers in service recovery (co-creation in service recovery) since it is a cost-effective recovery strategy (Roggeveen *et al.*, 2012) and also improves customers' post-recovery evaluations (Park and Ha, 2016; Roggeveen *et al.*, 2012; Xu *et al.*, 2014b). Co-creation in service recovery or co-recovery refers to a

collaborative process of creating a solution between a firm and its customers. Although customer co-creation can help firms to cope with service failure (Roggeveen *et al.*, 2012), however it is not yet known the modes by which consumers co-create a service recovery. Understanding the modes by which consumers co-create in a service recovery provides firms with opportunities to facilitate the service recovery process, given that firms operate as value facilitators (Grönroos and Voima, 2013), and thus to have benefits for them. In this way I am seeking to capture at the same time the multidimensionality of customer value co-creation in-role behavior as literature reveals (Yi and Gong, 2013), in service recovery context, i.e. consumer value co-recovery in-role behavior. Consumer value co-recovery in-role behaviors, in this study *refer to the totality of behaviors which are required for successful value co-recovery.* Previous authors by measured customer co-creation in service recovery using single- or multiple-item measures, they actually ignored the conceptual richness of the customer value co-creation in-role behavior construct. Moreover, none of the previous research explores the relationship between the overall construct and its dimensions, in a service recovery context. This is important in order to confirm whether consumers co-create value in a service recovery context in the same way as they do in a service delivery context. Consequently, the first research question focuses on the modes by which customer value co-creation in service recovery occurs:

1. What are the modes by which consumers co-create value with firms in service recovery context?

The evolving new logic of marketing provides a fundamental shift from goods and services, to service (singular) as the appliance of resources for value creation and value co-creation. Furthermore, S-D logic emphasizes the role of operant resources as the source of competitive advantage (Vargo and Lusch, 2004a; 2008a), because those resources can produce effects or outcomes (e.g a competitive product is created) (Lusch and Vargo, 2014). Since value is created and co-created with the appliance of these resources on operand, their importance is major. S-D logic notices this importance of acknowledging customers' operant resources (Vargo and Lusch, 2008a) as important value-enhancing variables in service experiences. This means that, only if an actor has operant resources i.e abilities and knows how to apply does he or she gain advantage (Lusch and Vargo, 2014), in terms of perceived value. In this dissertation abilities in service recovery context, i.e ability to co-recover will be defined as *skills and knowledge needed for interacting with service providers to co-create a*

solution. However, it is not yet known if operant resource-based abilities (abilities to co-recover) enhance and contribute to consumers' value assessment in service recovery context. The next research question centers on the role of consumers operant resources in the form of ability to co-recover on value co-recovery assessment:

2. Does consumers' ability to co-recover affect consumer perceived value in service recovery context?

What is more, ability to co-recover is a consumer's asset that helped him/her to co-create value, it may have an impact also on co-recovery in-role behavior, as well as on their motivation to exhibit co-recovery in-role behaviors. Understanding, if consumers who have the ability to co-recover will be more motivated to engage in co-recovery in-role behavior and actually engage in co-recovery in-role behaviors, provides firms with the knowledge to evaluate the requirements for a successful co-recovery process. Contrary, a mandatory co-recovery process with a consumer which has no the ability to co-recover could harm post-recovery perceptions and evaluations. In this case, a firm recovery may be a more appropriate strategy (Dong *et al.*, 2016). Research shows that ability has an impact on customer co-creation behavior (Yi, 2014) and on customers' motivation (Dellande *et al.*, 2004; Lusch *et al.*, 2007). Nevertheless, what happens with the role of ability on customers' behavior for the successfulness of the service recovery? Does ability to co-recover affect consumer motivation? In the service recovery context a more careful examination about the role of ability to co-recover on customer behavior and his/her motivation is required.

3. Does ability to co-recover affects customer motivation as well as consumer value co-recovery in-role behavior?

Importantly, contrary to traditional concepts that have used until now in services marketing literature (e.g satisfaction) S-D logic emphasizes the concept of value (Vargo and Lusch, 2004a; 2014). Value is a dominant concept and is always co-created with customers, while it is perceived as an outcome of experience rather than extracted from objects. Since prior literature supports two value dimensions, utilitarian and hedonic, as capturing the outcome of experiences (Zhuang *et al.*, 2014), similarly S-D logic literature (e.g Park and Ha, 2016; Zhuang *et al.*, 2014) emphasizes the utilitarian and hedonic aspects of co-creation, and suggests that value co-creation is considered multifaceted construct. As I mentioned above value is a central concept in S-D logic, understanding therefore what contributes (enhance) to

customer value co-creation is a major issue and also neglected. Although much discussion exists around value co-creation and value creation very little empirical research confirms what really contributes to value creation. For instance, it is argued by several authors that customers behavior and participation in service delivery process creates value (e.g leads to higher levels of perceived value) (e.g Bitner *et al.*, 1997). Ironically, research instead of examines whether co-creation in-role behavior actually increases value, studies focus on other concepts such as different forms of satisfaction and loyalty (e.g Vega-Vazquez *et al.*, 2013; Grisse mann and Stokburger-Sauer, 2013; Cossío-Silva *et al.*, 2016; Navarro *et al.*, 2016). Thus, I seek to extend the literature, by examining if consumer value co-recovery in-role behavior leads to higher levels of utilitarian and hedonic value, in a service recovery context:

4. Does consumer co-recovery in-role behavior lead to higher levels of utilitarian and hedonic value?

As I already mentioned, firms are trying to engage customers in co-creation activities in different aspects of services (e.g service delivery, service innovation, new product development) due to the benefits. Recent call suggests that understanding motivation for engagement in co-creation activities is an important issue in order to enhance customers' motivation. As Bolton and Saxena-Iyer (2009) argue firm needs to facilitate customer motivation to ensure effective customer in-role behavior. In a service recovery context this means that firms should examine what motivates customers to engage and contribute their resources (mainly operant) in a service recovery process in order to achieve specific benefits. Because, understanding value creation and co-creation emphasizes the need to further study customers' motivations to engage in the process (Fernandes and Remelhe, 2015), I also intend to explore consumer motivations to actively engage in co-recovery in-role behavior and thus co-create value, what are the benefits in order to contribute their own resources.

5. Why consumers engage in co-recovery activities?

Similarly to co-creation process, based on S-D logic co-recovery is also a dynamic process. This means that different factors can affect the co-recovery outcome among service providers and customers. In this study these factors, can affect not only the outcome of the co-recovery process (utilitarian and hedonic value) but also customers' co-recovery in-role behavior. The selection of these factors is based on the impacts of the effective usage of

consumer's resources in the resource integration process during recovery. Vargo and Lusch (2008a) present value as a phenomena that is '...idiosyncratic, experiential, contextual and meaning laden' (p. 7). From a contextual perspective, this means that value is contextually specific. Context affects value creation and co-creation. Consider, for example, teenagers teen play video games. The play could be done, at the teen's house, at their parent's house, or at a friend's house. Moreover, could be while also listening to music or discussing. In each of these contexts, value co-creation is different, because context differs. A better understanding of what context is and how context affect co-creation process is needed, since it is provide a neglected aspect from empirical research. Moreover, in a service recovery process it is not yet known how context affects the co-recovery process. Besides, recently S-D logic argues that institutions are the context which frames value co-creation (Vargo and Lusch, 2016).

As I mentioned above, trust is an important construct which enables the value co-creation process. In a co-recovery context, trust between consumers and service providers can be seen as consumers' perceptions of service providers' abilities to help them co-recover. In this dissertation I name this construct as *trust in the service provider's resolution ability*. Since trust is required for exchanging resources (i.e resource integration process), while also affect the actors' ability and motivation to exchange resources (Altinay *et al.*, 2016), in a service recovery context, I examine how trust may affect the relationship between consumers' ability to co-recover and their motivation to co-recovery.

6. Does trust in the service provider's resolution ability moderate the relationship between ability to co-recover and motivation?

Likewise, other constructs may enable or constrain the service recovery behavior and the assessment of co-created value. For example, service recovery literature reveals that emotions affect service recovery outcomes (Andreassen 1999; 2000; Smith and Bolton, 2002). Indeed, negative emotions during the service recovery process have been found to reduce satisfaction and predict exit behaviors. During service interactions (service delivery as well as service recovery) between different actors (i.e customers and employees) are frequently experienced both positive and/or negative emotions (McColl-Kennedy *et al.*, 2006; Keeffe *et al.*, 2007). At this point it is important to note that, especially in service recovery context emotions predict a variety of different behavior such as voice, exit and negative word of-mouth. For example, Grégoire *et al.*, (2010) found that anger can predict revenge

behaviors, Tronvoll (2011) argued that frustration is the best predictor for complaint behaviour towards the service provider. Despite the importance of emotions in service interaction, unfortunately in the S-D logic framework and especially in the co-creation context the role of emotions is almost neglected. This is surprisingly enough given that co-creation is "an often emotion-centric process surrounding a series of interaction" (Prebensen *et al.*, 2014). More recently, some authors (e.g. Fischer, 2014) have started to examine how positive emotions in co-creation process can foster the creation of positively deviant performances in services. Nevertheless, in the appliance of S-D logic in service recovery context the role of emotions remains unexplored. Since previous research has shown that emotions have an impact on consumers behaviors, outcome assessment, as well as on their motivation (Krishnakumar and Hopkins, 2014), I am also seeking to explore their moderating role in the value co-recovery process, thus in the relationships on the aforementioned model.

7. Do negative emotions moderate the co-recovery process?

In S-D logic, suppliers operate as value facilitators (Grönroos and Voima, 2013), in service delivery process. In a service recovery context, this means that actors (e.g employees) facilitate the customers during service recovery process by provide them with the necessary information and explanations. When firms provide customers with a deeper understanding of what they have to do in order to co-recover from service failure, therefore role clarity is achieved. Therefore it is likely that they feel more motivated to participate and actually participate in a service recovery process. Role clarity has been examined in the literature (Lengnick-Hall *et al.*, 2000; Ostrom, 2003) and has been found to have an impact on motivation (Moynihan and Pandey, 2007) for co-creation behaviors (Yi, 2014), and service outcomes. However, in the service recovery context its effects on co-recovery behaviors and value creation are not yet known. I suggest that as employees provide customers with role clarity about the specific task, this may has an impact on the aforementioned relationships, by enabling or constraining the co-recovery process depending on the levels of role clarity.

8. Does role clarity moderate the co-recovery process?

Last, the role of blame is well established in the service recovery literature (e.g Harris *et al.*, 2006; Grégoire *et al.*, 2010; Maxham and Netemeyer, 2002; Weiner, 2000). Attribution of blame is defined as "the degree to which customers perceive a firm to be accountable for the causation of a failed recover" (Grégoire *et al.*, 2010, pp. 742). In the traditional service

recovery literature attribution of blame has been found to have an impact on the expectations of service recovery (Harris *et al.*, 2006), on emotional responses (Fiske and Taylor, 2013), as well as on consumer reactions after service failure (e.g Brown and Beltramini, 1989; Folkes *et al.*, 1987). In co-recovery attribution of blame has been examined as a control variable (Dong *et al.*, 2008) and as factor that affects the service recovery outcome (e.g satisfaction) because it generates perceived guilt depending on the level of co-creation (Heidenreich *et al.*, 2014). Because attribution for what occurred can influence how the consumer will respond (Swanson and Kelley, 2001), in a co-creation of service recovery I expect that it might has an impact on co-recovery process (aforementioned relationships of the model) as well as in the perceived value.

9. Does internal blame moderate the co-recovery process?

1.9 Overview and scope of the thesis

In goods dominant (G-D) logic, value creation is associated with resource acquisition (Lusch, Vargo and Wessels 2008) due to the fact that resources either tangible (goods) or intangibles (services) (usually plural) are embedded with value (Vargo and Lusch 2004a; Vargo, Maglio and Akaka 2008; Vargo and Lusch 2008c). Therefore, value was drawn by acquiring the resource (goods or services) of another, while the term services (usually plural) reflect a particular type of (intangible) good (output) (Vargo and Lusch 2008c; Vargo 2009). Companies create and deliver value in form of resources (goods/and or services), in terms of output (Vargo and Akaka 2009). This logic which was based on neoclassical economic view, on the underlying model of economic exchange recently was challenged by a new school of thought (Vargo and Lusch 2004a; 2008a; Lusch and Vargo, 2014), which called service-dominant logic. Contrary to G-D logic view of value, in service-dominant (S-D) logic, value creation occurs when a potential resource is turned into a specific benefit, an activity known as resourcing (see Lusch *et al.*, 2007). Service (singular) is a process of doing something beneficial for, and in conjunction with, an entity (Vargo and Lusch, 2008a). Resources do not have value instead there are embedded with “*potential value*” which turns into real value through resource integration. Moreover, all economic actors are resource integrators (Lusch and Vargo 2006; Vargo and Lusch 2006; 2008a) and value co-creation (company and customers co-create value together) is realized through resource integration process (Vargo

and Lusch 2004a; 2008a). According to S-D logic (Vargo and Lusch, 2004a; Vargo and Lusch, 2008a) firms and customers co-create value together through collaboration by contributing their own resources. Customer is no longer a passive recipient, but is always a co-creator of value (Vargo and Lusch, 2008a) who is actively engaged in resource integration activities. These two premises of S-D logic underline the importance of concurrent resource allocation and customer engagement for a successful service encounter that engenders value co-creation for the customer and the firm. Value co-creation takes place not only during service delivery process but also during service recovery (Dong *et al.*, 2008; Roggeveen *et al.*, 2012; Heidenreich *et al.*, 2014; Xu *et al.*, 2014a,b). The importance of value co-creation in a service recovery context is even higher since it is imperative for the firm to heal a damaged relationship for cost-effectiveness in service recovery for short-term (Roggeveen *et al.*, 2012) and for customer satisfaction in the long run (Dong *et al.*, 2008). The importance of operant resources (skills and knowledge) is high as there are the source of competitive advantage, which are dynamic, and act upon the static operand ones, in order to produce favorable experiences and solve problems (Vargo and Lusch, 2004a).

Despite its importance, little research to date has focused on a service recovery context from the perspective of value co-creation (see Dong *et al.*, 2008; Roggeveen *et al.*, 2012; Heidenreich *et al.*, 2014; Xu *et al.*, 2014a,b; Guo *et al.*, 2015). This newly blossoming stream of studies has demonstrated that the co-recovery outcome has been influenced by the customers' perceptions of co-creation during recovery process (Dong *et al.*, 2008; Roggeveen *et al.*, 2012), the impact of initial co-creation of service delivery (Heidenreich *et al.*, 2014), the employee initiation (Xu *et al.* 2014a), as well as the justice perception (Xu *et al.*, 2014b; Guo *et al.*, 2015) and customers' control (Guo *et al.*, 2015). Nevertheless, growing evidence reveal contradictory findings regarding the effect of co-creation in service recovery. Empirical studies have reported that co-creation in service recovery is evaluated negatively; if customers have a high level of co-creation in the initial service (Heidenreich *et al.*, 2014), and believe that they are doing the company's job (Roggeveen *et al.*, 2012). Customer satisfaction is improved only when the service staff initiates a co-created service recovery (Xu *et al.*, 2014a). Therefore, further research is needed to understand whether co-creation behavior in service recovery leads to favorable outcome or not, and under which circumstances. Unfortunately, no account has been offered to explicate this equivocal relationship and little attention has been given to the underlying processes that explain how co-recovery in-role

behavior could occur via the integration of operant resources i.e. abilities. In other words, this study asks the question of how one customer's own assessment of his/her ability to co-allocate his/her skills and knowledge to the recovery process could lead to co-recovery behavior and hence value co-creation.

With the goal of addressing these issues, I draw on Vroom's Expectancy Theory (Vroom 1964) to explicate the negative and positive effects on consumer value co-recovery in-role behavior, respectively. Therefore, this dissertation contributes to the literature by developing a dual process model that posits customers' extrinsic and intrinsic motivation as competing psychological mediators, which account for distinct contributions on consumers' service recovery behaviors which also lead to different value co-created outcomes. Thus, separate intermediate mechanisms are identified, through which the effect of ability is transferred to consumer value co-recovery in-role behavior and, in turn, to co-created value. In addition, the current study tests several moderators' role (internal blame, role clarity, trust in service provider's resolution ability, and negative emotions) in the proposed model in order to be able to have a holistic picture of how value co-recovery takes place under certain conditions.

Moreover, despite the call for a thorough understanding of co-creation assessment in service recovery process behind the way customer value co-creation is translated into customer value (see S-D logic), previous studies have exclusively evaluated co-recovery in terms of satisfaction (Dong *et al.*, 2008; Roggeveen *et al.*, 2012; Heidenreich *et al.*, 2014), although a more recent study evaluated it as an experience (Xu *et al.*, 2014b) taking a more S-D logic approach, in this way these studies neglecting the real nature of the given phenomenon. The present research contributes to the literature by linking consumer value co-recovery in-role behavior to outcomes related to value co-created, such as hedonic and utilitarian, thus expanding the scope of the literature.

In addition, in order to examine recovery behaviours, it is necessary to examine the conditions under which unfavourable service experience took place. Therefore a careful examination of service failure through the lens of S-D logic is required. Moreover, understanding what customers want from service recovery, leads to the establishment of more effective recovery strategies, and drives behaviours (e.g engagement, co-recovery in-role behavior).

1.10 Summarizing the importance of this study and the expected results

In a service economy era, in which interest in service recovery has grown (e.g. Harris, Grewal, Mohr, and Bernhardt 2006; Smith, 2013) due to its importance for both firms and customers (Hart *et al.*, 1990; Lovelock *et al.*, 2002), firms are seeking ways to engage customers in co-recovery process since it is a cost-effective recovery strategy (Roggeveen *et al.*, 2012) and also improves customers' post-recovery evaluations (Park and Ha, 2016; Roggeveen *et al.*, 2012; Xu *et al.*, 2014b). Moreover, contrary to traditional service recovery strategies which often fail (e.g. Ringberg *et al.*, 2007; Michel *et al.*, 2009), co-recovery process has less chances to fail because co-creation reduces the uncertainty of the recovery outcome (Park and Ha, 2016). Understanding therefore how consumers co-recover (through which practices), why they engage in co-recovery process, what is the role of their operant resources in their motivation and actually co-recovery in-role behavior, and whether consumers' co-recovery in-role behavior improves or not their value assessment are all issues of primary importance because enable firms to enhance their motivation, facilitate the co-recovery process (Grönroos and Voima, 2013), and then to ensure the successfulness of co-recovery. Moreover, it enables firms to decide whether co-recovery is an appropriate service recovery strategy or not. Thus, I seek to understand the relative importance of these issues that firms should assign to their service recovery options. With the aim of address these issues this research expects to have following outcomes. (a) Identifying the reasons of consumers' engagement in co-recovery process. (b) Understanding how consumers co-recover, through which specific practices. (c) Confirm the importance of operant resources in co-recovery process (d) explore whether co-recovery in-role behavior produces or not value and what kind of value (utilitarian and/or hedonic). (e) Exploring the circumstances under which co-recovery could be a successful, and thus when co-recovery process will be a successful recovery strategy.

1.11 Overview of the methodology

The present study employed a mixed methods approach based on both qualitative and quantitative research design, in order to develop the proposed model and test the hypotheses. Study 1 was a qualitative study which was done to develop a better understanding of the

nature of co-creation in service recovery context, to develop a comprehensive definition and explore its dimensions, and also to support theory development for the construct. 27 in-depth were conducted in order to transit and confirm the dimensions of co-creation behavior in a service recovery context. Thus customer participation in service recovery also called as consumer value co-recovery in-role behavior was found to consist of four dimensions as well as the consumer value co-creation in-role behavior. Moreover during the interviews the role of ability as operant resource was identified as well as why interviewees participated in a service recovery process. By the same token, the moderating role of the above constructs was also confirmed through the interviews. Consequently, a proposed model of consumer value co-recovery in-role behavior and a set of hypotheses were developed based on the results of interviews and a review of the literature.

Study 2, sought to test the relationships between the second order factor consumer value co-recovery in-role behavior and the value co-creation. The measured used for the model testing were taken from existing, established scales in the literature except for the construct *trust in service provider resolution ability*, were items developed through the interviews. All the scale measures items were modified to reflect more appropriate scale items for the specified context of service recovery. The questionnaire was tested by experts. Then the model was tested through the use of a large-scale quantitative online survey n=740. Both SPSS and Amos were used in this study. Exploratory Factor Analysis (EFA) was conducted using SPSS20 to test the reliability of all the measurements and the dimensionality of two constructs. Then measurement invariance was tested based on the moderating factors, and Confirmatory factor analysis (CFA) was conducted using AMOS20 software program as well as regression analysis for hypothesis testing through structural equation modelling (SEM). Also, mediation effects were tested while in order to test the moderator effects, in this dissertation I performed a multiple group moderation.

1.12 Overview of the dissertation

In the second chapter, I review the service dominant logic and co-creation literature. After that, I review the literature of service failure and service recovery. In the third chapter, I reconceptualize service failure and service recovery concepts through the lens of service-dominant logic and I develop the conceptual framework and the hypotheses. In the fourth

chapter I discuss the methodology and describe both qualitative and quantitative studies. Moreover, validity of constructs and demographic factors are presented. In the fifth chapter, I analyze the data and present the results while parallel present a series of test including EFA, CFA, measurement invariance, SEM, moderators and mediators. Last, in the sixth chapter, I discuss the findings by providing recommendations for future research and practical implications.

1.13 Contribution of the appended conferences papers

The following papers have been published during the preparation of this thesis. The remaining parts of the thesis have not yet been published.

Table 1.1: Contributions of the conference papers		
Paper 1	Title	Re-conceptualizing the Service Recovery Strategies: The Mechanism of Value Restoration
	Research Questions	Why service recovery fails? Where firms should be focus in order to establish effective service recovery strategies?
	Type of article	Conceptual
	Contribution of the paper	The concept of value is central for customers. Unfortunately the majority of the service recovery strategies focus on predefined recovery strategies (e.g compensation, explanation) which may not provide value for customers. Therefore firms should focus on value-based recovery approaches, though the lens of S-D logic.
	Published/	This paper is published in

	review process	30ème Congrès de l' Association Française du Marketing , Montpellier, France, 14-16, May, 2014.
Paper 2	Title	Conceptualizing Service Failures through the lens of service-dominant logic: a value-based approach.
	Type of article	Conceptual
	Contribution of the paper	To develop an integrated model of resource-integration process in order to understand service failure, success and recovery into a continuum process, the “service process”. Co-creation and co-destruction
	Published/ review process	This paper is accepted, to be presented to American Marketing Association (AMA) Winter Marketing Educators' Conference, 2015 , San Antonio Texas, USA, February 13-15, 2015.
Paper 3	Title	When employee co-destroyed customers' well-being
	Research Questions	Why employees while enhance well-being for themselves by co-creating value, intentionally diminish value for customers in resource integration process?
	Type of article	Conceptual
	Contribution of the paper	The study proposes that violation of employees' psychosocial needs in resource integration process may lead to customer value co-destruction process.
	Published/ review	This paper is published in the 2015 Naples Forum on

	process	Service, Service Dominant Logic, Network & Systems Theory and Service Science: Integrating Three Perspectives For A New Service Agenda, Naples, Italy, 9 - 12 June 2015.
Paper 4	Title	Exploring the role of context and adaptability on customer value co-recovery behaviour
	Research Questions	What is the role of context and adaptability on customer value co-recovery behaviour?
	Type of article	Conceptual
	Contribution of the paper	Consumers' adaptability influences the co-recovery behavior during service failures something that is conditioned by the context that service failure takes place (e.g. with the attendance of different consumers or not, interactive or not servicescape, etc).
	Published/ review process	This paper is published in the 2015 Naples Forum on Service, Service Dominant Logic, Network & Systems Theory and Service Science: Integrating Three Perspectives For A New Service Agenda, Naples, Italy, 9 - 12 June 2015.

Chapter 2. A service-dominant logic view of marketing

2.1 Service -Dominant logic foundational premises

Vargo and Lusch (2004a) summarized the value of S-D logic on ten foundational premises (FPs), with a later modification (Vargo and Lusch 2008a), revision and reduction into four axioms (Lusch and Vargo 2014), with a final update and extension into 11 (FPs) and 5 axioms (Vargo and Lusch 2016). The foundational premises of S-D logic constitute the concepts underlying the S-D logic framework. The first FP and axiom posit that ***service is the fundamental basis of exchange***. In S-D logic, the word service (singular) is the application of knowledge and skills by one actor for the benefit of another (Vargo and Lusch 2004a; Lusch and Vargo, 2006). Accordingly, it differs from the traditional term services (plural) which refers to an intangible type of good (where value is added) and usually are intangible, heterogeneous, inseparable, and perishable offerings (Vargo *et al.*, 2008). Therefore, the first axiom (and FPs) suggests that *what is being exchanged is the application of knowledge and skills* (operant resources) providing by actors (e.g individuals, firms, etc.) (Lusch and Vargo 2014). The second FP posits that ***indirect exchange masks the fundamental basis of exchange***. While service is exchanged for service as the FP1 suggests, this FP argues that the exchange of service-for-service *is not direct but indirect*. For instance, an actor pays another actor for direct service, such as when a student pays a professor for his or her service. Therefore the *indirect exchange of skills* is facilitated by money as a medium between actors and actors exchange *service-for-service* through money (or goods) which are vehicles (Lusch and Vargo 2014). The FP3, ***goods are distribution mechanisms for service provision***, stresses that since the basis of exchange is service (FP1), goods (i.e. units of output) cannot be the common basis of exchange (Vargo and Lusch, 2004a), and therefore can serve as distribution mechanisms (or as appliances) for the service provision, that actors used their knowledge and skills to create (Lusch and Vargo 2014). The fourth foundational premise recognizes that ***operant resources are the fundamental source of strategic benefit***. By explaining this FP, Vargo and Lusch (2004a) and Lusch and Vargo, (2014) posit that operand resources (e.g knowledge and skills) are actually the competitive advantage of actors

(firms, organizations, nations) and not the tangible resources (money, equipment etc). Indeed, tangible goods are important only if an actor has operant resources and knows how to apply them does he or she gain competitive advantage and strategic benefit (Lusch and Vargo 2014; Vargo and Lusch, 2016). In other words, what matters is the comparative ability to draw on and use the operand resources (tangible) and that is the strategic benefit of competition.

According to FP 5 *all economies are service economies*. From FP1, in which Vargo and Lusch argued that service provision (the application of mental and physical skills) is the basis of economic exchange (Vargo and Lusch 2004a), is derived the fifth foundational premise. This FP stresses that *all the economies* (e.g agricultural economy, industrial economy, information economy) can be viewed as macro-specialization which were characterized by the refinement of specialized knowledge and skills (operant resources) (Lusch and Vargo, 2014). Since *all the economies are characterized by service provision*, are service economies. The sixth foundational premise and the second axiom posit that *value is cocreated by multiple actors, always including the beneficiary*. This FP is one of the most cited FP of S-D logic litterature as well as one of the most misunderstanding concept. Traditionally, value was added by the firms in goods and services, in terms of outputs. Therefore, customers bought goods (e.g shoes) when they exchanged with firms. This type of value was characterized as value-in-exchange because value was embedded in goods (shoes) and it was supposed that customers acquired this value in the point of exchange. However the beneficiary, after the sale of the shoes use and adapt the appliance to his or her specific needs and behaviors (e.g joking) and determine the value of the shoes at the time of their use, as value-in-use. Therefore value co-creation, implies that value is always created in the use and integration of resources (Lusch and Vargo, 2014). It is important to notice here that value co-creation is not optional contrary to co-production (e.g participation in the production process of design, etc). The FP7, *Actors cannot deliver value but can participate in the creation and offering of value propositions*, stresses that actors such as firms, individuals etc can only offer invitation to engage with other actor for a benefit (Lusch and Vargo, 2014). Value propositions can be seen as offerings embedded with potential value (Skålen *et al.*, 2015). Thus firms and others actors cannot create and deliver value (G-D logic perspective) but only participate in the creation and offering of potential value through value propositions (Lusch and Vargo, 2014). That is firms not only cannot create value but they also cannot create potential value rather than co-create it with customers (Vargo and Lusch 2016). Value

propositions should be fulfilled in order to realize value from the involved actors (Lusch and Vargo, 2014). The eighth foundational premise posits that *a service-centered view is inherently beneficiary oriented and relational*. Because value is always co-created between the beneficiary and other stakeholders (FP6) as a result the beneficiary is inherently in the center of value creation process. The service centered view is beneficiary oriented because firm doing things not for the beneficiary but with the beneficiary and service is defined as the application of skills and knowledge for the benefit of another party (Lush and Vargo, 2014). More simple, Service is customer-determined and cocreated; thus, it is inherently customer oriented and relational (Vargo and Akaka, 2009). The FP9 and third axiom posit that *all social and economic actors are resource integrators*. S-D logic views all actors (e.g individuals, firms, nations) as resource integrators that contribute their operand resources (tangible) and operant resources (intangible) in order to co-create value (Lusch and Vargo, 2014). Therefore, simply states that not only the economic actors but also the social actors integrate their resources to co-create value. The fourth axiom and FP10 recognizes that *value is always uniquely and phenomenologically determined by the beneficiary*. By analyzing this foundational premise, Vargo and Lusch imply that since value is co-created by different actors, it is also evaluated in a specific context as an experience by the beneficiary. This is because each interaction takes place in different context, involving the availability, the integration and the use of different resources and actors (Lusch and Vargo, 2014). Last the FP11 and the fifth axiom posit that *value cocreation is coordinated through actor-generated institutions and institutional arrangements*. This FP emphasizes the role of institutions (e.g norm, meaning, symbol, practice, law) and institutional arrangements (sets of institutions) in value creation and co-creation (Vargo and Lusch 2016) Because institutions are central in value co-creation this FP mentions that institutions enable and constrain value creation.

Table 2.1 Service-Dominant logic Foundational Premises		
Axiom 1	FP1	Service is the fundamental basis of exchange.
	FP2	Indirect exchange masks the fundamental basis of exchange.
	FP3	Goods are distribution mechanisms for service provision.
	FP4	Operant resources are the fundamental source of strategic benefit.
	FP5	All economies are service economies.
Axiom 2	FP6	Value is cocreated by multiple actors,always including the beneficiary.

	FP7	Actors cannot deliver value but can participate in the creation and offering of value propositions.
	FP8	A service-centered view is inherently beneficiary oriented and relational.
Axiom 3	FP9	All social and economic actors are resource integrators.
Axiom 4	FP10	Value is always uniquely and phenomenologically determined by the beneficiary.
Axiom 5	FP11	Value cocreation is coordinated through actor-generated institutions and institutional arrangements.
Source: Vargo and Lusch (2004a; 2008a) Lusch and Vargo (2014) Vargo and Lusch (2016), also available in sdlogic.net.		

2.2 Service-Dominant Logic and Value Co-creation

Traditionally, firms controlled all business activities and consequently it was their view of value that was dominant (Prahalad and Ramaswamy, 2002). In this firm-centric logic *goods* are tangible output embedded with value and *services* are intangible goods or add-ons which enhance the value of goods (Vargo and Lusch, 2008b), while the source of value creation is the internal cost efficiency (Prahalad and Ramaswamy, 2002). Customer has little or no influence in the value creation until the point of exchange where the ownership of the product is typically transferred to the consumer from the firm (Prahalad and Ramaswamy, 2002) and value-in-exchange was realized. That is, value-in-exchange characterized the Good-Dominant logic (G-D) logic (Vargo and Lusch, 2004a; Vargo *et al.*, 2008a) and value is embedded in goods or services (Grönroos, 2008; Vargo and Lusch, 2008a), it is created by the firm and distributed in the market, usually through exchange of goods and money (Vargo *et al.*, 2008).

This prevalent, logic was challenged by a consumer-centric logic (Prahalad and Ramaswamy, 2002; Vargo and Lusch, 2004a; Grönroos, 2008) according to which consumers influence value creation in multiple ways. According to this customer-centric logic, also called as Service-Dominant logic (S-D) logic (see Vargo and Lusch, 2004a; Vargo and Lusch, 2008) or Service logic (see Grönroos, 2006; Grönroos, 2008; Grönroos and Ravald, 2011), the value is created when customers use goods and services (value-in-use) (Grönroos, 2008; Sandström *et al.*, 2008), therefore value shifts from value-in-exchange to value-in-use (Vargo and Lusch, 2004a; Grönroos, 2008) and the basis for value shifts *from products to experiences* (Prahalad and Ramaswamy, 2002). In the consumer-centric logic *service* is the

application of specialized competences (operant resources knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself while *goods* are the distribution mechanisms for service provision (Vargo and Lusch, 2004a; 2008c).

In this aforementioned, service-grounded perspective, the concept of co-creation is dominant and has attracted considerable attention. Gradually, the concept of co-creation has become a central issue in conferences presentations and marketing journals. First, Prahalad and Ramaswamy, (2000; 2002) introduce the term of co-creation and argue that “companies must learn to *co-create* value with their customers”, (Prahalad and Ramaswamy, (2002, p. 4). Later, authors argued that, “*value will have to be jointly created by both the firm and the consumer*”, (Prahalad and Ramaswamy, 2004a, p.7) and that value of co-creation is realized “*through personalized interactions*” and that “all the points of consumer-company interaction are critical for creating value” (Prahalad and Ramaswamy, 2004a, p.10). Furthermore, authors developed *the building blocks of interactions between the firm and consumers that facilitate co-creation experiences*, DART model of co-creation which is made up four components: dialogue, access, risk assessment and transparency (Prahalad and Ramaswamy, 2004a; b). At the same time, in their seminal paper Vargo and Lusch (2004a) regarding the Service-Dominant logic, a paradigm shift has been established with profound influence on marketing and management.

Among others foundational premises authors suggested that customers are always co-producers because they “... always involve in the production of value by ... continuing the marketing, consumption, and value-creation and delivery processes” (Vargo and Lusch, 2004a, p. 11). Later, Vargo and Lusch, (2006; 2008a) changed that premise from “The customer is always a co-producer” to “*The customer is always a co-creator of value*” due to the fact that the term “co-production” was a good-dominant logic term and a component of value co-creation (Vargo and Lusch, 2008a). Contrary to S-D logic and following the Nordic school of thought, Grönroos, (2008) argued that customers are not co-creators of value but they are value creators and suppliers are value facilitators, who could be invited to join this process as co-creators (Grönroos, 2011). The author explains that due to the fact that value is created in the customer’s sphere, as value-in-use, in a value creating process in which consumer is in charge (Grönroos, 2000; Grönroos 2008; Grönroos 2011), and therefore customer is the value creator.

Table 2.2 Service Dominant logic and Service logic/most cited papers		
<i>Citation</i>	<i>Purpose</i>	<i>Key findings</i>
Prahalad, (2004)	Interview about the concept of co-creation.	Author gives an example of co-creation experience referring to Medtronic Inc. a world leader in cardiac rhythm management, in which each doctor-patient combination can co-create a unique way of dealing with a complex problem. Patients are actively involved in the system of Medtronic in order to create the modality of treatment. He also notes that the distinction of roles between consumers and the company is becoming blurred. Consumers enable in the creation of value in the products and services. On the other hand some other companies such as Disney, although have enjoy a closer relationship with their customers they don't co-create value because they are still firm-centric. Author also notes that co-creation differs from customization, because the former goes further, jointly with the customer a whole range of ways to create value. He is also notes that co-creation can decrease the risk of loss to the supplier. Prahalad referred 3 building blocks of the co-creation process: dialogue, risk assessment, transparency.
Prahalad and Ramaswamy (2004a)	To mention about the concept of co-creation and its challenges in business world in which individuals play a leading role	They propose DART model of co-creation of value, which stresses that the building blocks for co-creation, is made up of four components: dialogue, access, risk assessment and transparency. Authors asserted that a careful combination of these building blocks will result in better engagement of customers as collaborators in value creation. Managers can combine them in different ways.
Prahalad and Ramaswamy (2004b)	To discuss how the concept of a market is undergoing change and transforming the nature of the relationship between the consumer and the firm	Authors rejected the firm-centric" view of value creation and accept the "co-creation" view. Value has to be jointly created by both the firm and the consumer. All the points of consumer-company interaction are critical for creating value. They also noted that the interaction between firms and consumers must be built on critical building blocks: dialogue, access, risk assessment and transparency (DART). All points of interaction between the company and the consumer are opportunities for both value creation and extraction and the interaction becomes the locus of value creation and can be anywhere in the system. Last authors noted that co-creation of value fundamentally challenges the traditional distinction between supply and demand and market must be seen as a space of potential co-creation experiences.
Ramaswamy,	To provide an	Author states the premises

Chapter 2. Literature review

(2011)	alternative logic that value is human experiences rather than a function of service	of an alternate logic of value and its creation: 1. Value is a function of human experiences 2. Experiences come from interactions. 3. A firm is any entity that facilitates this creation of experience-based value through interactions. Engagement platforms are the means to creating value together 4. Co-creation is the process by which mutual value is expanded together, where value to participating individuals is a function of their experiences, both their engagement experiences on the platform, and productive and meaningful human experiences that result.
Vargo and Lusch, (2004a)	To discuss the transition from the traditional goods-dominant view of marketing into a new service-dominant view in which service provision is fundamental to economic exchange.	Authors argued that marketing has shifted from a goods-dominant view in which tangible output and discrete transactions were central, to a service-dominant view, in which intangibility, exchange processes, and relationships are central. They described the goods- and services- centered views. Based on the distinction between operand and operant resources they mentioned 6 (six) differences between the goods and service dominant logic. They developed eight foundational premises (FPs) in which the emerging dominant logic is based on. Authors also argued that the focus is shifting away from tangibles and toward intangibles, such as skills, information, and knowledge, and toward interactivity and connectivity and ongoing relationships. Authors proposed that emerging service-centered dominant logic of marketing will have a substantial role in marketing thought and that it has the potential to replace the traditional goods centered paradigm.
Vargo and Lusch, (2008a)	To explore the major issues surrounding S-D logic and to offer revisions to the FPs as published in the 2004 JM article and to add a FP.	Authors discussed misconceptions of some issues concerning the service-dominant logic, such as “services economy”, the notion that S-D logic applies only to dyadic, firm/customer exchange, and the contention that S-D logic does not accommodate or pay sufficient attention to social and nonprofit marketing and marketing ethics. Regarding the first one authors argued that all economies are service economies and the postulate that all businesses are service business liberates marketers to think of innovation in new and innovative ways. Regarding the second misconception authors postulate that value creation takes place within and between systems at various levels of aggregation. Last authors seen S-D logic not only accommodative but potentially foundational to not only social marketing and issues of ethics but also more general societal issues and non-profit marketing. Authors also made wording modifications in FPs and added another one foundational premise: <i>Organizations exist to integrate and transform microspecialized competences into complex services that are demanded in the marketplace.</i>
Grönroos,		Author presented an alternative view of service logic compared

Chapter 2. Literature review

(2006)		to goods logic. Furthermore, he compared the evolution of the service marketing literature between two distinct school of thoughts the Nordic School perspective and the service-dominant logic of Vargo and Lusch. He argued that in service logic goods do not render services as such, and customers do not consume goods as services while consumer durables and industrial products in business-to-business contexts can be treated as services.
Grönroos, (2008)	To examine the two facets of service logic: the customer and the provider service logic, respectively and explore the consequences for value creation and marketing.	Author discussed the differences between value-in exchange and value-in-use. He noted that value-in-exchange is a more goods-logic based concept and that in essence concerns resources used as a value foundation which are aimed at facilitating customers' fulfillment of value-in-use. On the other hand, according to value-in-use customers are the creators of value. Generally, adopting a service logic makes it possible for firms to get involved with their customers' value-generating processes, and the market offering is expanded to including firm-customer interactions. So supplier can become a co-creator of value with its customers.
Grönroos, (2011)	To analyze value creation in the context of a service perspective on business and marketing (service logic), and specifically to analyze the value co-creation aspect of value creation and the roles of the customer and the firm, respectively.	Regarding the first premise, Grönroos reformulates to: <i>“Reciprocal value creation is the fundamental basis of business, with service as a mediating factor.”</i> instead of “Service is the fundamental basis of business”, (Vargo and Lusch, 2004). The premise “Goods are distribution mechanisms for service provision” was reformulated as: <i>“All resources and processes are distribution mechanisms for service provision, however without including value in themselves.”</i> , the premise “The customer is always a co-creator of value” was reformulated as <i>“Fundamentally, the customer is always a value creator”</i> . Furthermore author argued that The firm is not restricted to offering value propositions only, but also has an opportunity to directly and actively influence its customers' value creation. The customer is still in charge of value creation (of value-in- use), and is the one who determines whether value emerges or not. However, the direct interactions with customers that take place put the service provider in a position where, during such interactions, and only then, the firm and its customers can jointly contribute to the value that emerges for the customer. Last author argued that value is accumulating throughout the customer's value-creating process; and that value is always uniquely and both experientially and contextually perceived and determined by the customer. General, author argued that the reformulation of some of the central premises guiding service as a perspective for business and marketing creates a meaningful basis for understanding the total process leading to value for customers,

Chapter 2. Literature review

		and the customer's and the firm's various roles in that process. In the article it is demonstrated that basically it is not the customer, but rather the service provider that gains from value co-creation possibilities.
Grönroos, (2012)	To develop a conceptual model of value co-creation that includes all the elements needed to understand, plan, and respond to customer-firm interactions in a way that supports both the customer's and the service provider's value creation.	Combining the models from the French and Nordic schools of thought, this study derives a model of value co-creation. These models demonstrate how service emerges in interactions between sets of resource categories, as well as how such interactions function to influence customers and value formation. The resource categorization of the servuction model (Eiglier and Langeard, 1975, 1976) and the action-oriented interactive marketing model (Grönroos, 1978) offer a strong foundation for developing a model of value co-creation that includes both co-creation resource categories and co-creation activity categories. This model is based on the notion that customers create value through usage as value-in-use and that the co-creation of value therefore takes place in joint collaborative activities during direct interactions of the parties. However the model is a value co-creation platform only. The strength of the influence on the value-formation process by activities taken by the parties depends on their willingness, motivation, and skills to perform in a way that contributes to value formation. Furthermore, value can be influenced negatively by destructive actions on the platform. Using the reciprocity of value creation in service, the same interactive process that contributes to the emergence of value for customers has the potential to create co-creation-based value for the service provider. Finally, value co-creation during direct interactions of service encounters is only part of a customer's value-creating process; the model connects value co-creation to the customer's independent value creation.
Grönroos and Voima (2013)	To analyze value creation and co-creation in service by analytically defining the roles of the customer and the firm, as well as the scope, locus, and nature of value and value creation	They introduce three value creation spheres (provider sphere, joint sphere, and customer sphere) and elaborate on the customer's and service provider's roles in each of them. They argued that only in a joint sphere is co-creation of value between the firm and the customer possible. In the provider sphere, provider generates potential value, which customers later turn into real value (-in-use) and firm is in charge of the process. In the joint sphere, the customer is in charge of value creation (value-in-use). Furthermore, the role of customer is twofold: coproducer of resources and processes with the firm and value creator jointly with the firm. Last, in customer sphere, value creation by the customer is independent of the provider because the system is closed to the provider and the customer only interacts with resources obtained from the firm but not with the firm's processes. Between customers and firms there are two types of interactions: direct and indirect. Authors argued that

Chapter 2. Literature review

		value-in-use created by the user during usage of resources and processes and that value creation is the customer's creation of value-in-use. In order to analyze the roles, nature, scope, and content of value creation in the service provider's and customer's value spheres authors argue that value creation must be defined rigorously and grounded in the value-in-use concept.
Source: The researcher		

The value is not a new term and it has been extensively examined. First, Aristotle made the distinction between value-in-exchange and value-in-use (Aristotle 4th century B.C.) and concluded that value is derived subjectively through the user's experiences with resources (Gordon, 1964: 117), while stated that all consumption involves interactions between a subject and an object. Value-in-exchange is a function of value-in-use (Aristotle, *Ethica*, 1133, 26-29, *cited in Gordon*, 1964, p.118), and according to Smith, 1776/2000, p.31 “*the things which have the greatest value in use have frequently little or no value in exchange; and on the contrary, those which have the greatest value in exchange have frequently little or no value in use*”, cited by Vargo et al., (2008). Although value-in-use is more important than value-in-exchange (Grönroos, 2008), and it is possible to exist without value-in-exchange (Vargo and Lusch, 2006), the latter is required for value creation (Vargo *et al.*, 2008) and can exist at different points during value creation process, where potential value exists (see Grönroos and Voima, 2013).

Value-in-use emerges during consumption process (Lusch and Vargo, 2006; Grönroos, 2006; Grönroos, 2008; Grönroos and Voima, 2013). The notion that value is realized through consumption has its roots in Marxian economics. In support of this, I would like to take a step back to the Karl Marx's book, *A Contribution to the Critique of Political Economy*, in which Marx asserts that: “A use-value has value only in use, and is realized only in the process of consumption.” The concept of consumption traditionally has been treated as a black box in marketing (Grönroos, 2006). An important contribution in the consumption concept was made by Grönroos, (2006) who extended the consumption concept by arguing that except the customers interactions with physical objects, consumption also encompasses other elements such as information, people-to-people encounters, encounters with systems and infrastructures and customers' perception of elements of any sort with which they interact during the consumption processes that together have an impact on customer's value creation.

Vargo, Maglio, and Akaka (2008, p. 149) define value as “*an improvement in system well-being*” which can be measured “*in terms of a system’s adaptiveness or ability to fit in its environment*”. Later, Vargo and Lusch, (2011, p. 184) highlighted the “*central role of resources*” to S-D logic and to the value co-creation as well. More specifically, value is co-created when service systems (for example individuals and organisations) integrate “*operant resources*” (the intangible resources that produce effects, e.g knowledge and skills) and “*operand resources*” (those resources that must be acted on to be beneficial, such as natural resources, goods, and other generally static matter) in a mutually beneficial way, (Vargo *et al.*, 2008). Consequently, value is co-created during the interaction between \ customers and providers (Prahalad and Ramaswamy, 2004a; Ramírez, 1999; Vargo and Lusch, 2004a) who can actively and directly influence their experiences and therefore also their value creation (Grönroos and Ravald, 2011).

2.3 The nature and definitions of co-creation

Although co-production is only a component of value co-creation (see for example Lusch and Vargo, 2006; Vargo and Lusch, 2008a), generally authors in the service marketing literature, without much questioning, use interchangeably these terms as well as similar terms e.g. involvement, pro-sumption, servuction, contact, interaction in order to describe customer participation in firms activities. For example, Roggeveen *et al.*, (2012) in their paper used the literature from customer involvement under the term of co-creation in order to describe the action of customer participation in service recovery. They also used the term of co-production interchangeably. Zwick *et al.*, (2008) describe pro-sumption mainly using the term co-creation. By the same token, authors encompass all activities within the umbrella term of co-creation. Dong and colleagues, (2008) used the term co-creation in order to describe customer participation and likewise Jong-Kuk *et al.*, (2010) used customer participation literature under the term of co-creation.

Although these terms have as primary premise that customers are involved in the creation of value (Gebauer *et al.*, 2010), nevertheless suggest different means through different processes. An effort for distinction between the terms of pro-sumption, servuction, co-production, and co-creation has been made by previous authors (see for example Gebauer *et al.*, 2010; Humphreys and Grayson, 2008). The term co-production implies the “customers’ engagement as active participants in the organization’s work” (see for example Lengnick-

Hall *et al.*, 2000 Auh *et al.*, 2007), and describes the participation (e.g Whitaker 1980; Levine and Fisher, 1984) in the production process managed by the service provider (Grönroos, 2011). Researches such as Bendapudi and Leone, (2003); Bitner *et al.*, (1997); Von Hippel, (2001), see customers as co-producers of a service or a product, in which value is added in the production process. Nevertheless, in value-in-use notion, this cannot exist (Grönroos, 2011). Regarding the term pro-sumption consists an abbreviated form of “producer and consumer” (Toffler, 1980), involves both production and consumption (Ritzer and Jurgenson, 2010), and implies that customers produce products for their own consumption (Xie *et al.*, 2008). The terms servuction (from the words service and production) (Langeard and Eiglier, 1987), denotes that customer has a high degree of involvement in the service production process. Last, co-creation refers to the concept that the involvement both of consumer and supplier is required in order to create value (see for example Vargo and Lusch, 2004a; Grönroos, 2008).

As I mentioned above the concept of co-creation is generally ill-used in the marketing litterature and often in confusion with its similar terms. As a result, there are different definitions of co-creation in the litterature which represent different approach of co-creation depending each authors’ view. A review of the literature reveals the several definitions which characterize the term co-creation. Some of these very widely referenced definitions are provided below. Co-creation has been defined as:

Table 2.3: Definitions of Value Co-creation	
Normann and Ramirez (1994)	Actors come together to coproduce value.
Gummesson (1996)	Coproduction is the process of involving customers in joint production and thus joint value creation [with the firm].
Ramirez (1999)	Coproduction is a framework for understanding value-creation processes that exist within interactions between producers and consumers.
Grönroos (2000)	Value for customer is created throughout the relationship by the customer, partly in interactions between the customer and the supplier or service provider.
Grönroos (2008)	Adopting a service logic makes it possible for firms to get involved with their customers’ value-generating processes, and the market offering is expanded to including firm customer interactions.
Grönroos, (2012, p.1523)	“Joint collaborative activities by parties involved in direct interactions, aiming to contribute to the value that emerges

Chapter 2. Literature review

	for one or both parties.”
Rindfleisch, (2009, p.86)	“Collaborative NPD activity in which customers actively contribute and/or select the content of a new product offering.”
Bertilsson and Cassinger, (2011,p.412)	“The process where exchange value is co-created between firm and consumers.”
Dobrzykowski et al., (2010, p.115)	“The extent to which the worth of a product or service is determined by the beneficiary as derived by the participation of suppliers, the focal firm, and the beneficiary.”
Syvertsen, (2012, p.16)	“Value and meaning are created together with customers and other stakeholders, through a process called co-creation among business managers and academics.”
Gebauer et al., (2010, p.514)	“The rudimentary precept that the involvement of both the customer and the producer is required to create value.”
Kristensson et al., (2008, p.475)	“The involvement of the customer as an active collaborator right from the beginning of the innovation process.”
Roser and Samson, (2009, p.9)	“An active, creative and social process, based on collaboration between producers and users, that is initiated by the firm to generate value for customers.”
Auh et al., (2007, p.361)	“Constructive customer participation in the service creation and delivery process” and clarify that it “requires meaningful, cooperative contributions to the service process.”
Finsterwalder and Tuzovic (2010, p.111)	“The customer’s role as a part of the production and delivery process of the service”.
Banks and Potts (2010, p.260)	Suggested that “consumer co-creation emerges as an evolved process in respect of practices, identities, social norms, business models and institutions of both market-based extrinsically-motivated exchange relations and culturally-shaped intrinsically-motivated production relations.”
Ji Yong Park (2012, p.87-88)	“An equal evolving participatory process between user and designer towards sharing of values, knowledge and needs, and building of a sense of community. In this sense, co-creation is a monistic system. ”
Rajah et al., (2008, p.367-368)	“A process requiring an active participation of the customer and relevant actors in the experience network.”
Randall et al., (2011, p.5)	“An evolutionary process that occurs not only between the firm and the customer but also among the community of customers.”
Prahalad and Ramaswamy (2000)	Co-create personalized experiences with customers—customers want to shape these experiences themselves, both individually or with experts or other customers
Prahalad and Ramaswamy (2003)	There are multiple points of exchange where the consumer and the company can co-create value
Prahalad and Ramaswamy (2004, p.8)	“about joint creation of value by the company and the customer”, “allowing the customer to co-construct the service experience to suit her context”, “Joint problem definition and problem solving”, “Creating an experience

	environment in which consumers can have active dialogue and co-construct personalized experiences; product may be the same (e.g., Lego Mind storms) but customers can construct different experiences”, “Experience variety”, “Experience of one”, “Experiencing the business as consumers do in real time”, “Continuous dialogue”, “Co-constructing personalized experiences”, “Innovating experience environments for new co-creation experiences.”
Grönroos, (2011, p.290)	“Joint value creation with the customers”
Jaakkola and Hakanen, (2012, p.49)	Authors conceptualize value co-creation as “an iterative, collaborative process (Grönroos and Helle, 2010) that occurs at three interrelated levels: First, the individual actors execute activities to contribute and receive resources whereby they perceive benefits and sacrifices, i.e. they have their respective value creation contexts and processes (cf. Grönroos and Ravald, 2011). Second, value co-creation occurs at the relationship level through interaction and collaboration between actors (Vargo and Lusch, 2008a). Third, at the network level, resources are integrated into a larger resource constellation through a pattern of activities by a web of actors (Gummesson and Mele, 2010; Håkansson <i>et al.</i> , 2009, p. 67)”.
Plé and Chumpitaz Cáceres, (2010, p.431)	Authors argue that value co-destruction can be defined “as an interactional process between service systems that results in a decline in at least one of the systems’ well-being (which, given the nature of a service system, can be individual or organizational). During this process, these service systems interact either directly (person-to-person) or indirectly (via appliances such as goods) through the integration and application of resources.”
Witell <i>et al.</i>, (2011, p.143)	“Activities in which customers actively participate in the early phases of the development process by contributing information about their own needs and/or suggesting ideas for future services that they would value being able to use.”
Ng <i>et al.</i>, (2010, p.9)	“The customer realizing the value proposition to obtain benefits (value-in-use).”
Ballantyne and Varey, 2006, p. 344).	“Spontaneous, collaborative and dialogical interactions, where putting things together that others do not think go together achieves something new and unique in the process leading to competitive advantage.”
Ramaswamy, V. (2011, p.195).	“The process by which mutual value is expanded together, where value to participating individuals is a function of their experiences, both their engagement experiences on the platform, and productive and meaningful human experiences that result.”
Hilton, Hughes, and Chalcraft (2012, p. 1504)	“As planned resource integration behaviours by actors intended to realise a value proposition”.
Yi and Gong, 2013, p. 1-2).	Authors argue that there are “two types of customer value

	co-creation behavior: customer participation behavior, which refers to required (in-role) behavior necessary for successful value co-creation, and customer citizenship behavior, which is voluntary (extra-role) behavior that provides extraordinary value to the firm but is not necessarily required for value co-creation. ”
Frow, Payne, and Storbacka (2011, p.1)	Define value co-creation as ‘an interactive process involving at least two willing resource integrating actors which are engaged in specific forms of mutually beneficial collaboration, resulting in value creation for those actors’.
Cova and Salle (2008)	Value cocreation process involving actors from both the supply network and the (business) customer network.
McCull-Kennedy, Vargo, Dagger, Sweeney and van Kasteren (p.5)	Define customer value cocreation as “benefit realized from integration of resources through activities and interactions with collaborators in the customer’s service network.” That is, a multiparty all-encompassing process including the focal firm and potentially other market-facing and public sources and private sources as well as customer activities (personal sources)
Lambert and Enz (2012, p.1601)	[...] as a three phase cycle comprised of (1) joint crafting of value propositions, (2) value actualization (3) value determination.
Roser <i>et al.</i>, (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.
Vargo and Lusch (2004a)	Customers are active participants in relational exchanges and coproduction.
Arnould, Price, and Malshe (2006)	Consumers deploy their operand resources and use of the firms’ operand and operant resources . . . to create value.
Lusch and Vargo (2006)	The S-D logic notion of value cocreation suggests that there is no value until an offering is used—experience and perception are essential to value determination.
Ind and 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.
Grönroos, and Voima(2013)	“[...] refers to customers’ creation of value-in-use where co-creation is a function of interaction.”
Edvardsson <i>et al.</i>, (2011, p.327)	“[...] is shaped by social forces, is reproduced in social structures, and can be asymmetric for the actors involved.”
Gummesson and 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.”
Xie <i>et al.</i>, (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.”
Zwick <i>et al.</i>, (2008, p.184)	“[...] as a set of organizational strategies and discursive

	procedures aimed at 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.
Payne <i>et al.</i>, (2008, p.84)	“[...] process involves the supplier creating superior value propositions, with customers determining value when a good or service is consumed.
Wikström (1996, p.362)	“[...] is company-consumer interaction (social exchange) and adaptation, for the purpose of attaining added value.”
Bolton in Ostrom <i>et al.</i>, (2010)	Cocreation (of value) is conceptualized as collaboration in the creation of value through shared inventiveness, design, and other discretionary behaviors.
Tzokas and Saren (1997)	Value can only be reached by means of blending the activities of two strategically positioned yet highly dependent systems of production and consumption.
Tzokas and Saren (1999)	Value, for both the firm and the customer, is created in the combined, yet unique, effort of systems of production and consumption working synergistically.
Vargo, Lusch, and Morgan (2006)	Value is always uniquely and phenomenologically determined by the beneficiary.
Lusch, Vargo, and O’Brien (2007)	Value can only be determined by the user in the consumption process. Thus it occurs at the intersection of the offerer, the customer—either in direct interaction or mediated by a good—and other valuecreation partners.
Vargo, Maglio, and Akaka (2008)	Cocreation of value inherently requires participation of more than one service system, and it is through integration and application of resources made available through exchange that value is created.
Schau, Muniz, and Arnould (2009)	Consumer collectives are the site of much value creation which emerges through emergent participatory actions of multiple members,
Heinonen <i>et al.</i>, (2010)	Firm provides service cocreation of value opportunities, consumers only engage in value creation as part of how consumption activities become a part of their life goals.
Source: Synthesized from the following sources: The researcher; McColl-Kennedy <i>et al.</i> , (2012).	

From the above definitions of co-creation becomes clear that much confusion exists regarding its meanings. Co-creation is a concept that can be viewed as co-production, engagement, involvement, servuction, participation, presumption, collaboration etc. Moreover, the term co-creation has been used by several authors in order to describe resource integration process. In this dissertation I use the term co-creation in order to denote the process by which value is co-created.

2.4 The concept of perceived value in S-D logic

The concept of perceived value has increasingly gain both academia and industry attention. Sánchez-Fernández and Iniesta-Bonillo (2007) by drawing on service marketing literature revealed different definitions of value (see for example Zeithaml, 1988; Woodruff 1997; Holbrook 1996) and different approaches, treating it as a uni-dimensional (Zeithaml, 1988; Dodds *et al.* 1991) and a multi-dimensional (Sheth *et al.* 1991a,b; Holbrook 1999) construct. An important contribution in different values approaches and conceptualizations has been made by Sánchez-Fernández and Iniesta-Bonillo (2007). According to these authors the uni-dimensional approach posits that the construct of value may be produced by the effects of different antecedents but it doesn't include several components and can be measured simply by a self-reported item (or set of items) that evaluates the consumer's perception of value. Contrary, the multi-dimensional approach provides a more holistic representation of value including several attributes or dimensions. Regarding the multidimensionality of value, among the most important research streams is the "Holbrook's typology of consumer value". Holbrook's typology of consumer value (1994;1999) consists of three dichotomies: (1) extrinsic vs. intrinsic, (2) self-oriented vs. other-oriented, and (3) active vs. reactive. When these criteria are combined, eight different value types emerge namely: efficiency, play , excellence, esthetics, status, ethics, esteem, and spirituality (*cited in* Sánchez-Fernández and Iniesta-Bonillo, 2007).

S-D logic follows the definition of Holbrook's typology of perceived value or the axiological perspective of value. As adopted by the S-D logic (Vargo and Lusch 2008a) value is '...an interactive, relativistic, preference experience' (Holbrook and Corfman, 1985, p. 40, *cited in* Hilton *et al.*, 2012). As I mentioned before, in S-D logic, value is a central concept and is always co-created with customers (Vargo and Lusch, 2006), while it is achieved through use, consumption, or experience rather than being a characteristic of objects (Hilton *et al.*, 2012). Thus, it is perceived as the outcome of use, consumption or experience, *i.e* the *outcome of an evaluative judgment* (Hilton *et al.*, 2012). Prior literature, supports two value dimensions, utilitarian and hedonic, as capturing the outcome of experience (Zhuang *et al.*, 2014), or the outcome of consumption (Babin *et al.*, 1994, *cited in* Park and Ha, 2016). S-D logic by following this literature confirms the hedonic and utilitarian aspect of consumption for value co-creation (e.g Rodie and Kleine, 2000) as the *outcome* of the service experience

which is unique to the individual. Similarly, in value co-recovery empirical supports the dual-dimensionality of co-recovery (Park and Ha, 2016). Consequently, S-D logic follows the multidimensional approach of value, from a theoretical point of view the conceptualizations are based on Holbrook's definition of perceived value, while empirical research supports the dual dimensionality of utilitarian and hedonic value.

2.5 Resources and resource integration

According to Hunt (2000, p.138) resources are the “tangible and intangible entities available to the firm that enable it to produce efficiently and/or effectively a market offering that has value for some market segment(s)”. Previously literature on resources suggests different classification. Barney (1991) classifies firm resources into three categories: physical capital resources (e.g technology, equipment), human capital resources (e.g experience, intelligence, relationships) and organizational capital resources (e.g controlling, planning, coordinating systems). Later, Constantin and Lusch (1994) categorize resources as operand and operant resources. Operant resources are employed to act on operand resources (and other operant resources), and operand resources, are resources on which an operation or an act is performed to produce an effect. Hunt and Morgan, (1995) categorize them into tangible and intangible. In their work, in which they proposed a new theory of competition by contrasting the neoclassical theory, they expanded the resources from capital, labor, and land (Neoclassical Theory) to financial, physical, legal, human, organizational, informational, and relational (Comparative Advantage Theory). Similarly, with the categorization of resources into tangible and intangible of Hunt and Morgan, (1995) (regarding the function) and based on Constantin and Lusch (1994), later Vargo and Lusch, (2004) categorized them as operand and operant. Hunt, (2004) by commented the new dominant logic of Vargo and Lusch's, through resource-advantage theory argued that operand resources are typically physical (e.g raw materials), while operant resources are mainly human (e.g., the skills and knowledge of individual employees), organizational (e.g cultures, competences), informational (e.g knowledge about market competitors),and relational (e.g relationships with customers, suppliers, etc).

That is, operand resources (e.g goods, raw materials, income, inherited wealth, food stamps, vouchers, credit) are tangible (Vargo and Lusch, 2004a; Arnould *et al.*, 2006),

physical (Hunt 2004), on which an operation or an act is performed to produce an effect (Constantin and Lusch, 1994) and over which consumers or firms have allocative capabilities (Arnould *et al.*, 2006). Contrary, operant resources (e.g skills, knowledge, competence, dynamic capabilities) are invisible and intangible (Vargo and Lusch, 2004a; Arnould *et al.*, 2006), which are employed to act on operand resources and other operant recourses (Constantin and Lusch, 1994) and over which consumers have authoritative capabilities (Arnould *et al.*, 2006).

The focus on operant resources, provide a competitive advantage (Vargo and Lusch, 2004a; Madhavaram and Hunt, 2008), that enable firms to anticipate customers' desired values and help them create value- in- use (Arnould *et al.*, 2006). More recently from a customer perspective Arnould *et al.*, (2006) by combining Consumer Culture Theory (CCT)¹ school of thought and the (S-D) logic of Vargo and Lusch's, they provide a resource based view framework for the consumers' operant and operand resources. By focusing on operant resources (which are intangible and invisible see also Vargo and Lusch, 2004a) over which consumers have authoritative capabilities, authors categorized them into: *physical* (include physical and mental endowments, such as sensorimotor endowment, energy, emotions, and strength), *social* (are networks of relationships, e.g family relationships, brand communities, consumer tribes, and commercial relationships) and *cultural* (include specialized knowledge and skills, life expectancies and history, imagination). Authors argued that consumers through the deployment of operant resources derive value-in-use from the firms' package of services.

Following Arnould's *et al.*, (2006) framework Baron and Warnaby (2011a; 2011b) provide useful insights regarding the importance of operant resources in value co-creation. From a firm perspective operant resources usually include competencies (knowledge and skills) or dynamic capabilities (Arnould *et al.*, 2006; Madhavaram and Hunt, 2008). Madhavaram and Hunt, (2008) provided a hierarchy of operant resources building on resource-advantage theory's hierarchy. They proposed the following hierarchy: basic, operant resources (BORs), composite, operant resources (CORs), and interconnected, operant resources (IORs). BORs (financial, physical, legal, human, organizational, informational, and

¹ Consumer culture theory is an interdisciplinary field (comprises macro, interpretive, and critical approaches to and perspectives of consumer behavior) that examines how consumers actively rework and transform symbolic meanings encoded in advertisements, brands, retail settings, or material goods to manifest their particular personal and social circumstances and further their identity and lifestyle goals.

relational), are tangible and intangible entities that allow firms to produce a market offering and may include the skills and knowledge of individual employees. CORs could be a combination of two or more distinct basic resources that enable firms to produce valued market offerings (e.g the combination of customer knowledge process and competitor knowledge process enables firms to produce market knowledge competence). Last, IORs are similar to CORs but with interactivity among its basic resources, (e.g technological competence and customer competence enables firms to produce product innovation competence). Authors argued that some of the CORs could potentially be IORs and sometimes CORs or IORs could potentially have common BORs.

According to S-D logic, all economic actors are resource integrators (FP9) (Lusch and Vargo 2006; Vargo and Lusch 2006; 2008a) and value co-creation is realized through resource integration (Vargo and Lusch 2004a; 2008a). Integration requires process (es) and forms of collaboration (Kleinaltenkamp *et al.*,2012), while resources provided by customers into company process are called customer resources (Moeller, 2008).

Most representative paper regarding the process of resource integration is the work of Moeller. Moeller (2008), provides a useful framework (FTU) of service provision to examine customer and firm integration process. She argues that customer integrates his/her resources (physical possessions, nominal goods, and personal data) with company resources, in order to transform them into value. Customer integration enables service provision to be divided into the following stages: facilities, transformation, and usage. The first stage *facilities*, is prerequisite to any offering and includes all company resources (tangible and intangible e.g employees, know-how etc.). In this stage firms *operate autonomously* regarding its decision, and exhibit only *potential value*. The second stage *transformation* is the stage that either company resources are combined with other company resources to accomplish a transformation (company-induced transformation) or customer resources are integrated into the service provision for the purposes transformation (customer-induced transformation). In the former case (company-induced transformation) customers are neither co-producers nor co-creators, while in the latter case, *consumption* begins with the integration (customers are co-creators of value, by using value propositions). In this stage, in case of company-induced transformation, firms continue to operate autonomously and only potential value exists. Contrary, in case of customer-induced transformation, firms' level of autonomy is low and *value-in-transformation* (that can be positive or negative) exists. The transition from

transformation to the *usage* (third stage) depends on whether the transformation is induced by the company or the customer (e.g. who is the prime resource integrator). From a company-induced transformation perspective, customers create value for themselves and assume their roles of co-creators, while from a customer-induced transformation perspective, the transition from transformation to usage occurs when consumers' resources exit the company's sphere, therefore benefits and usage begin after the transformation (e.g. students' graduation). In this stage, from a company-induced perspective, *value-in-use* is accomplished as well as from a customer-induced perspective. Last, in case of *direct service provision*, customers contribute to customer-induced transformation (and to usage with resources and activities), while in the case of *indirect service provision*, customers only contribute during usage in co-creating their own value.

Regarding the forms of resource integration Gummesson and Mele, (2010) mentioned 3 forms: complementarity, redundancy, and mixing. Complementarity concerns the supplement of resources in an appropriate manner to add what it needs for the whole process; redundancy concerns the similar resources of integrators and the appropriate combination in order to facilitate transfer of tacit knowledge; and mixing concerns a combination of complementarity and redundancy resources.

2.6 Customer co-creation behaviors

Customer co-creation behaviors consist of co-creation in-role and extra role behaviors (Yi and Gong, 2013). Below there is a description of in-role and extra role behaviors as well as the antecedents and consequences of each category.

2.6.1 Customer co-creation participation (in-role) behaviors

Customer participation (in-role) behaviors are the necessary behaviors for value co-creation (Yi and Gong, 2013). Marketing literature reveals several contributions on in-role (e.g. Ennew and Binks, 1999; Zeithaml *et al.*, 2009) behaviors. In her book Yi (2014) categorized the antecedents (Schneider and Bowen, 1995; Büttgen *et al.*, 2012; McKee, Simmers, and Licata 2006; Gallan *et al.*, 2013) and consequences (Ennew and Binks; Yi *et al.*, 2013; Skaggs and Youndt, 2004) of in-role behaviors.

Regarding the antecedents of customer participation behaviors by reviewing the literature the author concludes that socialization, customer attributes (ability, role clarity, and

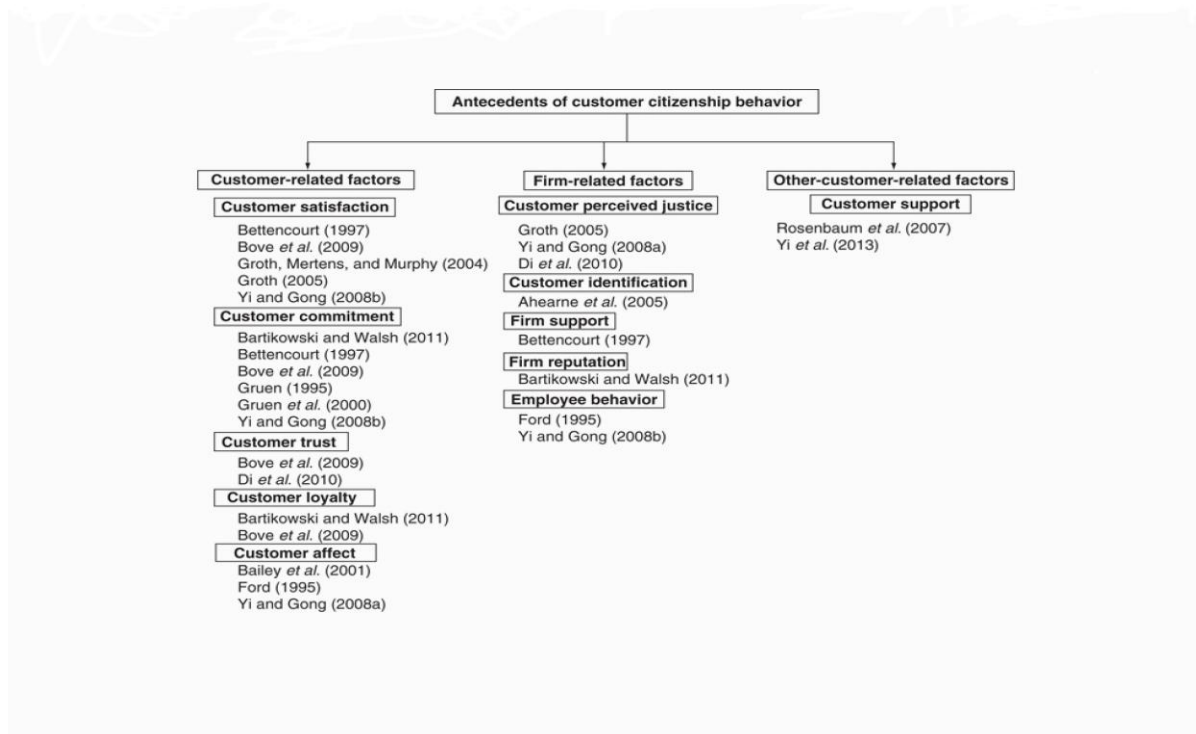
motivation), self-efficacy, emotion and perceived benefits may affect customer participation in different services. Büttgen *et al.*, (2012) found that organizational socialization activities positively affects customers motivation to co-create. Other authors (Schneider and Bowen, 1995) have noticed the importance of customer ability to service delivery engagement by suggesting that firms need develop training strategies for their customers, while Dong *et al.*, (2008) argued that the manner in which a customer engages in future value co-creation is determined by the customer's role clarity. Moreover, motivation and perceived benefits positively affects co-creation in innovation process (Roberts, Hughes and Kertbo, 2014), while Gallan *et al.*, (2013) have argued that customers emotions can have an impact on customer participation behavior. Last, people who believe that they have the necessary ability and resources (self-efficacy) to perform a particular task feel comfortable taking action and engage in co-creation process (McKee, Simmers, and Licata 2006).

In turn customer participation in services affects perceived service quality, satisfaction, customer loyalty, and firm performance. Ennew and Binks (1999) argued that customer participation behavior affects perceived service quality. Yi *et al.*, (2013) found that in-role behaviors affect employee satisfaction, while Dong and colleagues (2008) found that customer participation in service recovery influences satisfaction with the service recovery process. Customer co-creation positively influence loyalty (Cossío-Silva *et al.*, 2016), while when value complexity is low customer participation may increase firm performance contrary to high value complexity (Skaggs and Huffman 2003). Moreover, the same authors argued that human capital moderates the relationship between customer participation and firm performance (Skaggs and Youndt, 2004). However customer participation in services except of the positive outcomes could also have negative effects. For example, it could increase employee stress. In their paper Chan *et al.*, (2010) they showed that customer participation behaviors could create employee job stress, which in turn hampers their job satisfaction. Additionally, they showed that customer in-role behavior has an impact on customer economic and relational benefits. More recently, Gong *et al.*, (2016) have found that customer participation behavior increases customer role stress, thus decreasing customer value, which in turn affects customer well-being.

2.6.2 Customer co-creation citizenship (extra-role) behaviors

Customer co-creation extra-role or citizenship behaviors are the behaviors which are not prerequisite for value co-creation but benefit the firm. These behaviors differ from in-role behaviors regarding their dimensions as well as their antecedents and consequences (Yi and Gong, 2013). As Yi (2014) found several authors (e.g Bittencourt, 1997; Groth, 2005; Rosenbaum and Massiah, 2007) contribute on extra-role behavior in marketing literature. Yi (2014) also categorized the antecedents and consequences of extra role behaviors. As shown in figure 2.1 customer citizenship behaviors may affected by customer related factors such as customer satisfaction, customer commitment, customer trust, customer loyalty, customer affect as well as by firm related factors such as perceived customer justice, customer identification, firm support, firm reputation, and employee behavior.

Figure 2-1 Antecedents of customer citizenship behavior



Source: Adapted from Yi (2014)

Last, Yi (2014) by drawing on the previous literature (Yi *et al.*, 2011; Bell and Menguc, 2002; Yi and Gong, 2006) found that customer citizenship behaviors (extra-role behaviors) affect perceived service quality, customer satisfaction, customer loyalty, employee performance, employee satisfaction and employee loyalty. More precisely, Yi *et al.*, (2011) found that customer extra role behavior enhance employees performance, satisfaction and loyalty. Moreover, customers' extra-role behavior has been found to affect perceived service quality (Bell and Menguc, 2002; Yi and Gong, 2006), which in turn affects customer satisfaction and customer loyalty (Yi, 2014).

2.6 Research streams on co-creation

Co-creation has been examined in different contexts e.g. co-creation process, brands, services or hospitality industry. More specifically, the process of co-creation has attracted the attention of several authors in a general context (i.e Grönroos, 2008; 2011; 2012, Payne *et al.*, 2008; Vargo *et al.*, 2008; Ramaswamy, 2011; Edvardsson *et al.*, 2011; Hilton *et al.*, 2012; Rihova *et al.*, 2013; Chang *et al.*, 2013; Dey *et al.*, 2016), in B2B context (O'Cass and Ngo 2012; Douglas and Matias 2012; Valjakka *et al.*, 2013; Lacoste 2016; Chowdhury *et al.*, 2016), in a sport context (McDonald and Karg, 2013; Hajli and Hajli 2013), in innovation context (Ramaswamy 2008; Gustafsson *et al.*, 2012; Perks *et al.*, 2012; Zhang *et al.*, 2016), in the health care sector (Merz *et al.*, 2013), in a virtual context (Harwood and Garry 2010; Füller 2010; Füller *et al.*, 2011; Kohler *et al.*, 2011; Ind *et al.*, 2013; Vallaster and von-wallpach, 2013), in the educational sector (Díaz-Méndez and Gummesson 2012; Fagerstrøm and Ghinea, 2013), in the tourism context (Prebensen and Foss 2011; Grisseemann and Stokburger-Sauer, 2012; Sfantla and Björk, 2013; Cabiddu *et al.*, 2013), and in networks (Cova and Salle, 2008; Mele, 2011; Jaakkola and Hakanen, 2013).

Literature on co-creation can be placed into four broad categories. First, some authors have focused on antecedents (Hakanen and Jaakkola 2012; Gebauer *et al.*, 2013; Katrien *et al.*, 2015; Elsharnouby 2015; Navarro *et al.*, 2015; Hsiao *et al.*, 2015; Zhang *et al.*, 2015; da Silva *et al.*, 2015; Shamim *et al.*, 2016; Chou *et al.*, 2016) and consequences (Rajah *et al.*, 2008; Vega-Vazquez *et al.*, 2013; van Dijk *et al.*, 2014; Luo *et al.*, 2015; Hsieh and Hsieh 2015; Revilla-Camacho *et al.*, 2015; Chih-Cheng *et al.*, 2015; Tseng and Chiang 2015; Ribes Giner and Peralt Rillo 2016; Mathis *et al.*, 2016; Navarro *et al.*, 2016; Cossío-Silva *et al.*,

2016; Hau *et al.*, 2016) of co-creation. A second group of papers has focused on the concept of co-creation on a brand context (Payne *et al.*, 2009; Hatch and Schultz 2010; Tynan *et al.*, 2010; Fisher and Smith 2011; Hjalager and Konu, 2011; Thompson and Malaviya 2013; Iglesias *et al.*, 2013). The third set of papers has focused on describing the process and the mechanism for co-creation (Payne *et al.*, 2008; Zhang and Chen, 2008; Andreu *et al.*, 2010; Aarikka-stenroos and Jaakkola 2012; Elg *et al.*, 2012; Altun *et al.*, 2012; Saarijärvi 2012; Fyrberg Yngfalk 2013; Stewart *et al.*, 2015; Piligrimiene *et al.*, 2015; Ren *et al.*, 2015). The fourth group has empirically attempted to understand co-creation in a service recovery context (Dong *et al.*, 2008; Heidenreich *et al.*, 2014; Roggeveen *et al.*, 2012; Xu *et al.*, 2014a,b).

Table 2.4 Summary of literature review of Co-Creation

Citation	Purpose of the study	Key Findings	Nature
Albinsson <i>et al.</i> , (2016)	To develop the DART scale that measures dimensions of Dialogue, Access, Risk assessment, and Transparency in customer interactions within the service experience environment.	Authors developed and validate a scale that assesses a given organization's experience environment and its readiness to engage in value co-creation efforts.	Empirical
Chowdhury <i>et al.</i> , (2016)	To explores the dark side of value co-creation (VCC) in B2B service networks.	The dark side of value co-creation includes role conflicts and ambiguity, weak-form opportunism and power plays. What is considered to be "dark" in value co-creation can have positive aspects and overlaps with the "bright" side of value co-creation.	Empirical
Hau <i>et al.</i> , (2016)	To examine the impact of various interaction behaviors of service frontliner on customer participation and how both of which together co-create value	They found that there is a significant positive effect of interacting behaviors of the service frontliners on customer participation, through which more customer resources are contributed to the service creation.	Empirical
Dey <i>et al.</i> , (2016)	To explore how bottom of the pyramid	Authors suggest that value-in-use is facilitated	Empirical

	consumers with limited knowledge can co-create value.	or inhibited by product features, socio-economic practices, individuals' capabilities and the appropriation of mobile telephony.	
Lacoste (2016)	To explore the role played by sustainability in business-to-business value co-creation.	Author found that the role of sustainability in a value co-creation process that links the supplier and customer networks.	Empirical
Cossío-Silva <i>et al.</i> , (2016)	To investigate the impact of value co-creation on attitudinal and behavioral loyalty toward the organization ,	Value co-creation positively affects attitudinal but not behavioral loyalty. Attitudinal loyalty affects behavioral loyalty.	Empirical
Navarro <i>et al.</i> , (2016)	To explores the relationship between value co-creation and customer satisfaction in spa services.	No variable of value co-creation is necessary to generate satisfaction. However, the absence of advocacy is necessary to generate dissatisfaction.	Empirical
Chou <i>et al.</i> , (2016)	To examine both in- and extra-role value co-creation behavior in virtual communities.	They found that five justice perceptions have significant effects on both in- and extra-role value co-creation behaviors indirectly through the mediating role of members' sense of virtual community.	Empirical
Zhang <i>et al.</i> , (2016)	To examine the roles of services, co-creation and integration in innovation.	Results showed that companies implement support services to facilitate interactions with customers. Solution services require both supplier integration and co-production.	Empirical
Shamim <i>et al.</i> , (2016)	To examine the effect of corporate brand experience (CBE) on customer value co-creation attitude and behaviour.	They found that corporate brand experience had a significant impact on value co-creation attitude and subjective norms.	Empirical
Seyedeh Khadijeh <i>et al.</i> , (2016)	To validate scale measurements of dialogue, access, risk	The basic components of DART, dialogue, risk assessment and	Empirical

	assessment and transparency (DART) construct and examine its impact on innovation strategy.	transparency have found to have a significant positive relationship with innovation strategy.	
Mathis <i>et al.</i> , (2016)	To examine the dimensions of co-creation in the tourism context and its effects on tourists' satisfaction with the co-creation of an experience, subjective well-being, and loyalty to the service provider.	Co-creation of a tourist experience was found to affect satisfaction with vacation experience and loyalty to service provider. Involvement was found to play an important role by affecting loyalty to the service provider and satisfaction with vacation experience was found as a predictor of perceived overall life satisfaction.	Empirical
Ribes Giner and Peralt Rillo (2016)	To measure empirically the effect of co-creation on student satisfaction, and loyalty.	They found that student's participation in co-creation with the university leads to higher levels of satisfaction and to greater loyalty by the student to the educational institution.	Empirical
da Silva <i>et al.</i> , (2015)	To test the effect of a flexibility, responsiveness and co-innovation on co-creation	They found that flexibility is positively associated with the responsiveness and co-innovation, while there was a positive association with the responsiveness co-innovation and co-creation.	Empirical
Lee and Van Dolen (2015)	To investigate the role of sentiment in user co-creation	They found that management style can affect the success of co-creation communities.	Empirical
Ren <i>et al.</i> , (2015)	To identify the process and the mechanism of value co-creation and to realise relational value.	Results indicated bilateral idiosyncratic investment and resource interdependence as two important steps in the value co-creation process while they confirmed the effects of value co-creation on partnership	Empirical

		quality.	
Pilgrimiene <i>et al.</i> , (2015)	To investigate the role of consumer engagement in value co-creation from the company's perspective, identifying the value company gets as an outcome of co-creation process.	Value for company, is generated through co-creation process, and should also be viewed as multidimensional construct, social and functional value.	Empirical
Zhang <i>et al.</i> , (2015)	To investigate how site characteristics improve customers' co-creation experiences and affect their intention to participate in co-creation in the future.	They found that future participation intention is determined by customer learning value, social integrative value, and hedonic value experiences, which are influenced by perceived task-relevant and affection-relevant cues.	Empirical
Hsiao <i>et al.</i> , (2015)	To investigate the effects of servant leadership on customer value co-creation as well as the mediators of positive psychological capital and service-oriented organizational citizenship behavior.	The results indicated that the positive psychological capital of individual employees mediates the servant leadership at the organizational level and the service-oriented organizational citizenship behavior of individual employees, whereas the service-oriented organizational citizenship behavior of overall employees mediates the positive psychological capital of overall employees and the value co-creation of individual customers.	Empirical
Tseng and Chiang (2016)	To investigate the effect of customer co-creation behavior on new product performance and parallel to assess the impacts of organizational culture, communication quality, and perceived value as moderators of customer co-creation behavior that leads to improved	The results indicate that customer co-creation demonstrates a positive and significant relationship with new product performance while the relationship between customer co-creation and new product performance hinges upon the moderating effects of	Empirical

Chapter 2. Litterature review

	performance of new products/services.	organizational culture and communication quality.	
Chih-Cheng <i>et al.</i> , (2015)	To examine the impact of customer co-creation from the employee's perspective on service delivery process.	Customer participation produces positive effects on employees' job satisfaction only if such participation minimizes job stress and meets employees' relational needs.	Empirical
Revilla-Camacho <i>et al.</i> , (2015)	To investigate the role of customer value co-creation behavior i.e participation and citizenship behaviors on customers' turnover intention.	They found that customers' participation behavior enhances the consolidation of the relationship with the customer.	Empirical
Navarro <i>et al.</i> , (2015)	To explore the factors affecting value co-creation between hotels and disabled customers.	Results show that 78% of the factors affecting value co-creation derive from disabled customers' relationships with staff (23.5%), staff training (20.6%), environment (20.3%), and collaboration (14.4%).	Empirical
Elsharnouby (2015)	To examine the influence of satisfaction with the university experience on students' co-creation behavior – i.e participation behavior and citizenship behavior.	The results showed that perceived university reputation and perceived faculty competency determine students' satisfaction with university experience, which in turn affect students participation and citizenship behaviors. Thus, student satisfaction mediates the relationship between the antecedent variables of perceived university reputation and perceived faculty competency, and student citizenship behaviors.	Empirical
Hsieh and Hsieh (2015)	To investigate the impact of customer co-creation on the performance of service innovation through the operant	Results showed that co-creation affects customer relationship strength, valuation of knowledge, and capability of	Empirical

	resources.	customization, facilitating service innovation.	
Luo <i>et al.</i> , (2015)	To investigate the effects of value co-creation practices on building harmonious brand community, on digital social media and the way they convert to brand loyalty through community commitment.	They found that value co-creation practices in brand community established on social media enhance the relationships between consumer-brand and consumer-other consumers and contribute to creating harmonious community atmosphere. Furthermore, the model shows how brand loyalty is increased in brand communities through community commitment.	Empirical
Loane <i>et al.</i> , (2015)	To investigate social support as the mechanism through which consumers co-create and experience different types of value.	Authors found that online health communities give consumers the opportunity to (co)-create consumer value that would not otherwise be available in a traditional health delivery system.	Empirical
Per Skálén <i>et al.</i> , (2015)	To investigate why firm value co-creation succeeds and fails and what strategies actors use to turn failing co-creation into successful co-creation	Co-creation of value succeeds when the enactment of collaborative practices (interacting, identity and organizing) aligns, i.e. when firm and brand community members enact practices in a similar way, and that co-creation fails when the enactment of practices misaligns.	Empirical
Katrien <i>et al.</i> , (2015)	To examine the antecedents of the customer experience in cocreation situations, and testing a multidimensional co-creation scale.	Role readiness, technologization, and connectivity positively affect different co-creation experience dimensions	Empirical
Greer (2015)	To identify the forms of defective co-creation behaviour that are exhibited in professional services.	Six broad categories of dysfunctional behaviour are identified: (1) property abuse; (2) fraudulence; (3) verbal abuse; (4) physical	Empirical

		aggression; under participation; and (6) over participation.	
van Dijk <i>et al.</i> , (2014)	To explore how co-creation affects consumer brand perceptions in the mass market	Results showed that co-creation affects brand personality perceptions directly and behavioral intentions indirectly	Empirical
Heidenreich, Wittkowski, Handrich, and Falk (2014)	To examine the impact of initial co-creation of service delivery in service recovery and its outcomes.	In case of service failure, a high level of co-creation in the initial service leads to lower customer satisfaction caused by negative disconfirmation. Moreover, co-creation of service recovery results in greater satisfaction, when customers co-created the service failure, while NCSR leads to greater post-recovery satisfaction than CSR when customers are not involved in the initial service delivery.	Empirical
Xu, Marshall, Edvardsson, and Tronvoll (2014a)	To examine whether the impact of employee initiation in service co-recovery affects customers' post-recovery evaluations and behavioural intentions.	When a service employee initiates a co-recovery, customers perceive higher justice, greater satisfaction and a higher tendency to repurchase in the future.	Empirical
Xu, Tronvoll, and Edvardsson (2014b)	To examine the mechanism of customer co-creation in service recovery by exploring the role of resource integration and relating it to justice theory.	Co-creation in service recovery affects perceived justice of activities, perceived justice of interactions and experience with the service recovery. Perceived justice of activities acts as a mediator between perceived justice of interactions and customer service recovery experience.	Empirical
Chang <i>et al.</i> , (2013)	To examine how project success is perceived and how project value can be co-created by different	The results revealed a diverse view of stakeholders on what constitutes project success	Empirical

	stakeholders.	and the importance of engaging stakeholders throughout the project life cycle in co-creating project value.	
Vega-Vazquez <i>et al.</i> , (2013)	To empirically measure 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.	Results showed that there is a positive relationship between the customers' behavior of value co-creation and their level of satisfaction with the service.	Empirical
Rihova <i>et al.</i> , (2013)	To provide insights into co-creation within customers' social sphere.	Value emerges in four distinctive social layers: "detached customers", "social bubble", "temporary communities" and "ongoing neo-tribes".	Conceptual
Ramaswamy and Ozcan , (2013)	To propose that platforms of stakeholder engagement can become the new basis of enterprise value (co)-creation.	Strategy making has become a joint process of co-creative discovery, as enterprises devise and develop new opportunities together with customers, partners and other stakeholders.	Conceptual
Leavy (2013)	To review and explain the basic elements of the co-creation playbook (interview with Prof. Ramaswamy).	In designing and managing a co-creation platform: accessibility, dialogue facilitating, transparency, and risk assessment.	Interview
Hajli and Hajli (2013)	To investigate social factors introduced through social media to sport organisations in the co-creation of value with fans.	Co-creation behavior originates from the supportive climate that has emerged through Web 2.0, where individuals share their information, knowledge, and experience through online communities.	Conceptual
Sfandla and Björk (2013)	To introduce a new framework, the Tourism Experience Network (TEN), which explores	Actors are recognized as facilitators who are bonded in value as experience logic in	Conceptual

	co-creation of experiences.	tourism, which acknowledges active tourists as a market agent.	
Iglesias <i>et al.</i> , (2013)	To present an organic view of the brand (OVB), and a resulting brand value co-creation framework.	Brand value is conversationally co-created by many different stakeholders in a fluid space subject to constant negotiation and often develops beyond the strategic aims set by brand managers.	Conceptual
Merz <i>et al.</i> , (2013)	To present a conceptual model of the determinants of value co-creation in the context of healthcare provider-patient relationships.	Authors found that the determinants of value co-creation in the healthcare context consist of patient's or physician's ability or willingness to co-create value in the healthcare context.	Conceptual
Yi and Gong (2013)	To develop and validate a customer value co-creation behavior scale.	Customer value co-creation behavior scale consists of customer participation (information seeking, sharing, responsible behavior and personal interaction) and customer citizenship behavior (feedback, advocacy, helping, tolerance).	Empirical
Vallaster and Von-wallpach (2013)	To highlights the social dynamics that characterize multi-stakeholder brand meaning co-creation in a virtual environment.	They argued that brand meaning results from simultaneous interactions between interdependent stakeholders in a network (termed multi-log).	Empirical
Gebauer <i>et al.</i> , (2013)	To investigate triggers of both positive and negative behavior of members of the 'SPAR Bag Design Contest' and helps to explain the bright and dark side of co-creation.	They found that dis-/satisfaction with the outcome, perceived fairness, and sense of community are beside co-creation experience major determinants for negative as well as positive reactions of innovation community members.	Empirical
Handrich and	To develop and test a construct measuring the	They found through exploratory and	Empirical

Heidenreich (2013)	willingness of a customer to engage in co-creation of innovative technology-based services (TBS).	confirmatory factor analysis that willingness of a customer to engage in co-creation scale is a three-dimensional construct consisting of customization on the benefit-side as well as effort and information sharing on the cost-side.	
Fyrberg Yngfalk (2013)	To describe how multiple actors interact and co-create value in given contexts, by investigating the football experience.	Actors' resource integration is dependent on their background, previous experiences, and present goals.	Conceptual
Ind <i>et al.</i> , (2013)	To understand how participation emerges and develops in virtual co-creation projects.	They found that people co-create in a community because it offers them the chance to find fulfillment, to express their creativity, and to socialize.	Conceptual
Thompson and Malaviya (2013)	To examine whether brands benefit from communicating to consumers who had not been involved in the co-creation process that a target ad was developed by a fellow consumer.	They found that that the effectiveness of disclosing advertising co-creation depends on factors that hinder skepticism and heighten identification with the ad creator.	Empirical
Fagerstrøm and Ghinea (2013)	To examine how a university college attempts to co-create value as a result of interacting with applicants on Facebook.	They found that value is co-created between the university college and applicants based on dialogue, access, transparency, and risk assessment (DART) model.	Empirical
Cabiddu <i>et al.</i> , (2013)	To examine how Information technology (IT) enables value co-creation in tourism and why some players appear to appropriate the value co-created in the partnership more successfully compared to others.	They suggested that operators that achieve superior performance in terms of appropriating value do so because of superior strategic fit with the objectives of the value co-creation initiative, synergy with other members of the network, and IT readiness to conduct business	Empirical

Chapter 2. Litterature review

		electronically.	
Jaakkola and Hakanen (2013)	To examine how value is co-created in solution networks.	They demonstrated that the value processes a) within individual customer or supplier organizations, b) between the co-operating suppliers, and c) between the customers and their solution suppliers are iterative and inherently interlinked.	Empirical
Valjakka <i>et al.</i> , (2013)	To examine how value is co-created in b2b networks and how the compatibility of business models affect value creation.	Results showed that operation models of networks can and should be different, but the compatibility of value accrued to the actors and business models are basic antecedents of value co-creation within b2b networks. Thus, the network's value co-creation is a multifaceted phenomenon; whereas in win-win situations all the actors create value to network, network participation creates value to them.	Empirical
McDonald and Karg, (2013)	To examine consumer co-creation in sport, in the form of ritual behaviors around sporting events, in order to better understand the potential benefits to sports organizations, and more appropriate ways of dealing with possible negative outcomes.	Ritualized behaviors are very common, largely fan-developed, and can form very quickly. A positive relationship was found to exist between ritual behavior and outcomes such as satisfaction, team identification, merchandize expenditure and game attendance. Longitudinal tracking of individual fans suggests that ritual behaviors drive those outcomes, rather than the inverse.	Empirical
Hilton <i>et al.</i> , (2012)	To present a conceptual model of service co-creation, and provide a	Authors argue that value cannot be co-created since value is an evaluative	Conceptual

	different approach regarding value co-creation.	judgment. Thus, what is co-created is the service while value is the outcome of the service.	
Griseemann and Stokburger-Sauer (2012)	To develop and test a model of customer co-creation of tourism services in a travel agency context.	Company support was found to significantly affect the customer's degree of co-creation. The degree of co-creation was found to significantly affect the customers' satisfaction with the service company, customer loyalty, and customers' expenditures.	Empirical
Douglas and Matias (2012)	To explain the mechanisms by which cross-functional involvement in B2B enables value co-creation.	Authors conclude that value co-creation occurs during three cyclical and interrelated phases through which customers and suppliers interact: (1) joint crafting of value propositions, (2) value actualization, and (3) value determination.	Empirical
Perks <i>et al.</i> , (2012)	To investigate how co-creation occurs in radical service innovation.	Authors suggest that the co-creation is not simple but it consists of complex patterns of activities and interactions.	Empirical
Díaz-Méndez and Gummesson (2012)	To examine value co-creation in assessing higher education (HE) teaching quality.	Resources provided by different stakeholders are integrated in order to co-create value. Co-creation of value in higher education teaching quality is a complex process.	Conceptual
Hakanen and Jaakkola (2012)	To identify critical factors affecting the effective co-creation of customer-focused solutions within business networks.	Authors found that co-creation is affected by customer's preferences for participation and value, and the degree of competition, clarity of role division and rapport among the suppliers.	Empirical
Saarijärvi (2012)	To examine the strategic implications of the mechanisms of value cocreation.	Value proposition was applied as a central concept. Mechanisms of value co-creation include:	Conceptual

		co-pricing, co-maintenance, co-disposal, co-design, co-experience, co-production, co-development, co-distribution, co-promotion	
Gustafsson <i>et al.</i> , (2012)	To analyze customer co-creation based on four dimensions of communication – frequency, direction, modality, and content – in order to understand the value of customer co-creation in service innovation	Authors found that three of the four dimensions of customer co-creation (frequency, direction, and content) have a positive and equally significant effect on product success when developing incremental innovations.	Empirical
Elg <i>et al.</i> , (2012)	To investigate the process of patient co-creation and different mechanisms in the health-care sector.	Authors found two steps regarding the process of patient co-creation: preparation and execution while the outcome of co-creation was found to be learning.	Empirical
Aarikka-stenroos and Jaakkola (2012)	To examine the process of value co-creation in the context of knowledge intensive business services.	They found that within knowledge intensive services, value co-creation occurs through a dyadic problem solving process encompassing five key activities: diagnosing needs, designing and producing the solution, organizing the process and resources, managing value conflicts, and implementing the solution.	Empirical
Roggeveen ,Tsiros, and Grewal, (2012)	To identify under which circumstances co-creation is and is not useful as a service recovery strategy.	When customers experience a severe service delay, both co-creation and compensation improve their post-recovery evaluation with co-creation performing slightly better than compensation, while when a less severe delay occurs co-creation and compensation have no	Empirical

		impact.	
O'Cass and Ngo (2012)	To examine the extent of the creation of superior performance, relationship, and co-creation value is driven by market orientation, product innovation and marketing capabilities in B2B firms.	They found that product innovation capability and marketing capability partially mediates the relationship between a firms' market orientation and its ability to create value (performance and co-creation).	Empirical
Altun <i>et al.</i> , (2012)	To propose a framework for customer co-creation in NPD through a multi-issue negotiation mechanism, namely; Modified Even-Swaps, for finding win-win solutions between customers and designers.	The framework provides firstly multi-issue evaluation of design alternatives and then clarifying their contradictions with the help of agreement areas generated through the used negotiation mechanism. Moreover, before releasing the product to market, designer can see whether the modifications, which are performed for trying to solve the contradictions, improve or decline product performance in terms of customers' utility.	Conceptual
Mele (2011)	To examine the role of conflicts on value co-creation in project network.	Author found that the management of the three dimensions of conflicts (types, timing and effects) enables value co-creation.	Empirical
Hjalager and Konu, (2011)	To present models for co-creation and co-branding in the value chain.	Authors suggested that co-branding and co-creation take place under quite different understandings of the boundaries of the enterprises and that there are both existing and emerging overlaps in the roles of the cosmeceuticals producers and the spa wellness enterprises.	Conceptual
Fisher and Smith	To investigate the consumers' experiences	Authors found that that 'control' increasingly	Conceptual

(2011)	of co-creation within the context of a brand community.	passes from corporations to consumers. They concluded that that the notions of control and predictability that have served as the established foundation for marketing theory and practice may require serious revision in how consumers create value.	
Kohler <i>et al.</i> , (2011)	To explore how to design co-creation experience in a virtual world context	Authors generated a set of design principles for virtual co-creation systems. They contributed by adding a collaborative dimension, in which, in user-generated environments, the system needs to invite users to create or co-create the content they wish to be part of their experience. The results emphasized on Nambisan's sociality dimension and highlight that the fulfillment of hedonics needs through the experience is crucial for participants in order the efforts involved in a co-creation system are no longer considered work.	Conceptual
Zhang <i>et al.</i> , (2011)	To investigate the patterns of capabilities development in value co-creation with customers in a fast developing economy, such as that in China.	They showed that flexibility is positively associated with service, delivery, and customerization capability. In addition, new capabilities and established capabilities are mutually supportive and the development follows a sequence of flexibility, delivery, service and customerization to build cumulative capabilities in value co-creation strategy.	Empirical

Füller <i>et al.</i> , (2011)	To introduce the idea of virtual co-creation platforms and parallel to explore the impact of the co-creation experience on the content contributed by participant.	They found that co-creation experience significantly impacts the number of contributions by consumers as well as the quality of submitted designs.	Empirical
Witell <i>et al.</i> , (2011)	To compare the traditional market research techniques (e.g. in-depth interviews, focus groups) which are characterized as reactive or backward looking with co-creation-oriented techniques (lead-user technique or the co-creation techniques) which are characterized as proactive or forward-looking techniques, when developing new market offerings.	Authors argued that co-creation-oriented techniques are more profitable than reactive when developing new market offerings and active participants developed more innovative ideas than participants of traditional research techniques.	Empirical
Edvardsson <i>et al.</i> , (2011)	To expand the understanding of service exchange and value co-creation in a social context.	Authors argued that value should be understood as value-in-social-context.	Conceptual
Ramaswamy (2011)	To provide an alternative paradigm for value co-creation	Author argue that value co-creation is not a result of service rather than the experience. Thus value is a function of human experiences and co-creation concerns the engagement of the experiences where mutual value is expanded.	Conceptual
Prebensen and Foss (2011)	To explore how tourists co-create experiences in various situations and with various people during a vacation.	Through practical examples of coping and co-creation strategies authors found that learning experience, coping and co-creation strengthen the 'travel competence' of tourists.	Empirical
Gebauer <i>et al.</i> ,	To explore how value co-creation occurs	Authors found that firms through specific activities	Empirical

(2010)	in the context of a public-transport service provider.	(customer engagement, self-service, customer involvement, problem-solving, and co-design) become a value co-creators.	
Tynan <i>et al.</i> , (2010)	To explore conceptually the meaning of value for luxuries brands, and empirically investigate how firms and consumers co-create value in the luxury market.	Results showed that co-creating the luxury brand experience involves dialogue and complex interactions between the brand owner, employee, customer and other social groups including the customer brand communities, those experts or agencies who are part of the brand owners' network and the industry itself.	Empirical
Darshan (2010)	To explore how different actors of a value network co-create emergent creativity, learning and adaptability in the presence of imposed administrative control and coordination	Author argue that an organization can enable leaders who foster co-creation of learning, creativity and adaptability; and the interactive technologies boost the adaptive and enabling leadership and support the co-creation of learning, creativity and adaptability within the value networks.	Conceptual
Hatch and Schultz (2010)	To propose a framework for brand co-creation by combining the four building blocks by which co-creation occurs: dialogue, access, transparency and risk.	Authors suggest a simplified model based on the dimensions of company / stakeholder engagement and organizational self-disclosure.	Conceptual
Andreu <i>et al.</i> , (2010)	To propose a model of value co-creation and to examine the applicability of a value co-creation framework that integrates the process view, the actors' view and the role of customer knowledge in furniture retail stores using	They found that, in the supplier's value creating processes, the company determines the premises upon which to define and develop value propositions, in the encounter process, the supplier interacts with customers to better define	Empirical

	service-dominant (S-D) logic.	and build the offer and last during a joint process the main obstacle to the enhancement of value creation is that customers seem barely aware of their important role in value co-creation, believing that this is the retailer's business	
Harwood and Garry (2010)	To explore value co-creation within virtual-experience environments.	Authors suggest that consumers are able to create their own post-product consumption experience through a collaborative process between firm and consumer, continually modify and 'co-evolve' the product in an ongoing process.	Conceptual
Jong-Kuk <i>et al.</i> , (2010)	To examine how customers' perceived level of participation influences their attribution tendency and emotional/behavioral responses toward service failure which they may encounter on internet.	Results showed that customers whose perceived level of participation in service production and delivery is high showed external attribution tendency more, felt disappointment more, and wanted to complain, switch, and communicate negative WOM more than those with low participation perception.	Empirical
Füller (2010)	To examine consumers' expectations towards virtual co-creation	Author showed that consumers' motivations determine their expectations towards the virtual co-creation design, while they reveal four different kinds of consumers engaging in co-creation: reward-oriented, need driven, curiosity-driven, and intrinsically interested.	Empirical
Füller <i>et al.</i> , (2009)	To investigate how consumers are empowered through	They found that consumers engaging in co-creation feel more or	Empirical

	Internet-based co-creation activities.	less empowered depending on the design of the applied virtual interaction tool, the related enjoyment of the virtual interaction, the participants' task and product involvement, as well as their creativity and lead-user characteristics.	
Payne <i>et al.</i> , (2009)	To develop a conceptual model for understanding co-creation of a brand through relationship experience design in business-to-consumer markets.	Authors categorized encounters based on the opportunity to support co-creative processes as emotion-supporting encounters, cognition supporting encounters and action-supporting encounters.	Empirical
Sogn-Grundvåg <i>et al.</i> , (2008)	To investigate whether it is possible to co-create valuable consumer experiences in a mass market setting.	They found that considerable effort from both retailers and consumers are devoted to co-create valuable consumer experiences.	Empirical
Zhang and Chen, (2008)	To examine the constructs and the interacting mechanism of the co-creation system with customers.	They found that co-creating activities have positive impact on customerization capability and service capability and that service capability have significantly positive impact on customerization capability. They identified service and customerization as new capabilities.	Empirical
Kristensson <i>et al.</i> , (2008)	To propose a conceptual framework concerning the key strategies required for the successful involvement of customers in the co-creation of new technology-based services.	Authors identified seven key strategies for user involvement during innovative NPD were proposed: derivation from user situation, derivation from various roles, Analytical tools, apparent benefits, non-use of brainstorming, limited expertise, ensuring heterogeneity.	Conceptual

Ramaswamy (2008)	To discuss how to co-create value through customers' experiences in the context of the innovation and marketing processes of Nike.	Nike managed its co-creation of value process using the dialogue, access, risk-return and transparency (DART) model.	Conceptual
Cova and Salle (2008)	To understand the movement of co-creation of solutions between the supplier and his network and the customer and his network.	The co-creation of value with the customer network actors has been particularly identified as being the missing link in current B2B offering strategy approaches in terms of solutions. Authors through the study of two cases have put forward a two stage approach: first, co-creation of value between the supplier (including his supply network) and certain customer network actors; second, co-creation of value between the supplier and his network and the customer and his network.	Empirical
Payne <i>et al.</i> , (2008)	To develop a process-based conceptual framework for understanding and improving value co-creation within the context of S-D logic.	Authors conceptualized the key processes in managing value co-creation: customer value-creating processes, supplier value-creating processes and encounter processes. The use of the framework in mapping customer, supplier and encounter processes provides a mechanism for identifying and organizing micro-specialized competences.	Conceptual
Vargo <i>et al.</i> , (2008)	To explore alternative views of value in economic exchange and establish a service science conceptualization of value co-creation,	Authors reviewed the origin of value and from Aristotle to Adam Smith and other economic scholars. They concluded that value is	Conceptual

	providing a framework for rethinking value and how it is created in service systems.	fundamentally derived and determined in use.	
Rajah <i>et al.</i> , (2008)	To examine the impact of co-creation on the key marketing outcomes of customer satisfaction; customer loyalty, trust, relationship strength and the consequent loyalty induced.	They found that both satisfaction and trust mediate the relationship of co-creation with relationship strength. A directly path from co-creation to relationship strength has a negative value. Relationship strength provides partial mediation for satisfaction and loyalty and full mediation for trust and loyalty.	Empirical
Choi and Mattila (2008)	To examine the impact of perceived controllability over service failures and service quality expectations on customer reactions to service failures.	Findings indicate that customers react quite negatively when they believe the service firm could have easily prevented the failure.	Empirical
Cranage and Mattila, (2006)	To examine the informed choice, the apology and the compensation strategies in order to offset the damaging effects of service failures.	They found that an informed choice, a proactive strategy, raises or sustains customers' satisfaction and the desire to stay loyal with the service provider after a service failure.	Empirical
Dong, Evans and Zou (2008)	To examine the consequences of customer participation in a service recovery process and more precisely on self-service technologies (SSTs).	Involving customers in the recovery of a customer-caused service failure causes them to be more satisfied with the recovery and increases their perceived value of future co-creation as well as their intention toward future participation.	Empirical

2.8 Co-destruction of value

Although, co-creation experiences are the basis for value co-creation (Prahalad and Ramaswamy, 2004a,b), they may also have negative, destructive effects (Echeverri and Skålén, 2011). Regarding the concept of co-destruction, it's still in its infancy, however recently some authors (Plé and Chumpitaz Cáceres, 2010; Lefebvre and Plé; 2011; Echeverri and Skålén, 2011;Smith, 2013) by emphasized the importance of resources and interactions and by using different theories (script theory, COR theory, practice theory) tried to extended previous implications for improvements of S-D logic and to explain the co-destruction process.

Plé and Chumpitaz Cáceres, (2010) first introduce the concept of value co-destruction into the conceptual framework of S-D logic. Based on the aforementioned definition for value (Vargo *et al.*, 2008), they defined VCD as “*an interactional process between service systems that results in a decline in at least one of the systems’ well-being*” (Plé and Chumpitaz Cáceres 2011, p.431). Authors argued that co-destruction happens when a system misuses its own resources and/or the resources of another system and in contrast of value-in-use that generated through the co-creation process authors counterpoise the *value destruction-through-misuse* which results from a co-destruction process. In order to explain the co-destruction process, they emphasized into the role of resources due to the fact that value co-destruction process can result from the *misuse of resources* (e.g the failure of integration and application of operant and operand resources between service systems) during the interactions (directly or indirectly), which can be accidental or intentional. They argued that accidental misuse of resources can happen when there are discrepancies regarding the expectations of the systems, while intentional misuse of resources occurs when one system experience benefits to the detriment of another system. They used script theory², in order to justify the congruent and the different expectations between the service systems. In the same vein, Lefebvre and Plé, (2011) extended the work of Plé and Chumpitaz Cáceres, (2010) by examined the value co-destruction in B2B context. Except the accidental and intentional misuse of resources they added the *misalignment of processes*, which can also be accidental or intentional and consequently they characterize the value loss from this process as *value*

²Script theory holds that the success or failure of their interactions will heavily depend on the capacity of each party to foresee the behavior of the other, in addition to comprehending how to act and to behave himself (Solomon, et al., 1985).

destruction-through-misalignment. They defined misalignment of business processes as “the situation in which one actor of a focal relationship has failed to adapt and coordinate (e.g. align) his processes with the ones of the other focal actor, and/or of the latter’s network, and/or of his own network in a manner that is considered as “appropriate” or “expected” by these other actor” (Lefebvre and Plé, 2011, p. 13).

Following Plé and Chumpitaz Cáceres, (2010), later Smith (2013) by using critical incidents technique (CIT and by adopting Hobfoll’s conservation of resources (COR) theory³ empirically examines the value co-destruction process from a customer perspective. She argued that customers will experience resource misuse and loss of well-being in three cases: a) the organization fails to fulfill its resource offer (value proposition) b) failure of resource integration (to co-created expected value) c) the customer experiences an unexpected resources loss, or a combination of the above cases. She also noticed that resource loss in all cases encompassed failure to experience value in the form of expected/desired resources as well as unexpected loss of stored resources.

Another important contribution on the value co-destruction has been made by Echeverri and Skålén (2011). Authors by adopting a practice theory⁴ perspective provide a framework that explains how interactive value (value that takes place through interaction) formation takes place in practice. Authors identified five interaction value practices – informing, greeting, delivering, charging, and helping and suggested that value co-creation and co-destruction are two key dimensions of these interaction value practices. They also argued that operant resources not only co-create but also co-destroy value and that value can be understood in terms of ‘matches’ (congruence) or ‘mismatches’ (incongruence) between socially available methods. Authors suggested that interactive value formation derives from providers and customers drawing on congruent (in the case of value co-creation) and incongruent (in the case of value co-destruction) elements of practices.

In the same vein, Worthington and Durkin, (2012) by examined the retail banking industry showed how value is co-destroyed between customers and banks through irresponsible borrowing and irresponsible lending. Authors proposed a conceptual model

³COR theory describes how individuals experience and respond to loss of well-being due to stress – inducing resource loss

⁴ Practice theory holds that action is only possible and understandable in relation to common and shared practices and that social order is constituted by practices (Bourdieu, 1977; Foucault, 1977; Giddens, 1984).

consisting of four boxes (risk box, co-creation box, co-destruction box and survival box). They argued that using insights from behavioral economics as well as from psychology contribute to understand how value is co-destroyed.

Stieler, Weismann, and Germelmann (2014) introduced the concept of value co-destruction in the field of sport. By conducting a qualitative study (interviews) in spectators before or after the game, or during half-time, they investigated whether all groups of spectators contribute to and experience value co-destruction in the same way and how do the prior expectations of the various stadium spectator groups influence their experience of value co-destruction. They found that not all fans are equal when it comes to value co-destruction in a stadium context and that co-destruction mainly depends on the value expectation.

Robertson, Polonsky and McQuilken (2014) developed a resource-based typology of value co-destruction in online self-diagnosis. Drawing on the literature, their typology consist of consumers and e-health service providers resource definitions. Consumers resource definitions include of co-operation, knowledge, ability and/or motivation to assess the credibility of content, e-health literacy, information provision, and self-assessment. E-health provider resource definitions include quality of online content, information sought from consumer and ease of use of the technology. Authors found that online self-diagnosis can result in value co-destruction of consumers' service process and outcome when consumer resources are deficient or misused (e.g., knowledge) or when e-health provider resources are lacking (e.g., poor quality offerings).

Last, Kashif and Zarkada (2015) examined value co-destruction between customers and frontline employees. By conducting a qualitative research (interviews), authors in frontline banking employees and customers, tried to understand the bad effects of customer misbehaviour on employees during work and to understand the motives, consequences and employee coping strategies to counter misbehaviour incidents. They found that the employees and customers both blame each other to trigger a misbehaviour incident during banking transactions. More precisely value co-destruction process is caused due to communication gap between employees and customers.

The above research stream has focused on value co-destruction in order to illustrate that value does not only co-created. During interactions co-destruction of value may also be occurred instead of value co-creation and could have a negative impact for both customers and firms. What is actually a value co-destruction process is a service failure. I explain this better below in this dissertation where I conceptualize service failures as value co-destruction process.

2.9 Co-creation of service recovery

Service recovery in S-D logic litterature has been examined in terms of customer participation (see Dong, Evans, and Zou 2008; Roggeveen, Tsiros, and Grewal 2012; Xu, Marshall, Edvardsson, and Tronvoll, 2014; Xu, Tronvoll, and Edvardsson 2014; Heidenreich, Wittkowski, Handrich, and Falk (2014) and has been treated as a single event. The little has been written examined the concept of co-creation as a reactive strategy after the occurrence of a service failure (e.g Dong *et al.*, 2008; Roggeveen *et al.*, 2012). First, the concept of co-creation in service recovery was examined by Dong *et al.*, (2008) in the self-service technology (SST) context. Dong and colleagues (2008) showed that involving customers in the recovery of a customer-caused service failure causes them to be more satisfied with the recovery and increases their perceived value of future co-creation as well as their intention toward future participation. Customer's role clarity, ability, perceived value for future co-creation, and customer satisfaction with recovery were found as mediators in the relationship between customer participation in service recovery on intention for future co-creation. In the same vein, Roggeveen *et al.*, (2012) found that co-creation improves satisfaction with the recovery process in a non-SST setting and for a failure that the customer did not co-create. Roggeveen and colleagues (2012) confirmed that allowing customers to co-create a recovery solution leads to their enhanced satisfaction with the recovery process. Severity of service failure was found to moderate the impact of co-creation on satisfaction with the recovery process, while co-creation improves post-recovery evaluations. Building on previous litterature, more recently Xu *et al.*, (2014a) extended previous research by examined whether the impact of employee initiation affects customers' post-recovery evaluations and behavioural intentions. They found that employees' initiation affects customers' justice, satisfaction and repurchase intentions. Culture was found to have a moderating effect, with western customers to be more sensitive to initiation in the co-recovery process than Eastern

customers. In addition, Xu *et al.*, (2014b) examine the mechanism of customer co-creation in service recovery by exploring the role of resource integration and relating it to justice theory. They found that company's co-creation in service recovery affects customer's perceived justice of activities, perceived justice of interactions and experience with the service recovery, while perceived justice of activities mediates the relationship between perceived justice of interactions and customer service recovery experience. Heidenreich *et al.*, (2014) examine the impact of initial co-creation of service delivery in service recovery and its outcomes. They found that in case of service failure, a high level of co-creation in the initial service leads to lower customer satisfaction caused by negative disconfirmation. Moreover, co-creation of service recovery results in greater satisfaction, when customers co-created the service failure, while non-co-created service recovery (NCSR) leads to greater post-recovery satisfaction than co-created service recovery (CSR) when customers are not involved in the initial service delivery. Perceived disconfirmation was found to mediate the relationship between the level of co-creation in service provision and customer satisfaction, while perceived guilt moderates the relationship between the level of co-creation in service recovery and customer satisfaction. Park and Ha (2016) examine how different dimensions of customer value derived from co-creation of service recovery affect customer's post-recovery reactions. They found that utilitarian and hedonic values of co-creation have an impact on customers' perceived equity and affect toward the service recovery, which in turn affect customers' repurchase intentions. More recently Guo *et al.*, (2015) based on control theory examine how perceived control affects customers' evaluations of service recovery. They found that customers' control in the cocreation of service recovery positively affects desirable consequences such as outcome favorability and relationship-based self-esteem.

Surprisingly given its importance, the role of operant resources on customer value recovery in-role behavior (customer participation behavior) in service recovery context remain unexplored, as well as the psychological mechanism that contributes to value co-creation in the service recovery process.

Service failures and service recovery in G-D logic

2.10 Service Failures in G-D logic

Traditionally service failures have been examined within Goods-Dominant (G-D) logic, and consequently have been treated as single events (e.g Smith *et al.*, 1999; Harris, Grewal, Mohr, and Bernhardt 2006) which are either process or outcome-related (Bitner, Booms, and Tetreault 1990; Parasuraman, Zeithaml, and Berry 1985; Keaveney 1995). The process-failure encompasses *how* customers receive the service whereas the outcome-failure includes *what* customers actually receive (Smith *et al.*, 1999). This categorization of service failures enables managers to establish different service recovery strategies (Chuang, Cheng, Chang, and Yang 2012; Zhu, Sivakumar, and Parasuraman 2004). As services marketing literature suggests, in case of process-failure social recovery is more appropriate, while in case of outcome-failure economic recovery is meaningful (Smith *et al.*, 1999; Tax, Brown, and Chandrashekar 1998). Since in G-D logic resources are embedded with value therefore the output (type of compensation) of these two recovery types is also embedded with value (e.g compensation). Therefore in G-D logic, service failure types were normally seen as criterion upon which firms perform “value-adding activities” in form of social or economic recovery.

Another typology of service failures literature refers to the controllability i.e. customers’ perceptions of firm’s control over service failures (Choi and Mattila 2008; Hess, Ganesan, and Klein 2003). The concept of controllability in service failure context is related to attribution of blame (Harris, Mohr and Bernhardt, 2006; Hess et al. 2003; Weiner 2000). In G-D logic perception of controllability leads to negative emotions (Folkes, Koletsky, and Graham 1987) and reactions (Choi and Mattila 2008). Due to the fact that many academics and experts in the marketing field agree that it is more profitable for a firm to retain a customer than to recruit a new one (Hart *et al.*, 1990; Maxham, 2001), to deal with service failures, services providers have adapted service recovery strategies.

2.11 Service Recovery in G-D logic

The definitions of service recovery (e.g Grönroos, 1988; Zemke and Bell, 1990; Johnston, 1995; Andreassen, 2000; Zeithaml *et al.*, 2009, cited in Krishna *et al.*, 2011) generally have been based on a G-D logic view and are output-oriented; consequently,

service recovery process becomes a post-failure action. A commonly used definition of service recovery was suggested by Grönroos, (1988), who conceptualised it as:

[. . .] the actions a company takes in response to a service failure.

The most commonly used process models of service recovery are founded on this or similar definitions.

Bitner *et al.*, (1990) describe the process of recovery in four steps problem acknowledgment, explanation of the reason, apology where appropriate, and compensation such as a free ticket, discount coupons etc. Tax and Brown (1998) provide a recovery process based on four stages: (1) identification of service failures, (2) resolving customer problems, (3) communication and classification of service failures and (4) integrating data and improving overall service. Tax and Brown's process in identification of failures include practices such as setting standards, communicating the importance of recovery, training customers to complain and using technological benefits. Other authors designed blueprinting in order to identifying failure points and produce a recovery process (e.g Shostack 1984; Botschen, Bstieler and Woodside, 1996, *cited in* Krishna *et al.*, 2011). Botschen *et al.*, (1996) provided blueprint of sequence-oriented problem identification (SOPI) within service encounters.

Krishna *et al.*, (2011) drawing on service recovery litterature (Bell & Zemke, 1987; Bitner *et al.*, 1990; Johnston and Fern 1999; Kelley *et al.*, 1993; Barlow and Møller, 1996, Boshoff 1997; Michel 2004) identified 7 fundamental steps in the service recovery process: (1) acknowledgement, (2) empathy, (3) apology, (4) ownership, (5) fix, (6) assurance, (7) compensation. Bell and Zemke, (1987) proposed five dimensions for service recovery: apology, empathy, urgent reinstatement, symbolic atonement, and follow-up.

Traditionally, service recovery occurs by providing predefined recovery offerings i.e *value propositions* through firms' initiatives (e.g., apology, empathy, compensation, explanation) (Bell and Zemke 1987; Bitner *et al.*, 1990) as units of outputs that are embedded with value. Consequently, in G-D logic, service recovery (Tax, Brown, and Chandrashekar 1998) is characterized as "value-adding activities". As services marketing literature suggests, in case of process-failure social recovery (e.g apology) is more appropriate, while in case of

outcome-failure economic recovery (e.g compensation) is meaningful (Smith *et al.*, 1999; Tax, Brown, and Chandrashekar 1998).

Poor service recoveries have been shown to exacerbate already low customer evaluations following a failure, producing a "double deviation" effect (Bitner, Booms, and Tetreault 1990; Hart *et al.*, 1990). On the contrary, an effective recovery is critical for firms because it not only can compensate for consumers' losses but also can produce a "service recovery paradox" in which secondary satisfaction (i.e., satisfaction after a failure and recovery effort) is higher than prefailure levels (McCullough, Berry, and Yadav 2000; Smith and Bolton 1998). In line with this the service recovery paradox (Etzel and Silverman, 1981, *cited in* Krishna *et al.*, 2011) has shown that service recoveries can build loyalty faster than if no failure had occurred.

Because of the importance of executing effective failure recovery strategies, much research has been conducted in recent years to determine what constitutes effective recovery. However, all these recovery strategies (i.e. compensation, apology) are based on (G-D) logic because they focus on the specific transaction (purchased service and failure) instead of the perceived value search by the customers either at the specific transaction or generally from the cooperation with the company/ brand. Effectiveness of service recovery attempts depends on consumers' recovery expectations and consumers' recovery preferences. Although, a considerable amount of literature argued that recovery initiatives (e.g., apology, empathy, compensation, replacement, explanation, timeliness, assurance of no recurrence), are indispensable in some cases but pointless in some others, I argue that the adoption of these initiatives depends on customer's perceived value after a service failure and the providers' ability to make the appropriate value propositions.

Although, literature of service recovery suggest that recovery can fall into two dimensions, economic recovery (providing "utilitarian" resources such as paying compensation and giving discounts) and social recovery (by providing psychological or symbolic resources, such as making an apology and offering an explanation) the aforementioned attributes has been examined in a G-D Logic context. Smith *et al.*, (1999) applied resource exchange theory, mental accounting principles, and prospect theory (all these theories predict that customers will place greater value on exchanges involving proximal similar resources than on those involving distal dissimilar resources) showed that

customers prefer to receive recovery resources that “match” the type of failure they experience in “amounts” that are commensurate with the magnitude of the failure that occurs. For example, when customers are treated rudely by a waiter, they will assign less value to a discount than to an apology. However, in S-D logic since resources are embedded with potential value only (Vargo and Lusch 2004a), a resource integration process of parties involved is needed for service recovery value realization.

CONCLUSION

In conclusion, this chapter has reviewed the streams of literature that form the theoretical basis of this investigation into value co-creation in service recovery context. Specifically, this chapter has discussed S-D logic paradigm and its implications; value co-creation; value co-destruction; the perceived value in S-D logic; Service failures and service recovery; and co-creation behaviors. The following chapter describes the methodology of this thesis, which incorporates a multi-study mixed method approach in addressing the research questions.

Chapter 3. Conceptual Framework and Hypotheses Development

3.1 Conceptualizing Service Failures through the lens of Service-Dominant logic: A value-based approach

In S-D logic, instead of service provision there is resource integration process which either leads to value co-creation or to value co-destruction (see figure 3-1). Thus, the classical approach of service provision has been replaced by resource integration activities. Consequently, the term “service failure” refers to a resource integration which is characterized by a misuse of resources and therefore leads to an outcome called value co-destruction (Plé and Chumpitaz Cáceres 2010; Smith 2013). Taking into account, that service is either co-created or co-destroyed rather than provided from a firm therefore we can assume that resource integration is a process where multiple opportunities for value co-creation and/or co-destruction can occur. In line with this Payne, Storbacka and Frow (2008) argue that resource integration is an ongoing process, “a series of activities performed” (Payne *et al.*, 2008, p. 86). In support to my argument for treating resource integration as an ongoing process where are multiple opportunities for co-creation and/or co-destruction more recently, some authors (Sivakumar, Li, and Dong 2014) have begun to treat service delivery as a continuous process where multiple failures can occur (e.g double deviation) (Wu and Lo 2012). Since resource integration is a process (continuum) therefore if service failure is treated based on G-D logic criteria different problems arise and leaves the notion of value unclear. Thus, in S-D logic, service failure cannot be an outcome-failure, because the customers “do not receive an output” in terms of value, since they are value creators (Grönroos 2008; Grönroos and Voima 2013) or value co-creators (Vargo and Lusch 2004a; Vargo and Lusch 2008a) and their actions during value creation are primarily involved. Therefore since customers do not receive value via goods or services (as an output embedded with value) since they co-create their own value through resource integration activities instead of receive (S-D logic perspective) therefore it cannot be an outcome-failure. Since customers and service providers are resource integrators therefore the only failure can occur (related the goods and/or services) is during resource integration process, a process-failure. Thus, contrary to G-D logic

Chapter 3. Conceptual Framework and Hypotheses Development

view which suggests two types of service failures, I suggest that in S-D logic service failures can be seen as an exit (or multiple exits) from the ongoing process of resource integration, while *outcome-failure* is related as the evaluative outcome of the whole process. Moreover, in terms of value what is lost during resource integration is not “a value” rather than resources. Plé and Chumpitaz Cáceres (2010) argued that value co-destruction process can result from accidental or intentional misuse of resources. In the same vein, Smith (2013) examines how failure to integrate and/or apply resources as expected by customers results in a process of value co-destruction. However co-creation and/or co-destruction characterize the resource integration process and not the value. Value is the outcome of a process in which customers integrate and use available resources, including their own knowledge, skills and motivation (Vargo and Lusch 2009; Hilton *et al.*, 2012). Resources do not have value *per se*, instead there are embedded only with potential value (Vargo and Lusch 2009; Hilton *et al.*, 2012). Applying this logic to the traditional view of service failures where resources are loss, in terms of value, then *only potential value is loss*, not *actual*. This provides excellent opportunities to establish proactive recovery strategies before the output-realisation (co-destruction of value). Summarizing in S-D logic, a service failure refers to a loss of resources (potential value) during resource integration (process-failure) and *not to a loss of value*, while actual loss of value is evaluated by actors as an *outcome-failure* of service process.

Severity/magnitude is another characteristic in service failure literature (Smith *et al.*, 1999; Harris, Grewal, Mohr, and Bernhardt 2006). Failure severity refers to the magnitude of perceived loss experienced by customers (Smith *et al.*, 1990) and affects satisfaction, trust, commitment, negative word-of-mouth (Weun, Beatty, and Jones 2004) and customers' recovery expectations (Hess, Ganesan, and Klein 2003). Contrary to the G-D logic which posits that severity is related to resources loss in terms of output (Folkes and Kotsos 1986, *cited in*, Krishna *et al.*, 2011) from an S-D logic view I suggest that severity of service failure gets link with the *stage of service process* and the *resource availability*. For example, if a flight canceled due to technical problems (resource loss) and the compensation from the airline is a booking in the business class for the next flight (recovery), this may increase failure severity, if the value for the customer is conditional (miss a professional meeting). However, if there are other flights, or other means of transport (e.g ship) (resource availability) from the same company or a cooperation with flights from other companies for emergence situations, and the customer could manage to go to his meeting, therefore severity

Chapter 3. Conceptual Framework and Hypotheses Development

is decreased. Since service failure in S-D logic is a process-failure therefore severity is determined by the resources loss and resource availability for the continuously of integration process in order to prevent value co-destruction process. Misuses of resources have been examined as the key determinant of co-destruction process (Plé and Chumpitaz Cáceres 2010;Echeverri and Skålén, 2011; Smith 2013). Therefore, depending on customer's expected value, resources loss and resource availability determine the grade of severity in the resource integration process. Thus, failure severity is a critical point in resource integration process because in a manner determines whether resource integration follows a co-creation or a co-destruction process while parallel enables the establishment of proactive recovery strategies.

Since service failures in S-D logic express negative events during the resource integration process which can take either the form of co-creation or the form of co-destruction and we it is perceived as failure-process rather than outcome, clarifying some terms from process theories enable me to develop an integrated framework.

3.2 Process theories as a theoretical basis for service failure

Two process theories lifecycle theory (Van de Ven 1992) and dialectical theory (Van de Ven 1992) were chosen as the key theoretical foundations because they, by complementing one another, make it possible to describe service failure process in resource integration activities.

Lifecycle process theory (Van de Ven 1992) posits that process incorporates different stages such as starting conditions, an emergent process of change and a functional end-point, while change is inherent. Service process is characterized by starting conditions in forms of inputs (actors' resources/facilities), processes of change (resource integration/transformation) and functional end-points in terms of outputs (modified resources/usage), while outcome e.g value is a personal evaluative judgment (Moeller 2008; Hilton, Hughes and Chalcraft 2012). Regarding the main process from an S-D logic point of view, resource integration can be described as an emergent process as well as interaction (Peters *et al.*, 2014). However, since interactions are characterized the whole resource integration process I perceived it here as an antecedent to resource integration process (Gummesson, and Mele 2010). Moreover according to lifecycle theory a service process can be theorized as a sequence of changed

Chapter 3. Conceptual Framework and Hypotheses Development

events that unfolds over the duration of an entity's existence (Van de Ven, 1992). Therefore in terms of the service failure, the lifecycle theory sets the process of change and drives the misuse of resources from a given point, the cause of resource misuse (e.g expertise, adaptability), towards an anticipated end (e.g value co-destruction). The resource misuse that ranges latent in the early stage of the service process becomes progressively more mature, complex, and differentiated. Plé and Chumpitaz Cáceres (2010) agree that misuse of resources triggers a value co-destruction process during resource integration process. Similarly, I agree that resource integration process takes the form of service failure process which is actually a value co-destruction process, in terms of S-D logic. Different contexts (e.g socio-cultural) and processes affect the resource-configuration (customer's and firm's operand and operant resources).

Dialectic process theory (Van de Ven 1992; Holt 2002) suggests a pluralistic world of colliding events, forces, or contradictory values which compete with each other for domination and control. Therefore service failure process is based on these contradictions (events, forces, values) which may be internal or external (Van de Ven 1992). Internal may emerge due to customers' subjective well-being (e.g emotions) (see Smith 2013). External contradictions may emerge due to conflicting values in resource integration process. In line with this, Plé and Chumpitaz Cáceres (2010) mentioned that conflicts between different systems lead to misuse of resources, while Hilton *et al.*, (2012) argue that value propositions are a process of negotiation between and among actors. Additionally, external contradictions may emerge due to contextual influences, which includes other actors (Grönroos and Voima 2013) or other ecosystems (Akaka, Vargo, and Lusch 2013). In service process stability and changes are characterized as forces which struggle to maintain status quo in the analogous context.

These two theories may provide some insights in order to understand service failure through the lens of S-D logic. Lifecycle theory by describing the required stage sequence implies a final state and a process of change and dialectic theory by focusing on how changes and development occur. In terms of service failure this framework may be provide explanations on understanding when resources misuse occurs through the development of service process in a sequence of different stages and activities and how these resources misuse occurs. From an S-D logic point of view misuse of resources could be intentional or accidental (Plé and Chumpitaz Cáceres 2010) and maybe occurs through customer's loss of

Chapter 3. Conceptual Framework and Hypotheses Development

resources, firm's failure to fulfill value proposition, and during resource integration process (Smith 2013). Additionally, since resource integration i.e the service process (Vargo and Lusch, 2004a; 2008a; 2011) has three different forms depending on kind of resources: complementarities (different resources which supplement each other), redundancy (similar resources) and mixing (similar and different resources) (Gummesson and Mele 2010) resource misuse can occur in any form. Therefore recognizing the stage of service process where the service failure occurs as well as the form of resource integration enable firms regarding the resource availability to prevent value co-destruction process and turn it into co-creation process. However in the early stages of sequence may be easier to prevent co-destruction process due to the fact that process becomes later more complex. In order to understand better the service process development through the sequence of events and the changes which leads to service failure i.e. the co-destruction process it is necessary to present service failures as a part of a continuum process in S-D logic literature co-creation to co-destruction.

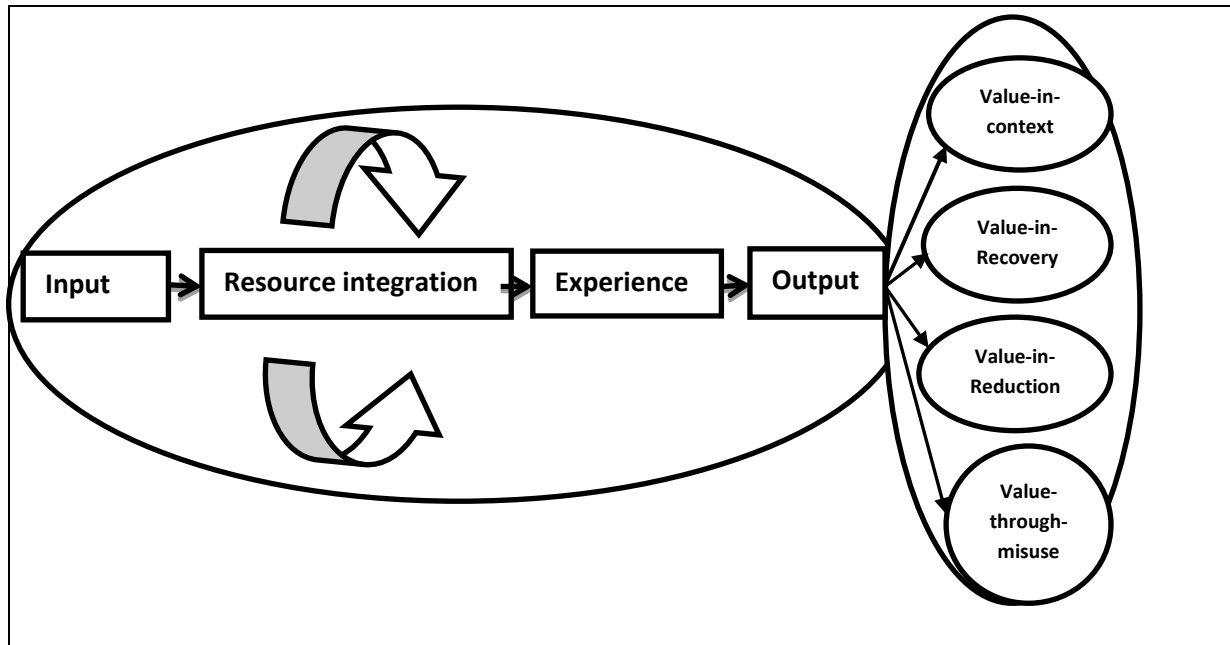
3.3 Toward an integrated framework for service process continuum

With this more holistic conceptualization of service failure grounded in S-D logic, I develop a conceptual framework (see Fig.3-1) where service failures are described in a continuum of resource integration process as co-destruction process. Drawing from prior research on co-creation and co-destruction process and their different streams (e.g., Arnould *et al.*, 2006; Moeller 2008; Gummesson and Mele, 2010; Grönroos 2011; Grönroos and Voima, 2013; Hilton *et al.*, 2012; Plé and Chumpitaz Cáceres, 2010; Echeverri and Skålén, 2011; Smith 2013), I propose an integrated conceptualization of resource integration process (see Fig.3-1) theorizing it as a sequence of incidents, events or activities and stages between actors which unfolds over the duration of direct interactions. I suggest that co-creation and co-destruction are both processes of resource integration which are formed due to resource-configuration, and leads into value co-creation or value co-destruction respectively. Therefore the concepts of co-creation and co-destruction create a continuum, the resource integration process. Service is the resource integration process (Vargo and Lusch 2004a; 2008a; 2011) which may form either co-creation (Vargo and Lusch 2008a; Payne *et al.*, 2008; Vargo *et al.*, 2008) or co-destruction process (Plé, and Chumpitaz Cáceres, 2010; Echeverri and Skålén, 2011; Smith 2013). Stages of service process include actor's resources as inputs, resource

Chapter 3. Conceptual Framework and Hypotheses Development

integration process, experiences and evaluation of experiences in forms of value acquired (outcomes) (Moeller 2008; Ramaswamy 2011; Hilton *et al.*, 2012)

Figure 3-1: An input-process-output approach to service



I suggest that co-creation-co-destruction of value should be seen as a dynamic process of resources integration with the ultimate goal the creation of the value. That dynamic process is based on Input-Process-Output-Outcome Model (IPOO) Model) that explains how the inputs (resources) should be modified through the resource integration in order to produce the desired output (experience) and therefore an evaluative outcome (value). Additionally, at the end of the process I argue that there is feedback mechanism which explains the willingness to provide inputs during a new value co-creation. The *input* in this process consists of the consumer's and firm's resources. These resources are the main ingredients for the second phase of *resource integration process* wherein the service is either co-created or co-destroyed (through direct interactions). The result of the second phase is the *output i.e the experience*. The evaluation of experience *the outcome* can be one of the following values: value-in-context, value-in-recovery, value-in-reduction, or value-through-misuse. Value-in-context refers to a consumer's positive evaluation of resource integration process, value-in-recovery refers to consumers' perceived outcome of the co-recovery process in terms of utilitarian and hedonic value, value-in-reduction refers to a consumer's evaluation of reduce

Chapter 3. Conceptual Framework and Hypotheses Development

value acquiring from resource integration process, and last value-through-misuse refers to a consumer's negative evaluation of resource integration process. The resource integration is the most important procedure happens during the co-creation/co-destruction process which includes the act of consumers on firms' resources (both operant and operand) and is realized during the direct interactions (Grönroos 2011; Grönroos and Voima 2013).

The *input phase* includes customers' as well as firms' operant and operand resources, needs and expectations, cultures, rules and regulations. According to resource-advantage (R-A) theory firm's operand resources may include raw materials, machinery etc., while operant resources include cultures, routines, controls, competences, employees skills and knowledge, relationships with customers and suppliers etc. (Hunt 2004). Customers' operand resources are economic resources, physical spaces and material objects, while operant resources include sensorimotor endowment, energy, emotions, family relationships, brand communities, consumer tribes, knowledge and skills, life expectancies and history, imagination etc. (see Arnould *et al.*, 2006). It is important to emphasize here that resources are embedded with potential value. Thus, the appropriate configuration of firms' resources may lead to a resource offer also called as value proposition. During that phase firms try to understand customers' perception of value. Therefore according to customer's value perception and consequently the desired value, a resource offer (also called value proposition) which also has potential value and promises value realisation through resource integration (Hilton *et al.*, 2012). The input phase finishes through value proposition acceptance and the beginning of resource integration phase.

At the *resource integration* phase, (the main stage of service process) firms' as well as customers' operant and operand resources are combined in order to co-create the experience (service) and therefore to achieve value creation (output). That is, through the acceptance of offered resources by the firm, the integration process begins through direct interactions between company and consumer. Company-consumer interactions exist in the whole resource integration process and their importance is because the interaction is the main predictor of successful resource integration. At this point, it is important to refer that interaction is a dialogical process (see Ballantyne 2004; Ballantyne and Varey 2006), and through dialog knowledge and resources are transferred and learning takes place (Gummesson and Mele 2010). Therefore, the resource integration process is affected continuously by the dialog. During this transformation of knowledge, as well as other resources, through

Chapter 3. Conceptual Framework and Hypotheses Development

interactions, initial resources (embedded with potential value) are modified according to value propositions (see Hilton *et al.*, 2012). In this stage, we observe a transition from potential value that resources are embedded into *resource-in-modification* towards value proposition realisation. Consider for instance, when humans developed knowledge of electromagnetic spectrum and the skills to handle electromagnetic waves to transform it in sending speech (through mobiles) and music (radio, etc). Thus resources are modified. Value-in-modification may be resulted in different outputs depending on the quality of interactions, (Fyrberg and Jürriado 2009), the understanding of customer's value creation (Grönroos and Voima 2013), and the level of expertise (Plé and Chumpitaz Cáceres 2010). Resource integration process may leads either to value co-creation or to value co-destruction process (service failure). Depending on the aforementioned factors as well as on some inherent characteristics of customer's i.e adaptability. The resource integration process phase is finished when results into a service experience with modified resources.

Output of resource integration is the experience of the service process which is co-created in the previous stages. Experiences results from interactions and determine value (Ramaswamy 2011). The positive or negative evaluation of an experience as a result of resource integration depends on whether the service process took the form of co-creation or the form of co-destruction. I agree with Hilton *et al.*, (2012) that value is a personal evaluative judgment and therefore is an outcome and not an output and that the evaluation of experience which comes from the resource modification is the outcome.

Outcome includes the personal evaluation of service experience and may take one of the following forms: value-in-context, value-in-recovery, value-in-reduction, or value-through-misuse (Chandler and Vargo 2011; Plé and Chumpitaz Cáceres 2010; Echeverri and Skålén 2011; Smith 2013). Consider, for instance, a student who attends a graduate program in a university. Student's resources (e.g knowledge) are integrated with university's resources (classroom, library, internet, professors), in ways unique to his or her life goal. In case of value-in-context, students have taken the desired value from the integration process and therefore firms' value proposition (related to the enhancement of students' operant resources, eg. university's expertise in learning and teaching, research, facilities etc.) through the service process has been successfully transformed from potential value to value-in-context (e.g learning). Contrary, potential value through value-in-modification can be transformed into value-through-misuse. In terms of traditional service failures logic, a resource misuse (in

Chapter 3. Conceptual Framework and Hypotheses Development

goods or services) triggers a service failure but does not determine the outcome. Therefore it is important as I mentioned above to understand how resources loss occur (intentional, accidental through expertise, adaptability to the process etc.) and when resources loss occur i.e in which stage (starting conditions, and or emergent process) for both customers and firms. I agree that the outcome-failure is the evaluation of experience as value-through-misuse which is a personal judgement and depends on experience. Additionally, I suggest that from service co-creation to service co-destruction there is a continuum process. Moreover, drawing on Echeverri and Skålén's (2011) work of interactive value formation, I argue that between the evaluation of value-in-context and value-through-misuse, there are also two other forms of value, value-in-recovery and value-in-reduction. Value-in-recovery exists when a misuse of resources in resource integration process is fixed before leading to the functional end-point of the process. Therefore I believe that in this case resource re-integration can be used as a proactive recovery strategy. In some cases, value-in-recovery may be superior of value-in-context, in case of service recovery paradox. However, this is beyond the scope of this dissertation . Value-in-reduction refers to a lower evaluation of output due to some negative incidents of the process which are not fixed, however customers receive some value. I argue that severity of value co-destruction process also affects whether is perceived as value-in-reduction or value-through-misuse from customers.

3.4 Service Recovery in S-D logic

Whereas G-D logic views that value is created and delivered by firms as an output which is determined in the exchange, as value-in-exchange, S-D logic acknowledges that value is co-created (FP6) by both firms and customers as resource integrators (FP9) (Vargo and Lusch 2004a; 2008a), while it is determined at the time of its use, as value-in-use (Ballantyne and Varey, 2006). In terms of service recovery, this means that firms cannot create and deliver value (recovery strategies) in terms of output, after a service failure occurs. Since, value is co-created by both firms and customers as resource integrators, this focus contributed to an understanding that service recovery value co-creation (value co-recovery) is relational and thus requires a process orientation, rather than an output orientation. Problematically, service recovery literature still views recovery strategies as value propositions embedded with value (that firms create and communicate to customers), and thus service recovery value is still determined through value-in-exchange, by firms. This is

Chapter 3. Conceptual Framework and Hypotheses Development

also in contrast to FP10 (which states that value is always determined by the beneficiary). Acknowledging that service recovery value constitutes the customers' perception of a recovery's use value, therefore service recovery value should be determined by the customer.

Moreover, S-D logic posits that firms cannot deliver value, but only offer value propositions (FP7). Value propositions similarly to operand resources do not have intrinsic value rather than potential value, and require the integration of resources to realise their value (Hilton *et al.*, 2012). In terms of service recovery, that means, that firms cannot create and deliver value recovery strategies in terms of output, but only offer value propositions (embedded with potential value), which require customers' resources contribution, for value realization. Therefore understanding, the concept of value proposition in co-recovery is critical.

3.5 The role of value propositions on value co-recovery process

Value propositions have been examined from both G-D logic (e.g Anderson *et al.*, 2006, Lanning and Michaels, 1988) and S-D logic perspectives (Ballantyne and Varey 2006; Frow and Payne 2008, 2011). Skålén *et al.*, (2014, p.138) by conceptualizing value propositions from a G-D logic view, argue that “are offerings to the market; their inherent value is delivered to the customer by the firm; they are constructed without any direct customer involvement”. According to the G-D logic perspective in a service recovery context, companies offer value propositions (e.g compensation) with embedded value for the customer after the service failures. Therefore, traditionally service recovery strategies (e.g., apology, empathy, compensation, replacement, explanation, timeliness, assurance of no recurrence) have been treated as value propositions after a service failure occurs which were embedded with value delivered to the customers by firms without their involvement, from a supplier-centric perspective.

For example, a customer books a hotel room to enjoy a holiday trip with friends. When the customer arrives at the reception, interacts with the service employee. If the receptionist explains that there was an electronic miscommunication and the hotel is overbooked, in the service interaction process this could be a critical incident and value may be co-destroyed for the customer. Some typical service recovery strategies, which could be

Chapter 3. Conceptual Framework and Hypotheses Development

delivered entirely or mostly by the organization and its employees; is an explanation, a discount coupon, or the offering of a room in another more luxurious hotel than the one where room has been booked (as compensation). In G-D logic, these recovery strategies, typically consist *value propositions embedded with value*. However, these value propositions as recovery strategies could be indispensable in some cases but pointless in some others (Ringberg, Odekerken-Schröder, and Christensen, 2007).

A major difference between G-D logic and S-D logic is that in the former value propositions have value *per se* while in the latter do not have value *per se* (Skålén *et al.*, 2014). From an S-D logic point of view, value propositions are reciprocal promises of value (Ballantyne and Varey 2006) which consumers choose based on their own assessment and expectations of value (Pires, Dean, and Rehman 2015). In a service recovery context, this means that firms cannot deliver offerings but can only initiate value propositions which are the promises of realising value through the contribution of resources by the actors involved (Hilton *et al.*, 2012). In the above example, the service employee may offer a room in the nearest luxurious hotel (initiates a new value proposition for realising service recovery). Nevertheless, the customer may or may not accept the value proposition, depending on his or her expectations of value. If the customer needs to relax, probably he or she accepts the new value proposition. The *functional value of relaxing* as the service value, will be determined at the time of its use, in the luxurious hotel as *value-in-use*. Still, the customer may not accept the new value proposition. If the customer, wants to entertain with his friends in hotel's swimming pool some events, therefore this value proposition as well as some other predefined (e.g discount coupons) could be indispensable. In the case that customer accepts value proposition for realising service recovery, an integration of his or her resources is also needed for value realisation. So, these value propositions offer customers the potential for service recovery. The acceptance of value propositions depend on customers' expectations of value (Pires *et al.*, 2015), and participating actors must be able and willing to contribute their resources to realise the value proposition, while all actors might engage in behaviours to achieve service provision (Hilton *et al.*, 2012), in order to understand the expected value in a service recovery context, I draw on expectancy theory and I introduce consumer value co-recovery in-role behavior as a value co-creation behaviour in a service recovery context.

Chapter 3. Conceptual Framework and Hypotheses Development

3.6 The role of institutions on value co-recovery process

Continuous refinements and elaboration in S-D logic framework suggest that the role of institutions becomes necessary for value co-creation (Vargo and Lusch 2011). Indeed, in the update version of S-D logic, the fifth axiom focuses on institutions and institutional logics (see Vargo and Lusch, 2016). Recently S-D logic recognizes the importance and the application of institutions (Vargo and Lusch, 2011; Akaka, Vargo, and Lusch, 2013) in innovation (Vargo, Wieland, and Akaka, 2015), resource integration (Edvardsson, Kleinaltenkamp, Tronvoll, McHugh, and Windahl, 2014) and value co-creation (Vargo and Lusch, 2011; Akaka, Corsaro, Kelleher, Maglio, Seo, Lusch, and Vargo, 2014). *Institutions* can be described as “humanly devised constraints” (North, 1990, p.3), such as rules, norms, meanings, symbols, practices, and similar aides to collaboration (Vargo and Lusch, 2016), that influence and guide actor's behavior (Edvardsson *et al.*, 2014; Vargo and Lusch, 2016). Institutions enable or constraint actors' actions (Scott, 2001; Vargo and Akaka, 2012; Vargo *et al.*, 2015) and interactions (i.e. resource integration and service-for-service exchange) (Akaka *et al.*, 2013; Akaka *et al.*, 2014) while could be of regulative (formal rules that affect actors' behavior), normative (norms, values, beliefs), or cognitive (perception and representation of actor's reality) nature (Scott, 2001; 2008). Because institutions have an impact on resource integration and value evaluation or assessment by the beneficiary (Akaka *et al.*, 2014; Edvardsson *et al.*, 2014), in this context, I view institutions as enabling or constraining the co-recovery process as well as they guiding how actors assess or evaluate the value co-recovery. My view draws on Edvardsson *et al's* (2014) perspective who argue that institutions (norms, rules, standards) affect actor's behavior and thus resource integration activities. Given that co-recovery process is a resource integration activity (Xu *et al.*, 2014b), in which actors integrate their resources to co-create a service recovery, (a value proposition), I extend the work of Edvardsson *et al's* (2014) by argue that regulative, normative, or cognitive functions of institutions and institutional logics affect actors' behaviour and thus co-recovery process.

In value co-recovery process, in line with the appropriate value propositions made after service failure, actors' seek support from institutional rules and norms within their ecosystem. A service ecosystem is a “relatively self-contained, self-adjusting system of resource-integrating actors that are connected by shared institutional logics and mutual value

Chapter 3. Conceptual Framework and Hypotheses Development

creation through service exchange.” *Institutional logics* are sets of interdependent institutions grounded in norms and rules (Vargo and Lusch, 2016), which are shared by actors' within their ecosystem (Lusch and Vargo, 2014). In this context, a service-ecosystems view emphasizes the importance of value co-recovery and institutions among actors, because service ecosystems need shared institutions to coordinate resource integration activities (Lusch and Vargo, 2014), i.e the co-recovery process. The emphasis on institutions in service ecosystems suggests that phenomenological views on value recovery (FP10) and evaluations of service recovery experience are driven largely by differences in institutions.

I suggest that institutions and institutional logics and the regulative, normative, and cognitive functions either enable or constrain co-recovery process. In the aforementioned example, the service employee may want to offer a room in the nearest luxurious hotel which could also be accepted (as value proposition) from the customer. However the rules/or the policy of the hotel management may not allow this kind of compensation. In this case, the regulative institutions of the hotel service ecosystem (rules, policies) restrain value co-recovery process between actors (employee and customer). Nonetheless, if the employee has greater authorization to deal with critical incidents, could book the room in the nearest hotel, after the interaction with the customer and thus the regulative institutions enable the service co-recovery process. At the same time, during the resolution of his/her problem customer may advise the hotels' page on facebook through his/her smartphone in order to seek *information for resolution in similar problems* (information seeking). Thus, other institutions with their logics (norms, rules, and standards) will affect co-recovery process in practice; the social network logic as well as the logics linked to information seeking and sharing, etc. From a normative perspective, beliefs, norms and values in the hotel industry guiding the co-recovery process. The service employee feels he or she *ought to* find a solution to customer' problem and *a moral obligation* to help the customer (norms or standards of the hotel industry), even he or she doesn't believe that he/she will succeed. Yet, customers' normative expectations which encompass what customers perceive as standards of service recovery or norms, as well as how the employee *should* behave in case of service failure, affect the evaluation of service-for-service exchange and thus the co-recovery process.

Different standards affect the evaluation of co-recovery process and its outcome assessment (value co-recovery). Cognitive institutions, guide systems (e.g customer and employee) to engage in co-recovery behavior that is consider to be nothing less than the

Chapter 3. Conceptual Framework and Hypotheses Development

proper way. The employee choose and adopt a co-recovery behavior (e.g cooperation, politeness, participative) as well as the customer does (e.g follow the employ instruction, information sharing about the problem) that is related to actions and routines that are *taken-for- granted* (the way the things are done).

Still, it is important to notice that differences between institutions affect the success of the co-recovery process. As suggested by Akaka *et al.*, (2013) congruence or difference between actors' shared institutions guide the success of interaction. In a service recovery context, where interaction refers to the process of communicating for the resource integration of available resources in order to recover from service failure (Xu *et al.*, 2014b), institutions enable or constrain co-recovery process, depending on the congruence or conflict between actors. Therefore, I suggest that similarities in institutions encourage the co-recovery process while differences in institutions exhibit the co-recovery process.

However, not only institutions guide actor's behavior but also actors affect institutions through their behavior and thus contribute to an institutional change (Edvardsson *et al.*, 2014), a process also called institutionalization (*i.e* the maintenance, disruption and change of institutions) (Vargo *et al.*, 2015; Vargo and Lusch, 2016). In a service recovery context, actors' behavior in a co-recovery process influence and change institutions if their logic do not fulfill their requirements or expectations. For example, financial compensation as a hotel overbooked compensation (regulative institution) may not be an appropriate value proposition, for co-recovery process. Therefore, this institution *may change* if doesn't fulfill customers' expectations. Hotel management may offer a room in the nearest hotel, a value proposition that the customer may accept as a recovery resource, e.g in case that he or she wants to stay in this area for a specific reason (conference). Therefore, deinstitutionalization and reinstitutionalization of shared institutions (Vargo and Lusch, 2016) between resource integrating actors when it is possible enable co-recovery process.

Table 3.1 An overview of the major differences between G-D logic and S-D logic related to service recovery.

G-D logic vs. S-D logic on Service Recovery

	G-D Logic	S-D Logic
Role of firm	Produce and deliver predetermined recovery	Propose and co-create value recovery initiatives

Chapter 3. Conceptual Framework and Hypotheses Development

	initiatives (e.g., apology, compensation, replacement, explanation, assurance of no recurrence) based on a firm-centric logic. Recovery is determined by the firm.	according to the loss value consumptions, based on customer logic, recovery is determined by the customer.
Role of customers	Pathetically accepted the predetermined recovery strategies.	Co-create with firms the appropriate solution or recovery strategy, through resource integration process.
Service failures	Recovery efforts are based on the logic that failure is the destruction of an “ <i>intangible good</i> ” as units of output.	Recovery efforts are based on the logic that failure is “ <i>the process of value co-destruction experience</i> ”.
Service Recovery Paradox	Service providers cannot explain phenomena such as Service recovery Paradox.	There is a clearly explanation for SRP. There is a combination of value consumptions propositions better than the primary core value proposition and customer value co-creation leads to more benefits.
Process of restoration	Firms trying to restore by offering “goods” or “services” (in which value is added by enhancing or increasing attributes).	Firms trying to restore through offering value propositions by applying DART model of Prahalad and Ramaswamy (2004a).
Source: Developed by the researcher		

3.7 Research Model and Hypotheses Development

My view of co-recovery behavior builds on Yi and Gong’s work (2013) which emphasizes that value co-creation behavior is a two-dimensional construct consisting of customer value in-role (customer participation) and extra-role (customer citizenship) behavior. As I mentioned before, in-role behaviors are those required for value co-creation, while extra-role behaviors are voluntary behaviors that provide extraordinary value to the

Chapter 3. Conceptual Framework and Hypotheses Development

firm or other consumers. For instance, co-recovery in-role behavior takes place when a consumer follows the service provider's guidelines during recovery, whereas extra-role behavior occurs when a consumer helps other consumers during a service failure. In this study, I focus on in-role behaviors since they are necessary for value creation, while extra-role behaviors are not necessary for a successful recovery and thus are seen less often during negative events such as service failures. Therefore, I define value co-recovery in-role behavior as the totality of behaviors which are required for successful value co-recovery such as the seeking and sharing of information, responsible behavior, and personal interactions.

This study's model (Figure 3-2) applies the expectancy theory of motivation to examine how the ability to co-recover stimulates consumer value co-recovery in-role behavior through extrinsic and intrinsic motivation. In this study, I define the ability to co-recover as the skills and knowledge needed for interacting with service providers to co-create a solution. Extrinsic motivation here refers to extrinsic benefits such as getting a quicker service recovery, getting the preferred solution to a failure, while intrinsic motivation refers to personal feelings of worthwhile accomplishment with the co-recovery process. Ultimately, the study aims to understand whether consumer value co-recovery in-role behavior leads to utilitarian and hedonic value co-creation. As become clear, following the S-D logic point of view, perceived value of co-recovery is measured in terms of utilitarian and hedonic value, for three reasons. First, because by examining hedonic and utilitarian value (Park and Ha, 2016) confirms the multidimensionality of value, in support of the view of S-D logic (Vargo *et al.*, 2008; Park and Ha, 2016), and previous literature of value who argues that the outcome of an experience, and or consumption is empirical measured with these two dimensions. Second, because previous research in service recovery (Zhu *et al.*, 2004) argued that recovery strategies should be respond to utilitarian and symbolic (hedonic) consumers' perceptions. Third, because utilitarian and hedonic aspects of co-recovery capture task-related, emotional, intrinsic, and social reward of collaboration, which are more appropriate value-measurements constructs in the context of service recovery, contrary to service delivery that other typologies maybe more appropriate (e.g Holbrook's typology).

Furthermore, this study hypothesizes that the relationships in the proposed model can be amplified or reduced by several factors related either to consumers or service providers. The selection of the factors in the proposed model was based on the basis of insights gathered

Chapter 3. Conceptual Framework and Hypotheses Development

from both qualitative in-depth interviews with consumers and related research streams. More specifically the constructs of operant resources in the form of ability to co-creation, motivation and co-creation in-role behavior were identified in the literature of S-D logic (Vargo and Lusch, 2004a; 2006, Hilton *et al.*, 2012; Roberts). Interviews helped to the transition of these concepts in a co-recovery context. Regarding the moderating variables, the selection of these factors was based on the impacts of the effective usage of consumer's resources in the resource integration process during recovery. This means that interviews revealed that these factors enable or constrain co-recovery in-role behavior (e.g. internal blame, emotional statement, and role clarity) and consequently the co-recovery process. The construct of trust in service providers' resolution ability was identified as moderator (new construct) during interviews, and thus items were developed. In support of interviews findings, literature review of customer participation literature and service failure confirmed the importance of the above constructs and their impact on service process. From a service provider perspective, I examine the roles played by clarity and trust in the service providers' resolution ability, and from the consumer perspective, I investigate the role of internal blame and negative emotions.

First, during the co-recovery process, service providers should have and use the necessary resources for resource integration (e.g. skilled and experienced employees) so that they can achieve successful value co-recovery (see Figure 3-2). Consumers' perceptions of service providers' resources facilitate or constrain their usage of resources (e.g. ability) and their in-role value co-recovery behavior. In this study, trust in the service provider's resolution ability is the measure of this aspect. Thus, trust in the service provider's resolution ability is defined as the consumers' perceptions of employees' ability to respond to their problems efficiently. Second, service providers should facilitate the usage of consumers' resources during co-recovery by helping them understand their roles (Yi, 2014). Thus, role clarity ensures the effective usage of consumer resources in resource integration processes (Bolton and Saxena-Iyer, 2009) and leads to higher value. Here, role clarity can be defined as the extent to which customers understand the task to be performed (procedures, duties, etc.) when they engage in co-recovery process.

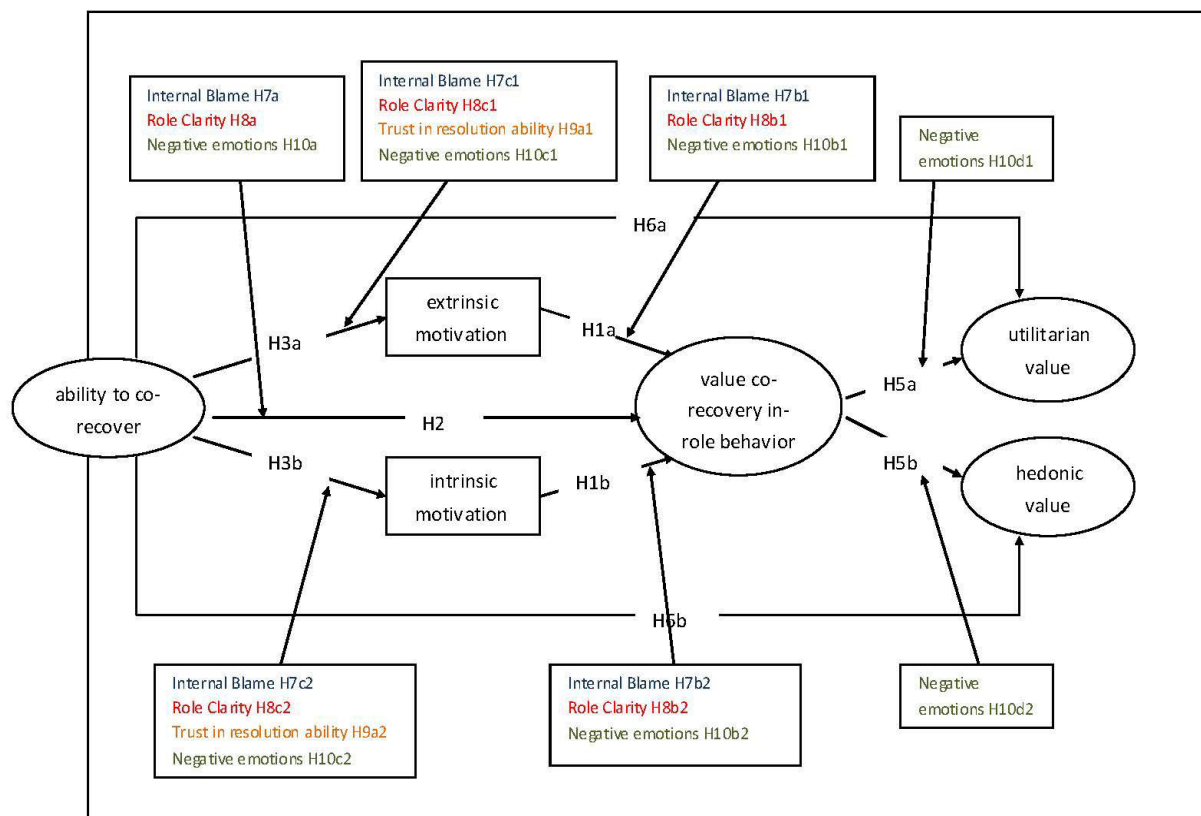
Third, due to the fact that customers may feel guilty for a flawed service outcome, they may feel obliged to solve the problem they caused (Heidenreich *et al.*, 2015). Thus,

Chapter 3. Conceptual Framework and Hypotheses Development

internal blame, i.e consumers' responsibility for the service failure, may also affect the value co-recovery process by making consumers more motivated to use a greater amount of their own resources. Moreover, since individuals frequently experience negative emotions when a problem arises and during its resolution (Andreassen, 1999), such emotions are likewise expected to negatively affect the co-recovery process.

Last, the right-hand side of the model depicts the consequences of consumer value co-recovery in-role behavior. Utilitarian value of co-recovery is the customer's perception of co-recovery desired result, while hedonic value is related to the emotional or social value of co-recovery process (Park and Ha, 2016).

Figure 3-2 Research model of the underlying mechanism of motivation between operant resources and consequences of consumer value co-recovery in-role behavior



Note: For clarity's sake, the moderator variables are not presented individually.

3.8 Motivation and consumer value co-recovery in-role behavior

Expectancy theory (Vroom, 1964) explains the process by which people are motivated to engage in various types of behavior based on their expectations (Oliver, 1974). It suggests that motivation is a function of the following three components: expectancy, instrumentality, and valence (Tyagi, 1985; Vroom, 1964). Expectancy refers to an individual's perception that effort leads to successful performance; instrumentality concerns a person's expectations about performance-driven specific rewards; and valence refers to the degree to which an individual values a particular reward. These three aspects and their relationships are represented mathematically as follows (Le Bon and Merunka, 2006):

$$M_i = \sum_{j=1}^n E_{ij} \times \left(\sum_{k=1}^m I_{jk} \times V_k \right)$$

where:

M_i Motivation: individual motivation for a particular task i .

E_{ij} Expectancy: consumer's subjective estimate of the probability that expending a given amount of effort on task i will lead to a performance level on some performance dimension j .

I_{jk} Instrumentality: consumer's subjective estimate of the probability that achieving a performance level on performance dimension j will lead to a specific reward k .

V_k Valence for reward: consumer's perception of the desirability of receiving the reward k as a result of improved performance.

n Number of performance dimensions.

Chapter 3. Conceptual Framework and Hypotheses Development

m Number of rewards.

Motivation can be extrinsic and intrinsic (Tyagi, 1985; Meuter *et al.*, 2005). Extrinsic motivation refers to behavior that is driven by extrinsic benefits (Dabholkar, 1996) such as money, price discounts, etc., whereas intrinsic motivation emerges from personal factors (Le Bon and Merunka, 2006) such as feelings of accomplishment, prestige, personal growth, and mere pleasure derived from engaging in an activity (Meuter *et al.*, 2005). From an S-D logic point of view, expectancy theory describes customers' motivation to engage in resource-integration processes by explaining whether customers adopt certain behaviors (e.g. co-recovery behavior) or not. Drawing on expectancy theory, Roberts, Hughes and Kertbo (2014) argue that consumers expect benefits prior to their engagement in co-creation activities and believe that this benefit is attainable (e.g. innovation), so they express desire to get it. Thus, consumers' motivation to co-create is driven by expectations that precede participation in the value co-creation and meaningful outcomes.

In the service recovery context, I suggest that consumers will be motivated to engage in a co-recovery process if they believe that their input will lead to a specific performance (expectancy) which will imply a perceived value (instrumentality) that they want to acquire (valence). During co-recovery, if customers believe that being able to integrate their resources (e.g. knowledge and skills) into a recovery attempt will lead to a better recovery experience, they may perceive some valuable external and internal benefits. For instance, customers become extrinsically motivated to arrive at the preferred solution to their problem or attain a quicker recovery. Similarly, they also may be intrinsically motivated to feel the fulfillment of a worthwhile accomplishment or independence during the co-recovery process. It is expected that both of these motivators lead customers to express more value co-recovery in-role behavior (e.g. looking for additional information about how to solve a problem). In other words, consumers would be willing to integrate their own resources into the service experience if the aim was to obtain a valued outcome from the expected performance. Drawing on these arguments, I assert that:

Chapter 3. Conceptual Framework and Hypotheses Development

H1. When consumers' a) extrinsic, and b) intrinsic motivation increase, they will express more value co-recovery in-role behavior.

3.9 Ability to co-recover and consumer value recovery in-role behavior

S-D logic emphasizes the importance of operant resources (skills and knowledge) over operand resources, since they are the fundamental source of competitive benefits (Vargo and Lush, 2008a). Therefore, understanding their role in the recovery context is crucial. Operant resources include mainly knowledge and skills (Vargo and Lusch, 2004a; Hunt, 2004; Madhavaram and Hunt, 2008). While knowledge can be utilized by a skilled practitioner, skills (know-how) are the ability to interact successfully in one's environment (Purvis and Purvis, 2012). In this study, as I already mentioned, I define the ability to co-recover as the skills and knowledge needed for interacting with service providers to co-create a solution. Studies in co-creation (e.g. Dellande *et al.*, 2004; Meuter *et al.*, 2005; Dong *et al.*, 2008) have noted that it is necessary to have necessary resources (e.g. skills and knowledge) to express value co-creation in-role behavior (Yi, 2014). Similarly, in a service recovery context, customers with ability are more likely to engage in value co-recovery in-role behavior than customers without it. For instance, consumers who know the technical terms of computing or networking can engage in a more successful exchange of information with the customer service providers of the company to identify the problem and come up with a solution. Therefore, I expect that:

H2. When consumers are better able to co-recover, they will express more value co-recovery in-role behavior.

The marketing literature indicates that ability positively affects motivation (Dellande *et al.*, 2004; Lusch *et al.*, 2007). Higher levels of ability influence customers' motivation to participate in the co-production process and hence they increase the value co-created (Lusch and Vargo, 2014). Even if the customers are motivated, without ability they are not likely to engage in customer value co-creation in-role behavior (Gruen *et al.*, 2007; Yi, 2014).

Chapter 3. Conceptual Framework and Hypotheses Development

Furthermore, the participation of customers with a limited ability in processes may result in accidental misuse of resources and lead to co-destruction (Plé and Chumpitaz-Cáceres, 2010), which will require recovery. As with co-creation, in a co-recovery context customers who have the skills and knowledge that are needed to engage in a value co-recovery process may feel more motivated to demonstrate in-role behavior than those with a limited amount of ability. Thus, I make the following hypothesis:

H3. A customer's level of ability influences a) extrinsic, and b) intrinsic motivation.

Empirical research has shown that motivation can not only explain consumers' behavioral effort (Meuter *et al.*, 2005; Le Bon and Merunka, 2006) but can also mediate between managerial or consumer-related variables and this effort. Similarly, I argue that in a co-recovery context a consumer's motivation mediates his/her ability to co-recover and engage in value co-recovery in-role behavior.

H4. The relationship between the level of ability to co-recover (ability to integrate knowledge and skills) and value co-recovery in-role behavior will be mediated by a) extrinsic motivation, and b) intrinsic motivation.

3.10 Consequences of value co-recovery in-role behavior

S-D logic acknowledges that firms cannot create and deliver value (Vargo and Akaka, 2009) and that value is always co-created jointly and reciprocally by all of the actors involved in resource- integration processes (Vargo *et al.*, 2008). The outcome of such processes is the actors' assessment of value in their respective contexts (Edvardsson, Skålén, and Tronvoll, 2012). Earlier studies have identified customer value in-role behavior as the source of value creation (Revilla-Camacho *et al.*, 2015) and value perception (Mustak *et al.*, 2013; Chan *et al.*, 2010). Recently, some researchers (Park and Ha, 2016) have argued that both utilitarian and hedonic values emerge during the co-recovery process. The utilitarian value of co-

Chapter 3. Conceptual Framework and Hypotheses Development

recovery refers to consumers' evaluation of how efficient and useful the co-recovery was, whereas the hedonic value of co-recovery refers to consumers' evaluation of how socially or emotionally meaningful the co-recovery was (Park and Ha, 2016). Although the assessment of value has been found to have positive outcomes, it is not yet known whether customer value co-recovery in-role behavior leads to higher levels of value creation in a recovery context. In this study, I predict that in-role co-recovery behavior will lead to higher utilitarian and hedonic value given that the interaction and resource integration are more effective and thus the co-recovered value better fits consumers' needs. Thus, I posit the following hypothesis:

H5. A higher level of customer value co-recovery in-role behavior leads to greater a) utilitarian value, and b) hedonic value during the co-recovery process.

Furthermore, apart from its impact on how customers actually participate in co-creation, consumer ability influences the amount of value that can be created (Risch Rodie and Schultz Kleine, 2000). Similarly, it is expected that if ability influences value co-creation, it can influence the type and amount of value perceived by consumers during co-recovery. In the present study, this means that customers' ability to co-recover affects the amount of utilitarian and hedonic value, and hence it is proposed that:

H6. As the level of customer ability to co-recover increases, the consumer will perceive greater a) utilitarian value, and b) hedonic value.

3.11 Moderators

3.11.1 Internal blame as a moderator

Attribution of blame has been widely examined in the service failure and recovery literature (e.g. Harris, Mohr, and Bernhardt, 2006). It is defined as the extent to which customers hold the firm responsible for a failure (Maxham and Netemeyer, 2002) and it has been shown to have an influence on customer intentions (Folkes Koletsky and Graham,

Chapter 3. Conceptual Framework and Hypotheses Development

1987). The dimensions of attribution can be classified as the locus (who is responsible for the failure), control (how much control the responsible party had over the cause), and stability (the possibility of a recurrence) (Bitner, 1990). Since co-recovery requires consumers' co-allocation of their skills and knowledge, consumers make decisions and take action, which brings about a sense of responsibility. Therefore, it would be more appropriate to examine the "locus" component of attribution theory in a co-recovery context because it focuses on the attribution of responsibility. The notion of the locus influences beliefs about who should solve problems—either the consumers or firms (Folkes, 1988, p. 556). Put another way, the more customers feel that they are at fault for a failure, the more effort they will put into solving the problem. Subsequently, they will integrate their resources more and be more motivated to enjoy the extrinsic and intrinsic benefits of their efforts, and hence they will engage in more value co-recovery in-role behavior. Thus, I formulate the following hypothesis:

H7. The positive relationship between (a) ability to co-recover and value co-recovery in-role behavior, (b1) consumer's extrinsic motivation and value co-recovery in-role behavior, (b2) consumer's intrinsic motivation and value co-recovery in-role behavior, (c1) ability to co-recover and extrinsic motivation, (c2) ability to co-recover and intrinsic motivation, will be stronger if the customer is high internal blamer in comparison to those who are low internal blamers.

3.11.2 Role clarity as a moderator

Role clarity can be defined as the customer's knowledge and understanding of what they need to do as they perform a given task (Meuter *et al.*, 2005). Customer role clarity in service recovery refers to the extent to which customers know and understand what is expected of them (procedures, duties, etc.) when they engage in value co-recovery in-role behavior. If customers have a clear understanding of their roles and responsibilities and what is expected from them during co-recovery, it is likely that they will feel motivated to engage in value co-recovery in-role behavior and finally they will engage in value co-recovery in-role behavior, in order to achieve their desired goal (e.g. quick service recovery). However, if

Chapter 3. Conceptual Framework and Hypotheses Development

either the tasks of co-recovery or the circumstances under which such tasks are to be performed are ambiguous, then consumer motivation may decrease, meaning that consumers may engage in less value co-recovery in-role behavior. Even though consumers may have the skills and knowledge needed to deal with a failure recovery and think that they can effectively contribute to the co-recovery process, those who have received clear guidance concerning what is expected of them will perform better than those who are not well informed when co-allocating their resources, while they will enjoy higher hedonic and utilitarian values. Thus, the former group will be prompted by higher levels of extrinsic and intrinsic motivation to engage in more value co-recovery in-role behavior.

H8. The positive relationship between (a) ability to co-recover and value co-recovery in-role behavior, (b1) consumer's extrinsic motivation and value co-recovery in-role behavior, (b2) consumer's intrinsic motivation and value co-recovery in-role behavior, (c1) ability to co-recover and extrinsic motivation, (c2) ability to co-recover and intrinsic motivation, (d1)ability to co-recover and utilitarian value, (d2) ability to co-recover and hedonic value, will be stronger if the customer has greater role clarity in comparison to those who have less role clarity.

3.11.3 Trust in service provider's resolution ability as a moderator

As I mentioned above continuous improvements in S-D logic framework suggest that the role of institutions becomes crucial for value co-creation (see for example Vargo and Lusch, 2016). Due to the fact that institutions (e.g rules, norms, meanings, symbols, practices), regulative (formal rules that affect actors' behavior), normative (norms, values, beliefs), or cognitive (perception and representation of actors' reality) in nature (Scott, 2008), enable or constrain actor's resource integration process, actions and interactions, and behaviors (Scott, 2001; Akaka *et al.*, 2013; Akaka *et al.*, 2014; Edvardsson *et al.*, 2014; Vargo and Lusch, 2016), understanding their role is prerequisite to co-create value. Because institutions affect resource integration process as well as value assessment by the beneficiary (Akaka *et al.*,2014; Edvardsson *et al.*, 2014), in service recovery context, I view institutions

Chapter 3. Conceptual Framework and Hypotheses Development

as enabling or constraining the co-recovery in-role behavior and consequently co-recovery process as well as guiding how actors assess or evaluate the value co-recovery.

Trust could be considered as a normative institution (Czernek and Czakon, 2016), which guide actions and behaviors (Haukkamaa, Yliräisänen-Seppänen, and Timonen, 2010). Haukkamaa *et al.*, (2010) found that the ability of actors to (co)create knowledge is affected by the social strength of a network that is built upon trust, bonds, and transparency. Such social mechanisms, in which trust is one of the building blocks, influence the actors' ability and motivation to exchange and create shared knowledge. Similarly, I posit that consumers' ability to integrate their resources into co-recovery can be influenced by the extent to which they trust in the service provider's and its employees' ability to respond to their problems efficiently. In other words, if the service provider has the resources to solve the problem, consumers will use more of their own resources since it is more likely there will be a successful recovery. I expect that consumers with higher levels of trust and who also have the abilities that are needed to engage in co-recovery process would be more motivated to engage in co-recovery than those with lower levels of trust. Ultimately, higher levels of trust would lead to the expression of value co-recovery in-role behavior.

H9. The positive relationship between (a1) ability to co-recover and extrinsic motivation, and (a2) ability to co-recover and intrinsic motivation, will be stronger if the consumer has higher levels of trust in comparison to those with lower levels of trust.

3.11.4 Negative Emotions as a moderator

In the service failure and recovery literature, it has been found that customers tend to experience negative emotions which predict types of behavior such as customer complaints, complaints to a third party, negative word-of-mouth, and causing damage to organizational property (McColl-Kennedy and Smith, 2006). The most frequently reported negative emotions are the discontent (annoyed, sad, upset, angry, in a bad mood) and the concern emotions (afraid and nervous) (Schoefer and Diamantopoulos, 2009). Andreassen (1999) asserts that the initial negative emotion triggered by a service failure has a negative impact on

Chapter 3. Conceptual Framework and Hypotheses Development

customers' satisfaction with the organization's complaint resolution efforts and stimulates exit behavior. Smith and Bolton (2002) argue that negative emotions moderate the effects of recovery performance and other cognitive antecedents as regards service encounter satisfaction. In the co-recovery context, I propose that consumers' negative emotions negatively influence their motivation and in-role co-recovery behavior. This happens because customer assessments of the service encounter performance (Mattila and Enz, 2002) are poorer and thus goal setting and relevant behavior (Bagozzi *et al.*, 1999) are consequently adapted. For instance, extremely angry consumers may have less motivation for co-recovery and probably more intention of exiting and carrying out dysfunctional acts against the service provider, its employees, and other consumers instead of taking up the types of responsible behavior that were suggested. Even though consumers may have the ability to co-recover and think that they can express co-recovery in-role behavior, those with higher negative emotions will perform worse than those with lower negative emotions during the co-recovery process. As a result, they will enjoy lower hedonic and utilitarian values.

Therefore, I developed the following research hypotheses:

H10. The positive relationship between (a) ability to co-recover and value co-recovery in-role behavior, (b1) consumer's extrinsic motivation and value co-recovery in-role behavior, (b2) consumer's intrinsic motivation and value co-recovery in-role behavior, (c1) ability to co-recover and extrinsic motivation, (c2) ability to co-recover and intrinsic motivation, (d1) consumers' value co-recovery in-role behavior and utilitarian, (d2) consumers' value co-recovery in-role behavior and hedonic value will be weaker if the customer experiences higher levels of negative emotions in comparison to those who experience lower levels of negative emotions.

Based on a broad range of literature, with a focus on the S-D logic and service recovery literature, hypotheses of the research model have been presented. In total, this chapter (Chapter 3) has presented three sets of hypotheses that are summarised in the following table (Table 3.2). The first set of hypotheses related to the direct effects of the model, the second set reflected the mediating hypotheses and the third set concerned the moderating effects of several factors.

Chapter 3. Conceptual Framework and Hypotheses Development

Table 3.2 - List of Hypotheses

Hypotheses-Direct effects	
H1	When consumers' a) extrinsic, and b) intrinsic motivation increase, they will express more value co-recovery in-role behavior.
H2	When consumers are better able to co-recover, they will express more value co-recovery in-role behavior.
H3	A customer's level of ability influences a) extrinsic, and b) intrinsic motivation.
Mediating Hypotheses	
H4	The relationship between the level of ability to co-recover (ability to integrate knowledge and skills) and value co-recovery in-role behavior will be mediated by a) extrinsic motivation, and b) intrinsic motivation.
Hypotheses-Direct effects	
H5	A higher level of customer value co-recovery in-role behavior leads to greater a) utilitarian value, and b) hedonic value during the co-recovery process.
H6	As the level of customer ability to co-recover increases, the consumer will perceive greater a) utilitarian value, and b) hedonic value.
Moderating Hypotheses	
H7	The positive relationship between (a) ability to co-recover and value co-recovery in-role behavior, (b1) consumer's extrinsic motivation and value co-recovery in-role behavior, (b2) consumer's intrinsic motivation and value co-recovery in-role behavior, (c1) ability to co-recover and extrinsic motivation, (c2) ability to co-recover and intrinsic motivation, will be stronger if the customer is high internal blamer in comparison to those who are low internal blamers.
H8	The positive relationship between (a) ability to co-recover and value co-recovery in-role behavior, (b1) consumer's extrinsic motivation and value co-recovery in-role behavior, (b2) consumer's intrinsic motivation and value co-recovery in-role behavior, (c1) ability to co-recover and extrinsic motivation, (c2) ability to co-recover and intrinsic motivation, (d1) ability to co-recover and utilitarian value, (d2) ability to co-recover and hedonic value, will be stronger if the customer has greater role clarity in comparison to those who have less role clarity.
H9	The positive relationship between (a1) ability to co-recover and extrinsic motivation, and (a2) ability to co-recover and intrinsic motivation, will be stronger if the consumer has higher levels of trust in comparison to those with lower levels of trust.
H10	The positive relationship between (a) ability to co-recover and value co-recovery in-role behavior, (b1) consumer's extrinsic motivation and value co-recovery in-role behavior, (b2) consumer's intrinsic motivation and value co-recovery in-role behavior, (c1) ability to co-recover and extrinsic motivation, (c2) ability to co-recover and intrinsic motivation, (d1) consumers' value co-recovery in-role behavior and utilitarian, (d2) consumers' value co-recovery in-role behavior and hedonic value will be weaker if the customer experiences higher levels of negative emotions in comparison to those who experience lower levels of negative emotions.
Source: The Researcher	

3.12 Control variables

In addition to the hypothesized relations as presented in the research framework, this research considers various factors as control variables. Thus, below I describe the control variables that will be tested in relation to the research model, and I justify the choice to include them.

3.12.1 Educational level

Research suggests that consumer education level can affect consumer behavior and customers with higher educational level tend to be more demanding than customers with lower educational level in terms of effort i.e that the company devotes to solve their problem (Cambra Fierro *et al.*, 2011). Because education allows customers to have more capabilities and skills for analyzing the normative and comparing alternatives solutions (Cambra Fierro *et al.*, 2011) and also affect consumers' motivation to participate (Chang Liao *et al.*, 2012), in a co-recovery context, it is suggested that customers with higher educational level may exhibit higher motivation to co-recover and thus co-recovery in-role behavior than customers with lower educational level, in order to get the preferred solution. Furthermore, since education has been found to affect perceived value (Chang Liao *et al.*, 2012) and in service recovery, enables customers to better evaluate and analyze what the firm offers to solve the problem, which in turn contributes to value creation for the customer and can impact on customer's satisfaction levels (Cambra Fierro *et al.*, 2011), it is suggested that customers with higher and lower educational level may evaluate different hedonic and utilitarian value. Given the role educational background has been found to play in the service recovery context, it has been controlled for in this study.

3.12.2 Gender

Previous research suggest that gender influences customer participation behavior (Eisingerich *et al.*, 2004). It has been suggested that women are more sociable and empathic and, therefore, may have better communication skills than men (Deery, Iverson, and Walsh, 2002). They are socialized to maximize the interpersonal aspect of their relationships, thus contributing to an emphasis on the process component (Mattila *et al.*, 2009). This can influence the participation level displays by women, in terms of co-recovery in-role behavior. Furthermore, there is a long tradition between the impact of gender and motivation to

Chapter 3. Conceptual Framework and Hypotheses Development

participate (e.g. Daley and O’Gara, 1998) in order to obtain both intrinsic and extrinsic rewards. In service recovery, there is evidence that women are more sensitive in an apology (intrinsic reward) while men are more satisfied with compensation (extrinsic reward). Consequently, in a co-recovery process, I suggest that gender differences in participation motivation indicates that males and females exhibit different motives for co-recover. Last, prior research in service recovery showed that women are more interested in the service recovery process (process-focused) rather than the outcome, while men tend to focus on the outcome (Mattila *et al.*, 2009). Since as I mentioned above, for women it is more appropriate an interactional treatment (e.g apology) and for men a tangible outcome (e.g compensation) (Mattila *et al.*, 2009), it is expected also that in a co-recovery context, men and women may evaluate differently the co-recovery outcome e.g hedonic and utilitarian value. Building on this literature, in a co-recovery context, it is expected that gender may influence consumers’ motivation for co-recovery and co-recovery in-role behavior, as well as consumers’ value assessments, thus it has been controlled for in this study.

3.12.3 Age

Age has been found to affect customer motivation to participation (Daley and O’Gara, 1998). Because age significantly influences consumers behavior in a service recovery context (Varela-Neira *et al.*, 2010), and young consumers are more energetic and demanding in terms of recovery effort than elderly consumers (Cambra-Fierro *et al.*, 2011), it is expected that young consumers may exhibit higher information seeking, information sharing, responsible behavior, and personal interaction, in order to get the preferred solution, compared to elderly consumers. Because young consumers do not rely that strongly on their satisfaction with pure objective parameters but with more subjective evaluations than elderly consumers (Cambra-Fierro *et al.*, 2011), in co-recovery context this means that there are age-related evaluation differences between elderly and young consumers in regard to hedonic and utilitarian value. Given the role age has been found to play in the participation/service recovery contexts, it has been controlled for in this study.

Chapter 3. Conceptual Framework and Hypotheses Development

CONCLUSION

In this chapter I first conceptualize service failures through the lens of S-D logic, by showing that service failure is a value co-destruction process. Moreover, based on the literature review in the previous chapter, I developed an overall research model that integrates consumers' operant resources, in the form of ability to co-recover, motivation, value co-recovery in-role behavior and co-recovery values (hedonic and utilitarian). First, I developed testable hypotheses for the direct effects of the model. Second, I developed hypotheses for the ability to co-recover-co-recovery in-role behavior relationship, whereby the extrinsic and intrinsic motivation should mediate the positive effect of ability to co-recover on value co-recovery in-role behavior. Finally, I developed competing hypotheses for the moderating role of internal blame, role clarity, trust in service provider's resolution ability, and negative emotions, in the proposed model. To explain the hypotheses, I drew on well-established motivational and institutional theories, S-D logic framework, customer participation and service recovery literature, providing a strong theoretical argumentation for the hypotheses. Nevertheless, empirical validation of hypotheses is needed. Thus, a multi-method two-study approach was developed. In the next chapter, I will present the qualitative research (Study 1), research samples, study design, procedures, methods which is necessary for the refinement of the questionnaire and the elaboration of the research model, before the empirical validation (quantitative research), and the process of quantitative research (Study 2) as well as the demographics characteristics of the sample and the reliability of the constructs.

Chapter 4. Research Design and Methodology

4.1 Introduction

This chapter provides a detailed description of the methodology used to investigate the aforementioned research model 1. The investigation was divided into two research studies – *Study 1*- employed a qualitative methodology and *Study 2*-employed a quantitative methodology. This chapter opens with a discussion on *Study 1*, which includes details regarding recruitment and design for the qualitative component of the study. After clarifying the items by integrating the existing modified scale and additional items from the qualitative research, the chapter then describes *Study 2*. *Study 2* includes the quantitative research which was conducted in order to test the proposed theoretical model for the present study. Next, a discussion on survey development and the pretest process is presented. Demographics characteristics and the reliability of the constructs are also presented. As become clear both qualitative and quantitative research were conducted, also known as mixed method approach. Mixed methods can be defined as "the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches" (Johnson and Onwuegbuzie, 2004 p.17). Mixed method research have increased in importance (Todd *et al.*, 2004) because they can improve the accuracy of researchers' judgments by collecting different kinds of data bearing on the same phenomenon (Jick, 1979), while results that are more robust and compelling than single method studies (Davis *et al.*, 2011). Thus in this dissertation a mixed method approach was used.

4.2 Study 1- Qualitative Research

4.2.1 Justification for semi-structured in-depth interviews

In marketing research there are many qualitative methods such as personal interviewing ('depth', 'casual' etc.), group or focus group interviewing, projective techniques, participant observation, ethnography, case studies, photography and story telling (Belk, 2006). Among them, interviews could be useful when designing a questionnaire, in

Chapter 4. Research Design and Methodology

order to assess the pilot set of questions and to see whether participants in the interview come up with any suggestions (Todd *et al.*, 2004). Although, some researchers have noticed that focus groups also help in both survey questionnaire items generation and refinement (e.g. Nassar-McMillan and Borders, 2002), an empirical comparison of individual interviews with focus groups found the individual interviews were more likely to raise sensitive discussion topics than the focus groups (Kaplowitz, 2000). Hence, in this dissertation interviews were used.

Interviews have been used to develop a conceptual model (Meuter *et al.*, 2005) and the appropriate measures, and to refine a study questionnaire (Leonidou, Katsikeas, and Morgan 2012). A quite common typology of interviews include structured, semi-structured, and unstructured interviews (Brinkmann, 2013). Structured interviews are standardized ways of asking questions which to lead to specific answers, and although are useful some purposes, they do not take advantage of the dialogical potentials for knowledge production (Brinkmann, 2013). On the other lie of the continuum unstructured interviews, give and to determine the structure by "leading the way" and "telling the story" (Gillham, 2005) but the role of the interviewer is to remain a listener with holding desires to interrupt and periodically asking questions to facilitate the story of interviewee (Brinkmann, 2013). Semi-structured interview is the most important way of conducting a research interview because of its flexibility balanced by structure, and the quality of the data so obtained (Gillham, 2005), while parallel is one of the most common qualitative method used in mixed methods design, because enables transforming qualitative data into quantitative (Flick, 2014). Semi structured in-depth interviews are usually used prior to the construction of a questionnaire (Mentzer, Flint and Hult, 2001), with a small representative sample of the population being investigated in order to garner information to be used for developing a large-scale survey (Noble and Mokwa, 1999).

Semi-structured interviews facilitate a strong element of discovery (Gillham, 2005), thus allow much more leeway for following up on whatever angles are deemed important by the interviewee (Brinkmann, 2013). Moreover, the interviewer has a greater saying in focusing the conversation on issues that he or she deems important in relation to the research project (Brinkmann, 2013).

Semi-structured interviews allow the interviewees to discuss the projects without influence from the interviewer (Gillham, 2005). Indeed, the interviewees were able to outline their understanding of the co-recovery in-role behaviour concept and confirm its dimension without being unduly influenced by the interviewer. Moreover, the purpose of the individual in-depth interviews is to yield explanatory data (Hesse-Biber and Leavy, 2006). Given that the aim of this research is also to understand why consumers show a co-recovery in-role behavior, semi-structured in-depth interview was considered a suitable approach for the research purpose.

4.2.2 Interviews Protocol

An interview protocol was developed for use in all the interviews. Gillham (2005 p.76) introduces five stages of a semi-structured interview according to which the interview has to be conducted: 1) the preparation phase, 2) the initial contact phase, 3) the orientation phase, 4) the substantive phase and 5) the closure phase. The first phase, includes the agreement of time and place, ensures that equipment is in place and functioning correctly and that the interview location is suitable. The initial contact phase, includes introductions and checking the appropriateness of the physical surroundings for the interview. In the third phase, the interviewer explains the purpose of the interview and ensures that the interviewee understand the previously communicated information and research ideas. In the substantive phase the interview takes place and the interviewee answers the intended questions. Final, the closure phase includes checking whether information is missing and feedback.

The research objective was to discover the nature of the consumer value co-recovery in-role behaviour within a service failure context and understand the factors that enable or constrain consumers to participate in a service recovery. The questions, therefore, needed to gauge what kind of value co-creation activities in a service recovery context occurred within the service failure context. Questions were generated around particular dimensions (information seeking, information sharing, responsible behavior, personal interaction) of value co-creation in-role behavior from the paper of Yi and Gong (2013) and transfer to a service recovery context. These dimensions were written up as questions and cross checked for suitability by the research supervisor. A set of follow up questions and probes were also included as the interview process developed and potential themes explored. The second set of

questions related to the reasons for participate in a service recovery. Expectancy, instrumentality and valence were also asked as questions (e.g *how important was to get a service recovery?*). Another set of questions related to the interaction with the service provider in the service recovery process. Each respondent described his/her service recovery experience by answering the questions and parallel provide fruitful insights about the contextual aspects of the service recovery process (moderators).

4.2.3 Interview procedure

All interviews were conducted using an interview guide. Interviews were conducted until information redundancy was achieved (Lincoln and Guba, 1985). Each interview commenced with general small talk to warm the interviewee and ease him/her into the discussion. Next, each interview began with a brief description of the nature and purpose of the research: *"The purpose of this interview is to investigate cases where consumers were not satisfied by a service provider and how this problem was resolved. There are no right or wrong answers. Please answer in your own words. Interview should be recorded for purely scientific purposes."* A typical opening question used was: *"To begin, can you think of a time when as a customer, you had a particularly dissatisfying experience with a service organization?"* and continuing *"which organization was this?"*, *"can you tell me about it?"*. Moreover, the interviewer asked question for the identification and confirmation of value co-recovery in-role behavior dimensions. An example of those question that was used in this study was: *"Did you ask for information on how you can solve your problem?"*. This question correspond to the dimension information seeking. A typical example of a question corresponding to the dimension information sharing was: *"Did you explain to employee what you want?"*. Similar questions concerning the other two dimensions were asked. However, some respondents offered this information by their own, so these questions were only asked if they have not provided this information on their own accord.

Subsequent questions in the interviews, have the purpose to identify why the interviewees participated in a service recovery process (motivation) and under which circumstances (when). Based on this a new moderator was identified. Although interviewees had the motivation to participate in a service recovery process, however as interviews revealed they participated only when they trust that service provider could solve their

problem. Therefore, trust in resolution ability was identified as a moderator in the relationship between motivation and co-recovery in-role behaviour. Another question of the interview was: "*How you can describe your emotions during the course of the resolution of your complaint?*". This question was designed to capture the emotional state and to identify if there is a relationship between the emotions and the co-recovery process. In addition, interviews revealed that participants often mentioned on whose fault was the service failure. Thus, the construct of internal blame was identified as another possible moderator. Last, in some cases participants mentioned that although they wanted to find a solution with the employee, however they didn't engage in a collaboration process because they didn't know what to do (understanding the process). The construct of role clarity thus, it was also revealed as a possible moderator.

In this way, the interviews covered aspects of the reasons of participating, the ways the interviewees participated, the circumstances, their emotional state and their ability to contribute their resources on the service recovery process. All recorded interviews were transcribed in a text for analysis.

4.2.4 Sample & Data collection of interviews

Twenty seven in depth interviews (n=27) were conducted between February and May 2015 and lasted between 30 and 50 min. Interviews took place mainly in the houses of interviewees and one of them in a shopping mall, while another one in a internet cafe. Two interviews were not included in the data analysis because the level of background noise was so high that the content of responses was undeterminable.

4.2.5 Interviews analysis

All interviews were conducted in greek, digitally recorded with the permission of the participants, and transcribed into written greek. I listened to and read transcriptions of the interviews. The data of the interviews was analyzed by using the line by line approach (Van Manen, 1990). In the line by line approach the researcher "looks at every single sentence and ask, *What does this sentence or sentence reveal about the phenomenon or experience being*

described?" (Van Manen, 1990, p. 93). Thus, statements were grouped together to identify themes of content. Through this process, the researcher is able to assess the reliability of the qualitative data (McCracken, 1988). Subsequently statements related to the respondents' modes by which they participate with firms in resolving the service failures, their reactions, their motivation etc. were carefully highlighted. The researcher generated distinctive statements for the content categorization. This process of interpretation was repeated for each of the research questions.

4.2.6 Refinement of the questionnaire and constructs selection based on interviews results

The interviews results helped refine the survey questionnaire used for this research study. Because the reasons of consumers' motivation for engagement in co-recovery in-role behavior as well as the role of operant resources as an antecedent and the factors which enable or constrain the co-recovery process have yet to be researched, one of the main goals of the qualitative research was to see if this study's proposed antecedent – ability to co-recover– of consumer value co-recovery in-role behaviour was relevant as well as to explore possible constructs that enable or constrain consumer value co-recovery in-role behavior, and consequently the co-recovery process. Based on the interviews results, the proposed factors related to consumer value co-recovery in-role behavior appeared in the data, which warranted the next step in further research using the survey.

Moreover, since customer co-creation value is relatively new construct, some researchers have paid attention to scale development to measure customer co-creation value (Yi and Gong, 2013). However, there is still a lack of extant scales to measure customer co-creation value in the service recovery context (see Dong *et al.*, 2008; Roggeveen *et al.*, 2012; Xu *et al.*, 2014a,b; Heidenreich *et al.*, 2014). More importantly, there is no existing measure for consumer value co-recovery in-role behavior, a new construct proposed by the current research. Thus, another goal of the qualitative research was to help adapt existing measures to the service recovery context as well as to confirming if there are sub-dimensions under this construct.

A final goal of the interviews was to gain a preliminary understanding of consumer "expectancy" motivation on service recovery context and to assess if the motivation-related

questions on the survey were applicable. The interviews results revealed that respondents' expectancy, instrumentality and valence have an impact on their value co-recovery in-role behavior. In addition, interviews revealed that the effect of respondents' motivation on consumer value co-recovery in-role behaviour was affected by their trust in resolution ability of the service employee. Therefore *a new construct* trust in resolution ability and its moderating role, was revealed, while it was also identified the moderating role of clarity, negative emotions and internal blame.

These findings form the basis for the selection of constructs to be used in study 2, which included trust in the service provider's resolution ability, internal blame, negative emotions, role clarity, co-recovery, and motivation.

4.2.7 Measurement of Constructs

Internal blame was measured based on interviews results and using measurements from Meuter *et al.*, (2000) and Carvalho *et al.*, (2014), scales. The 2-item self report Likert type 7 (Strongly disagree – Strongly agree) attribution of blame scale included the following items: "I was responsible for the problem that I faced" and "The problem that I faced was due to mistakes made by my own actions".

Role clarity in service recovery was measured based on the scale of "Role clarity in future co-creation" used by Meuter *et al.*, (2005). The 2-item self report Likert type 7 point (Strongly disagree – Strongly agree) role clarity in service recovery scale included the following items: "I was feeling certain about how to participate more effectively in finding a solution to my complaint" and "The steps in the process of my participation in finding a solution to my complaint were clear to me". The items were modified and adapted in a service recovery context.

Ability to co-recover was measured based on the scale of "ability" used by Meuter *et al.*, (2005). The 6-item self report Likert type 7 point (Strongly disagree – Strongly agree) ability to co-recover scale included the following items: "I was fully capable of participating in finding a solution to my complaint", "I was confident in my ability in finding a solution with the service provider", "Participating more in finding a solution to my complaint was well within the scope of my abilities", "I didn't feel that I was qualified for an extra

Chapter 4. Research Design and Methodology

participation in finding a solution to my complaint”, “My past experiences increased my confidence that I was able to successfully participate more in finding a solution to my complaint”, and “In total, participating more in finding a solution to my complaint involved things that were more difficult than I was capable of”. All the original items were adapted accordingly to fit the research context.

Based on the interviews results, four items were added to the questionnaire to measure a new construct namely *trust in service providers' resolution ability*. The 4-item self report Likert type 7 point (Strongly disagree – Strongly agree) scale was used to measure the respondents' *trust in the service employees' resolution ability*, that he or she will help them to solve their problem. The scale included the following items: “I could count on the service provider that they would do the right thing for me”, “I had faith that the service provider would solve my problem”, “I completely trusted the service provider that they were capable of solving my problem”, and “I had great confidence that the service provider would find a solution”.

The respondents' motivation of expectancy, instrumentality and valence were measured using Meuter *et al.*'s, (2005) 3-item expectancy, 10-item instrumentality (extrinsic and intrinsic) and 10-item valence (extrinsic and intrinsic) self report Likert type 7 point (Strongly disagree – Strongly agree) scales (Meuter *et al.*, 2005). The expectancy scale included the following 3 items: “If I tried hard, I could successfully participate more in the service recovery”, “If I put all my effort in it, I could successfully participate more in the service recovery” and “Making the effort to participate would result in the service recovery successfully”. The extrinsic instrumentality scale included the following five items: “By participating more in the service recovery I was thinking that, I would get the preferred solution to my problem”, “By participating more in the service recovery I was thinking that, this would provide me more control over the recovery process”, “By participating more in the service recovery I was thinking that, I would get a quicker recovery”, “By participating more in the service recovery I was thinking that, I would get the recovery that I deserved”, and “By participating more in the service recovery I was thinking that, I would get a fair recovery”. The intrinsic instrumentality scale included the following five items: “By participating more in the service recovery I was thinking that, this would provide me with feelings of enjoyment from finding the solution to my problem”, “By participating more in the service recovery I was thinking that, this would allow me to have increased confidence in my skills”, “By

Chapter 4. Research Design and Methodology

participating more in the service recovery I was thinking that, this would allow me to feel innovative in how I interact with a service provider in order to solve my problem”, “By participating more in the service recovery I was thinking that, this would provide me the feeling of independence”, and “By participating more in the service recovery I was thinking that, this would provide me with personal feelings of worthwhile accomplishment”. The extrinsic valence scale included the following items: “Regarding my participation in the service recovery, I would say that it was desirable to get the preferred solution to my problem”, “Regarding my participation in the service recovery, I would say that it was desirable to get a quick recovery”, “Regarding my participation in the service recovery, I would say that it was desirable to get the recovery that I deserved”, “Regarding my participation in the service recovery, I would say that it was desirable to get a fair recovery”, and “Regarding my participation in the service recovery, I would say that it was desirable to have more control over the recovery process”. Respectively, the intrinsic valence scale included the following items: “Regarding my participation in the service recovery, I would say that it was desirable to get a personal feeling of worthwhile accomplishment”, “Regarding my participation in the service recovery, I would say that it was desirable to get a personal feeling of enjoyment”, “Regarding my participation in the service recovery, I would say that it was desirable to get a feeling of independence”, “Regarding my participation in the service recovery, I would say that it was desirable to get a feeling innovative in how I interact with a service provider”, “Regarding my participation in the service recovery, I would say that it was desirable to get increased confidence in my skills”. Appropriate changes were made to the wording of the scale to fit in the research context.

Emotions experienced during the course of the resolution of customers' complaint were measured using Schoefer and Diamantopoulos' (2009) 7-item self report Likert type 5 point (Not at all – extremely) scale (Schoefer and Diamantopoulos, 2009). The respondents were asked to indicate to what extent they experienced different emotional states during the course of the resolution of their complaint. The scale captured the dimensions of discontent and concern emotions. The negative discontent dimension included the following emotions: “angry”, “in a bad mood”, “upset”, “sad”, and “annoyed”. The negative concern dimension included the following emotions: “afraid”, “nervous”.

Consumer value co-recovery in-role behavior was measured using 12 items proposed by Yi and Gong (2013), adapted to the underlying research context of service co-recovery. Yi

Chapter 4. Research Design and Methodology

and Gong's (2013) (originally 4 dimension and 16-item self report Likert type 7 point (Strongly disagree – Strongly agree) value co-creation in-role behaviour scale was used to measure respondents' perceptions of information seeking, information sharing, responsible behavior, and personal interaction, in a service recovery context. Respondents were asked about their participation and behavior during the service recovery procedure. The first dimension "Information seeking" included the following items: "I asked others for information on how I can solve the problem" "I searched for information on how I can solve the problem", "I paid attention to how others have tried to solve the problem". The second dimension "Information sharing" included the following items: "I clearly explained what I wanted the employee to do", "I gave the employee proper information", "I provided necessary information so that the employee could perform his or her duties", and "I answered all the employee's service-related questions". The third dimension "Responsible Behavior" included the following items: "I performed all the tasks that were required", "I adequately completed all the expected behaviors", "I fulfilled responsibilities to the business", and "I followed the employee's directives or orders". Last the fourth dimension "Personal Interaction" included the following items: "I was friendly to the employee", "I was kind to the employee", "I was polite to the employee", "I was courteous to the employee", and "I didn't act rudely to the employee".

Two methods helped the adaption of customer value co-recovery behavior scale into a service recovery context: a review of the literature and face-to-face interviews. Seventeen in-depth interviews were conducted. All interviews were audiotaped and transcribed later. After completion of each interview, memos were written by the interviewer. Fourteen consumers and three experts were asked to describe in an open-ended format the behaviors they exhibit during a service recovery process.

Utilitarian and hedonic values of co-creation in service recovery were measured using a 5-item, 7-point semantic differential scale adopted from Park and Ha'(2016) to determine the respondents' evaluation of how efficient and useful co-creation of service recovery has been in meeting their goal and their appreciation of intrinsic, emotional, and social reward of the collaboration, respectively. Respondents were asked to indicate the perceived value that they get after the resolution or not of their complaint. The scale of utilitarian value included the following items: "Ineffective–effective", "Unhelpful–helpful", "Not functional–functional", "Not necessary–necessary", and "Impractical–practical". Last, the scale of

hedonic value included the following items: “Not fun–fun”, “Dull–exciting”, “Not delightful–delightful”, “Not thrilling–thrilling”, and “Unenjoyable–enjoyable”.

4.2.8 Pre-Test of the Survey Instrument

According to Hair *et al.*, (2003, p. 201), no questionnaire should be fielded without being pre-tested for the likely accuracy. Pretesting may involve screening the questionnaire with other research professionals or conducting a trial run with a set of respondents (Hair *et al.*, 2003). The objective of the pre-test is to “look for misinterpretations by respondents, lack of continuity, poor skip patterns, additional alternatives for precoded and closed-ended questions, and general respondent reaction” to the questionnaire (McDaniel and Gates, 2008, p. 309). Reynolds and Diamantopoulos (1998) analyzed three types of pre-tests methods including personal interviews, planned field survey and expert panel. Personal interviews require the interviewer to identify potential difficulties and obstacles that limit respondents’ ability to provide accurate answers. Planned survey method employs a small sample of respondents and the observation of their behavior when reading the questionnaire and noting when this behavior differed if compared to an “ideal” set of behaviours. Last, an expert panel consisting of research experts can be used as a pretest; panel could be used to determine if there are problematic questionnaire item. DeVellis (1991) also recommends that experts review the scale. This process is intended to improve the instrument’s content validity. Thus, in this dissertation an expert panel was used to pre-test the questionnaire. I met with two marketing faculty members with backgrounds and education in marketing who reviewed the scale items for relevance and to ensure that they agreed that each item was properly classified regarding the construct the item was designed to measure. I eliminated items identified by the marketing faculty members as irrelevant or inconsistent, while appropriate changes were made in wording and the tenses of items in order to be suitable for the survey.

4.3 Study2- Quantitative Research

4.3.1 Justification for using Web-based online surveys

There are several reasons why social scientists may want to employ web-based surveys (e.g Wyatt, 2000;Gunn, 2002;McIntyre *et al.*, 2004; Wright, 2005). According to

Chapter 4. Research Design and Methodology

Wyatt (2000) the advantages of online surveys include the following: the data are captured directly in electronic format, making analysis faster and cheaper, web surveys allow rapid updating of questionnaire content and question ordering according to user responses, web surveys making it easier to recruit large numbers of participants or to collect data repeatedly, on several occasions, they allow interactive data capture with rapid checking of responses. In the same vein, McIntyre *et al.*, (2004) argued that the benefits of online surveys include no need for printing or postage; speed of data collection; and precision of data compilation.

Moreover, online survey research takes advantage of the ability of the Internet to provide access to groups and individuals who would be difficult, if not impossible, to reach through other channels (Wright, 2005). Other benefits include: dynamic error checking capability; option of putting questions in random order; the ability to make complex skip pattern questions easier to follow; the inclusion of pop-up instructions for selected questions; and, the use of drop-down boxes (Gunn, 2002). It is important to notice that the most important advantage of web-based online surveys is the programming services and software involved, which helps assure reliability and validity of surveys (Wiersma, 2016).

On the other hand, disadvantages include that the generality of the results is clearly restricted to those who are keyboard and Internet literate, while it may be easy for some readers to understand what is required of them in a web survey, it is not for everyone, the sample in a web survey isn't really a random sample (Wyatt 2000; Gunn, 2002). Moreover, because respondents may have different levels of computer expertise, this lack of computer expertise can be a source of error or non-response and the surveyor is faced with concerns about data security on the server (Gunn, 2002).

Due to the fact that web-based online surveys are used more and more due to the fact that the advantages outweigh the disadvantages in this dissertation a web-based online survey method was used instead of face-to-face or other conventional methods.

4.3.2 Survey methodology

To test the hypotheses, I utilized SurveyMonkey to create an online survey and I gathered responses via Amazon Mechanical Turk (hereinafter MTurk), a relatively new system which has quickly been adopted by researchers (e.g Rose, Merchant, Orth, and

Horstmann, 2016) because it can be used to obtain high-quality and reliable data (Buhrmester *et al.*, 2011; Daly and Natarajan 2015), and as such it is being increasingly utilized in marketing research (e.g. Liu *et al.*, 2015). The data collected are classified as a convenience sample because MTurk does not verify respondents' information. In order to participate, respondents must have recently (i.e., within the past 6 months) complained to a service provider (bank, airline, hotel, etc.) about some aspects of their service, attempted to solve their problem and have a 100% approval rating. The HITs (online survey links shared through MTurk) were shared by the requester (the researcher) with the workers (the online panel respondents). As soon as the HIT goes live, the workers start filling the survey until the time the requester set at the beginning or the sample size set at the beginning is fulfilled. To be able to pay the workers as soon as they complete their task and also to be able make the HIT active for their attempt to answer, there needs to be a prepaid credit at the account holder's paypal account associated with the MTurk account. Otherwise, the HIT does not go on live and the requester fails to start data collection. Moreover, MTurk sent an email that confirmed the amount of payment done to the workers through the requester's MTurk account. This was to verify that the transaction was successful.

Because it is difficult to prevent malicious behavior for researchers when collecting data on Mechanical Turk (Ipeirotis *et al.*, 2010), I took two measures to ensure quality. First, I verified that workers submitted their MTurk ID in the end of the survey or were screened the last page of survey before paying them. Second, since MTurk allows to requester to “accept” or “deny” the task completed by the worker within a week, before Amazon “accepts” it automatically, allowing for a quick response return and making sure the survey is working properly. For example, the requester can choose to deny a HIT if the worker didn't answer all the questions. All the workers that completed the HIT under 3 minutes they rejected. Moreover, I removed any participants that failed to correctly answer open-ended questions embedded within the survey. To obtain high quality responses, the sample was drawn from subjects with an acceptance rate equal or greater than 90% who had previously completed at least 50 HITS. All participants were residents of the U.S. and they received payment of \$ 1 for an estimated 15-minute task, upon approval of the questionnaire by the researcher.

4.3.3 Response Condition

Chapter 4. Research Design and Methodology

As I previously mentioned the data were collected by MTurk in SurveyMonkey. A total of 953 questionnaires initially were collected. After removing incomplete responses and excluding responses which do not met the above criteria, the final sample consists of 740 qualified responses.

Table 4.1 Response Condition	
Condition	Amount
Questionnaires collected	953
Valid Questionnaires	740
Percentage of valid questionnaires	77,64

4.3.4 Demographic Factors

The questionnaire includes individual background variables: gender, age, educational level, and employment status. In all cases the respondents were asked to select the relevant option among classified response alternatives.

4.3.4.1 Gender

The number of female participants accounted for 395 participants (53.4 percent) of total sample (740), while the number of male participants was 345 participants (46.6 percent); The sample was evenly distributed by gender. Table 4.2 reports the frequencies and percentage associated with gender.

Table 4.2 Description of Gender		
Gender	Frequency	Percent
Female	395	53.4%

Chapter 4. Research Design and Methodology

Male	345	46.6 %
Total	740	100.0

4.3.4.2 Age

The sample consisted of 740 participants, 110 participants (14.9 percent) were between 18 to 24 years old. Three hundred and sixteen participants (42.7 percent) were between 25 to 34 years old. One hundred and fifty five participants (20.9 percent) were between 35 to 44 years old. Ninety five participants (12.8 percent) were between 45 to 54 years old, and 64 participants (8.6 percent) were over 55 years old. Table 4.3 reports the frequencies, and percentages associated with age.

Age	Frequency	Percent
18-24	110	14.9
25-34	316	42.7
35-44	155	20.9
45-54	95	12.8
Over 55	64	8.6
Total	740	100.0

4.3.4.3 Educational Level

There were 4 participants (0.5 percent) who held some high school degree and 67 participants (9.1 percent) with high school degree. One hundred eighty six participants (25.1 percent) held some college credit, while 90 participants (12.2 percent) held an associate

Chapter 4. Research Design and Methodology

degree. Most participants had graduated from university. There were 298 participants (40.3 percent) who held a bachelor's degree, and 77 participants (10.4 percent) who held master's degree. There were 9 participants (1.2 percent) who held professional degree and 9 participants (1.2 percent) who held doctorate degree. Table 4.4 reports the frequencies and percentages associated with educational level.

Table 4.4. Description of Educational Level

	Frequency	Percent
Some high school	4	.5
High school graduate	67	9.1
Some college credit	186	25.1
Associate degree	90	12.2
Bachelor's degree	298	40.3
Master's degree	77	10.4
Professional	9	1.2
Doctorate degree	9	1.2
Total	740	100.0

4.3.4.4 Employment Status

There were 96 participants (13.0 percent) who didn't work; 157 participants (21.2) who were part-time workers, while 487 participants (65.8 percent) who were full time workers. Table 4.5 reports the frequencies and percentages associated with employment status.

Table 4.5 Description of Employment Status

	Frequency	Percent
No	96	13.0
Part-time	157	21.2
Full-time	487	65.8
Total	740	100.0

4.3.5 Research Instrument Reliability

A test of reliability was conducted on the scales used in the questionnaire. Before conducting consistency estimates of reliability, the reverse-scaled items were reversed. The result of each of the coefficient alphas indicated satisfactory reliability. DeVellis (1991) posited that “..an alpha below 0.60 is unacceptable; 0.60-0.65 undesirable; 0.65-0.70 minimally acceptable; 0.70-0.80 respectively, 0.80-0.90 very good and if much above 0.90 excellent...” (p.4). According to DeVellis (1991), a Cronbach alpha coefficient over 0.7 implies respectable reliability. A value of 0.8 is seen as an acceptable value for Cronbach's alpha; a value substantially lower indicates an unreliable scale. In this study, Cronbach alpha coefficients of extrinsic motivation, intrinsic motivation, consumer value co-recovery in-role behaviour, ability to co-recover, trust in resolution ability, negative discontent emotions, utilitarian and hedonic value were 0.91, 0.93, 0.93, 0.87, 0.95, 0.89, 0.90, and 0.96 respectively. In this study, the Cronbach alpha coefficients of the scales were over 0.8 that were seen as a good indicator of their reliability and high acceptability.

Table 4.6 Research Instrument Reliability

Variables	Number of Questions	Cronbach α
Extrinsic Motivation	13	0.91
Intrinsic Motivation	13	0.93
Consumer value co-recovery in-role behaviour	12	0.93
Ability to co-recover	4	0.87

Role Clarity	2	NA
Internal Blame	2	NA
Trust in Resolution Ability	4	0.95
Negative-DiscontentEmotions	5	0.89
Negative -Concern emotions	2	NA
Utilitarian Value	4	0.90
Hedonic Value	5	0.96

Although reliability was measured with Cronbach's alpha for the majority of the factors in this dissertation, however for the constructs of role clarity, internal blame and concern emotions I measured reliability with correlation Pearson since, it is suggested as more appropriate when the construct consists of only two items (Macdonald and Uncles, 2007).

4.3.5.1 Reliability for internal blame

As only two items were included in the internal blame construct (IB), correlation (not Cronbach alpha) is the appropriate measure; this was acceptable at 0.76 as shown in table 4.7. The established criterion for item-to-total correlations requires that at least 50% of the retained items correlate with total scores in the range 0.30 to 0.70 (Carmines and Zeller, 1974).

Table 4.7-Correlation between internal blame items

		BL1	BL2
BL1	Pearson Correlation	1	.679**
	Sig. (2-tailed)		.000
	N	740	740
BL2	Pearson Correlation	.679**	1
	Sig. (2-tailed)	.000	
	N	740	740

** . Correlation is significant at the 0.01 level (2-tailed).

4.3.5.2 Reliability for Negative- Concern Emotions

As only two items were included in the concern emotions construct (CE), correlation (not Cronbach alpha) is the appropriate measure; this was acceptable at 0.65 as shown in table 4.8. The established criterion for item-to-total correlations requires that at least 50% of the retained items correlate with total scores in the range 0.30 to 0.70 (Carmines and Zeller, 1974).

Table 4.8-Correlation between concern emotions items

		CE1	CE2
CE1	Pearson Correlation	1	.657**
	Sig. (2-tailed)		.000
	N	740	740
CE2	Pearson Correlation	.657**	1
	Sig. (2-tailed)	.000	
	N	740	740

** . Correlation is significant at the 0.01 level (2-tailed).

4.3.5.3 Reliability for Role Clarity

As only two items were included in the role clarity construct (RC), correlation (not Cronbach alpha) is the appropriate measure; this was acceptable at 0.66 as shown in table 4.9. The established criterion for item-to-total correlations requires that at least 50% of the retained items correlate with total scores in the range 0.30 to 0.70 (Carmines and Zeller 1974).

Table 4.9-Correlation between role clarity items

		RC3	RC4
RC3	Pearson Correlation	1	.666**
	Sig. (2-tailed)		.000
	N	740	740
RC4	Pearson Correlation	.666**	1
	Sig. (2-tailed)	.000	
	N	740	740

** . Correlation is significant at the 0.01 level (2-tailed).

CONCLUSION

This chapter described the qualitative research and provided the results of study 1 as well as the procedure and the methodology of study 2. Regarding the first study, there was evidence from the interviews that co-recovery in-role behavior is a four dimension construct consists of information sharing, information seeking, responsible behavior and personal interaction, similar to value co-creation in-role behavior (Yi and Gong, 2013). The interviews also highlighted specific items for trust in service providers' resolution ability. Thus, a scale comprised of four items was developed, in order to measure consumers' trust in service providers' resolution abilities. What is more, interviews were useful to adapt existing measure from the literature to the specific context of the service recovery, and parallel to elaborate and confirm the theoretical research model. Regarding the study 2, an expert panel was used to pretest the questionnaire. An online survey was administered via Mturk (a high quality and reliable research tool), and I took the appropriate measures to ensure data quality on Mturk. Demographics factors of the sample and the reliability of the constructs were also presented. The following chapter describes the data analysis and the results for study 2.

Chapter 5. Data Analysis and Results

5.1 Introduction

The aim of this chapter is to present the results of the data analysis based on the following main steps: data screening (e.g test of normality, using skewness and kurtosis) exploration of dimensionality; confirmation of dimensionality; and final confirmation of the structural model. In order to analyze quantitative data gathered from the questionnaires, Statistical Package for Social Sciences (SPSS) version 20 and AMOS (Analysis of Moment Structures) were used. At the end of the chapter, the results of the moderators and mediators variables influence test are also reported.

In order to test the hypothesized model in this dissertation I performed both exploratory and confirmatory factor analysis. As suggested by Gerbing and Anderson (1988), EFA can be useful for the exploration of dimensionality, while CFA is recommended for establishing the measurement model and test its construct validity. Because a combination of both EFA and CFA is an effective approach (Gerbing and Anderson 1988), I adopted it in this dissertation. After CFA, I performed Structural Equation Modelling in order to test the hypotheses as well as mediation and moderation tests.

5.2 Exploratory Factor Analysis (EFA) Procedure

Regarding the EFA in order to determine the number of factors to extract there are several criteria that can be used: (1) Kaiser's criterion; (2) the scree plot; (3) parallel analysis; and (4) the minimum average partial procedure (McCoach *et al.*, 2013). In this dissertation I used the first two criteria: Kaiser's criterion and the scree plot. Kaiser's criterion suggests retaining all factors with eigenvalues (roots) greater than or equal to 1.0 (i.e., the unity criterion), while is the most commonly used method for determining the number of factors to extract (McCoach *et al.*, 2013). However, because Kaiser's criterion maybe considered inadequate it tends to overestimate the number of factors needed (O'Connor 2000; Zwick and Velicer 1986, *cited in* McCoach *et al.*, 2013) I also used the scree test. The scree test is a

visual analysis of the eigenvalues, where the point (factor number) at which the curve stops decreasing and straightens indicates the maximum number of factors to be extracted in the solution (McCoach *et al.*, 2013). Furthermore, due to the fact that the data were relatively normally distributed, maximum likelihood method was used, since is the best choice for normally distributed data (Costello and Osborne, 2005).

5.3 Exploratory Factor Analysis (EFA) Results

5.3.1 Extrinsic motivation (EM)

Extrinsic motivation was manifested by its three dimensions. Expectancy (EX), extrinsic instrumentality (EI), and extrinsic valence (EV) were the three dimensions. All extrinsic motivation dimension items made up 13 indicators in total. EFA was applied to explore the dimensionality of extrinsic motivation based on the service recovery context. Therefore, the factor extraction was applied to all 13 items in one EFA procedure in order to discover the grouped items representing the extrinsic motivation factors for this research. Based on the eigenvalue analysis results shown in Table 5.1, four factors having an eigenvalue over 1 were obtained. These results indicated that the extrinsic motivation items were to be extracted and grouped into 3 factors explaining 81.679 % of the variance.

TABLE 5.1 EIGENVALUES OF EXTRINSIC MOTIVATION (EM)

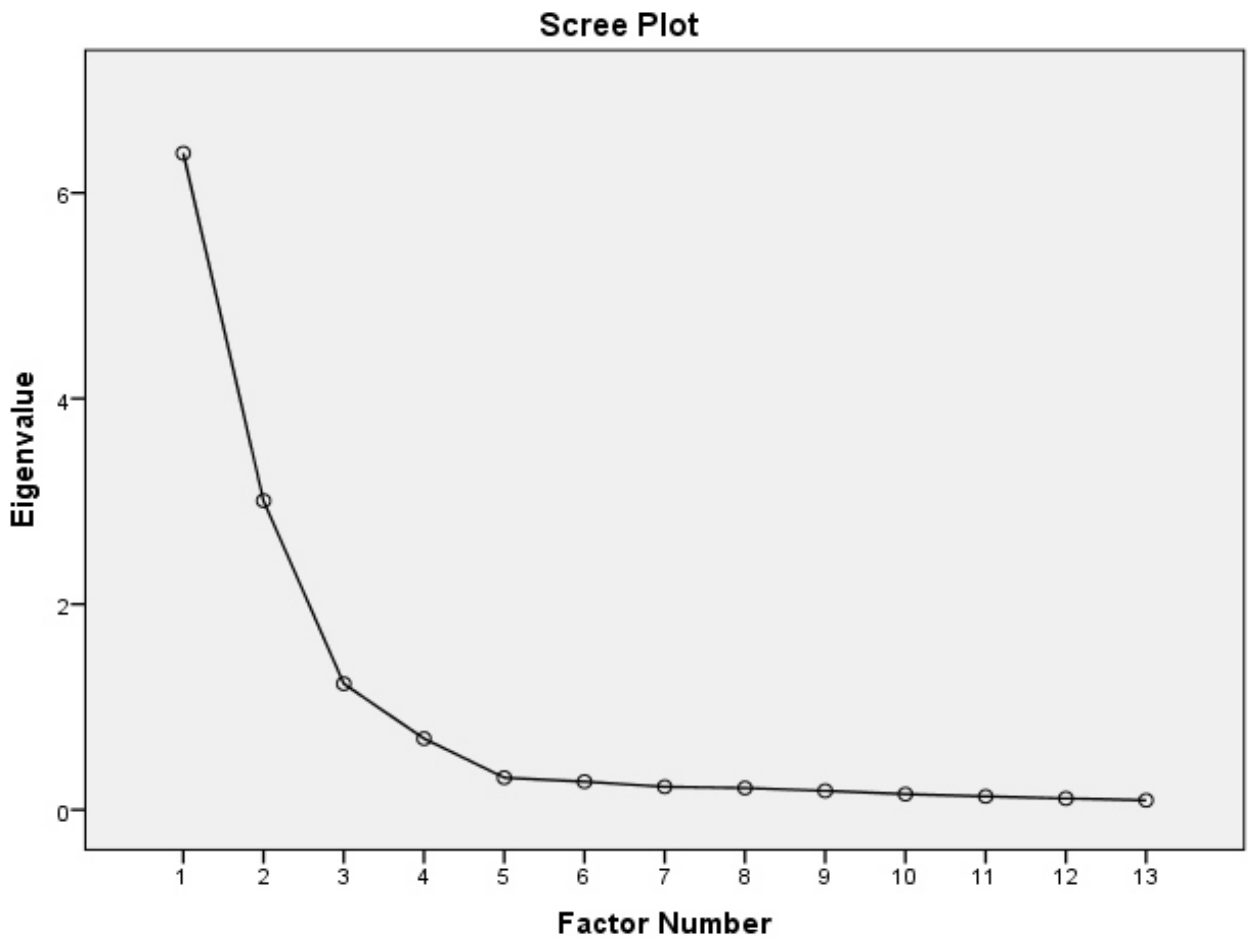
Components	Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6.386	49.123	49.123	6.052	46.554	46.554	5.548
2	3.006	23.124	72.248	2.811	21.619	68.174	3.976
3	1.226	9.431	81.679	1.174	9.029	77.202	4.067
4	.692	5.323	87.002				
5	.312	2.399	89.401				
6	.273	2.102	91.503				

7	.224	1.721	93.224			
8	.212	1.628	94.852			
9	.184	1.416	96.268			
10	.152	1.172	97.440			
11	.130	1.000	98.440			
12	.110	.848	99.288			
13	.092	.712	100.000			

Extraction Method: Maximum Likelihood.

When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

FIGURE 5-1 SCREE PLOT - EXTRINSIC MOTIVATION



Chapter 5. Data Analysis and Results

As shown in Figure 5.1, factor 1 displays the highest eigenvalue followed by factors 2 and 3. These three factors clearly appear in the vertical curve area, thus signifying eigenvalues of greater than 1. This indicated that three extracted extrinsic motivation factors conducted with EFA would contribute the most to the explanation of the variance in the data set.

The results of the EFA for extrinsic motivations are presented in Table 5.2, showing the extraction of the items.

Table 5.2 EFA for extrinsic motivation			
Pattern Matrix^a			
	Factor		
	1	2	3
EI3	.961		
EI4	.958		
EI1	.877		
EI2	.870		
EI5	.819		
EV3		.941	
EV2		.899	
EV4		.865	
EV1		.862	
EV5		.462	
EX2			.974
EX1			.959
EX3			.657
Extraction Method: Maximum Likelihood.			
Rotation Method: Promax with Kaiser Normalization. ^a			
a. Rotation converged in 6 iterations.			

As revealed in Table 5.2, all 13 items extracted into three factors. This result was well supported by the Kaiser-Meyer-Olkin measure verified the sampling adequacy for analysis, KMO= 0.897, due to the fact that KMOMSA's value of being higher than 0.8 indicating that the data is meritorious (Hair *et al.*, 2006). Furthermore, Bartlett's test of sphericity $\chi^2(78) = 9482.166$, $p < 0.001$, which is lower than 0.05 confirming that the observed variables in the survey data are both dependant and intercorrelated. These results firmly support that EFA can be used to analyze the data.

The reliability of the three extrinsic motivation factors was confirmed to be acceptable by the Cronbach's alpha values with scores of over 0.7. Table 5.3 presents the coefficient alpha values for factor 1 = 0.928; factor 2 = 0.956 and factor 3 = 0.884, indicating acceptable levels.

Table 5.3 Reliability of extrinsic motivation factors			
Factor	Item	Item/Factor	Cronbach's alpha
1	EX1	3	0.928
	EX2		
	EX3		
2	EI1	5	0.956
	EI2		
	EI3		
	EI4		
	EI5		
3	EV1	5	0.894
	EV2		
	EV3		
	EV4		
	EV5		

5.3.2 Intrinsic motivation (IM)

Intrinsic motivation was also reflected by three dimensions of expectancy (EX), intrinsic instrumentality (II) and intrinsic valence (IV). These three dimensions were to be measured with 3, 5, and 5 items, respectively, making up a total of 13 items. EFA was applied to explore the dimensionality of extrinsic motivation based on the service recovery context. Therefore, the factor extraction was applied to all 13 items in one EFA procedure in order to discover the grouped items representing the intrinsic motivation factors for this research. Based on the eigenvalue analysis results shown in Table 5.4 , four factors having an

Chapter 5. Data Analysis and Results

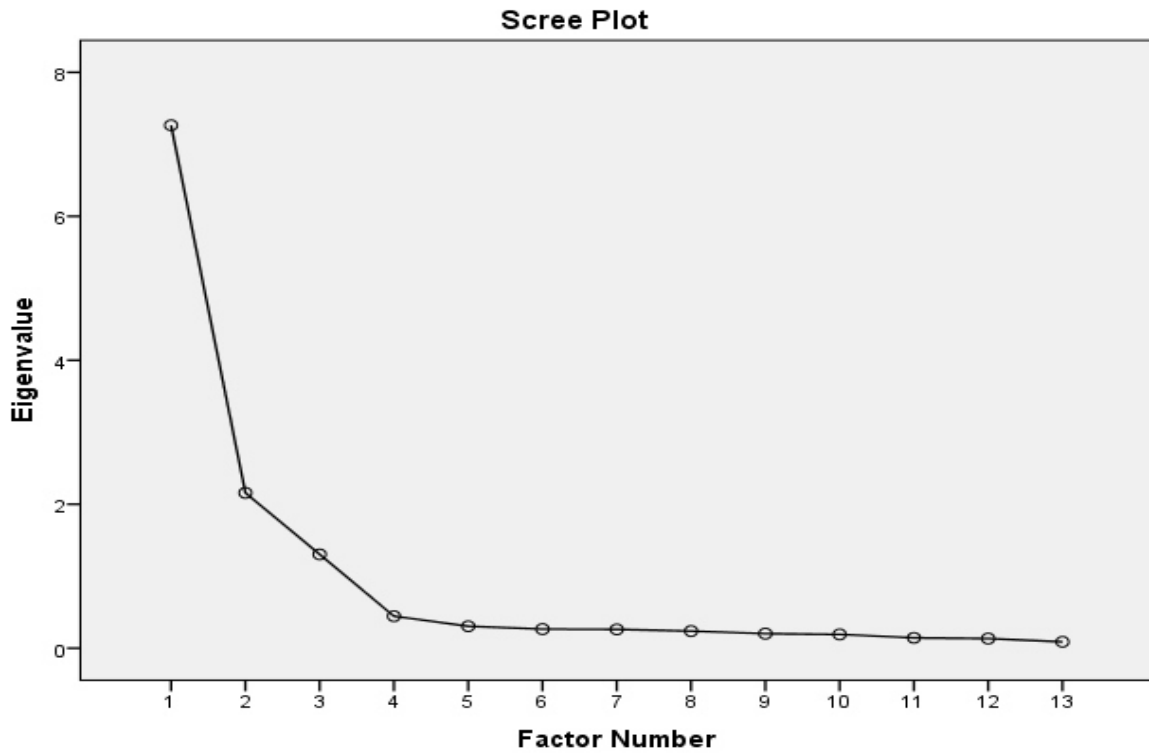
eigenvalue over 1 were obtained. These results indicated that the extrinsic motivation items were to be extracted and grouped into 3 factors explaining 82.500% of the variance.

TABLE 5.4 EIGENVALUES OF INTRINSIC MOTIVATION (IM)

Factor	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.264	55.876	55.876	6.738	51.832	51.832	3.864	29.722	29.722
2	2.158	16.598	72.474	2.130	16.384	68.216	3.645	28.039	57.760
3	1.303	10.026	82.500	1.218	9.373	77.589	2.578	19.829	77.589
4	.445	3.423	85.923						
5	.305	2.346	88.269						
6	.265	2.039	90.309						
7	.262	2.013	92.322						
8	.238	1.829	94.151						
9	.202	1.556	95.707						
10	.191	1.471	97.178						
11	.144	1.108	98.286						
12	.134	1.034	99.320						
13	.088	.680	100.000						

Extraction Method: Maximum Likelihood.

FIGURE 5-2 SCREE PLOT - INTRINSIC MOTIVATION



As shown in Figure 5-2, factor 1 displays the highest eigenvalue followed by factors 2 and 3. These three factors clearly appear in the vertical curve area, thus signifying eigenvalues of greater than 1. This indicated that three extracted intrinsic motivation factors conducted with EFA would contribute the most to the explanation of the variance in the data set. Extracting factors beyond the three would produce too large a proportion of unique variance, and thus would not be acceptable. The results of the EFA of intrinsic motivations are presented in Table 5.5, showing the extraction of the items.

Pattern Matrix ^a			
	Factor		
	1	2	3
IV3	.895		
IV4	.888		
IV5	.859		

Chapter 5. Data Analysis and Results

IV1	.836		
IV2	.831		
II4		.889	
II3		.880	
II2		.846	
II5		.843	
II1		.839	
EX2			.964
EX1			.955
EX3			.766
Extraction Method: Maximum Likelihood. Rotation Method: Promax with Kaiser Normalization. ^a			
a. Rotation converged in 5 iterations.			

As revealed in Table 5.5, all 13 items extracted into three factors. This result was well supported by the Kaiser-Meyer-Olkin measure verified the sampling adequacy for analysis, KMO= 0.908, due to the fact that KMOMSA's value of being higher than 0.8 indicating that the data is meritorious (Hair *et al.*, 2006). Furthermore, Bartlett's test of sphericity $\chi^2 (78) = 9325.020$, $p < 0.001$, which is lower than 0.05 confirming that the observed variables in the survey data are both dependant and intercorrelated. These results firmly support that EFA can be used to analyze the data.

The reliability of the three intrinsic motivation factors was confirmed to be acceptable by the Cronbach's alpha values with scores of over 0.7. Table 5.6 presents the coefficient alpha values for factor 1 = 0.928; factor 2 = 0.942 and factor 3 = 0.939, indicating acceptable levels.

Table 5.6 Reliability of intrinsic motivation factors

Factor	Item	Item/Factor	Cronbach's alpha
1	EX1	3	0.928
	EX2		
	EX3		
2	II1	5	0.942
	II2		

Chapter 5. Data Analysis and Results

	II3		
	II4		
	II5		
3	IV1	5	0.939
	IV2		
	IV3		
	IV4		
	IV5		

5.3.3 Consumer value co-recovery in-role behavior (CVCRIRB)

Consumer value co-recovery in-role behavior (CVCRIRB) was reflected by three dimensions of information sharing (ISH), responsible behavior (RB), and personal interaction (PI). These three dimensions were to be measured with 8, 5, and 3 items, respectively, making up a total of 13 items. EFA was applied to explore the dimensionality of CVCRIRB based on the service recovery context. Although original scale comprised of four dimensions Kaiser's criterion suggests retaining all factors with eigenvalues (roots) greater than or equal to 1.0.

TABLE 5.7 EIGENVALUES OF CONSUMER VALUE CO-RECOVERY IN-ROLE BEHAVIOR

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	7.256	45.349	45.349	6.582	41.135	41.135	6.046
2	2.535	15.844	61.194	2.565	16.032	57.167	5.504
3	2.137	13.357	74.551	1.914	11.963	69.130	2.279
4	.873	5.454	80.005				

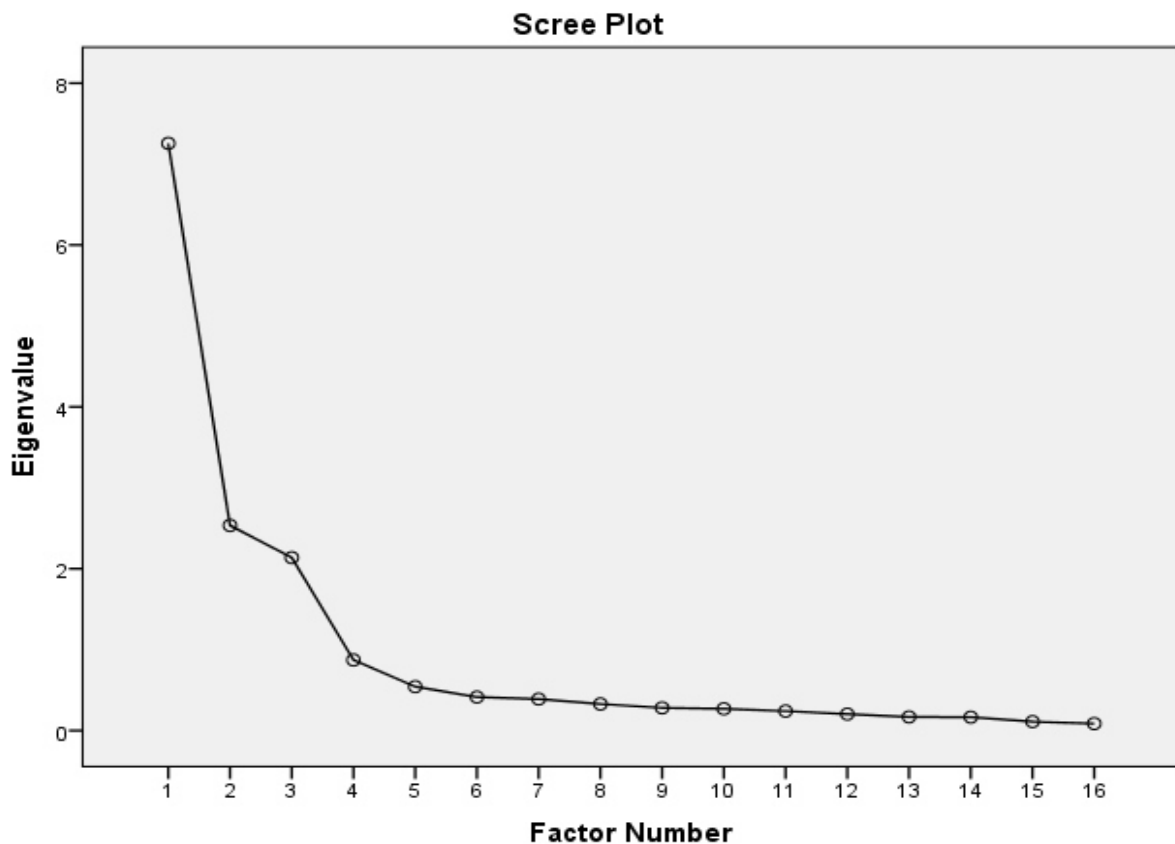
Chapter 5. Data Analysis and Results

5	.542	3.390	83.395				
6	.414	2.588	85.983				
7	.389	2.434	88.417				
8	.328	2.051	90.468				
9	.281	1.756	92.224				
10	.269	1.679	93.902				
11	.240	1.502	95.405				
12	.204	1.274	96.679				
13	.169	1.054	97.733				
14	.166	1.037	98.771				
15	.110	.687	99.458				
16	.087	.542	100.000				

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Therefore, the factor extraction was applied to all 16 items in one EFA procedure in order to discover the grouped items representing the CVCRIRB factor for this thesis. Based on the eigenvalue analysis results shown in Table 5.7, three factors with an eigenvalue of over 1 were obtained. These results suggested that the CVCRIRB items were to be extracted and grouped into three factors explaining 74.551% of the variance.

FIGURE 5-3 SCREE PLOT - CONSUMER VALUE CO-RECOVERY IN-ROLE BEHAVIOR

As shown in Figure 5.3, factor 1 displays the highest eigenvalue followed by factors 2 and 3. These three factors clearly appear in the vertical curve area, thus signifying eigenvalues of greater than 1. This indicated that three extracted intrinsic motivation factors conducted with EFA would contribute the most to the explanation of the variance in the data set. Extracting factors beyond the three would produce too large a proportion of unique variance, and thus would not be acceptable. The results of the EFA for intrinsic motivations are presented in Table 5.8, showing the extraction of the items.

Pattern Matrix^a

Table 5.8 EFA of consumer value co-recovery in-role behavior			
	Component		
	1	2	3
PI2	.930		
PI4	.929		
PI3	.928		
PI1	.901		
PI5	.868		
ISH4		.930	
ISH5		.870	
ISH1		.813	
ISH6		.808	
RB3			.928
RB4			.865
RB2			.847
RB1			.764

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

As revealed in Table 5.8, all 13 items extracted into three factors. This result was well supported by the Kaiser-Meyer-Olkin measure verified the sampling adequacy for analysis, KMO= 0.900, due to the fact that KMOMSA's value of being higher than 0.8 indicating that the data is meritorious (Hair *et al.*, 2006). Furthermore, Bartlett's test of sphericity $\chi^2 (150) = 10145.100$, $p < 0.001$, which is lower than 0.05 confirming that the observed variables in the survey data are both dependant and intercorrelated. These results firmly support that EFA can be used to analyze the data.

The reliability of the three consumer value co-recovery in-role behavior factors was confirmed to be acceptable by the Cronbach's alpha values with scores of over 0.7. Table 5.9 presents the coefficient alpha values for factor 1 = 0.949; factor 2 = 0.891 and factor 3 = 0.902, indicating acceptable levels.

Table 5.9-Reliability of consumer value co-recovery in-role behavior

Factor	Item	Item/Factor	Cronbach'salpha
1	PI1	5	0.949
	PI2		
	PI3		
	PI4		
	PI5		
2	ISH1		0.891
	ISH4		
	ISH5		
	ISH6		
3	RB1		0.902
	RB2		
	RB3		
	RB4		

5.3.4 Trust in service providers' resolution ability

The results of the eigenvalue calculations for trust in resolution ability (TR) items showed one factor having a value of greater than 1. As presented in Table 5.10, the results indicated that the four TR items were to be extracted in one factor, explaining 88.248% of the variance.

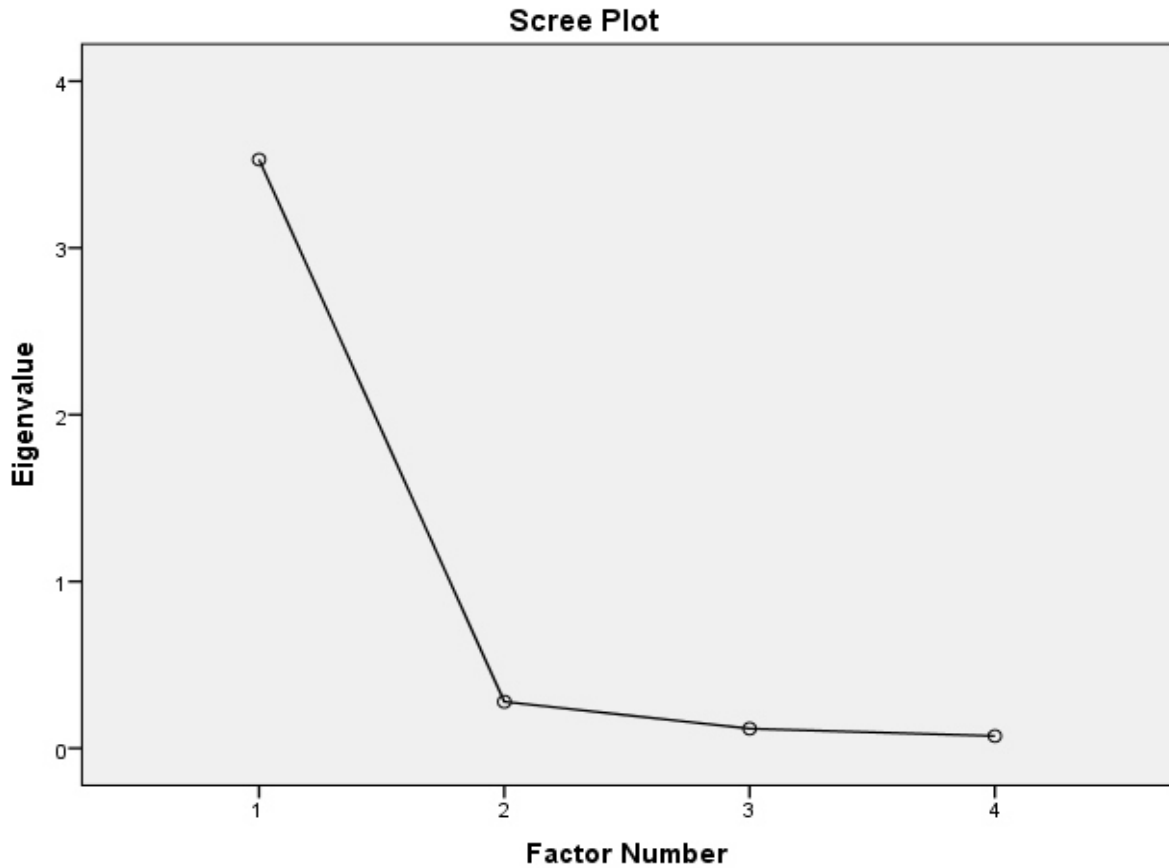
TABLE 5.10 EIGENVALUES OF TRUST IN RESOLUTION ABILITY (TR)

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.530	88.248	88.248	3.375	84.378	84.378
2	.279	6.969	95.217			
3	.118	2.944	98.161			
4	.074	1.839	100.000			

Extraction Method: Maximum Likelihood.

The formation of the TR construct based on one factor was confirmed by the scree test displayed in Figure 5-4.

FIGURE 5-4 SCREE PLOT - TRUST IN RESOLUTION ABILITY (TR)



As shown in Figure 5.4, only factor 1 plotted in the vertical curve area. This factor has the highest eigenvalue compared to the other factors sitting on the straight-line part of the curve. This indicated that one extracted factor in the EFA conducted contributed the most to the explanation of the variance in the data set. The results of the EFA for trust in resolution ability are presented in Table 5.11, showing that one factor was extracted.

TABLE 5.11 EFA OF TRUST IN RESOLUTION ABILITY (TR)

			KMO & Bartlett's test	
Itemretained	Factor Loading	Factorformed	KMO	Sig. Bartlett's
TR1	0.820	TR	0.845	0.000
TR2	0.931			

TR3	0.951			
TR4	0.965			

As reported in Table 5.11, all four items grouped to form a solid TR factor displayed loadings of above 0.4. This result was well supported by the KMOMSA’s value of being higher than 0.8 indicating that the data is meritorious (Hair *et al.*, 2006), and also by the significance value of Bartlett’s test of sphericity being lower than 0.05 confirming that the observed variables in the survey data are both dependant and intercorrelated. These results firmly support that EFA can be used to analyze the data.

5.3.5 Negative-discontent emotions

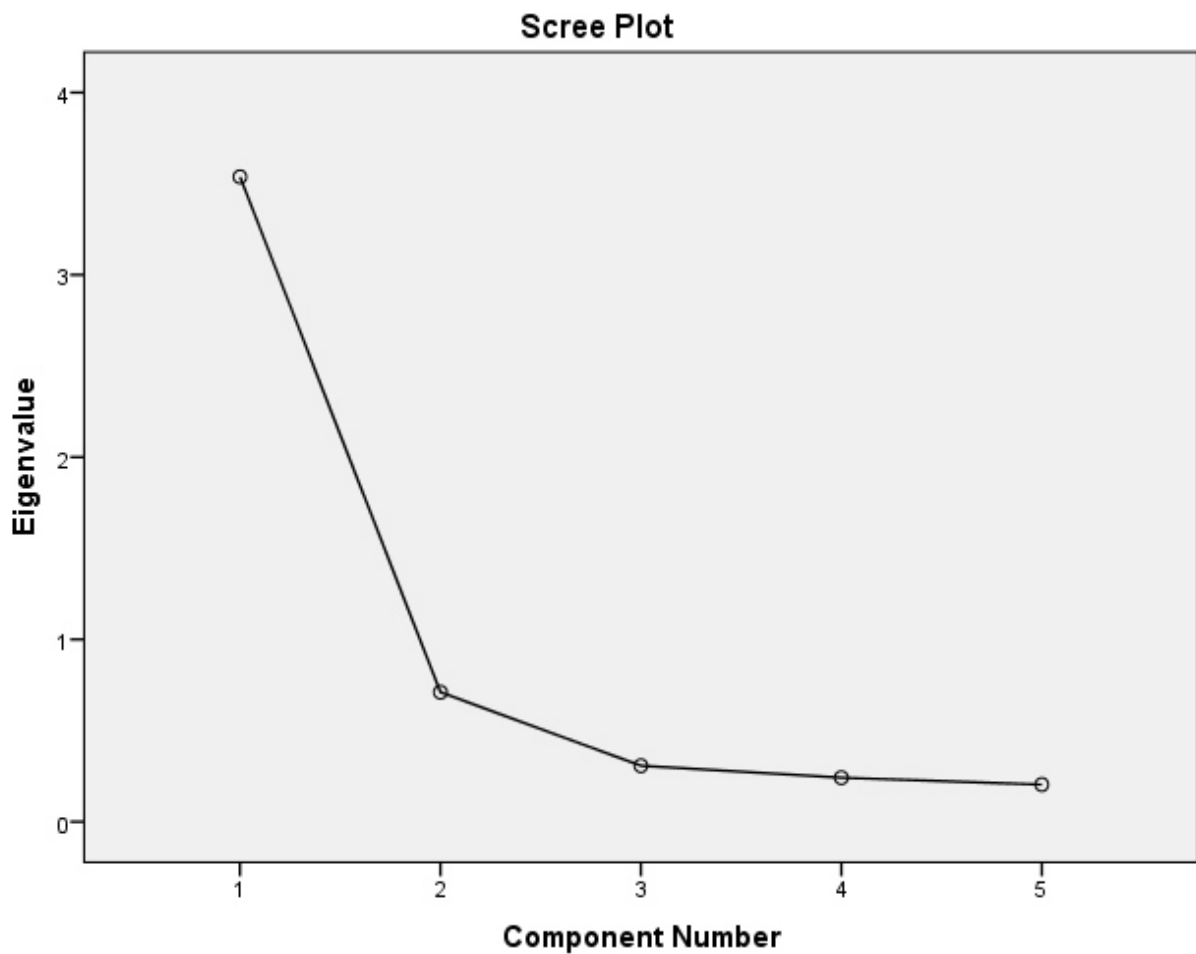
Negative discontent emotions were measured by five indicator items, as shown in Table 5.12. It is evident from this table that the eigenvalues for negative emotions items showed one factor to have a value over 1, suggesting that the extraction for negative emotions items should be performed with one factor explaining 70.753% of the variance.

Total Variance Explained

TABLE 5.12 EIGENVALUES OF NEGATIVE-DISCONTENT EMOTIONS						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.538	70.753	70.753	3.538	70.753	70.753
2	.710	14.206	84.959			
3	.307	6.139	91.099			
4	.242	4.831	95.929			
5	.204	4.071	100.000			

Extraction Method: Principal Component Analysis.

The formation of the negative-discontent emotions construct based on one factor was confirmed by the scree test displayed in Figure 5-5.

FIGURE 5-5 SCREE PLOT - NEGATIVE-DISCONTENT EMOTIONS

As shown in Figure 5-5, only factor 1 plotted in the vertical curve area. This factor has the highest eigenvalue compared to the other factors sitting on the straight-line part of the curve. This indicated that one extracted factor in the EFA conducted contributed the most to the explanation of the variance in the data set.

The results of the EFA for negative emotions are presented in Table 5.13, showing that one factor was extracted.

TABLE 5.13 EFA RESULT - NEGATIVE DISCONTENT EMOTIONS (NDE)

			KMO & Bartlett's test	
Itemretained	Factor Loading	Factorformed	KMO	Sig. Bartlett's
NE1	0.893	NE	0.874	0.000
NE2	0.909			
NE3	0.617			
NE4	0.902			
NE5	0.848			

As reported in Table 5.13, all five items grouped to form a solid NDE factor displayed loadings of above 0.4. This result was well supported by the KMOMSA’s value of being higher than 0.8 indicating that the data is meritorious (Hair *et al.*, 2006), and also by the significance value of Bartlett’s test of sphericity being lower than 0.05 confirming that the observed variables in the survey data are both dependant and intercorrelated. These results firmly support that EFA can be used to analyze the data.

5.3.6 Ability to co-recover (AB)

Ability to co-recover was measured by four indicator items, as shown in Table 5.14. It is evident from this table that the eigenvalues for ability to co-recover items showed one factor to have a value over 1. The initial scale consists of 6 items, but communalities shows the need to suppress 2 items. Below confirmatory factor analysis also showed the need for these items deleted. Thus, hese items were therefore excluded from the EFA procedure, resulting in the eigenvalues reported in Table 5.14

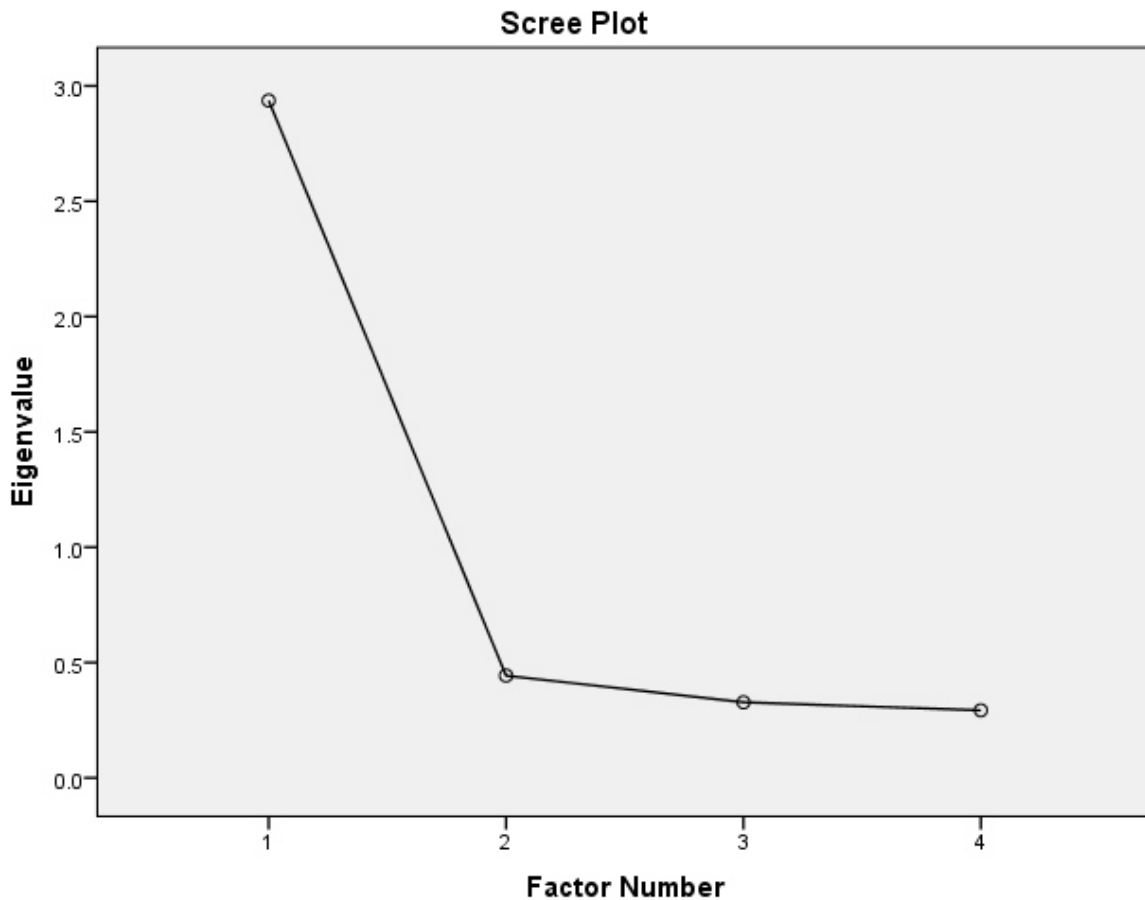
Total Variance Explained

TABLE 5.14 EIGENVALUES OF ABILITY TO CO-RECOVER (AB)						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.936	73.407	73.407	2.589	64.718	64.718
2	.443	11.082	84.490			
3	.327	8.187	92.677			
4	.293	7.323	100.000			

Extraction Method: Maximum Likelihood.

As shown in Table 5.14, the eigenvalue analysis shows one factor to have a value over 1, suggesting that the extraction for ability to co-recover items should be performed with one factor explaining 73.407% of the variance. This result was assessed and reconfirmed by the scree test (see Figure 5-6).

FIGURE 5-6 SCREE PLOT - ABILITY TO CO-RECOVER (AB)



Chapter 5. Data Analysis and Results

As shown in Figure 5-6, the scree starts to form at the point representing factor 2 and continues to move to the right of the curve as far as the factor 4 point. A sharp break in the vertical level of the curve occurs between factor 1 and factor 2. Therefore, it is clear that factor 2 lies at the left most point of the scree, and hence can be excluded from the non-trivial or important category. As a result, it was concluded that ability to co-recover items were to be extracted with one factor. Extracting the ability to co-recover items with one factor would contribute the most to the explanation of the variance in the data set.

The results of the EFA for ability to co-recover are presented in Table 5.15, showing the extraction of the items. Four ability to co-recover items extracted into one factor displayed loadings of above 0.4. This result was well supported by the KMOMSA's value of 0.8 indicating that the data is meritorious (Hair *et al.*, 2006), and also by the significance value of Bartlett's test of sphericity being lower than 0.05 confirming that the observed variables in the survey data are both dependant and intercorrelated. These results firmly support that EFA can be used to analyze the data.

TABLE 5.15 EFA OF ABILITY TO CO-RECOVER (AB)

			KMO & Bartlett's test	
Itemretained	Factor Loading	Factorformed	KMO	Sig. Bartlett's
Ab1	0.834	Ab	0.831	0.000
Ab2	0.829			
Ab3	0.820			
Ab5	0.730			

5.3.7. Utilitarian value (UV)

The results of the eigenvalue calculations for utilitarian value (UV) items showed one factor having a value of greater than 1. As presented in Table 5.16, the results indicated that the five UV items were to be extracted in one factor, explaining 70.530% of the variance.

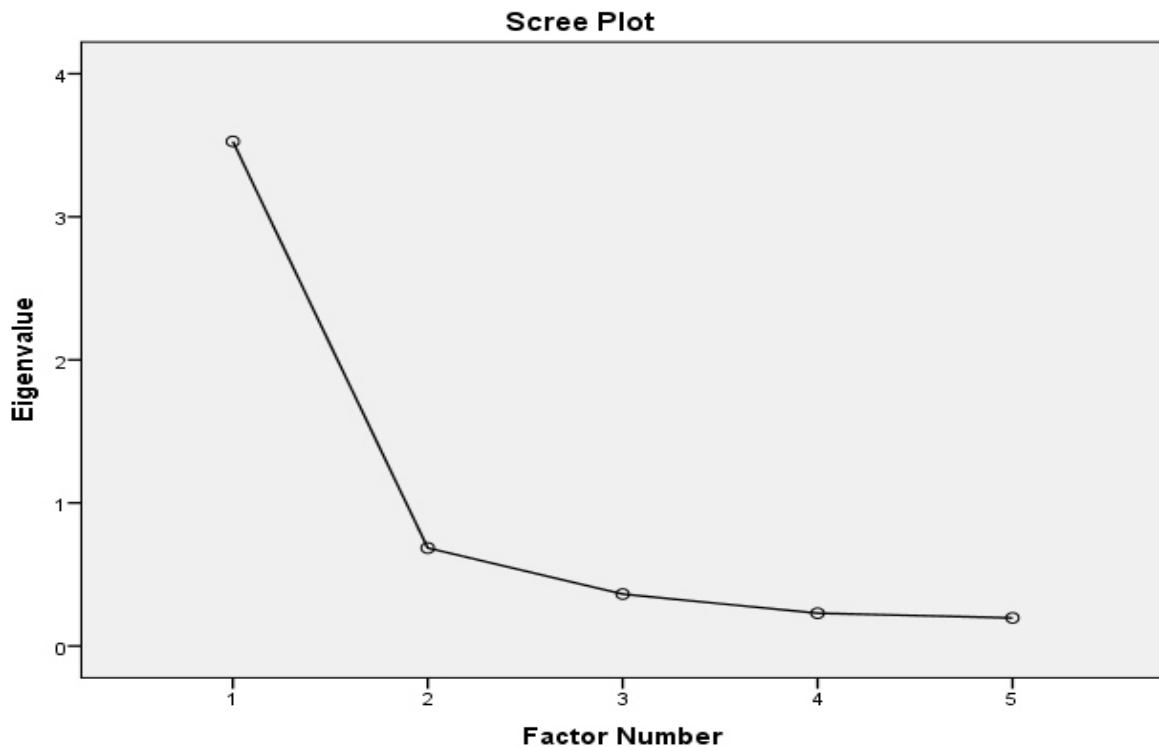
Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.526	70.530	70.530	3.189	63.773	63.773
2	.685	13.696	84.225			
3	.363	7.258	91.484			
4	.229	4.584	96.068			
5	.197	3.932	100.000			

Extraction Method: Maximum Likelihood.

The formation of the UV construct based on one factor was confirmed by the scree test displayed in Figure 5-7.

FIGURE 5.7 SCREE PLOT - UTILITARIAN VALUE (UV)



As shown in Figure 5-7, only factor 1 plotted in the vertical curve area. This factor has the highest eigenvalue compared to the other factors sitting on the straight-line part of the

curve. This indicated that one extracted factor in the EFA conducted contributed the most to the explanation of the variance in the data set.

The results of the EFA for UV are presented in Table 5.17, showing that one factor was extracted.

TABLE 5.17 EFA RESULT - UTILITARIAN VALUE (UV)

			KMO & Bartlett's test	
Itemretained	Factor Loading	Factorformed	KMO	Sig. Bartlett's
UV1	0.841	UV	0.847	0.000
UV2	0.897			
UV3	0.886			
UV4	0.571			
UV5	0.752			

As reported in Table 5.17, all five items grouped to form a solid UV factor displayed loadings of above 0.4. This result was well supported by the KMOMSA's value of being higher than 0.8 indicating that the data is meritorious (Hair *et al.*, 2006), and also by the significance value of Bartlett's test of sphericity being lower than 0.05 confirming that the observed variables in the survey data are both dependant and intercorrelated. These results firmly support that EFA can be used to analyze the data.

5.3.8. Hedonic value (HV)

Hedonic value was measured by four indicator items, as shown in Table 5.18. It is evident from this table that the eigenvalues for HV items showed one factor to have a value over 1.

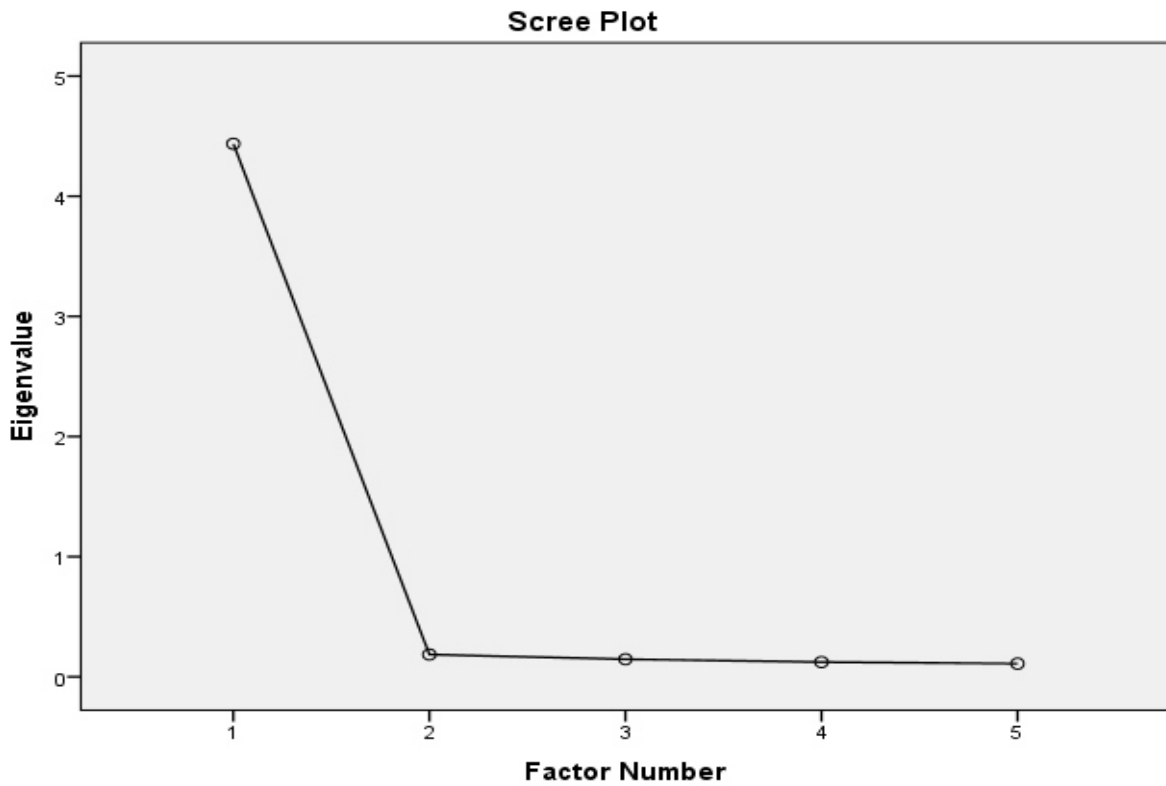
Total Variance Explained

TABLE 5.18 EIGENVALUES OF HEDONIC VALUE (HV)						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.436	88.730	88.730	4.296	85.921	85.921
2	.185	3.701	92.430			
3	.147	2.931	95.362			
4	.122	2.448	97.810			
5	.110	2.190	100.000			

Extraction Method: Maximum Likelihood.

The eigenvalue analysis results shown in Table 5.18 above indicated that the items were to be extracted and grouped into one factor, explaining 88.730% of the variance. This result was reconfirmed by a scree test, which is displayed in Figure 5-8.

FIGURE 5-8 SCREE PLOT - HEDONIC VALUE



It can be seen from Figure 5.8 above that the scree test confirmed the formation of the HV construct obtained through the extraction of its items with one factor. As revealed by the figure, only factor 1 appeared in the vertical curve area. This factor has the highest eigenvalue compared to the other factors plotted on the straight-line part of the curve. This indicated that one extracted HV factor contributed the most to the explanation of the variance in the data set.

The results of the EFA for HV are presented in Table 5.19, showing that one factor was extracted.

TABLE 5.19 EFA RESULTS OF HEDONIC VALUE (HV)

			KMO & Bartlett's test	
Itemretained	Factor Loading	Factorformed	KMO	Sig. Bartlett's
HV1	0.923	HV	0.918	0.000
HV2	0.916			
HV3	0.939			
HV4	0.936			
HV5	0.921			

Based on the EFA results shown in Table 5.19 above, we can see that all four items grouped to form a single HV factor displayed loadings of above 0.4. This result was well supported by the KMOMSA's value of being higher than 0.8 indicating that the data is meritorious (Hair *et al.*, 2006), and also by the significance value of Bartlett's test of sphericity being lower than 0.05 confirming that the observed variables in the survey data are both dependant and intercorrelated. These results firmly support that EFA can be used to analyse the data.

5.3.9 Construct Validity and Confirmatory Factor Analysis (CFA)

After conducted EFA, results were adopted to develop components of the integrative structural model to gain understanding of the hypothesized relationships among constructs. After conducting test of normality, each construct was measured separately, and after estimating validity and reliability of each construct, structural modeling was assessed in order to test the hypotheses.

5.4 Structure Equation Modeling

Structural equation modeling (SEM) is “a statistical methodology that takes a confirmatory (i.e., hypothesis-testing) approach to the analysis of a structural theory bearing on some phenomenon” (Byrne, 2010). According to Byrne (2010) this approach has several advantages:

- it takes a confirmatory rather than an exploratory approach to the data analysis.
- it provides explicit estimates of assessing or correcting error variance parameters.
- its procedures can incorporate both unobserved (i.e., latent) and observed variables.
- it is an easily applied method for modeling multivariate relations, or for estimating point and/or interval indirect effects.

SEM is characterized by two basic components: (1) the structural model which is the *path* model, which relates independent to dependent variables and (2) the measurement model which enables the researcher to use several variables (indicators) for a single independent or dependent variable (Hair *et al.*, 2006). Consequently, SEM is an important tool for marketing researchers and has become an important tool for analysis that is widely used in academic research.

Through SEM, the CFA method has the ability to assess the unidimensionality, validity and reliability of a latent construct (Hair *et al.*, 2006). In the present study structural equation modelling software AMOS 20 (Analysis of Moment Structures) was used to explore statistical relationships among the items of each factor and between the factors of independent (ability to co-recover) and dependent variables (i.e., motivation, co-recovery in-role behavior, utilitarian and hedonic value).

SEM can be conducted in one- or two-stage approaches (Hair *et al.*, 2003). One-stage approach is to process the analysis with simultaneous estimations of both structural and measurement models. The two stage approach, is to process the measurement model first and then fix this measurement model in the second stage when the structural model is estimated. In this dissertation I performed the two stage approach because it is widely accepted in marketing research while the accurate representation of the reliability of the items of each construct is best conducted in two stages to avoid any interaction between the measurement and structural models (Hair *et al.*, 2006).

5.5 Evaluating the fitness of a measurement model

In structural equation modeling, there are several goodness-of-fit indices that reflect how fit is the model to the data. Because there is no agreement among statisticians upon specific indices that best measure model fit, with clear guidelines regarding their interpretation, in this dissertation I follow the recommendation of Hair *et al.*, (2006) to use of at least one fitness index from each category of model fit. The adoption of these measures are parallel the most commonly used in marketing research to evaluate models. The three model fit categories are Absolute Fit, Incremental Fit, and Parsimonious Fit. The fit indices summarised in Table 5.20 were used for this purpose. A fulfilment of the acceptable cut-off level of at least one commonly used index determined the model fit. As outlined in Table 5.20, the first category of absolute values includes chi-square (χ^2), GFI, and RMSEA; the second category (incremental) includes AGFI, NFI, CFI, TLI; and the third category (parsimonious) includes χ^2/df .

Name of category	Name of the index	Level of acceptance
Absolute fit indices	Chi-square (χ^2)	$P > 0.05$
	Goodness-of-Fit (GFI)	.90 or greater, 0 = poor fit 1 = exact fit.
	Root Mean Square Error of Approximation (RMSEA)	Between .050 and .080, however, value upto 1.0 and less than .05 is considered acceptable.
Incremental fit indices	Adjusted Goodness-of-Fit	> 0.90 , value close to 0

	(AGFI)	indicates poor fit while value close to 1 indicates a perfect fit.
	Tucker-Lewis Index(TLI)	> 0.90 value close to 0 indicates poor fit while value close to 1 indicates a perfect fit.
	Normed Fit Index (NFI)	> 0.90 value close to 0 indicates poor fit while value close to 1 indicates a perfect fit.
	ComparativeFitIndex(CFI)	> 0.90 value close to 0 indicates poor fit while value close to 1 indicates a perfect fit.
Parsimonious fit indices	Chi Square/Degrees of Freedom (χ^2/df)	$1.0 \leq \chi^2/df \leq 5$
Source: Kline (2011), Hair <i>et al.</i> , (2006), Byrne, (2010)		

5.6 Assessment of the Normality

The scale items used should be assessed to determine normality of distribution. Checking variables for normality is an important early step in almost every multivariate analysis (Tabachnick and Fidell, 2006). In order to check any actual deviation from normality, a number of methods can be used. One method is to use skewness and kurtosis (Tabachnick and Fidell, 2006, Kline, 2011). Skewness has to do with the symmetry of the distribution; a skewed variable is a variable whose mean is not in the center of the distribution, while kurtosis has to do with the peakedness of a distribution; a distribution is either too peaked or too flat (Tabachnick and Fidell, 2006). In order to assess the normality of distribution it was necessary to check the absolute values of skewness and kurtosis. According to Kline (2011) a variable with an absolute value of skewness index greater than 3 and kurtosis index greater than 8 may suggest problems. However, using SPSS, an inspection of both skewness and kurtosis indicated that the absolute values were 1.532 for skewness and 2.741 for kurtosis and thus within the recommended levels (see Table 5.21), suggesting univariate normality, and therefore it was not necessary to make any adjustments such as transformation of the data (Tabachnick and Fidell, 2006).

Table 5.21 Assessment of normality

	N	Skewness		Kurtosis	
		Statistics	Statistic	Std. Error	Statistic
Ab1	740	-.825	.090	-.064	.179
Ab2	740	-.692	.090	-.175	.179
Ab3	740	-.707	.090	-.118	.179
Ab5	740	-.555	.090	-.278	.179
EX1	740	-.369	.090	-.695	.179
EX2	740	-.342	.090	-.794	.179
EX3	740	-.504	.090	-.481	.179
EI1	740	-.694	.090	-.278	.179
EI2	740	-.721	.090	-.269	.179
EI3	740	-.823	.090	-.087	.179
EI4	740	-.793	.090	-.049	.179
EI5	740	-.667	.090	-.265	.179
II1	740	-.441	.090	-.566	.179
II2	740	-.361	.090	-.705	.179
II3	740	-.353	.090	-.572	.179
II4	740	-.398	.090	-.534	.179
II5	740	-.489	.090	-.360	.179
EV1	740	-1.532	.090	2.741	.179
EV2	740	-1.432	.090	2.076	.179
EV3	740	-1.443	.090	2.365	.179
EV4	740	-1.453	.090	2.269	.179
EV5	740	-.683	.090	-.036	.179
IV1	740	-.501	.090	-.420	.179
IV2	740	-.314	.090	-.703	.179
IV3	740	-.365	.090	-.547	.179
IV4	740	-.421	.090	-.455	.179
IV5	740	-.510	.090	-.347	.179
ISH4	740	-1.350	.090	1.723	.179
ISH5	740	-1.325	.090	1.614	.179
ISH6	740	-1.453	.090	2.487	.179
RB1	740	-1.342	.090	2.029	.179
RB2	740	-1.150	.090	1.229	.179
RB3	740	-1.006	.090	.724	.179

RB4	740	-1.316	.090	2.016	.179
PI1	740	-1.073	.090	.976	.179
PI2	740	-1.106	.090	1.062	.179
PI3	740	-1.233	.090	1.632	.179
PI4	740	-1.146	.090	1.271	.179
PI5	740	-1.220	.090	1.075	.179
UV1	740	-.994	.090	.298	.179
UV2	740	-.934	.090	.378	.179
UV3	740	-1.154	.090	.896	.179
UV5	740	-1.096	.090	1.103	.179
HV1	740	.953	.090	-.085	.179
HV2	740	.816	.090	-.393	.179
HV3	740	.951	.090	-.128	.179
HV4	740	.951	.090	-.102	.179
HV5	740	.815	.090	-.432	.179

5.7 Analysis and Results of Structural Equation Modeling

Structural equation modeling (SEM) is used to test the hypotheses arising from the theoretical model. In order to perform the SEM analysis, the two-stage approach recommended by Anderson and Gerbing (1988) was adopted. In the first stage (measurement model), the analysis was conducted by specifying the causal relationships between the observed variables (items) and the underlying theoretical constructs. For this purpose, confirmatory factor analysis using AMOS 20.0 was performed. Following this, the paths or causal relationships between the underlying exogenous and endogenous constructs were specified in the structural model (second stage). Exogenous construct included ability to co-recover, whereas endogenous constructs included motivation, co-recovery in-role behavior (three dimensions- information sharing, responsible behaviour, and personal interaction), utilitarian and hedonic value.

5.7.1 Stage one: Measurement model

5. 7.1.1 Consumer value co-recovery in-role behavior

Consumer value co-recovery in-role behavior was measured using twelve indicators. As shown in Table 5.22, these items include ISH2 to PI5. Although standardized parameter estimates were all significant ($P < 0.001$), results of the CFA indicated that the initial measurement model needed to be respecified. Given the fact that the standardized factor loadings for IS1, IS2, IS3 and ISH1 were less than the recommended level of .50 were not within the acceptable level, these items were deleted. As goodness of fit indices were improved, the modified model showed a better fit to the data (Chi-square = 152.411, Degrees of freedom = 47, Probability level = .000, CMIN/DF= 3.243). The GFI was .967, AGFI = .946, NFI= .982, CFI=.988, TLI =.983, RMSEA =.055. These values suggest that this model fits adequately to the data, while CMIN/DF was slightly up the threshold of 3, other indices were within the recommended threshold levels, indicating an acceptable fit.

Table 5.22: Co-recovery in-role behavior items and their description

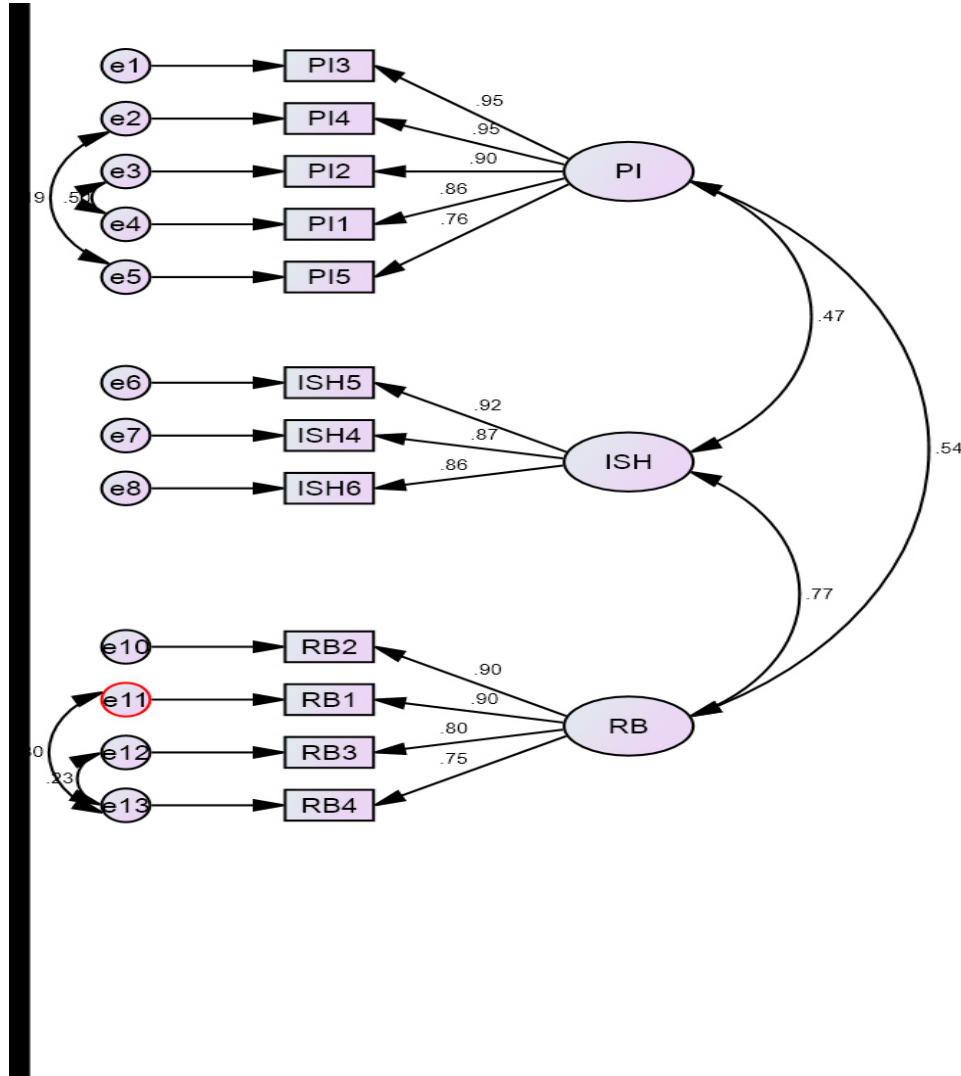
Dimension	Original Item	Label Item	Item Deleted
Information Seeking	I asked others for information on how I can solve the problem.	IS1	Deleted
	I searched for information on how I can solve the problem.	IS2	Deleted
	I paid attention to how others have tried to solve the problem.	IS3	Deleted
Information Sharing	I clearly explained what I wanted the employee to do.	ISH1	Deleted
	I gave the employee proper information.	ISH4	
	I provided necessary information so that the employee could perform his or her duties.	ISH5	
	I answered all the employee's service-related questions.	ISH6	

Chapter 5. Data Analysis and Results

Responsible behavior	I performed all the tasks that were required.	RB1	
	I adequately completed all the expected behaviors.	RB2	
	I fulfilled responsibilities to the business.	RB3	
	I followed the employee's directives or orders.	RB4	
Personal Interaction	I was friendly to the employee.	PI1	
	I was kind to the employee.	PI2	
	I was polite to the employee.	PI3	
	I was courteous to the employee.	PI4	
	I didn't act rudely to the employee.	PI5	

As shown in Figure 5-9, the modified model was tested with twelve indicators measuring co-recovery in-role behavior. The standardized factor loadings for these measures were all higher than the recommended level of .50 (see Table 5.37). Standardized parameter estimates for these measures were deemed to be statistically significant ($P < 0.001$). Given that the model fits the data adequately and the correlations between the underlying factors are less than .80 (see the values on the double-headed arrows in Figure 5.9), no further adjustments were required.

Figure 5-9: A modified CFA Measurement Model of Consumer Value Co-Recovery in-Role Behavior



5.7.1.2 Extrinsic motivation

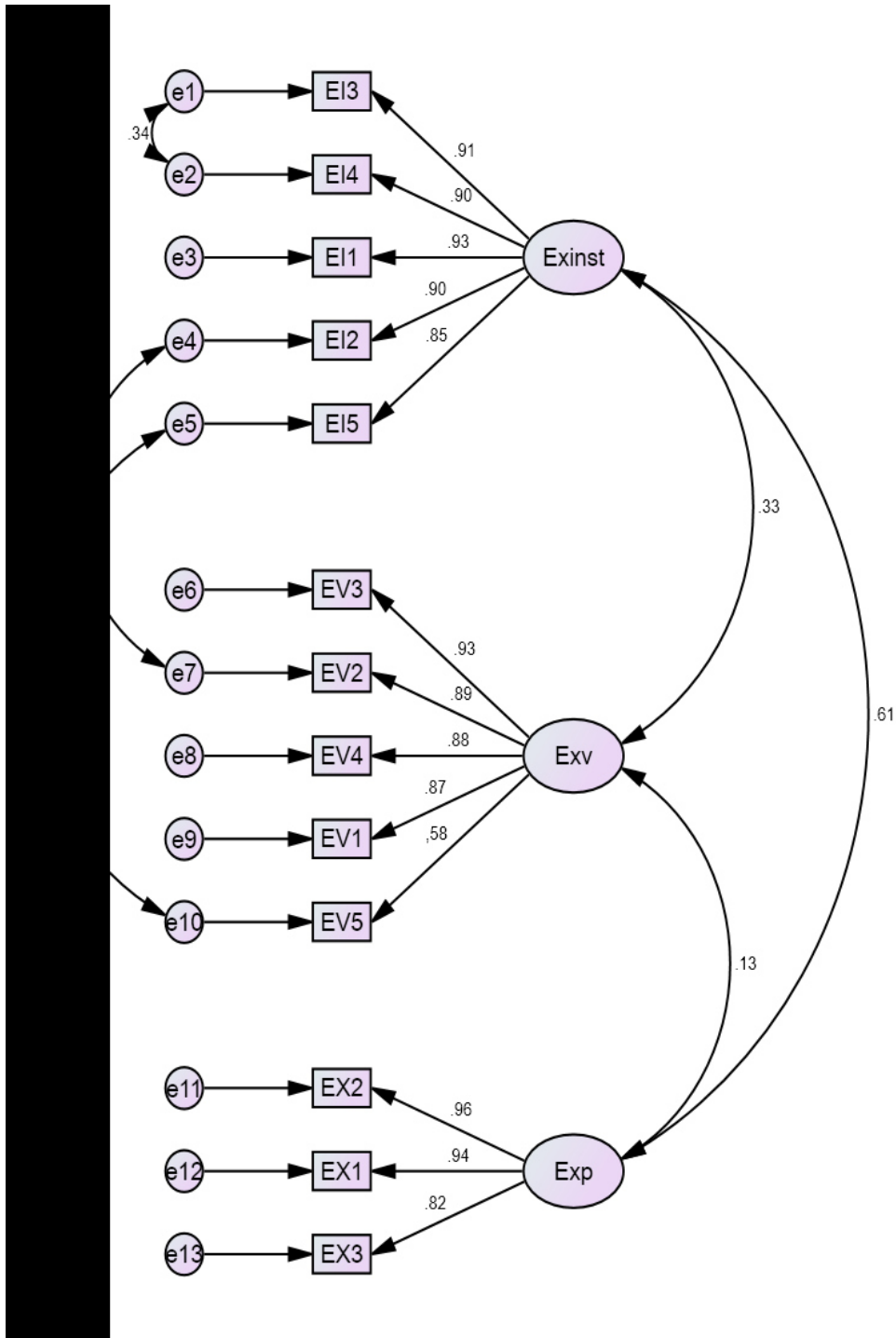
As shown in Table 5.23, the CFA analysis was conducted with extrinsic motivation being measured using 13 items (EX1 to EV5).

Table 5.23: Extrinsic motivation items and their description

Dimension	Original Item	Label Item	Item Deleted
Expectancy	If I tried hard, I could successfully participate more in the service recovery.	EX1	
	If I put all my effort in it, I could successfully participate more in the service recovery.	EX2	
	Making the effort to participate would result in the service recovery successfully.	EX3	
Extrinsic Instrumentality	I would get the preferred solution to my problem.	EI1	
	I would get a quicker recovery.	EI2	
	I would get the recovery that I deserved.	EI3	
	I would get a fair recovery.	EI4	
	This would provide me more control over the recovery process.	EI5	
Extrinsic Valence	To get the preferred solution to my problem.	EV1	
	To get a quick recovery.	EV2	
	To get the recovery that I deserved.	EV3	
	To get a fair recovery.	EV4	
	To have more control over the recovery process.	EV5	

The standardized estimations for the hypothesized model showed that all the parameters were highly significant ($P < 0.001$). The measurement model was found to fit the data adequately. The chi-square was 29.554, Degrees of freedom = 59, Probability level = .000, CMIN/DF=5.026. The GFI was .942, AGFI=.910, RMSEA=.074, NFI=.969, CFI=.975, TLI =.967. As mentioned before, it is commonly accepted that the chi-square estimate would potentially reject valid models in large sample size (Bagozzi and Yi, 1988).

Figure 5-10: A CFA Measurement Model of Consumer Extrinsic motivation



As shown in Figure 5-10, the modified model was tested with 13 indicators measuring co-recovery in-role behaviour. The standardized factor loadings for these measures were all higher than the recommended level of .50 (see Table 5.37). Standardized parameter estimates for these measures were deemed to be statistically significant ($P < 0.001$). Given that the model fits the data adequately and the correlations between the underlying factors are less than .80 (see the values on the double-headed arrows in Figure 5-10), no further adjustments were required.

5.7.1.3 Intrinsic motivation

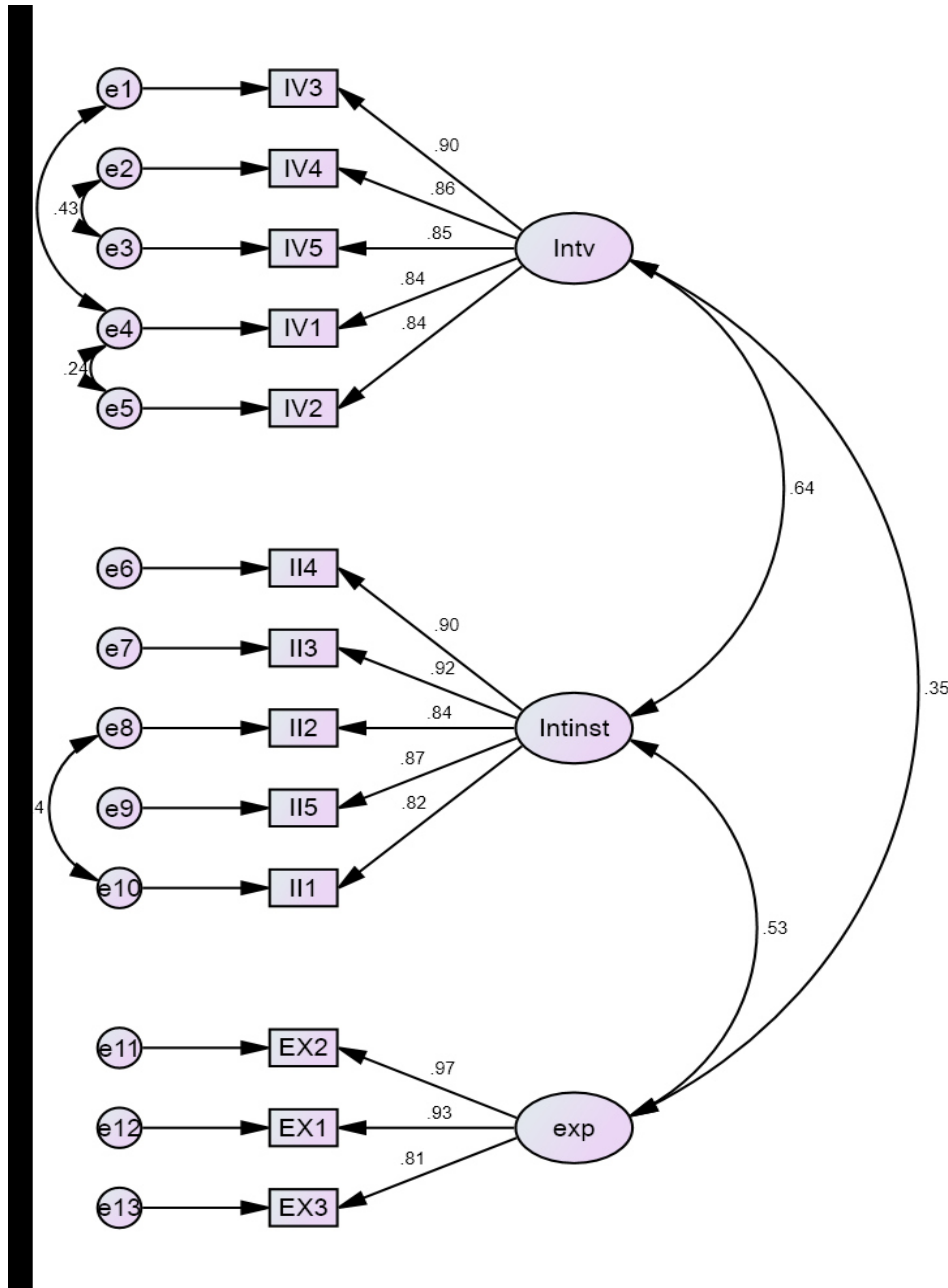
As shown in table 5.24, the CFA analysis was conducted with extrinsic motivation being measured using 13 items (EX1 to IV5).

Table 5.24: Intrinsic motivation items and their description			
Dimension	Original Item	Label Item	Item Deleted
Expectancy	If I tried hard, I could successfully participate more in the service recovery.	EX1	
	If I put all my effort in it, I could successfully participate more in the service recovery.	EX2	
	Making the effort to participate would result in the service recovery successfully.	EX3	
Intrinsic Instrumentality	Provide me with personal feelings of worthwhile accomplishment.	II1	
	Provide me with feelings of enjoyment from finding the solution to my problem.	II2	
	Provide me the feeling of independence.	II3	
	Allow me to feel innovative in how I interact with a service provider in order to solve my problem.	II4	
	Allow me to have increased confidence in my skills.	II5	

Intrinsic Valence	To get a personal feeling of worthwhile accomplishment.	IV1	
	To get a personal feeling of enjoyment.	IV2	
	To get a feeling of independence.	IV3	
	To get a feeling innovative in how I interact with a service provider.	IV4	
	To get increased confidence in my skills.	IV5	

The standardized estimations for the hypothesized model showed that all the parameters were highly significant ($P < 0.001$). The measurement model was found to fit the data adequately. The chi-square was 24.319, Degrees of freedom = 58, Probability level = .000, CMIN/DF=4.299. The GFI was .951, AGFI=.923, RMSEA=.067, NFI=.973, CFI=.979, TLI =.972. As mentioned before, it is commonly accepted that the chi-square estimate would potentially reject valid models in large sample size (Bagozzi and Yi, 1988).

Figure 5-11: A CFA measurement model for intrinsic motivation



As shown in Figure 5-11, the modified model was tested with 13 indicators measuring co-recovery in-role behavior. The standardized factor loadings for these measures were all higher than the recommended level of .50 (see Table 5.37). Standardized parameter estimates for these measures were deemed to be statistically significant ($P < 0.001$). Given that the model fits the data adequately and the correlations between the underlying factors are less

than .80 (see the values on the double-headed arrows in Figure 5-11), no further adjustments were required.

5.7.1.4 Ability to co-recover

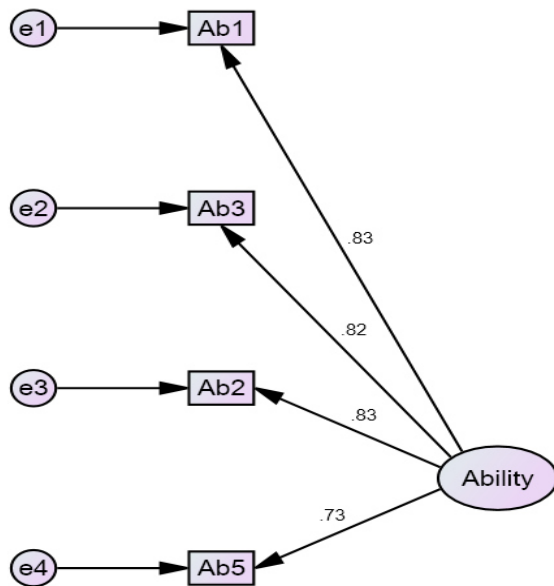
As shown in table 5.25, the CFA analysis was conducted with ability to co-recover being measured using 6 items (Ab1 to Ab6).

Table 5.25: Ability to co-recover items and their description		
Original Item	Label Item	Item Deleted
I was fully capable of participating in finding a solution to my complaint.	Ab1	
I was confident in my ability in finding a solution with the service provider.	Ab2	
Participating more in finding a solution to my complaint was well within the scope of my abilities.	Ab3	
I didn't feel that I was qualified for an extra participation in finding a solution to my complaint.	Ab4	Deleted
My past experiences increased my confidence that I was able to successfully participate more in finding a solution to my complaint.	Ab5	
In total, participating more in finding a solution to my complaint involved things that were more difficult than I was capable of.	Ab6	Deleted

Although standardized parameter estimates were all significant ($P < 0.001$), results of the CFA indicated that the initial measurement model needed to be respecified. Given the fact that the standardized factor loadings for Ab4 and Ab6 were less than the recommended level of .50 were not within the acceptable level, these items were deleted. As goodness of fit indices were improved, the modified model showed a better fit to the data (Chi-square =

7.954, Degrees of freedom = 2 ,Probability level =.000, CMIN/DF= 3.977). The GFI was .995,AGFI =.973,NFI= .995,CFI=.996,TLI =.988,RMSEA =.063.

Figure 5-12: A modified CFA Measurement Model of ability to co-recover



As shown in Figure 5-12, the modified model was tested with four indicators measuring ability to co-recover. The standardized factor loadings for these measures were all

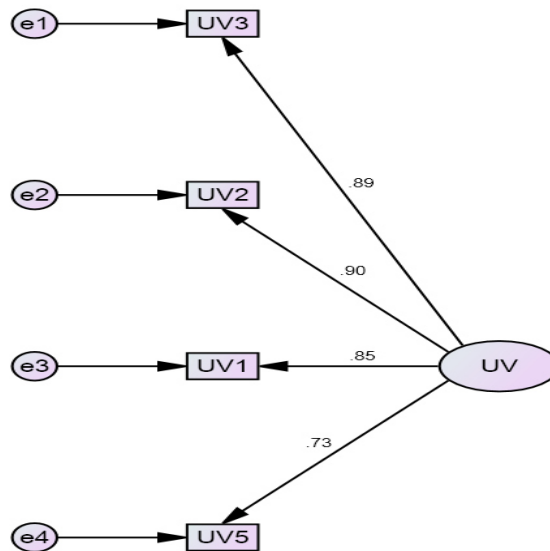
higher than the recommended level of .50. Standardized parameter estimates for these measures were deemed to be statistically significant ($P < 0.001$).

5.7.1.5 Utilitarian Value

As shown in table 5.26, the CFA analysis was conducted with utilitarian value being measured using 5 items (UV1 to UV5).

Table 5.26: Utilitarian Value items and their description		
Original Item	Label Item	Item Deleted
Effective	UV1	
Helpful	UV2	
Functional	UV3	
Necessary	UV4	Deleted
Practical	UV5	

The standardized estimations for the hypothesized model showed that all the parameters were highly significant ($P < 0.001$). The modified measurement model was found to fit the data adequately except one of the goodness-of-fit indices (RMSEA). The chi-square was 30.802, Degrees of freedom = 2, Probability level = .000, CMIN/DF=15.401. The GFI was .979, AGFI=.894, RMSEA=.140, NFI=.985, CFI=.986, TLI =.957. Because one of the goodness of-fit indices was not within the recommended level (RMSEA), and the communality in the EFA for UV4 was less than the recommended level of .30 (was not within the acceptable level, the item UV4 was deleted. Even though the chi-square is still significant, these values suggest that this model fits adequately to the data. As discussed before, it is commonly accepted that the chi-square estimate would potentially reject valid models in large sample size (Bagozzi and Yi, 1988).

Figure 5-13: A CFA Measurement Model of Utilitarian Value

As shown in Figure 5.13, the modified model was tested with four indicators measuring utilitarian value. The standardized factor loadings for these measures were all higher than the recommended level of .50. Standardized parameter estimates for these measures were deemed to be statistically significant ($P < 0.001$).

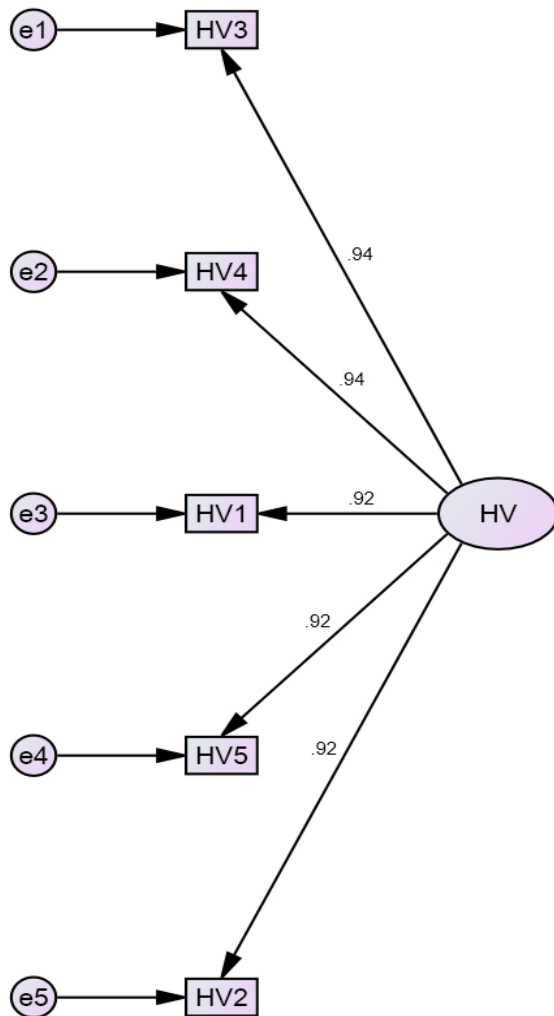
5.7.1.6 Hedonic Value

As shown in table 5.27, the CFA analysis was conducted with hedonic value measured using 5 items (HV1-HV5).

Table 5.27: Hedonic Value items and their description

Original Item	Label Item	Item Deleted
Fun	HV1	
Exciting	HV2	
Delightful	HV3	
thrilling	HV4	
Enjoyable	HV5	

The initial standardized estimations for the hypothesized model showed that all the parameters were highly significant ($P < 0.001$). The model indices indicated that this measurement model did not adequately fit the data. The chi-square was 43.352, Degrees of freedom = 5, Probability level = .000, CMIN/DF = 8.670. The GFI was .976, AGFI = .929, RMSEA = .102, NFI = .991, CFI = .992, TLI = .984. Even though the chi-square is still significant, these values suggest that this model fits adequately to the data. However, it is commonly accepted that the chi-square estimate would potentially reject valid models in large sample size (Bagozzi and Yi, 1988).

Figure 5-14: A CFA Measurement Model of Hedonic Value

As presented in Figure 5-14, the model was represented with five indicators of hedonic value. The standardized factor loadings for these measures were all high (above .50). Standardized parameter estimates for these measures were deemed to be statistically significant ($P < 0.001$).

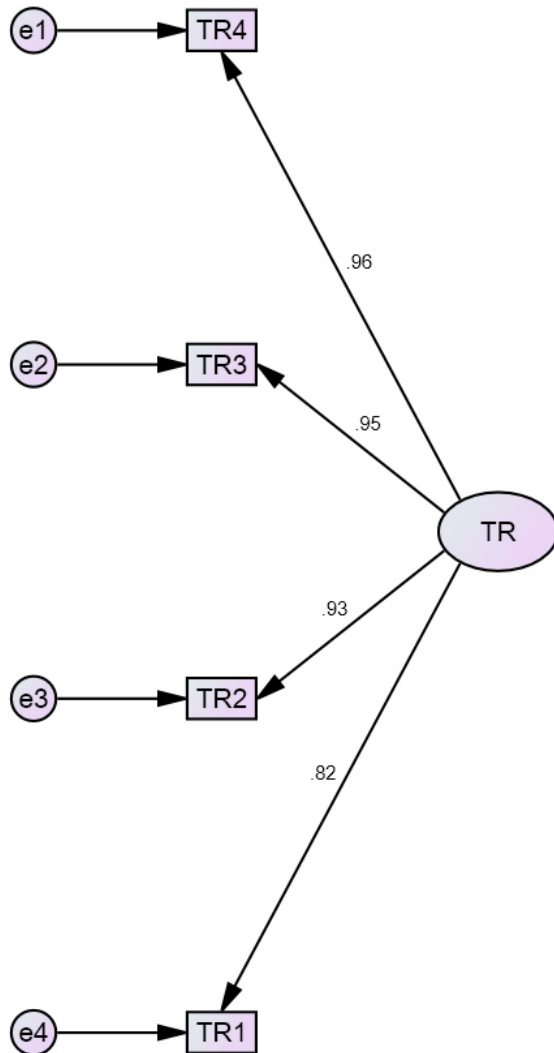
5.7.1.7 Trust in Resolution Ability

As shown in table, 5.28 the CFA analysis was conducted with trust in resolution ability measured using 4 items (TR1-TR4).

Table 5.28: Trust in resolution ability items and their description		
Original Item	Label Item	Item Deleted
I could count on the service provider that they would do the right thing for me.	TR1	
I had faith that the service provider would solve my problem.	TR2	
I completely trusted the service provider that they were capable of solving my problem.	TR3	
I had great confidence that the service provider would find a solution.	TR4	

The measurement model was found to fit the data adequately except one of the goodness-of-fit indices (RMSEA). The chi-square was 67.492, Degrees of freedom = 2, Probability level = .000, CMIN/DF= 33.746. The GFI was .955, AGFI= .955, RMSEA =.211, NFI=.981, CFI=.981, TLI =.944. Standardized parameter estimates were all significant (P<0.01). It is commonly accepted that the chi-square estimate would potentially reject valid models in large sample size (Bagozzi and Yi, 1988).

Figure 5-15: A CFA Measurement Model of Trust in resolution ability



As presented in Figure 5-15, the model was represented with five indicators of trust in resolution ability. The standardized factor loadings for these measures were all high (above

.50). Standardized parameter estimates for these measures were deemed to be statistically significant ($P < 0.001$).

5.7.1.8 Negative Discontent Emotions

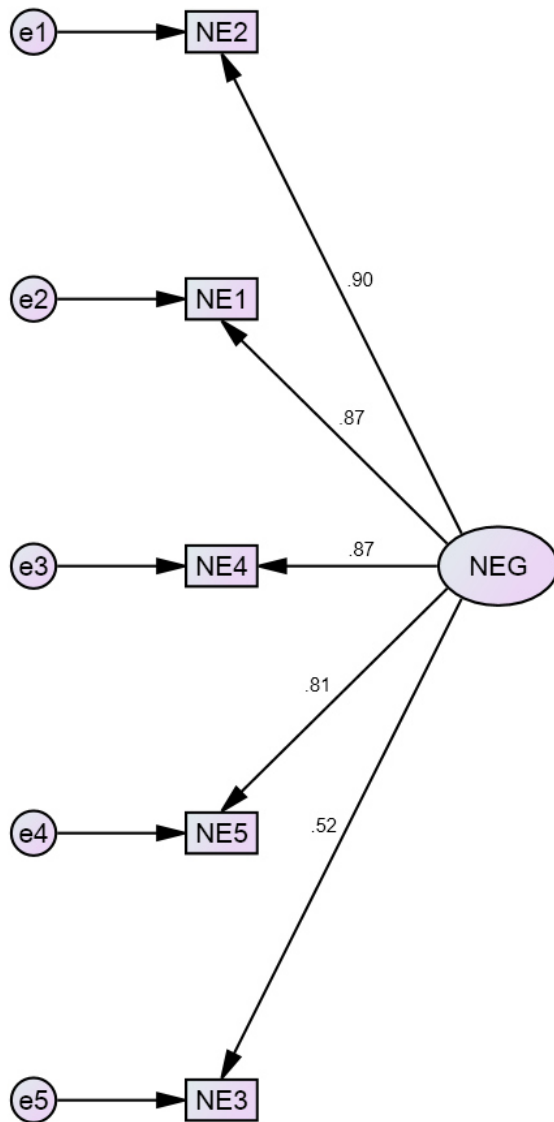
As shown in table 5.29, the CFA analysis was conducted with negative emotions discontent being measured using 5 items (NE1 to NE5).

Table 5.29: Negative Discontent Emotions items and their description

Original Item	Label Item	Item Deleted
Angry	NE1	
In a bad mood	NE2	
Upset	NE3	
Sad	NE4	
Annoyed	NE5	

The standardized estimations for the hypothesized model showed that all the parameters were highly significant ($P < 0.001$). The measurement model was found to fit the data adequately. The chi-square was 23.883, Degrees of freedom = 5, Probability level = .000, CMIN/DF=4.777. The GFI was .988, AGFI=.963, RMSEA=.071, NFI=.990, CFI=.992, TLI =.984. As mentioned before, it is commonly accepted that the chi-square estimate would potentially reject valid models in large sample size (Bagozzi and Yi, 1988).

Figure 5-16: A CFA Measurement Model of Negative Discontent Emotions



As presented in Figure 5.16, the model was represented with five indicators of negative discontent emotions. The standardized factor loadings for these measures were all

high (above .50). Standardized parameter estimates for these measures were deemed to be statistically significant ($P < 0.001$).

5.8 Overall Measurement Model Evaluation

After estimating each construct as described above, the measurement model for all constructs without constraining the covariance matrix of the constructs was estimated. In other words, a covariance is estimated to connect each latent construct with every other latent construct (see Figure 5.17). It is important to notice that because motivation (extrinsic and intrinsic) it was calculated as a single score, it was not included in the CFA. Instead, the CFA was performed on the other four variables, and extrinsic and intrinsic motivation were included again in structural equation model. In order to calculate the extrinsic and intrinsic motivation I used its mathematical equation. Thus extrinsic motivation was calculated:

$$M_{1-740} = \sum_{j=1-3}^3 E_{ij} \times \left(\sum_{k=1-5}^5 I_{jk} \times V_k \right)$$

Similarly, intrinsic motivation was calculated:

$$M_{1-740} = \sum_{j=1-3}^3 E_{ij} \times \left(\sum_{k=1-5}^5 I_{jk} \times V_k \right)$$

Thus for extrinsic motivation I had:

$$(1) E_1 \times [(I_1 \times V_1) + (I_2 \times V_2) + (I_3 \times V_3) + (I_4 \times V_4) + (I_5 \times V_5)]$$

$$(2) E_2 \times [(I_1 \times V_1) + (I_2 \times V_2) + (I_3 \times V_3) + (I_4 \times V_4) + (I_5 \times V_5)]$$

$$(3) E_3 \times [(I_1 \times V_1) + (I_2 \times V_2) + (I_3 \times V_3) + (I_4 \times V_4) + (I_5 \times V_5)]$$

Last, I added up all the numerical representations (1)+(2)+(3), and then I had generated extrinsic motivation based on a single score.

Similarly, for intrinsic motivation I had:

$$(1) E_1 \times [(I_1 \times V_1) + (I_2 \times V_2) + (I_3 \times V_3) + (I_4 \times V_4) + (I_5 \times V_5)]$$

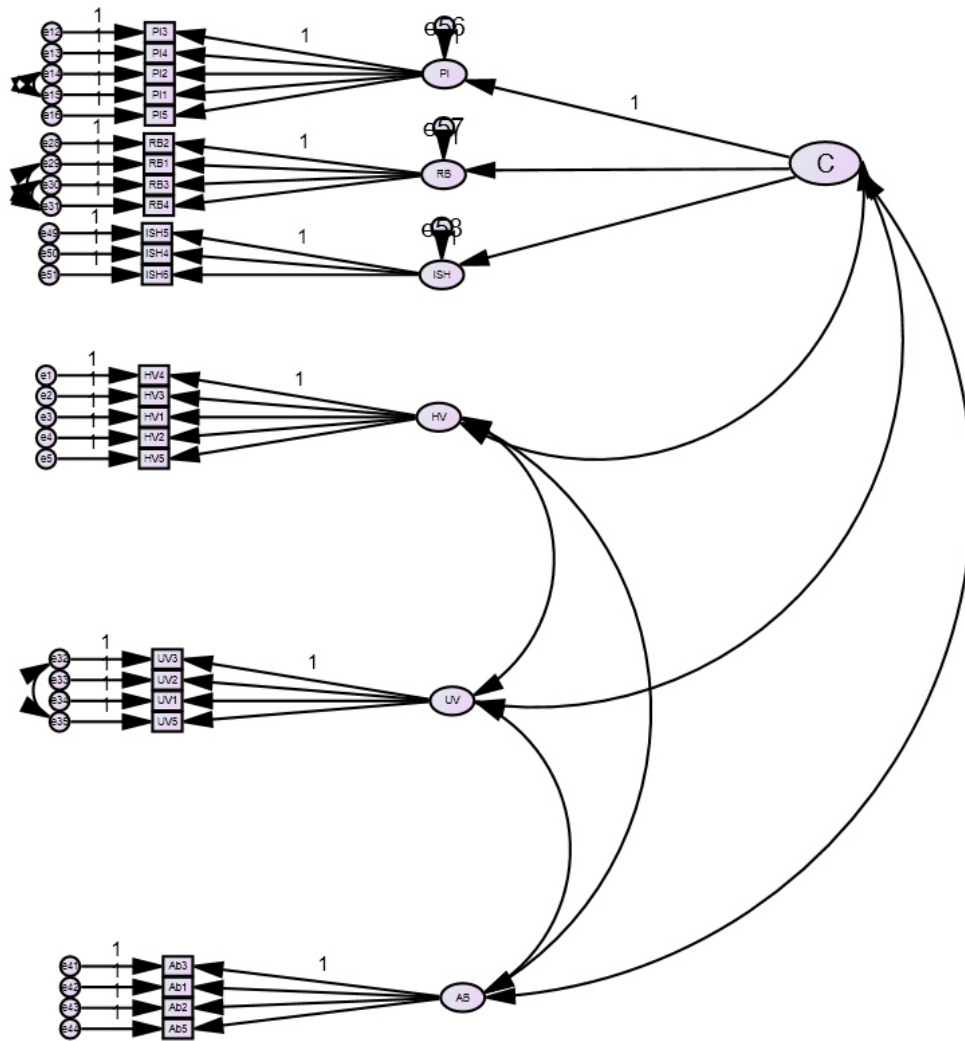
$$(2) E_2 \times [(I_1 \times V_1) + (I_2 \times V_2) + (I_3 \times V_3) + (I_4 \times V_4) + (I_5 \times V_5)]$$

$$(3) E_3 \times [(I_1 \times V_1) + (I_2 \times V_2) + (I_3 \times V_3) + (I_4 \times V_4) + (I_5 \times V_5)]$$

Last, I added up all the numerical representations (1)+(2)+(3), and then I had generated intrinsic motivation based on a single score.

Overall measurement model contained four constructs with a minimum of four indicators per factor. The assessment of model fit for the overall measurement model was done and the overall measurement model was found to fit the data adequately. The chi-square was significant (Chi-square =598.985, Degrees of freedom =262, Probability level = .000, CMIN/DF= 2.286 N = 740). The GFI was .938, AGFI = .924, RMSEA = .042, NFI= .966, CFI= .981, TLI =.978. Even though the chi-square is still significant, these values suggest that this model fits adequately to the data. The standardized factor loadings for these measures were all high (above .50). Standardized parameter estimates for these measures were deemed to be statistically significant ($P < 0.001$).

Figure 5-17: Overall Measurement Model



The results of descriptive statistics of measurement scales are showed in Table 5.30, and the results of zero-order correlations between variables are showed in Table 5.31.

Table 5.30: Descriptive Statistics of Measurement Scale

Variable	Number of Items	Mean	SD
Consumer value co-recovery in-role behavior	12	69.94	11.02
Ability to co-recover	4	19.78	5.32
Utilitarian value	4	20.69	5.41
Hedonic value	5	12.9	8.12

Table 5.31: Zero-Order Correlations Between Variable

		AB	UV	HV	CR
AB	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	740			
UV	Pearson Correlation	.477**	1		
	Sig. (2-tailed)	.000			
	N	740	740		
HV	Pearson Correlation	.174**	.231**	1	
	Sig. (2-tailed)	.000	.000		
	N	740	740	740	
CR	Pearson Correlation	.249**	.362**	-.156**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	740	740	740	740

** . Correlation is significant at the 0.01 level (2-tailed).

Notes: AB: Ability to co-recover, UV: Utilitarian Value, HV: Hedonic Value; CR: Co-recovery in-role behavior. N =740

As summarized in table 5.31, to address whether ability to co-recover, utilitarian and hedonic value are related to co-recovery in-role behavior, zero-order correlations among these three variables were computed. Ability to co-recover was positively related to co-recovery in-role behavior ($r(740) = .249, p < .01$), hedonic value ($r(740) = .174, p < .01$) and utilitarian value ($r(740) = .477, p < .01$). Further, utilitarian value was positively related to co-recovery in-role behavior ($r(740) = .362, p < .01$) and hedonic value ($r(740) =$

.231, $p < .01$). Last, hedonic value was negatively related to co-recovery in-role behavior ($r(740) = -.156, p < .05$).

5.9 Measurement invariance analyses

After evaluating the fit of the measurement model the next step is to test invariance (Byrne, 2010). Since a prerequisite step before conducting multigroup analysis is the establishment of measurement invariance i.e to ensure that the variables in the measurement model are equal in different samples (Steenkamp and Baumgartner, 1998), thus I started with tests of measurement invariance across different moderating groups. In order to assess measurement invariance, a multi-group confirmatory factor analyses are performed MGFA since is one of the most widely used methods to test for measurement invariance (Steenkamp and Baumgartner, 1998). In MGCFA the theoretical model is compared with the observed structure across groups and then with the constrained model (which entails adding parameters constraint one at a time) which in turn is compared with a nested model (Milfont and Fischer, 2010) and so on. MGCFA follows a hierarchical approach in which each model is compared with the previous model and is tested only if the previous model has been shown to be equivalent across groups, thus measurement test becomes increasingly restrictive (Milfont and Fischer, 2010). Furthermore, although measurement test of invariance or equivalence is mainly based on the difference of chi-square (Δdf) between two nested models however additional indexes such as CFI, TLI, IFI, and RMSEA and their differences were used as incremental fit indices to calculate improvements between models and to assess invariance (Steenkamp and Baumgartner, 1998; Milfont and Fischer, 2010).

Although there are several invariance levels (see Steenkamp and Baumgartner, 1998; Milfont and Fischer, 2010), In this dissertation I measured three levels of invariance: 1) configural invariance, 2) metric invariance and 3) scalar invariance, since these three models are necessary to compared scores across groups while the additional tests are optional (Milfont and Fischer, 2010). Configural invariance indicates that respondents from different group conceptualize the constructs in the same way, metric invariance indicates if different groups respond to items in the same way and scalar or intercept invariance indicates if individuals who have the same score on the latent construct would obtain the same score on the observed variable regardless on their group membership (Milfont and Fischer, 2010).

Below is the description of each level of invariance between the measurement model and the different moderating groups.

5.9.1 Measurement Invariance Tests for low and high blamers

For the measurement model, the similarity of the model across the two groups of blamers was tested through multigroup measurement invariance models: configural invariance, full metrics invariance, and intercept invariance models (Steenkamp and Baumgartner, 1998). The configural invariance model was supported, as satisfactory levels of fit for CFI, TLI, IFI, and RMSEA were achieved ($\chi^2(524)= 1089.904$; $p<.000$; CFI=.967; TLI=.962; IFI=.967; RMSEA=.038) (Hu and Bentler, 1995). This configural invariance model was compared to the full metrics invariance model constraining the factor loadings to be equal across groups, and the fit difference between the two models was not significant ($\Delta\chi^2=22.809$, $\Delta df=21$, $p>.001$). Moreover, the model fit of the full metrics invariance model was not worse than that of the configural invariance model ($\Delta CFI=.000$, $\Delta TLI=-.002$, $\Delta IFI=.000$, $\Delta RMSEA=.000$). As the third step, the intercept invariance model, constraining intercepts of all observed items to be equal, was compared to the full metrics invariance model. The fit difference between the two models was somewhat significant ($\Delta\chi^2=117.134$, $\Delta df=28$, $p<.001$), but the model fit of the intercept invariance model was not worse than those of the full metrics invariance model ($\Delta CFI=.005$, $\Delta TLI=.005$, $\Delta IFI=.004$, $\Delta RMSEA=-.002$), showing that the difference of CFI was less than .01 (Cheung and Rensvold, 2002) and RMSEA was overlapped in 90% confidence intervals (Cadiz, Sawyer, and Griffith, 2009; Wang and Russell, 2005). Using Cheung and Rensvold's (2002) criterion (i.e CFA change less than .01 as evidence of invariance), and given that RMSEA was overlapped in 90% confidence intervals (Cadiz, Sawyer, and Griffith, 2009; Wang and Russell, 2005), the similarity between the full metrics invariance model and the intercept invariance model was confirmed, in support of scalar invariance.

Table 5.32: Measurement Invariance Tests for low and high blamers

Model	χ^2	χ^2 / df	RMSEA (90%CI)	$\Delta \chi^2$	CFI	TLI	IFI	Comparison	Decision
	(df)		($\Delta RMSEA$)	(Δdf)	(ΔCFI)	(ΔTLI)	(ΔIFI)		
Model 1:	1089.904	2.080	0.038	----- --	0.967	0.962	0.967		
Full	(524)				-----	-----	-----		Accept

Chapter 5. Data Analysis and Results

configural invariance									
Model 2:	1112.713	2.042	0.038	22.809	0.967	0.964	0.967	Model 1 vs	
Full metric invariance	(545)		.000	(21)	.000	-.002	.000	Model 2	Accept
Model 3:	1197.227		0.040	84.514	0.962	0.959	0.963	Model 2 vs	
Full scalar invariance	549	2.181	-.002	(4)	.005	0.004	0.004	Model 3	Accept

5.9.2 Measurement Invariance Tests for low and high role clarity

For the measurement model, the similarity of the model across the two groups of high and low role clarity was tested through multigroup measurement invariance models: configural invariance, full metrics invariance, and intercept invariance models (Steenkamp and Baumgartner, 1998). The configural invariance model was supported, as satisfactory levels of fit for CFI, TLI, IFI, and RMSEA were achieved ($\chi^2(524)= 1066.422$; $p<.000$; CFI=.967; TLI=.963; IFI=.968; RMSEA=.037) (Hu and Bentler, 1995), in support of configural variance. As the configural invariance was supported, this model was compared to the full metrics invariance model constraining the factor loadings to be equal across groups. Although this model has good fit indices e.g $\chi^2/df=2.146 < 3$; RMSEA= 0.039 <0.08 ; CFI = 0.962 > 0.95 , the difference between the models was significant ($\Delta\chi^2=111.637$, $\Delta df=25$, $p<.001$), indicating that the imposition of constraints resulted in statistically significance increases in the fit of constrained model compared to unconstrained model. However, the model fit of the full metric invariance model was not worse than those of the configural invariance model ($\Delta CFI=-.005$, $\Delta TLI=.004$, $\Delta IFI=.006$, $\Delta RMSEA=-.002$), showing that the difference of CFI was less than .01 (Cheung and Rensvold, 2002) and RMSEA was overlapped in 90% confidence intervals (Cadiz, Sawyer, and Griffith, 2009; Wang and Russell, 2005). Thus the overall results indicate the viability of constraining the factor loading to be the same across the groups, in support of full metrics invariance. As the third step, the intercept invariance model, constraining intercepts of all observed items to be equal, was compared to the full metrics invariance model. The fit difference between the two models was significant ($\Delta\chi^2=214.133$, $\Delta df=2$, $p<.001$), and the model fit of the intercept invariance model was worse than those of the full metrics invariance model ($\Delta CFI=.012$,

Chapter 5. Data Analysis and Results

$\Delta TLI=.14$, $\Delta IFI=.012$, $\Delta RMSEA=-.006$). However, since the difference of CFI was more than .01 (Cheung and Rensvold, 2002) consequently scalar invariance is not supported.

Although the model for scalar invariance was rejected, however this is no reason to exclude the measurement model from further analysis for two reasons. First, scalar invariance is not required because no absolute comparisons of scale scores are conducted (Steenkamp and Baumgartner, 1998). Second, scalar invariance is a very strict condition and most researchers argue that it is sufficient to test for configural and metric invariance in order to conduct further analyses (e.g Le Bon and Merunka 2006; Keiningham *et al.*, 2015; Walsh *et al.*, 2009).

Table 5.33: Measurement Invariance Tests for low and high role clarity

Model	χ^2	χ^2 / df	RMSEA (90%CI)	$\Delta \chi^2$	CFI	TLI	IFI	Comparison	Decision
	(df)		($\Delta RMSEA$)	(Δdf)	(ΔCFI)	(ΔTLI)	(ΔIFI)		
Model 1:	1066.42	2.035	.037	-----	0.967	0.963	0.968		
Full configural invariance	(524)				-----	-----	-----		Accept
Model 2:	1178.05	2.146	.039	111.637	0.962	0.959	0.962	Model 1 vs	
Full metric invariance	549		-.002	(25)	-.005	.004	006	Model 2	Accept
Model 3:	1392.19		0.045	214.133	0.950	0.945	0.950	Model 2 vs	
Full scalar invariance	(551)	2.527	-0.006	(2)	0.012	0.14	0.012	Model 3	Reject

5.9.3 Measurement Invariance Tests for low and high negative discontent-emotions

For the measurement model, the similarity of the model across the two groups those with lower negative discontent emotions and those with higher negative discontent emotions was tested through multigroup measurement invariance models: configural invariance, full metrics invariance, and intercept invariance models (Steenkamp and Baumgartner, 1998). The configural invariance model was supported, as satisfactory levels of fit for CFI, TLI, IFI, and RMSEA were achieved ($\chi^2(524)= 995.675$; $p<.000$; CFI=.973; TLI=.969; IFI=.973; RMSEA=.035) (Hu and Bentler, 1995), in support of configural variance, (see table 5.34).

Table 5.34: Measurement Invariance Tests for low and high negative-dicontent emotions

Model	χ^2	χ^2 /df	RMSEA (90%CI)	$\Delta \chi^2$	CFI	TLI	IFI	Comparison	Decision
	(df)		(Δ RMSEA)	(Δ df)	(Δ CFI)	(Δ TLI)	(Δ IFI)		
Model 1:	995.675	1.900	0.035	-----	0.973	0.969	0.973		
Full configural invariance	(524)				-----	-----	-----		Accept
Model 2:	1044.016	1.902	0.035	48.341	0.972	0.969	0.972	Model 1 vs	
Full metric invariance	549		.000	(25)	.001	.000	.001	Model 2	Accept
Model 3:	1063.947		0.036	19.931	0.970	0.967	0.971	Model 2 vs	
Full scalar invariance	(543)	1.959	-0.001	(6)	0.002	0.002	0.001	Model 3	Accept

As the configural invariance was supported, this model was compared to the full metrics invariance model constraining the factor loadings to be equal across groups. Although this model has good fit indices e.g $\chi^2/df=1.902 < 3$; RMSEA= 0.035 <0.08 ; CFI = 0.972 > 0. 95, the difference between the models was significant ($\Delta\chi^2=48.41$, $\Delta df=25$, $p<.001$), indicating that the imposition of constraints resulted in statistically significance increases in the fit of constrained model compared to unconstrained model. However, the model fit of the full metric invariance model was not worse than those of the configural

invariance model ($\Delta CFI=.001$, $\Delta TLI=.000$, $\Delta IFI=.001$, $\Delta RMSEA=.000$), showing that the difference of CFI was less than .01 (Cheung and Rensvold, 2002) and RMSEA was overlapped in 90% confidence intervals (Cadiz, Sawyer, and Griffith, 2009; Wang and Russell, 2005). Thus the overall results indicate the viability of constraining the factor loading to be the same across the groups, in support of full metrics invariance. Last the intercept invariance model, constraining intercepts of all observed items to be equal, was compared to the full metrics invariance model. The fit difference between the two models was somewhat significant ($\Delta\chi^2=19.931$, $\Delta df=6$, $p<.001$), but the model fit of the intercept invariance model was not worse than those of the full metrics invariance model ($\Delta CFI=.002$, $\Delta TLI=.002$, $\Delta IFI=.001$, $\Delta RMSEA=-.001$), showing that the difference of CFI was less than .01 (Cheung and Rensvold, 2002) and RMSEA was overlapped in 90% confidence intervals (Cadiz, Sawyer, and Griffith, 2009; Wang and Russell, 2005), in support of scalar variance.

5.9.4 Measurement Invariance Tests for low and high negative concern-emotions

For the measurement model, the similarity of the model across the two groups those with lower negative concern emotions and those with higher negative concern emotions was tested through multigroup measurement invariance models: configural invariance, full metrics invariance, and intercept invariance models (Steenkamp and Baumgartner, 1998). The configural invariance model was supported, as satisfactory levels of fit for CFI, TLI, IFI, and RMSEA were achieved ($\chi^2(524)= 1021.129$; $p<.000$; $CFI=.972$; $TLI=.968$; $IFI=.972$; $RMSEA=.036$) (Hu and Bentler, 1995), in support of configural variance, (see table 5.35).

Table 5.35: Measurement Invariance Tests for low and high negative concern- emotions

Model	χ^2	χ^2 /df	RMSEA (90%CI)	$\Delta \chi^2$	CFI	TLI	IFI	Comparison	Decision
	(df)		($\Delta RMSEA$)	(Δdf)	(ΔCFI)	(ΔTLI)	(ΔIFI)		
Model 1:	1021.12 9	1.949	.036	-----	0.972	0.968	0.972		
Full configural invariance	(524)				-----	-----	----- --		Accept
Model 2:	1087.00 6	1.980	0.036	65.877	0.970	0.967	0.970	Model 1 vs	

Chapter 5. Data Analysis and Results

Full metric invariance	549		.000	(25)	.002	.001	.002	Model 2	Accept
Model 3:	1038.579		0.035	48.427	0.972	0.969	0.972	Model 2 vs	
Full scalar invariance	(541)	1.920	0.001	(8)	-0.002	-0.002	-0.002	Model 3	Accept

As the configural invariance was supported, this model was compared to the full metrics invariance model constraining the factor loadings to be equal across groups. Although this model has good fit indices e.g $\chi^2/df=1.980 < 3$; RMSEA= 0.036 < 0.08 ; CFI = 0.970 > 0.95, the difference between the models was significant ($\Delta\chi^2=65.877$, $\Delta df=25$, $p<.001$), indicating that the imposition of constraints resulted in statistically significance increases in the fit of constrained model compared to unconstrained model. However, the model fit of the full metric invariance model was not worse than those of the configural invariance model ($\Delta CFI=.002$, $\Delta TLI=.001$, $\Delta IFI=.002$, $\Delta RMSEA=.000$), showing that the difference of CFI was less than .01 (Cheung and Rensvold, 2002) and RMSEA was overlapped in 90% confidence intervals (Cadiz, Sawyer, and Griffith, 2009; Wang and Russell, 2005). Thus the overall results indicate the viability of constraining the factor loading to be the same across the groups, in support of full metrics invariance. As the third step, the intercept invariance model, constraining intercepts of all observed items to be equal, was compared to the full metrics invariance model. The fit difference between the two models was significant ($\Delta\chi^2=48.427$, $\Delta df=8$, $p<.001$), but the model fit of the intercept invariance model was not worse than those of the full metrics invariance model ($\Delta CFI=-.002$, $\Delta TLI=-.002$, $\Delta IFI=-.002$, $\Delta RMSEA=.001$), showing that the difference of CFI was less than .01 (Cheung and Rensvold, 2002) and RMSEA was overlapped in 90% confidence intervals (Cadiz, Sawyer, and Griffith, 2009; Wang and Russell, 2005), in support of scalar variance.

5.9.5 Measurement Invariance Tests for low and high trusters

For the measurement model, the similarity of the model across the low and high trust groups was tested through multigroup measurement invariance models: configural invariance, full metrics invariance, and intercept invariance models (Steenkamp and Baumgartner, 1998). The configural invariance model was supported, as satisfactory levels of fit for CFI, TLI, IFI, and RMSEA were achieved ($\chi^2(524)= 1053.439$; $p<.000$; CFI=.968; TLI=.964; IFI=.968; RMSEA=.037) (Hu and Bentler, 1995), in support of configural variance, (see table 5.36).

Table 5.36: Measurement Invariance Tests for low and high trusters

Model	χ^2	χ^2 /df	RMSEA (90%CI)	$\Delta \chi^2$	CFI	TLI	IFI	Comparison	Decision
	(df)		(Δ RMSEA)	(Δ df)	(Δ CFI)	(Δ TLI)	(Δ IFI)		
Model 1:	1053.43 9	2.010	0.037	-----	0.968	0.964	0.968		
Full configural invariance	(524)				-----	-----	-----		Accept
Model 2:	1174.37 9	2.139	0.039	120.94	0.962	0.959	0.962	Model 1 vs	
Full metric invariance	(549)		-.002	(25)	.006	.005	.006	Model 2	Accept
Model 3:	1017.92 3		0.035	156.456	0.971	0.968	0.971	Model 2 vs	
Full scalar invariance	(537)	1.896	0.004	(12)	-0.009	-0.009	-0.009	Model 3	Accept

As the configural invariance was supported, this model was compared to the full metrics invariance model constraining the factor loadings to be equal across groups. Although this model has good fit indices e.g $\chi^2/df=2.139 < 3$; RMSEA= 0.039 <0.08; CFI = 0.962 > 0. 95, the difference between the models was significant ($\Delta\chi^2=120.94$, $\Delta df=25$, $p<.001$), indicating that the imposition of constraints resulted in statistically significance increases in the fit of constrained model compared to unconstrained model. However, the model fit of the full metric invariance model was not worse than those of the configural invariance model (Δ CFI=.006, Δ TLI=.005, Δ IFI=.006, Δ RMSEA=-.002), showing that the difference of CFI was less than .01 (Cheung and Rensvold, 2002) and RMSEA was

overlapped in 90% confidence intervals (Cadiz, Sawyer, and Griffith, 2009; Wang and Russell, 2005). Thus the overall results indicate the viability of constraining the factor loading to be the same across the groups, in support of full metrics invariance. Last the intercept invariance model, constraining intercepts of all observed items to be equal, was compared to the full metrics invariance model. The fit difference between the two models was significant ($\Delta\chi^2=156.456$, $\Delta df=12$, $p<.001$), but the model fit of the intercept invariance model was not worse than those of the full metrics invariance model ($\Delta CFI=-.009$, $\Delta TLI=-.009$, $\Delta IFI=-.009$, $\Delta RMSEA=.004$), showing that the difference of CFI was less than .01 (Cheung and Rensvold, 2002) and RMSEA was overlapped in 90% confidence intervals (Cadiz, Sawyer, and Griffith, 2009; Wang and Russell, 2005), in support of scalar variance.

Based on the above analysis, the results demonstrate that the pre-conditions for conducting a multigroup analysis are satisfied in the present study. Evidence is provided for configural invariance, metric invariance, and scalar invariance. Specifically, evidence for measurement invariance is provided with regard to hedonic value, utilitarian value, ability to co-recover and the 3-factor model of co-recovery in-role behavior. Consequently, since establishment of measurement invariance is achieved we can continue in further analysis of the constructs as well as in the structural model and multi-group analysis.

5.10 Reliability and Validity of the Constructs

Before testing the hypotheses in the structural model (stage two), the reliability and validity of the underlying constructs were assessed (De Wulf *et al.*, 2001). For this purpose, the constructs included in confirmatory factor analysis were assessed for reliability using Cronbach's alpha, construct reliability (CR), and average variance extracted (AVE), and for validity using construct, convergent and discriminant.

I estimated convergent validity of scale items using Cronbach's alphas (α), composite reliabilities (CR), and average variances extracted (AVE) (Fornell and Larcker, 1981). Reliability of the measures was first assessed using Cronbach's coefficient alpha and then using confirmatory factor analysis (CFA). As for Cronbach's coefficient alpha, Table 5.37 shows that all the constructs exceed the suggested level of .70 (Byrne, 2010). In using confirmatory factor analysis, CR and AVE were calculated. The standardized CFA loadings for all scale items exceeded the minimum loading criterion of 0.50, and the composite

reliabilities of all factors also exceeded the recommended 0.70 level (Hair, *et al.*, 2006). In addition, the average variance-extracted values were above the threshold value of 0.50 (Muthen, 1994). Therefore, the scales used for the present study have high convergent validity.

Construct	Items	Standardized Loading	Cronbach's alpha(α)	CR	AVE
Consumer value co-recovery in-role behavior	ISH4	.87	0.93	0.829	0.626
	ISH5	.92			
	ISH6	.86			
	RB1	.90			
	RB2	.90			
	RB3	.80			
	RB4	.75			
	PI1	.86			
	PI2	.89			
	PI3	.94			
	PI4	.95			
PI5	.78				
Hedonic Value	HV1	.92	0.96	0.968	0.859
	HV2	.92			
	HV3	.94			
	HV4	.94			
	HV5	.92			
Utilitarian Value	UV1	.86	0.90	0.904	0.704
	UV2	.91			

	UV3	.86			
	UV5	.71			
Ability to co-recover	Ab1	.84	0.87	0.880	0.647
	Ab2	.83			
	Ab3	.82			
	Ab5	.73			

Fornell and Larcker (1981) suggest evaluating discriminant validity by calculating the square roots of the average variances extracted and comparing the values to the absolute values of the correlations with the additional measures in the model. The diagonal cells in Table 5.38 indicate the square root of the AVE for each construct. In each case, it exceeded the correlations in each corresponding column and row, in support of discriminant validity (Hair *et al.*, 2006).

Table 5.38: Discriminant Validity of Constructs

	1	2	3	4
1. Ability to co-recover	0.804			
2. Hedonic Value	0.186	0.927		
3. Utilitarian value	0.529	0.256	0.839	
4. Co-recovery in-role behavior	0.289	-0.268	0.350	0.792

Note: The diagonal cells are the square root of the AVE for each construct.

As presented in Table 5.38 the measures of each construct have not correlated too highly with other construct thus the square root of every AVE value (the diagonal cells) belonging to each latent construct is much larger than any correlation among any pair of latent constructs.

5.11 Stage Two: Structural Model (Testing of the Hypotheses)

After the analysis of the aforementioned measurement models for unidimensionality, reliability, construct validity, convergent validity, discriminant validity and overall measurement model fit, the second and the main stage is to perform the analysis of the structural model. The structural model has been defined as “the portion of the model that specifies how the latent variables are related to each other” (Arbuckle, 2005, *cited in* Byrne, 2010). The structural model aims to specify which latent constructs directly or indirectly influence the values of other latent constructs in the model (Byrne, 2010).

The purpose of the structural model in this thesis is to test the underlying hypotheses in order to partly answer the research questions. As presented in Table 5.39, these hypotheses were represented in eleven causal paths (H1-H6) to determine the relationships between the constructs under consideration. In the proposed theoretical model discussed in chapter three, the underlying constructs were classified into two classes, including the exogenous variable (ability to co-recover) and the endogenous constructs (extrinsic motivation, intrinsic motivation, consumer value co-recovery in-role behavior, utilitarian and hedonic value).

Table 5.39: Underlying Hypotheses (Direct Effect)	
HypothesesNo	Hypotheses content
H1a,b a) extrinsic, and b) intrinsic motivation → value co-recovery behavior	When consumers’ a) extrinsic, and b) intrinsic motivation increase, they will express more value co-recovery in-role behavior.
H2AB→CR	When consumers are better able to co-recover, they will express more value co-recovery in-role behavior.
H3a , b Ability →Ext.Motivation, Int. Motivation	A customer's level of ability influences a) extrinsic, and b) intrinsic motivation.
H5a,b CR→ UV, HV	A higher level of customer value co-recovery in-role behavior leads to greater a) utilitarian value, and b) hedonic value during the co-

	recovery process.
H6a,b AB → UV, HV	As the level of customer ability to co-recover increases, the consumer will perceive greater a) utilitarian value, and b) hedonic value.
Source: The researcher	

To evaluate the structural model, goodness-of-fit indices are examined to assess if the hypothesized structural model fits the data. If it did not fit, the requirement was to respecify the model until one was achieved that exhibited both acceptable statistical fit and indicated a theoretically meaningful representation of the observed data (Hair *et al.*, 2006; Kline, 2011). The evaluation of the structural model of this thesis is discussed below.

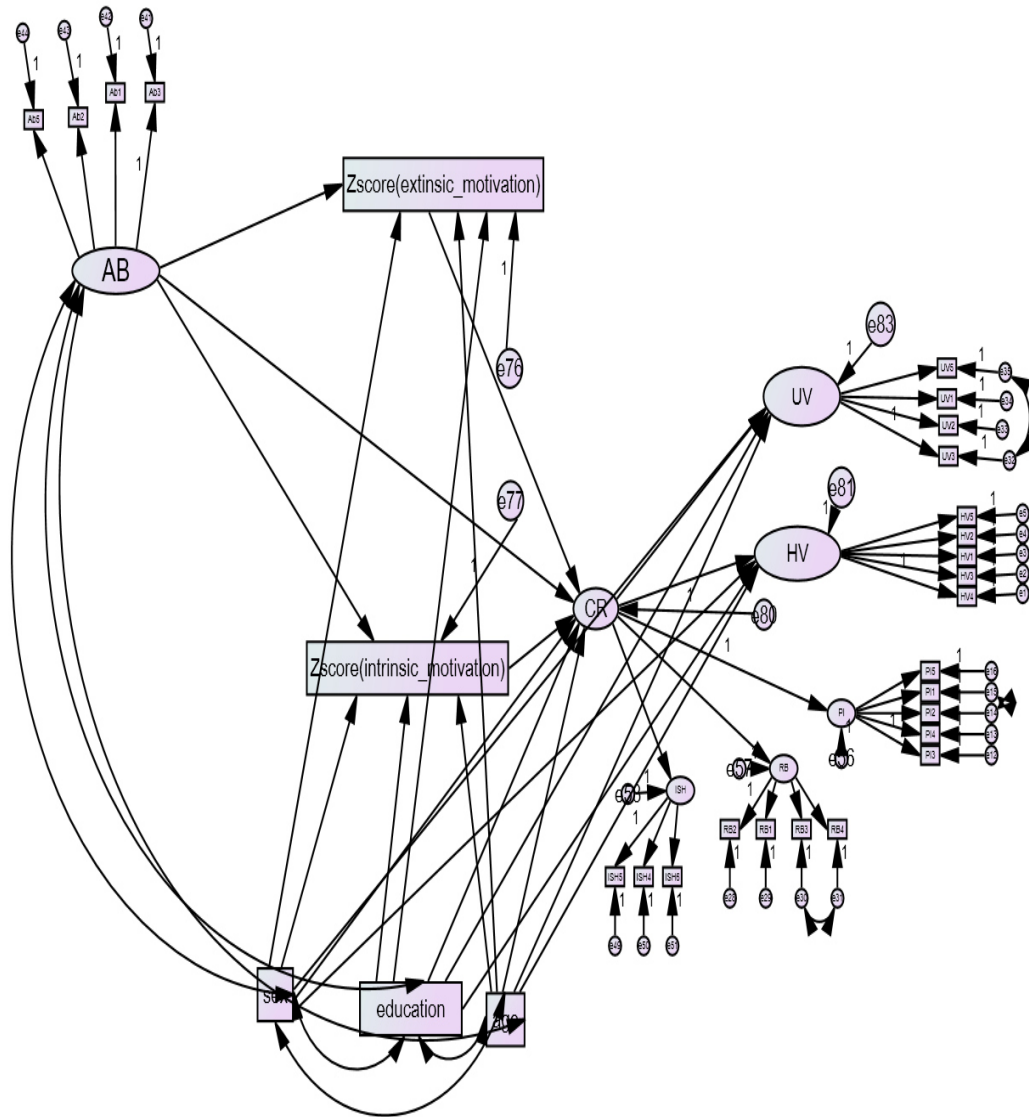
5.11.1 Structural Model One (The hypothesized model)

After checking the validity of the measurement model through CFA, the next step was to test the structural model to assess the proposed hypotheses. The analyses of the hypothesized structural model were conducted by testing the hypothesized model, which specified the nine casual relationships in Table 5.39. A necessary assumption of SEM is that the exogenous constructs are assumed to be correlated. This is because correlations between each pair of exogenous constructs must be estimated, even though no correlations are hypothesized (Hair *et al.*, 2006; Kline, 2011). However since in this study there was only one exogenous construct (ability to co-recover), the exogenous variable was co-varied with the control variables (age, gender, and education) (Dong *et al.*, 2008).

Endogenous constructs (extrinsic motivation, intrinsic motivation, consumer value co-recovery in-role behavior, utilitarian and hedonic value) have at least one single headed arrow leading to them. Straight arrows (or single-headed arrow) indicate causal relationships or paths, whilst the absence of arrows linking constructs implies that no causal relationship has been hypothesized. The error terms (e) represent random error due to measurement of the constructs they indicate. The parameter (E) represents the residual errors in the structural model resulting from random error and/or systematic influences, which have not been explicitly modeled.

The fit of model indices indicated that the hypothesized model did not fit to the data.

Figure 5-18: The hypothesized model

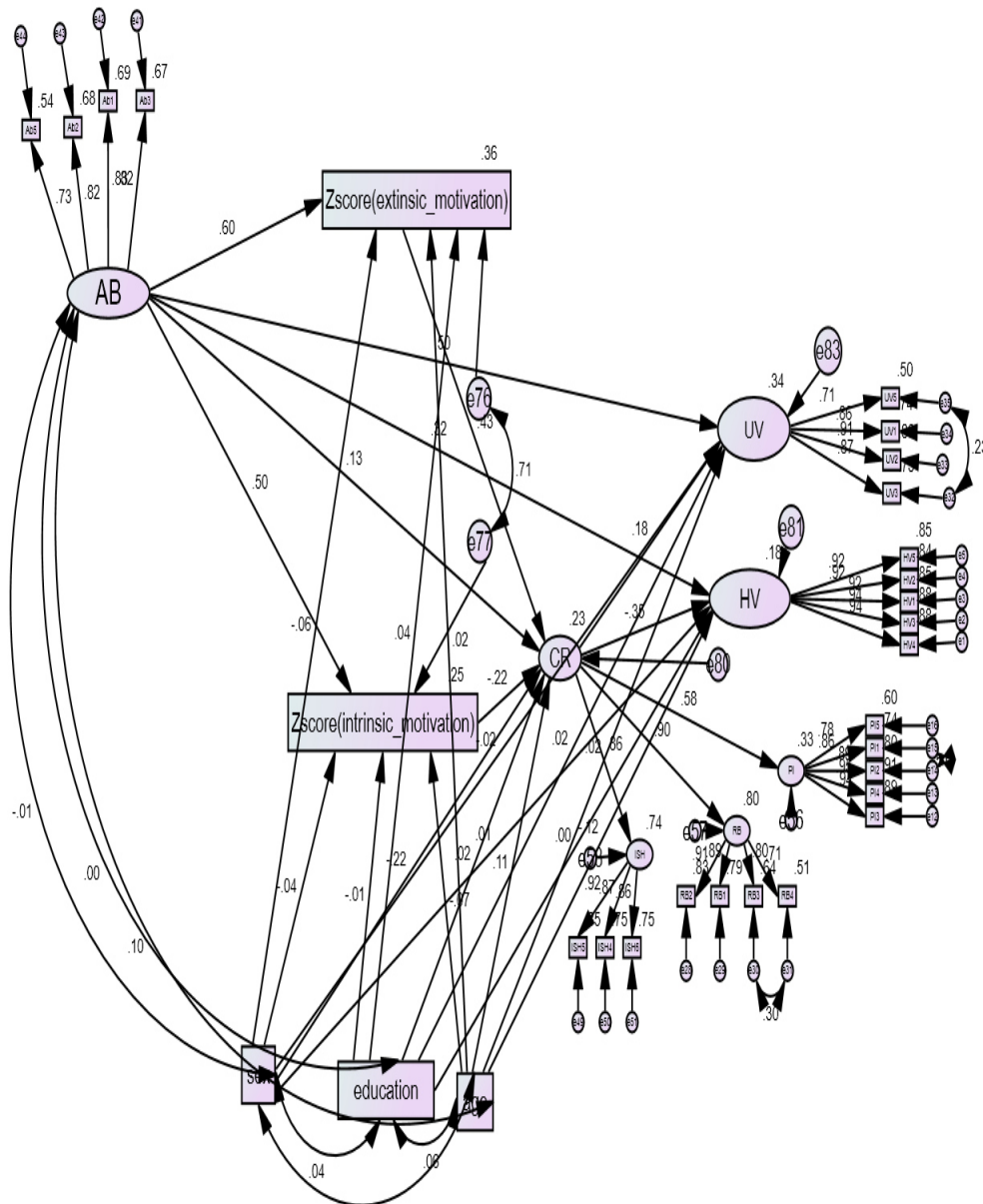


Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

5.11.2 Structural Model Two (The modified Structural Model)

As the hypothesized model did not fit to the data, Modification Indices (reported in text output of AMOS) showed that 2 paths should be added: $AB \rightarrow UV$, $AB \rightarrow HV$. Taking into account the theoretical basis of the model, then, we get Structural Model Two (The modified Structural Model, see Figure 5.19). These procedures were conducted based not only on statistical results, but also on theoretical justifications. Thus two more hypotheses were added (H6a,b) which in the beginning were not taken into account. Moreover based on modification indices I co-varied errors 76 and 77. Generally, although it is not permitted to co-vary errors of different latent variables, in the specification of the structural model, the residuals of the two mediators may co-vary (Preacher and Hayes, 2008). As Preacher and Hayes (2008) argue: "If path analysis or SEM is used to fit a multiple mediator model, as would typically be done, we recommend that residuals associated with the mediators be permitted to co-vary, p. 882."

Figure 5.19: The Modified Structural Model



Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

Table 5.40: Comparison of Two Structural Models		
Goodness-of-fit Indices	The Hypothesized Structural Model	The Modified Structural Model
Chi-Square(χ^2)	1624.670	899.021
Degrees of freedom(df)	376	373

CMIN/DF	4.321	2.410
Probability level	.000	.000
GFI	.876	.922
AGFI	.847	.903
NFI	.915	.953
CFI	.933	.972
TLI	.923	.967
RMSEA	.067	.044

According to the result of Table 5.40, I accept Structural Model Two (The modified Structural Model) as final model. Empirical model validation revealed good fit to the data, $\chi^2(373) = 899.021, p < 0.001$, $\chi^2/df = 2.410$, SRMR = 0.066, CFI = 0.972, TLI = 0.967, GFI = 0.922, AGFI = 0.903, and RMSEA = 0.044. Based on these results, I proceeded to test the hypotheses previously proposed.

5.12 Test of Hypotheses

Eight of the ten hypothesized paths are supported (Table 5.41). Most of the results were significant and the direction was as hypothesized. Hypothesis 1a posits that a consumer's extrinsic motivation positively relates to value co-recovery in-role behavior in service recovery. The results showed that hypothesis H1a was supported ($\beta = 0.426, p < 0.001$).

Hypothesis H1b posits that a consumer's intrinsic motivation positively relates to value co-recovery in-role behavior in service recovery. However, results showed that intrinsic motivation has a negative and significant effect on value co-recovery in-role behavior ($\beta = -0.220, p < 0.001$). Therefore, H1b was not supported.

Hypothesis 2 posits that consumer value co-recovery in-role behavior will be influenced by customers' level of ability to co-recover. The results showed that hypothesis 2 was supported ($\beta = 0.132, p < 0.01$).

Hypothesis 3a posits that a consumer's level of ability will influence extrinsic motivation. The results showed that hypothesis 3a was supported ($\beta = 0.597, p < 0.001$).

Hypothesis 3b posits that a consumer's level of ability will influence intrinsic motivation. The results showed that hypothesis 3b was supported ($\beta=0.502$, $p<0.001$).

Hypothesis H5a posits that a higher level of customer value co-recovery in-role behavior leads to greater utilitarian value during the co-recovery process. The results indicated that value co-recovery in-role behavior significantly and positively influences utilitarian value ($\beta=0.182$, $p<0.001$), supporting H5a.

Hypothesis H5b posits that a higher level of customer value co-recovery in-role behavior leads to greater hedonic value during the co-recovery process. The results indicated that value co-recovery in-role behavior had a negative effect on hedonic value ($\beta=-0.346$, $p<0.001$). Thus, H5b was not supported.

Table 5.41: Results of structural equation modelling

Hypotheses		Path Coefficient	Direction predicted	Std. err.	T-value
H1a	extrinsic motivation → value co-recovery behavior	.426	+	.04	6.118***
H1b	Intrinsic motivation → value co-recovery behavior	-.220	-	.04	-3.637***
H3a	Ability → Ext.Motivation	.597	+	.02	16.672***
H3b	Ability → Int. Motivation	.502	+	.02	13.590***
H2	AB → CR	.132	+	.02	2.622**

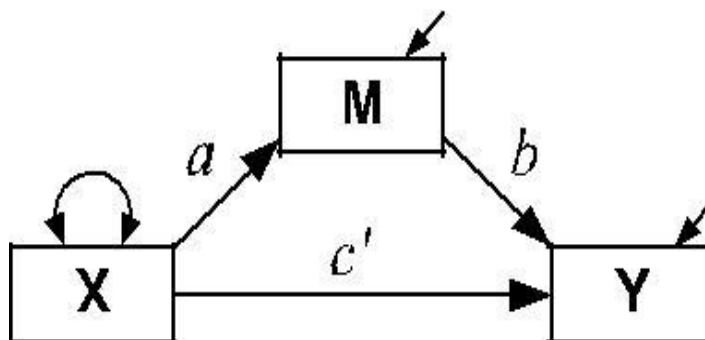
H5b	CR→HV	-.346	-	.10	-7.382***
H5a	CR→UV	.182	+	.07	4.432***
H6a	AB→UV	.497	+	.04	12.366***
H6b	AB→HV	.323	+	.05	8.043***

Note: *** $p < .001$, ** $p < .01$, * $p < .05$

5.13 Mediation Analysis

The increasing importance of statistical methods in marketing research reveals mediation analyses among the most popular (see Baron and Kenny 1986; Preacher and Hayes, 2004; Preacher and Hayes, 2008). Mediation refers to the psychological processes by which independent variables affect dependent variables (Rucker et al., 2011). More precisely a mediating variable transfers the effect of an independent variable on a dependent variable. As figure 5.20 shows the effect of X independent variable on Y dependent variable is explained by the M (mediating variable). Furthermore there are two types of mediation full and partial mediation. Full mediation exists when after finding a significant indirect effect from X to Y through M there is no longer a significant direct effect of X on Y, while if there remains a significant direct X to Y effect after controlling for the mediator, the mediator only partially mediates the X to Y effect (Rucker *et al.*, 2011).

Figure 5.20: Simple mediation Analysis



Source: Rucker *et al.*, (2011)

Baron and Kenney (1986), suggested three steps for mediation:

- Regress the direct effect of the independent on the dependent variable.
- Regress the mediator on the independent variable.
- Regress the dependent variable on both the mediator and independent variable.

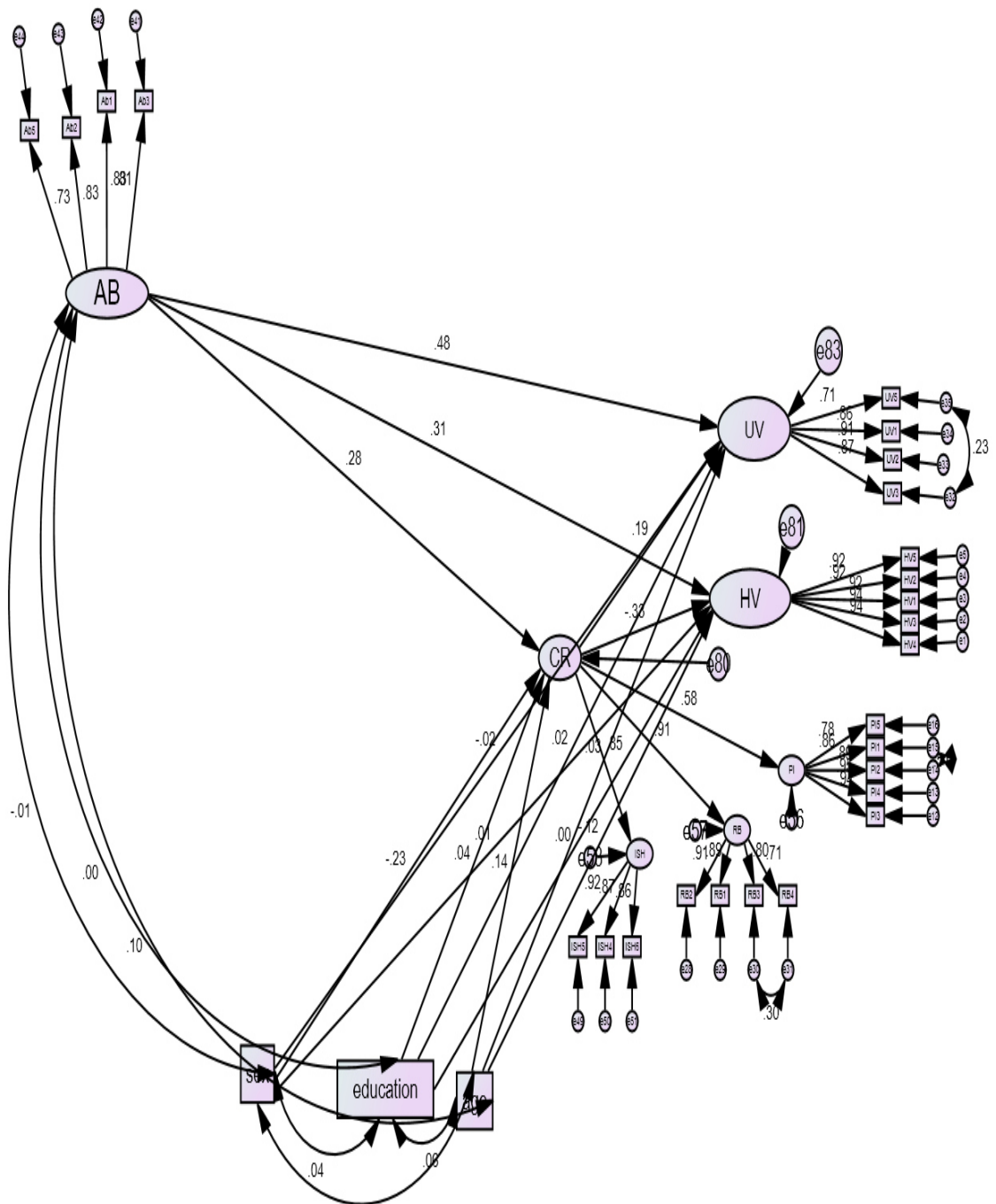
All the aforementioned relationships need to be statistically significant. However, some researchers recently (e.g Preacher and Hayes 2004; 2008) have challenged Baron and Kenney's (1986) mediation suggestions by omitting some steps. Moreover, researcher such as Preacher and Hayes (2004) recommended to use a bootstrapping approach to test for mediation. A bootstrapping technique may offer some benefits compared with the traditional techniques of hierarchical regression. Generally, bootstrapping method allows the researcher to assess the stability of parameter estimates and thereby report their values with a greater degree of accuracy (Byrne, 2010), while the strongest advantage of bootstrapping in SEM is “its ‘automatic’ refinement on standard asymptotic theories (e.g., higher-order accuracy) so that the bootstrap can be applied even for samples with moderate (but not extremely small) sizes” (Yung and Bentler, 1996, p. 223). Other advantages refer to its statistical power which does not rely on multivariate normality assumptions.

Although, Preacher and Hayes's (2008) propositions for investigating multiple mediation are based on bootstrapping procedures with the observed variables, this approach therefore cannot account for measurement error, as SEM does (Bartikowski and Walsh, 2009). In order to combine both the steps of Baron and Kenney (1986), with a bootstrapping method in this study I followed Mallinckrodt, Abraham, Wei, and Russell, (2006) procedures. Mallinckrodt *et al.*, (2006) described an alternative of Baron and Kenny (1986) approach, developed by Shrout and Bolger (2002) based on bootstrap resampling methods. Thus, I performed a bootstrapping analysis with 2000 samples, bias-corrected 95%, and indirect, direct, and total estimates of path coefficients (Hu and Wang, 2010; Mallinckrodt *et al.*, 2006). More precisely, I first estimated the direct path between ability and consumer value co-recovery in-role behavior in order to test the significance of the independent to dependent variable using a regression-based approach. In addition I tested the effect of independent variable (ability) to extrinsic and intrinsic motivation and last I tested the dependent variable (consumer value co-recovery in-role behavior) on both the mediators (intrinsic and extrinsic motivation) and independent variable (ability to co-recover).

5.13.1 Stage 1: Variable Analyses

In the first stage I estimated the path between ability to co-recover and consumer value co-recovery in-role behavior. Results (table 5.42) demonstrated from this test indicated a significant direct effect [$R^2 = .22$; $\beta = .27$, $p > .001$].

Figure 5-21: Direct effect without mediator



Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

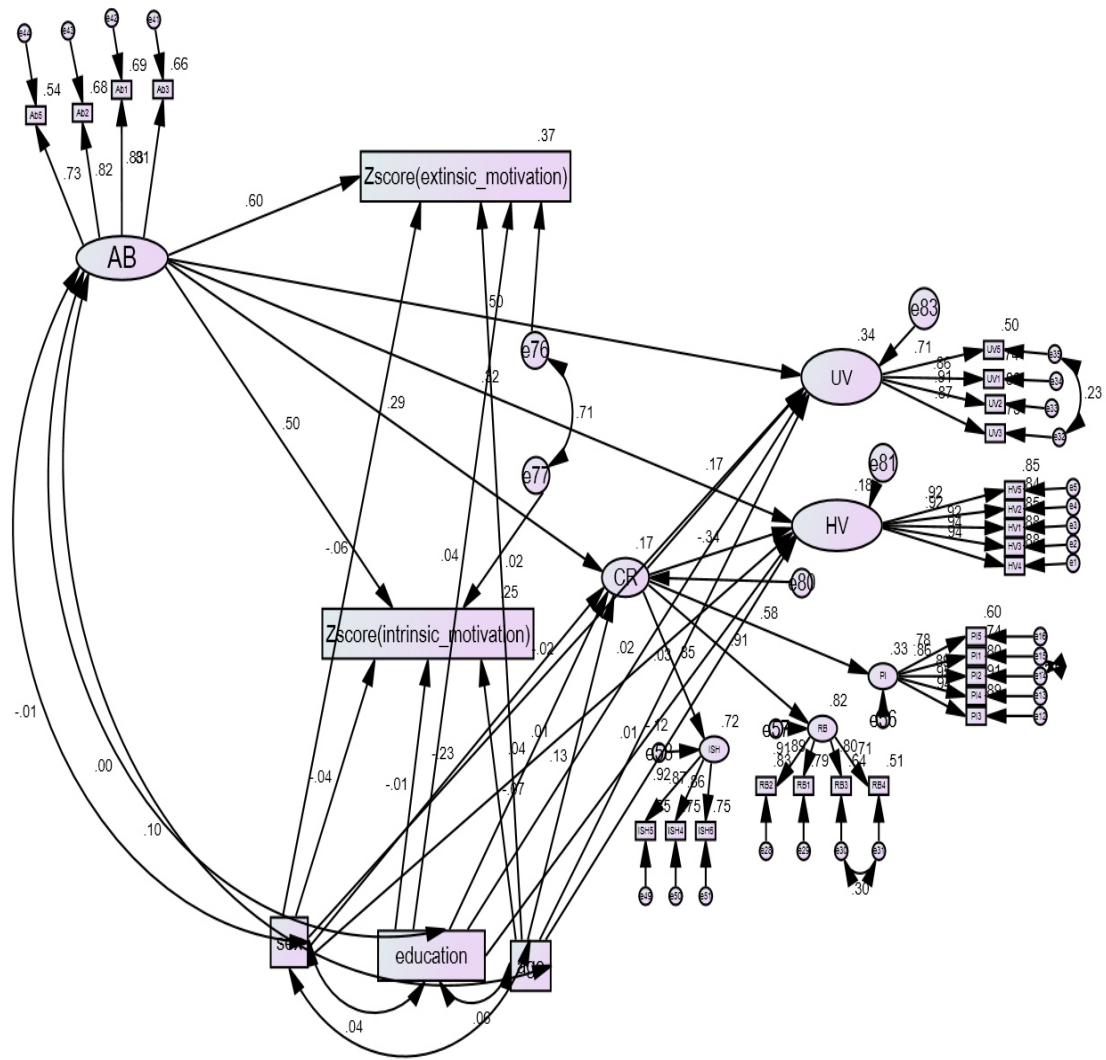
Table 5.42: Direct effect without mediator

Parameter	Direct effects model		
	Standardized coefficients	Variance	
AB→CR	.275***	R ² = .22	

5.13.2 Stage 2: Independent variable to mediators

In the second stage I tested the paths between ability to co-recover and the two mediators (extrinsic and intrinsic motivation). Results (table 5.43) demonstrated from this test indicated two significant direct effects from ability to co-recover on extrinsic [R² = .37; β = .60, p > .001], and intrinsic motivation [R² = .25; β = .50, p > .001].

Figure 5-22: Effect of ability to co-recover on extrinsic and intrinsic motivation



Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

Parameter	Direct effects model		
	Standardized coefficients	Variance	
AB→ext.motivation	.603***	R ² = .37	
AB→int.motivation	.504***	R ² = .25	

5.13.3 Stage 3: Independent variable to mediators

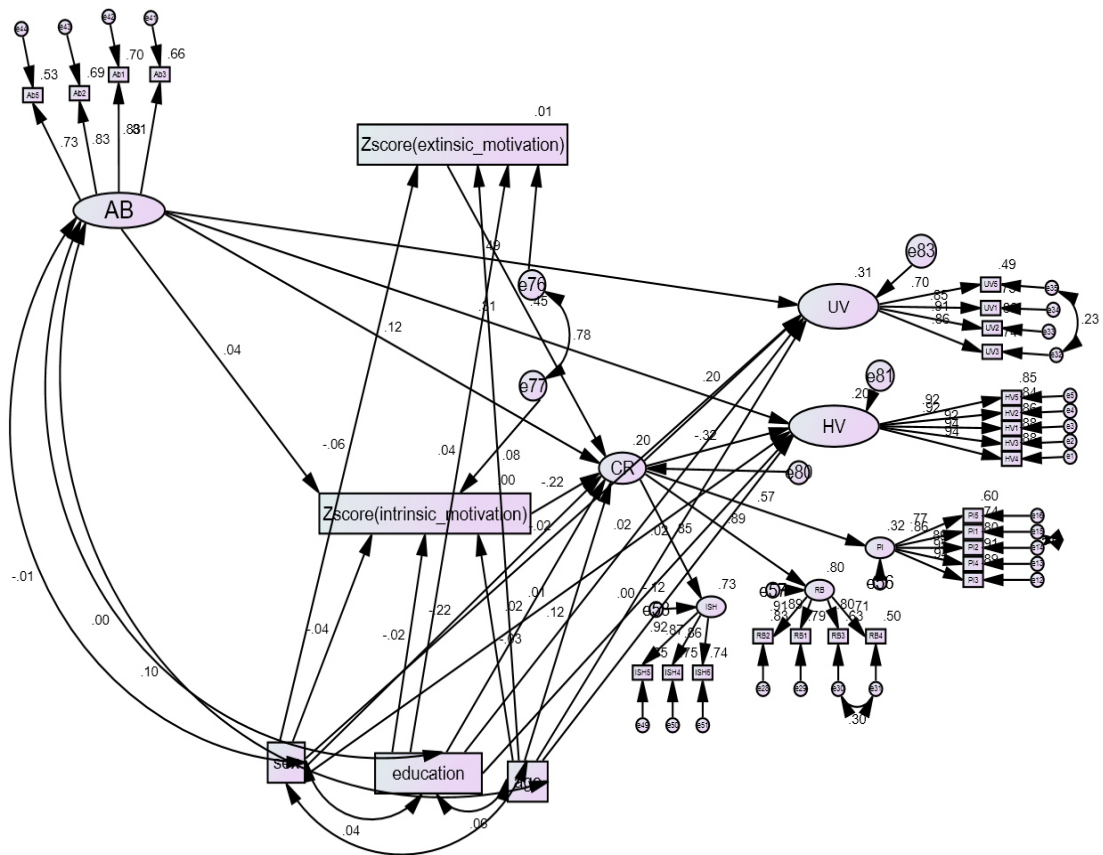
In this stage, I performed a bootstrapping analysis with 2000 samples, bias-corrected 95%, and indirect, direct, and total estimates of path coefficients (Hu and Wang, 2010). The two-tailed significance of the indirect effects of ability to co-recover via extrinsic motivation and intrinsic motivation on consumer value co-recovery in-role behavior was examined. Due to the fact that there were two mediators I estimated first the model with the extrinsic motivation as mediator and then the model with the intrinsic motivation as mediator. Thus, first in order to estimate the model with extrinsic motivation I had to get rid of the effect ability has on intrinsic motivation (see figure 5-23), so that the effect ability to co-recover has on consumer value co-recovery in-role behavior will be only mediated through one extrinsic motivation. Similarly, I followed the same procedure for extrinsic motivation (see figure 5-24).

Regarding the extrinsic motivation, the indirect effect between ability to co-recover and consumer co-recovery in-role behavior was statistically significant ($p < 0.001$), supporting mediation effect as proposed in hypothesis 4a. However, regarding the intrinsic motivation, the indirect effect between ability to co-recover and consumer co-recovery in-role behavior was not statistically significant ($p = 0.129$), offering no evidence for the mediating effect proposed in Hypothesis 4b.

Table 5.44: Mediation effects

Parameter	Direct effects model	Mediation, direct effects	Mediation, indirect effect	Variance
Structural path		Standardized coefficients	Significance (p-value)	
AB→extmotiv→CR	.275***	.126**	p = 0.001***	R ² = .21
AB→intmotiv→CR		.125**	p = 0.129	R ² = .19

5-24: Direct effects with intrinsic motivation as mediator and indirect Effect



Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

5.14 Moderating effects

The next step in SEM data analysis is related to multiple-group moderation analysis. In order to find out about the impact of the aforementioned moderators on the above model, two groups of hypotheses would be tested by using AMOS' multiple-group analysis. The objectives of comparing between or among groups are to investigate whether there are any significant differences between or among them. If these groups (such as blamers) are not significantly different it may suggest that this blame moderator (two groups: low blame and high blame) does not affect the influence of predictors toward behavior or the process. In doing so, the first step is to find out whether these groups use the same path diagram. If so, then the next step is to test whether there are any differences among groups.

In order to test the moderation effects of the four variables multiple-group SEM analysis was used (Byrne, 2010). In multiple-group analysis, a significant change in the chi-square value between the model with its path coefficients constrained to equality and the unconstrained model suggests the existence of moderating effects (Kline, 2011). Following Byrne's (2010) recommendations, I first calculated the median of each moderator. Based on the median, I created two groups (i.e., low and high role clarity): one below the median and the other above the median. Then, I tested the conceptual model for assessing the moderation effects by employed a series of chi-square difference tests between constrained and unconstrained models.

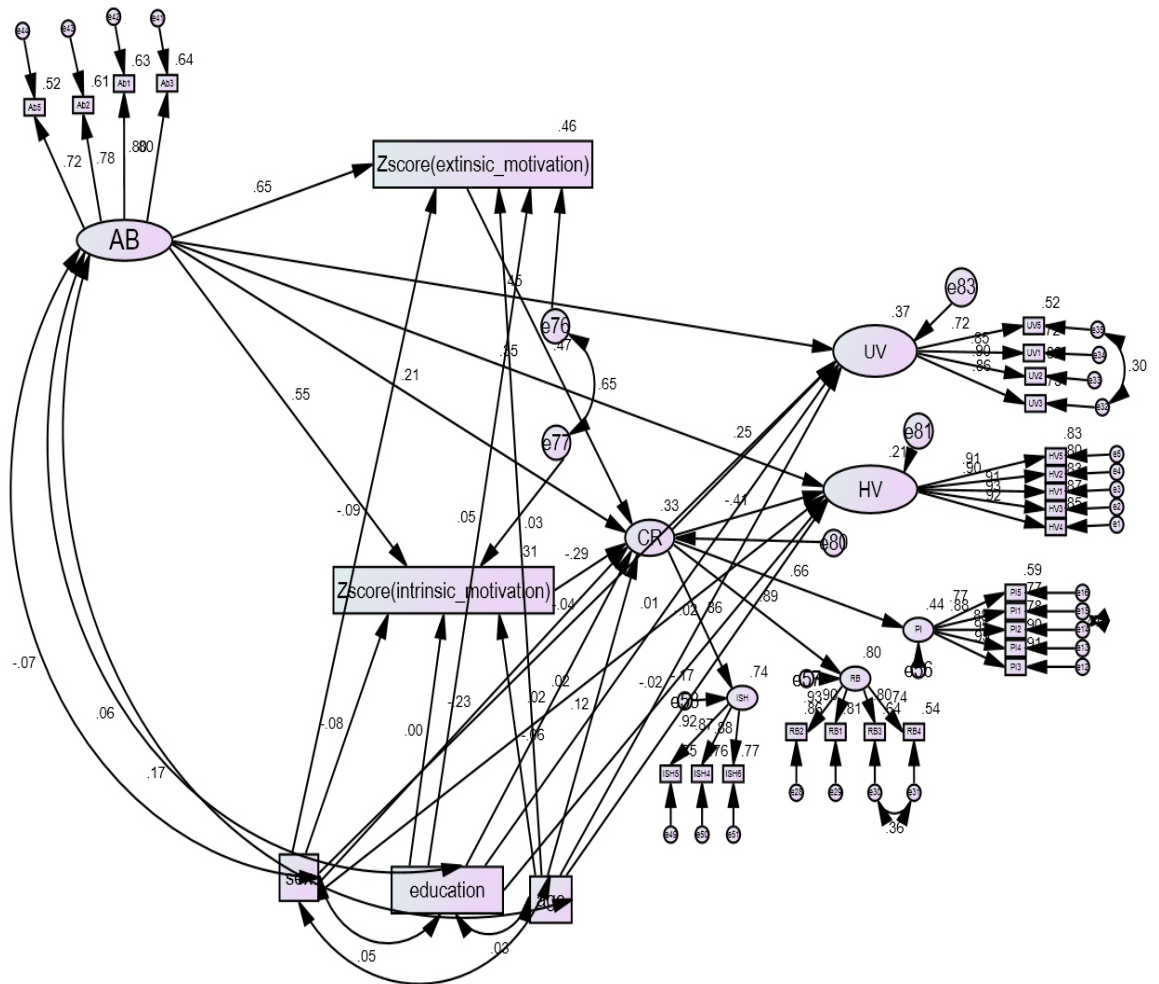
5.14.1 Internal Blame

I first calculated the median of blame. Based on the median, I created two groups: one below the median (lower internal blamers) and the other above the median (high internal blamers) low and high blame). There were 437 low internal blamers and 303 high internal blamers. Thus I investigated whether internal blame, will moderate the proposed relationships between ability, motivations (intrinsic and extrinsic), and value co-recovery in-role behavior.

In other words, the direct paths between the independent variable and a set of dependent variables, as well as the other paths between variables differ between low internal and high internal blamers.

The path diagram of the baseline model (unconstrained model) for low internal blamers (437 subjects) with standardised estimates is presented in Figure 5-25, and the baseline model (unconstrained model) for the high internal blamers (303 subjects) with standardised estimates is presented in Figure 5-26.

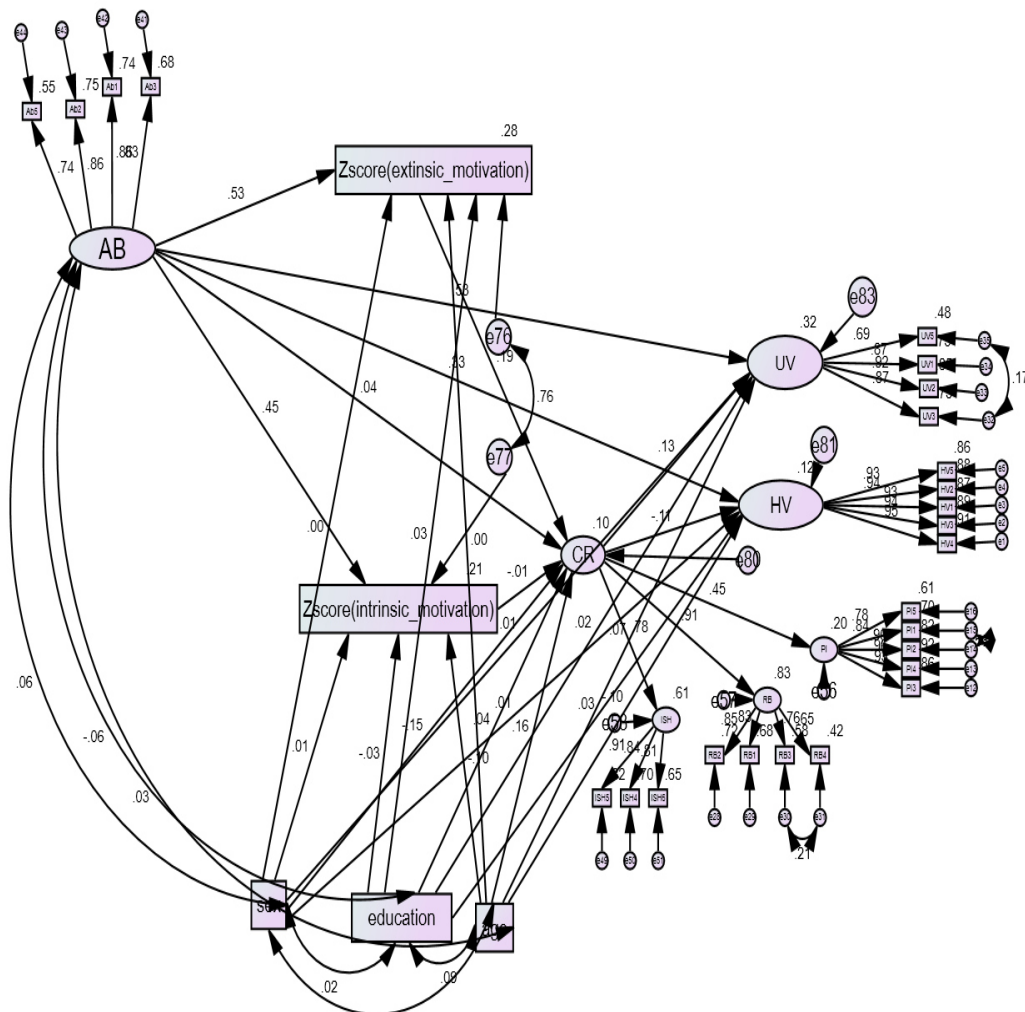
Figure 5-25: The Baseline Model (Multiple-Group Analysis) for low internal blamers with standardized Estimates



Low internal Blamer Subjects standardised estimates, Chi-square=1454.062, Degree of Freedom=746, CMIN/DF=1.949, RMSEA=.023, TLI=.985, CFI=.962, NFI=.925.

Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

Figure 5-26: The Baseline Model (Multiple-Group Analysis) for high internal blamers with standardized Estimates



High internal Blamer Subjects standardised estimates, Chi-square=1454.062, Degree of Freedom=746, CMIN/DF=1.949, RMSEA=.023, TLI=.985, CFI=.962, NFI=.925.

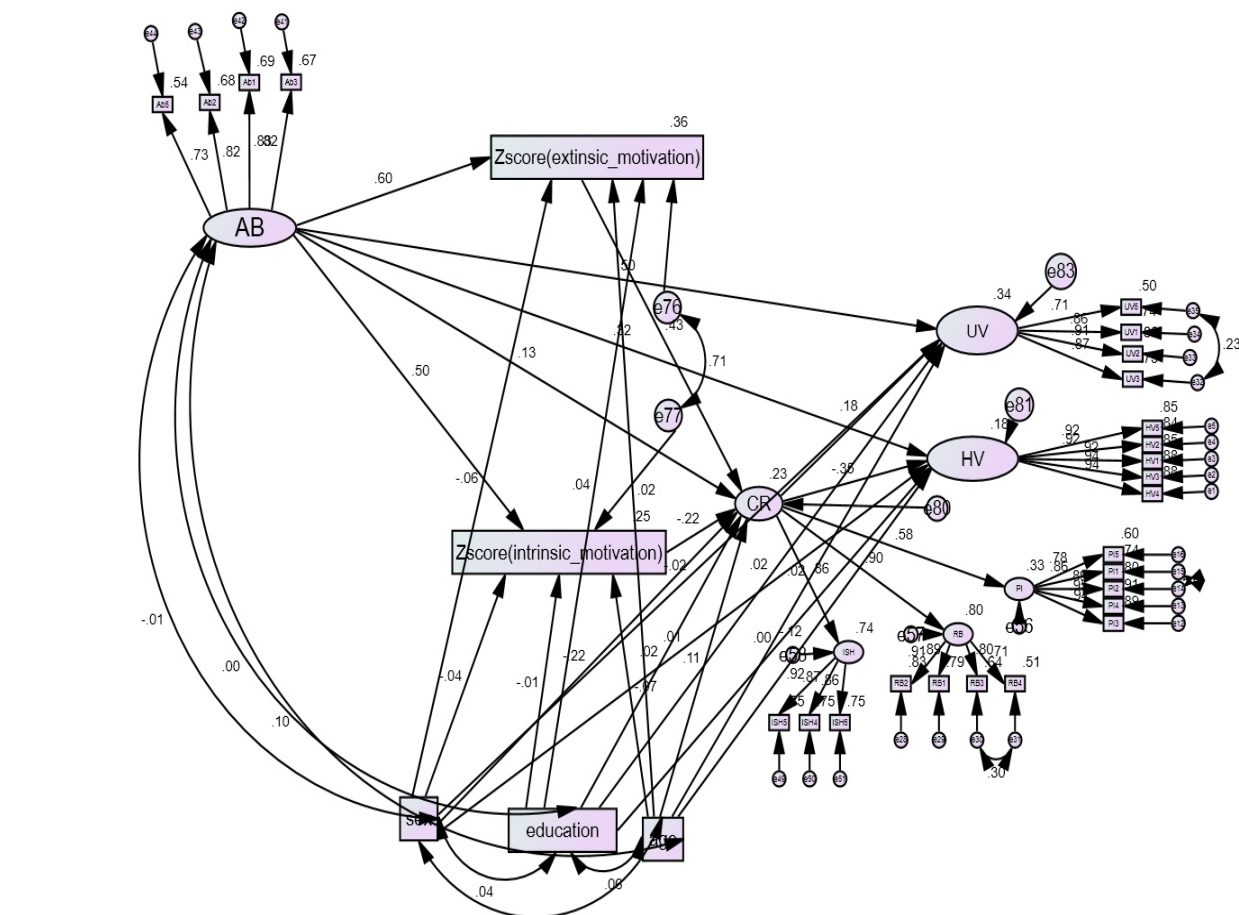
Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

From multiple-group analysis, the baseline model (unconstrained model) is generated (in Figure 5-25 and Figure 5-26) and yield a χ^2 (chi-square) of ,1454.062 degree of freedom = 746 and p value = 0.00. This indicates that the model fits the data for both groups very well. Other evidence also supports the goodness of fit of the model to the data (CMIN/DF = 1.949, RMSEA = 0.023, TLI = 0.985, CFI = 0.962, NFI = 0.925. It consequently indicates

that lower and higher subjects use the same path diagram but possibly difference parameter estimates. Despite the fact that the parameter estimates on the baseline model (unconstrained model) (Figure 5-25 and Figure 5-26) present some differences it is necessary to further investigate whether their parameter estimates are significantly different.

The constrained models (structural weights models) for low internal and high internal blamers are presented in Figure 5-27 and 5-28. The constrained model constrained the parameter estimates in measurement and structural weights to be equal in both groups.

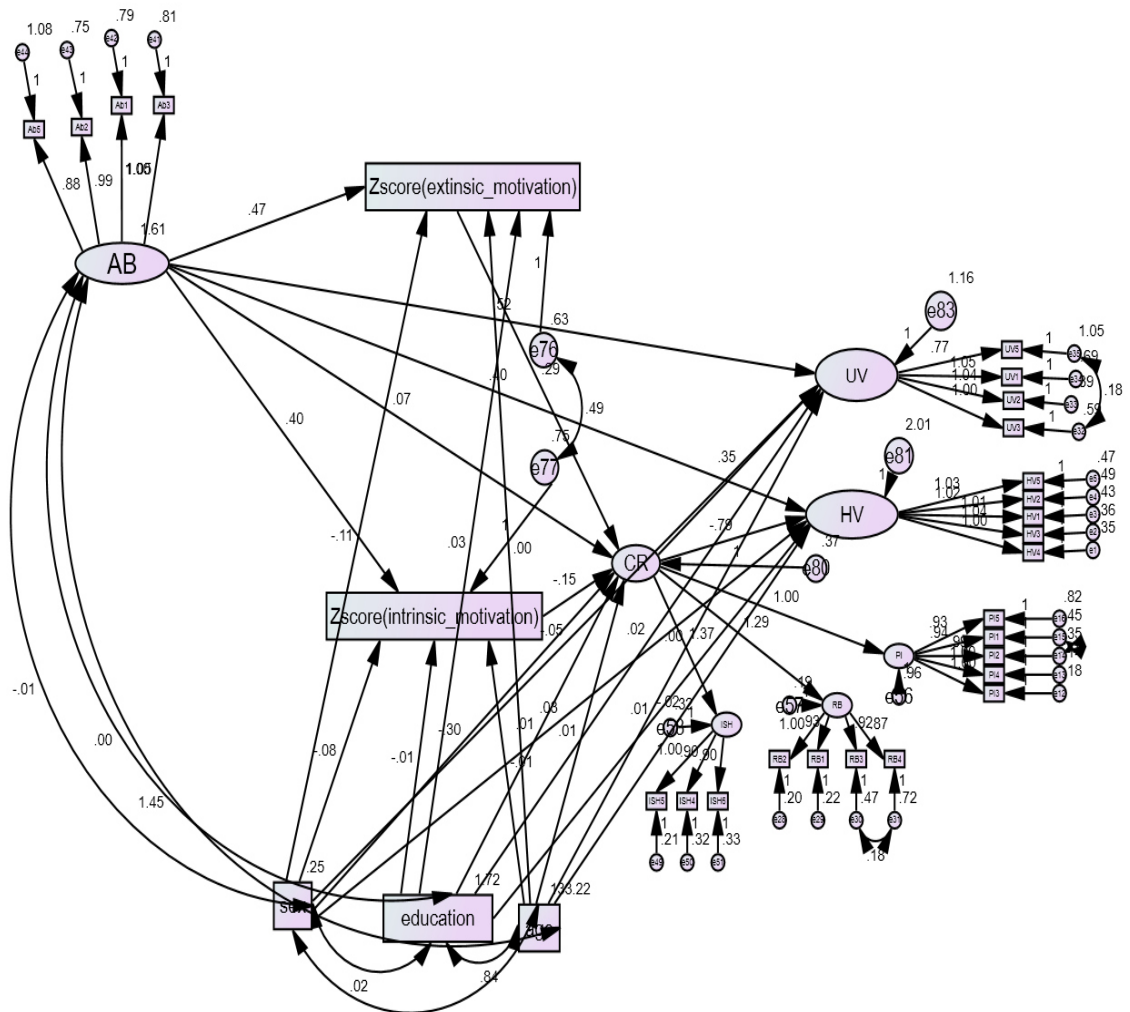
Figure 5-27: The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for low internal blamers



Low internal Blamer Subjects standardised estimates,chi-square=1798.041, Degree of Freedom=791, CMIN/DF=2.273, RMSEA=.029, TLI=.970, CFI=.973, NFI=.953.

Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

Figure 5-28: The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for high internal blamers



High internal Blamer Subjects standardised estimates,chi-square=1798.041, Degree of Freedom=791, CMIN/DF=2.273, RMSEA=.029, TLI=.970, CFI=.973, NFI=.953.

Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

The model fits the data for both groups very well, it yields a χ^2 (chi-square) of 1798.041, degree of freedom = 791 and p value = 0.000. Other evidence also supports the

goodness of fit of the model to the data (CMIN/DF = 2.273, RMSEA = 0.029, TLI = 0.970, CFI = 0.973, NFI = 0.953, (see Figure 5-27 and Figure 5-28).

As shown in Table 5.45, the two models were compared based on their chi-square and degree of freedom (df) values to empirically test significant differences between the two models.

	Blamers fully constrainedmodel	Blamers unconstrainedmodel	Difference
Chi-Square	1798.041	1454.062	343.979
df	791	746	45

The chi-square difference test reveals a significant difference across the baseline model and the constrained model according to these figures: the degree of freedom increases = 45 (791-746), and the CMIN increases = 343.979 (1798.041-1454.062), and p value = 0.000 (which is significant different). This result indicates that although both groups can use the same path diagram, they have a significant difference in structural weights estimates. This initial test provides evidence that at least one or more of the direct effects differs significantly across the two subgroups. It is recommended to estimate a series of models to identify the specific paths that differ significantly across the two groups (Holmes-Smith, Cunningham and Coote 2006).

After an initial test, further investigations have been made by analysing a series of models. In this study, because there are 9 direct paths in the model, 9 rounds of investigations/analyses have been undertaken (executing the model 9 times, each time investigating the significant difference of each direct path). When finishing these analyses, paths that are significant different across the baseline model and structural weights model are identified.

It was found that three direct paths differ significantly across two groups, while one direct path was not differ across the two groups but was fully moderated (see Table 5.46). These direct paths are one direct path between ability and extrinsic motivation (Ability → ext. motivation), two direct paths between extrinsic and intrinsic motivation and co-recovery in-role behavior (Ext. motivation → value co-recovery behavior, Int. motivation → value co-recovery behavior) and ability to co-recover toward co-recovery in-role behavior (AB→CR).

More precisely, H7 postulated the moderating effects of internal blame on the relationships in the proposed model. The result yielded a significant blame difference regarding the influence of ability on extrinsic motivation (H3a: $\Delta\chi^2(1) = 4.10, p < 0.05$). As shown in Table 5.46, the positive effect of ability on extrinsic motivation was significant for both low internal blamers and high internal blamer respondents ($\beta_{\text{low internal blamers}} = 0.65, p < 0.001$; $\beta_{\text{high internal blamers}} = 0.53, p < 0.001$). The magnitude of the positive effect was significantly greater for low blamers than for high blamers. In addition, the effect of extrinsic motivation on value co-recovery behavior (H1a: $\Delta\chi^2(1) = 9.99, p < .01$) was significant only for the low blamers group ($\beta_{\text{low internal blamers}} = 0.47, p < 0.001$; $\beta_{\text{high internal blamers}} = 0.18, \text{n.s.}$). Similarly, the negative effect of intrinsic motivation on value co-recovery in-role behavior (H1b: $\Delta\chi^2(1) = 8.55, p < 0.01$) was significant only for the low blamers group ($\beta_{\text{low internal blamers}} = -2.88, p < 0.001$; $\beta_{\text{high internal blamers}} = -0.005, \text{n.s.}$). Last, the effect of ability to co-recover on value co-recovery in-role behavior (H2: $\Delta\chi^2(1) = 5.30, p < 0.05$) was significant only for the low blamers ($\beta_{\text{low internal blamers}} = 0.21, p < 0.01$; $\beta_{\text{high internal blamers}} = 0.03, \text{n.s.}$).

Table 5.46 Moderating role of Blame

	Low Internal Blame (437)					High Internal Blame (303)		
	Chi-square	$\Delta\chi^2$	Std. est.	Std. err.	T-value	Std. est.	Std. err.	T-value
Ability → ext. motivation	1458.17	4.10*	.653	.03	13.85***	.533	.04	9.45***
Ability → int. motivation	1456.51	2.45	.553	.03	11.24***	.445	.04	7.77***

Chapter 5. Data Analysis and Results

Ext. motivation → value co-recovery in- role behavior	1464.0 5	9.99 **	.474	.07	5.55***	.187	.05	1.62
Int. motivation → value co-recovery in- role behavior	1462.6 2	8.55 **	- .288	.06	-4.02***	-.005	.05	-.04
AB→CR	1459.3 6	5.30 *	.213	.04	3.04**	.035	.03	.44
CR→HV	1457.5 5	3.49	- .406	.12	-6.39***	-.114	.19	-1.71
CR→UV	1454.1 2	0.0	.251	.09	4.41***	.130	.16	2.07*
AB→UV	1454.6 4	0.5	.452	.05	8.24***	.526	.06	8.66***
AB→HV	1454.9 2	0.86	.346	.07	6.16***	.326	.06	5.38***

Note 1: *** p < .001, ** p < .01, * p < .05

Note 2: Unconstrained model $\chi^2=1454.062$, df: 746, CMIN/DF=1.949, RMSEA=.023, TLI=.985, CFI=.962, NFI=.925./ Fully constrained model $\chi^2=$, 1798.041 df:791, CMIN/DF=2.273, RMSEA=.029, TLI=.970, CFI=.973, NFI=.953.

Notes: Ability: Ability to co-recover, ext. motivation : extrinsic motivation, int. motivation: intrinsic motivation, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

As shown in Table 5.46, the moderation test was significant, since the chi-square difference between the constrained and unconstrained model was greater than 3.84 (Byrne, 2010), for four direct paths. However, in contrast to the expectation the aforementioned effects were stronger for the low internal blamers than the high internal blamers. Consequently, H7a, H7b1, H7b2 and H7c1 were rejected. Last, regarding the impact of ability to co-recover on intrinsic motivation, the moderation test was not significant since the difference in chi-square value between the constrained and unconstrained model was less than 3.84 (Byrne, 2010). This result suggested that H7c2 was rejected.

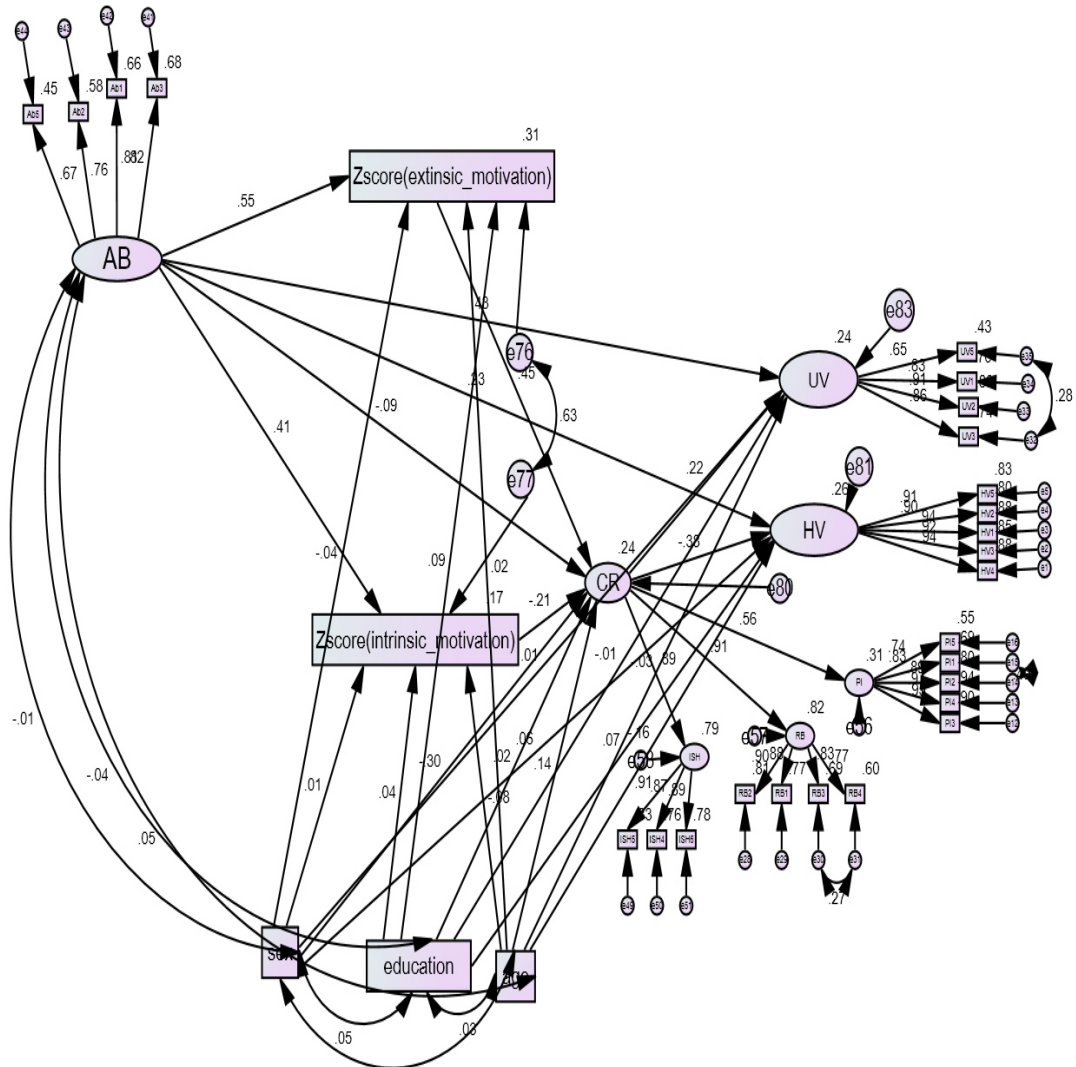
5.14.2 Role Clarity

I first calculated the median of role clarity. Based on the median, I created two groups: one below the median (low clarity subjects) and the other above the median (high clarity subjects). There were 443 low role clarity subjects and 297 high role clarity subjects. Thus I investigated whether role clarity, will moderate the proposed relationships between ability, motivations (intrinsic and extrinsic), value co-recovery in-role behavior and the perceived values (hedonic and utilitarian).

In other words, the direct paths between the independent variable and a set of dependent variables, as well as the other paths between variables differ between low and high role clarity.

The path diagram of the baseline model (unconstrained model) for low role clarity (443 subjects) with standardized estimates is presented in Figure 5-29, and the baseline model (unconstrained model) for the high role clarity (297 subjects) with standardized estimates is presented in Figure 5-30.

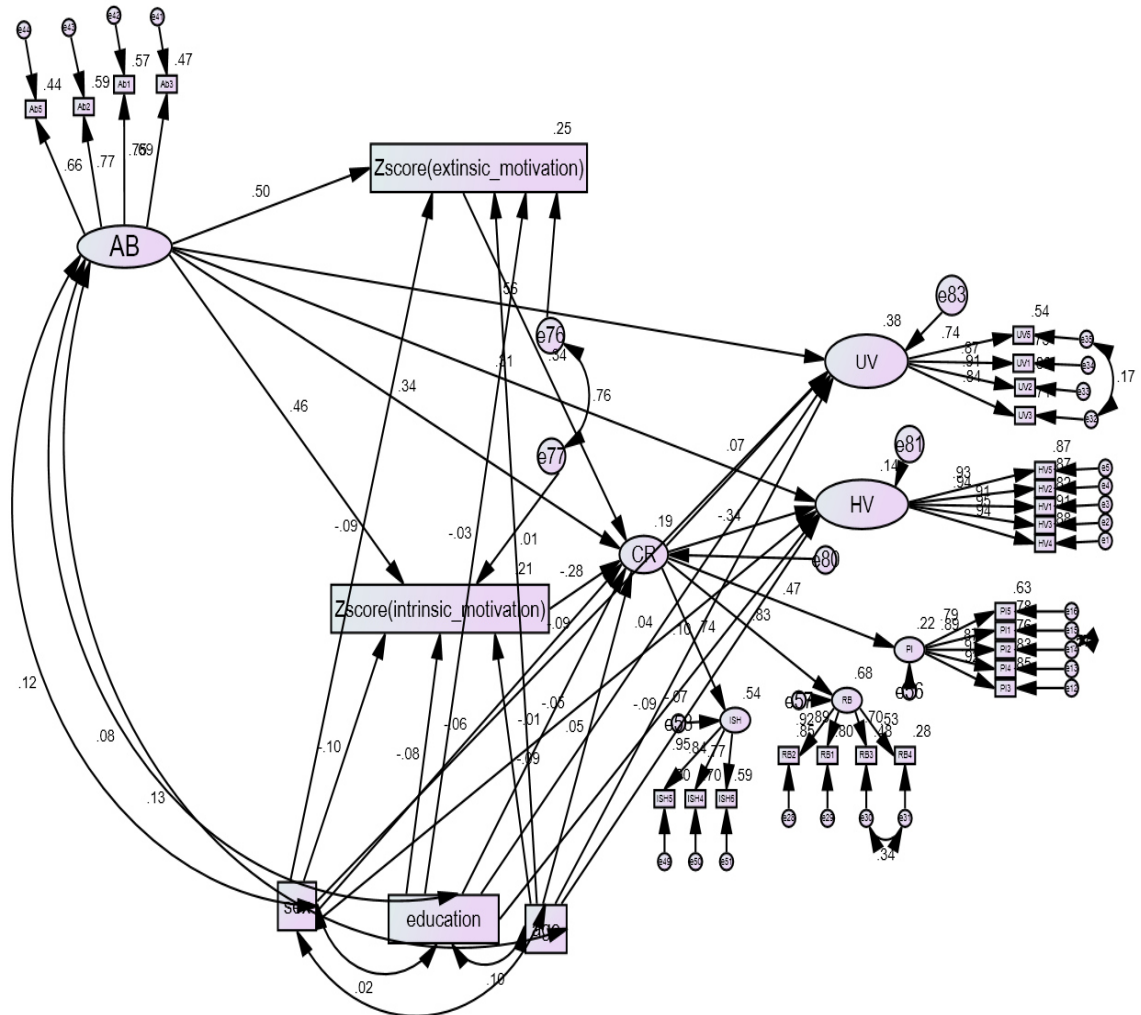
Figure 5-29: The Baseline Model (Multiple-Group Analysis) for low role clarity with standardized Estimates



Low role clarity Subjects standardized estimates, Chi-square=,1504.967 Degree of Freedom=746, CMIN/DF=2.017, RMSEA=.037, TLI=.950, CFI=.962, NFI=.957.

Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

Figure 5-30: The Baseline Model (Multiple-Group Analysis) for high role clarity with standardized Estimates



High role clarity Subjects standardized estimates, Chi-square=,1504.967 Degree of Freedom=746, CMIN/DF=2.017, RMSEA=.037, TLI=.950, CFI=.962, NFI=.957.

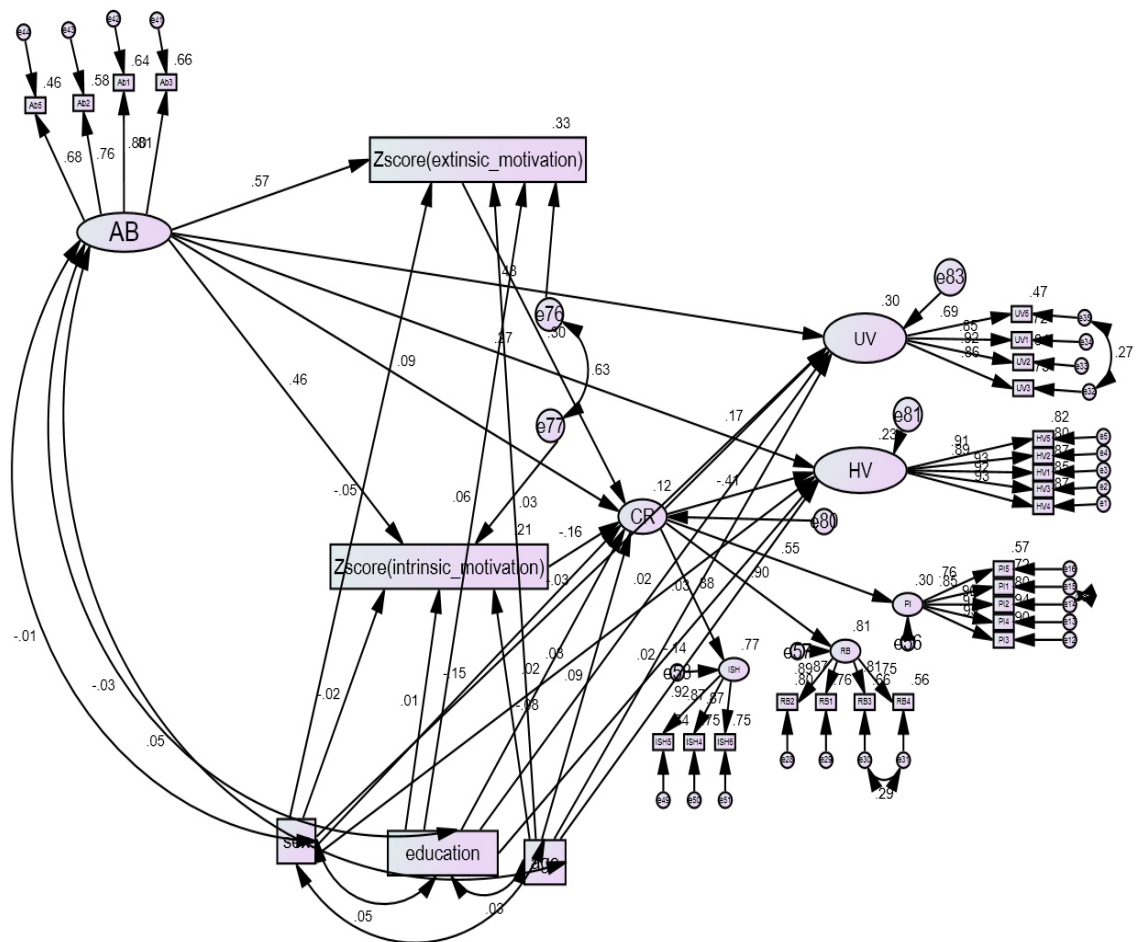
Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

From multiple-group analysis, the baseline model (unconstrained model) is generated (in Figure 5-29 and Figure 5-30) and yield a χ^2 (chi-square) of 1504.967 degree of freedom = 746 and p value = 0.00. This indicates that the model fits the data for both groups very well.

Other evidence also supports the goodness of fit of the model to the data (CMIN/DF = 2.107, RMSEA = 0.037, TLI = 0.950, CFI = 0.962, NFI = 0.957). It consequently indicates that lower and higher subjects use the same path diagram but possibly difference parameter estimates. Despite the fact that the parameter estimates on the baseline model (unconstrained model) (Figure 5-29 and Figure 5-30) present some differences it is necessary to further investigate whether their parameter estimates are significantly different.

The structural weights models (constrained models) for low and high role clarity subjects are presented in Figure 5-31 and 5-32.

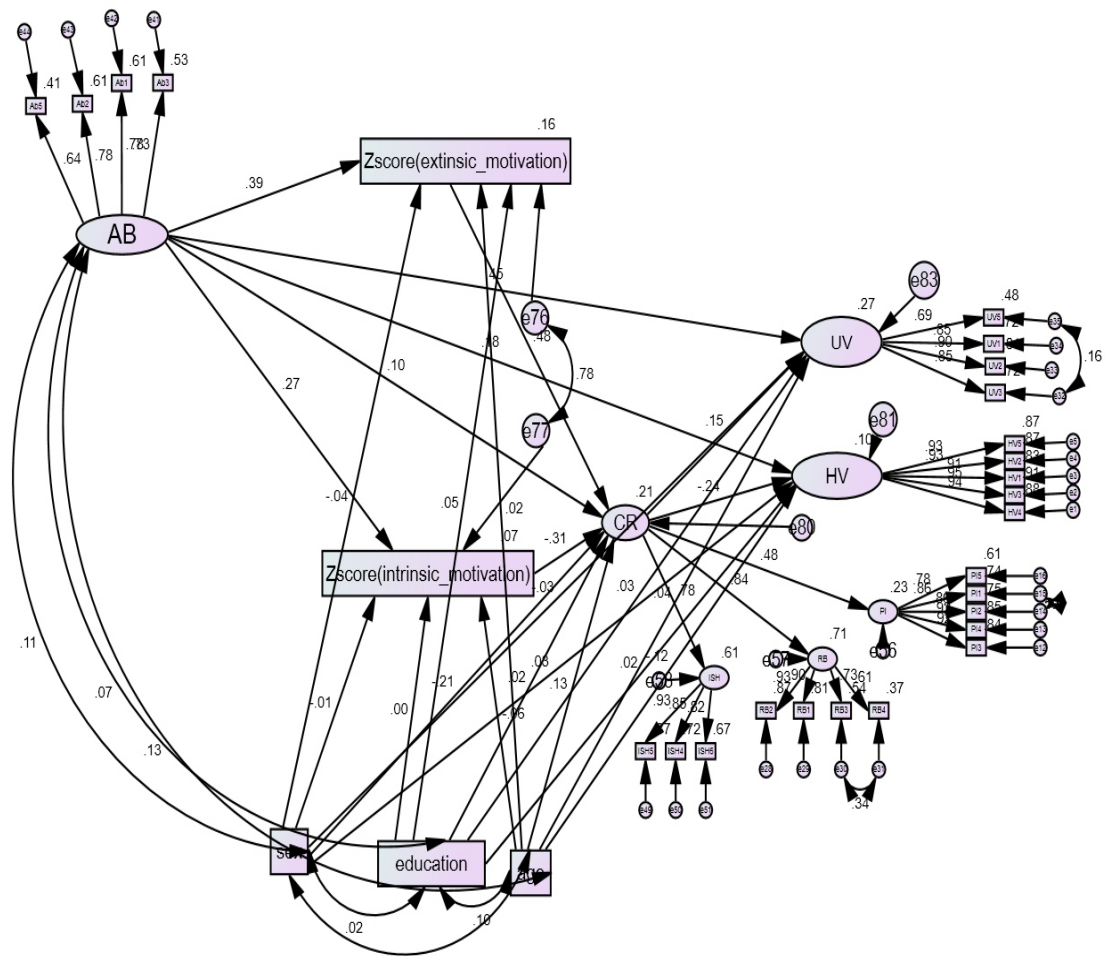
Figure 5-31: The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for low role clarity subjects



Low role clarity Subjects standardised estimates,chi-square= 1631.161 Degree of Freedom=791,
CMIN/DF=2.062, RMSEA=.038, TLI=.948, CFI=.953, NFI=.912.

Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV:
Hedonic Value

Figure 5-32: The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for high role clarity subjects



High role clarity Subjects standardised estimates,chi-square= 1631.161 Degree of Freedom=791,
CMIN/DF=2.062, RMSEA=.038, TLI=.948, CFI=.953, NFI=.912.

Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV:
Hedonic Value

The model fits the data for both groups well, it yields a χ^2 (chi-square) of 1631.161, degree of freedom = 791 and p value = 0.000. Other evidence also supports the goodness of fit of the model to the data (CMIN/DF = 2.062, RMSEA = 0.038, TLI = 0.948, CFI = 0.953, NFI = 0.912, (see Figure 5-31 and Figure 5-32).

As shown in Table 5.47, the two models were compared based on their chi-square and degree of freedom (df) values to empirically test significant differences between the two models.

TABLE 5.47 COMPARISON OF CHI-SQUARE AND DF VALUES FOR ROLE CLARITY

	Role Clarity fully constrained model	Role Clarity unconstrained model	Difference
Chi-Square	631.161	1504.967	126.194
df	791	746	45

The chi-square difference test reveals a significant difference across the baseline model and the constrained model according to these figures: the degree of freedom increases = 45 (791-746), and the CMIN increases = 126.194 (1504.967-631.161), and p value = 0.000 (which is significant different). This result indicates that although both groups can use the same path diagram, they have a significant difference in structural weights estimates. This initial test provides evidence that at least one or more of the direct effects differs significantly across the two subgroups. It is recommended to estimate a series of models to identify the specific paths that differ significantly across the two groups (Holmes-Smith, Cunningham and Coote 2006).

After an initial test, further investigations have been made by analyzing a series of models. In this study, because there are 9 direct paths in the model, 9 rounds of investigations/analyses have been undertaken (executing the model 9 times, each time investigating the significant difference of each direct path). When finishing these analyses,

paths that are significant different across the baseline model and structural weights model are identified.

It was found that six direct paths differ significantly across two groups, while one direct path was not differ across the two groups but was fully moderated (see Table 5.48). These direct paths are between ability and extrinsic motivation (Ability \rightarrow ext. motivation), between ability and intrinsic motivation (Ability \rightarrow int. motivation) between extrinsic co-recovery in-role behavior (Ext. motivation \rightarrow value co-recovery behavior), between ability to co-recover and co-recovery in-role behavior (AB \rightarrow CR), and between ability to co-recover and utilitarian and hedonic value (AB \rightarrow UV), (AB \rightarrow HV).

H8 hypothesized the moderating role of role clarity on the relationships in the proposed model. The impact of ability on extrinsic motivation was significantly differed between the low and high role clarity groups (H3a: $\Delta\chi^2(1) = 6.57, p < 0.05$). That is, ability for both groups increased extrinsic motivation, but the effect was stronger for the low role clarity group than for the high role clarity group ($\beta_{\text{low role clarity}} = 0.55, p < 0.001$; $\beta_{\text{high role clarity}} = 0.50, p < 0.001$). In addition, the results revealed a significant group difference such that the effect of ability on intrinsic motivation (H3b: $\Delta\chi^2(1) = 15.10, p < 0.001$) was greater for the high role clarity group than for the low role clarity group ($\beta_{\text{low role clarity}} = 0.41, p < 0.001$; $\beta_{\text{high}} = 0.46, p < 0.001$). Also, a significant group difference was found in the relationship between extrinsic motivation and value co-recovery behavior (H1a: $\Delta\chi^2(1) = 5.47, p < 0.05$): the positive impact of extrinsic motivation on value co-recovery in-role behavior was stronger for those with low role clarity than for those with high role clarity ($\beta_{\text{low role clarity}} = 0.45, p < 0.001$; $\beta_{\text{high role clarity}} = 0.33, p < 0.01$). The effect of ability to co-recover on customer value co-recovery in-role behavior (H2: $\Delta\chi^2(1) = 15.51, p < 0.001$) was significant only for the high role clarity group ($\beta_{\text{low role clarity}} = -0.86, \text{n.s.}$; $\beta_{\text{high role clarity}} = -0.33, p < 0.001$). Finally, the effect of ability on utilitarian and hedonic value varied between groups (H6a: $\Delta\chi^2(1) = 5, p < 0.05$; H6b: $\Delta\chi^2(1) = 4.49, p < 0.05$). The effect of ability to co-recover on utilitarian value was stronger for those with high role clarity than for those with low role clarity ($\beta_{\text{low role clarity}} = 0.42, p < 0.001$; $\beta_{\text{high role clarity}} = 0.56, p < 0.001$). Similarly, the impact of ability to co-recover on hedonic value was stronger for those with high role clarity than for those with low role clarity ($\beta_{\text{low role clarity}} = 0.23, p < 0.001$; $\beta_{\text{high role clarity}} = 0.30, p < 0.001$).

Table 5.48 Moderating role of Role Clarity

	Low Role Clarity (443)			High Role Clarity (297)				
	Chi-square	$\Delta\chi^2$	Std. est.	Std. err.	T-value	Std. est.	Std. err.	T-value
Ability → ext. motivation	1511.53	6.57*	.550	.03	11.56** *	.501	.07	7.52***
Ability → int. motivation	1520.07	15.10** *	.411	.03	8.35***	.463	.08	6.97***
Ext. motivation → value co-recovery in-role behavior	1510.43	5.47*	.454	.06	5.65***	.338	.05	2.79**
Int. motivation → value co-recovery in-role behavior	1505.65	0.68	-.209	.05	-3.13**	-.279	.05	-2.43*
AB → CR	1520.47	15.51** *	-.086	.03	-1.39	.338	.05	3.44***
CR → HV	1506.43	1.46	-.384	.12	-6.50***	-.339	.30	-3.93***
CR → UV	1506.66	1.7	.219	.10	3.91***	.075	.15	1.11
AB → UV	1509.97	5*	.429	.05	8.29***	.562	.09	7.36***
AB → HV	1509.46	4.49*	.234	.05	4.98***	.307	.14	4.14***

Note 1: *** p < .001, ** p < .01, * p < .05

Note 2: Unconstrained model: 1504.967, df: 746, CMIN/DF=2.017, RMSEA=.037, TLI=.950, CFI=.962, NFI=.957./ Fully constrained model 1631.161, df: 791, CMIN/DF=2.062, RMSEA=.038, TLI=.948, CFI=.953, NFI=.912. Notes: Ability: Ability to co-recover, ext. motivation : extrinsic motivation, int. motivation: intrinsic motivation, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

As shown in Table 5.48, the moderation test was significant, since the chi-square difference between the constrained and unconstrained model was greater than 3.84 (Byrne, 2010), for the majority of paths. However, regarding the paths (Ability → ext. motivation) and (Ext. motivation → value co-recovery behavior), in contrast to the expectation the effects were stronger for those with low role clarity than those with high role clarity. Consequently, H8b1 and H8c1 were rejected. Contrary, the direct paths between ability and intrinsic motivation, and ability and utilitarian and hedonic value was stronger for high role clarity subjects in support of H8c2, H8d1 and H8d2. Moreover, the effect of ability to co-recover on value co-recovery in-role behavior was fully moderated by those with high role clarity in support of H8a. Regarding the impact intrinsic motivation on value co-recovery in-role behavior, the moderation test was not significant since the difference in chi-square value between the constrained and unconstrained model was less than 3.84 (Byrne, 2010). This result suggested that H8b2 was rejected.

5.14.3 Trust in service provider's resolution ability

I first calculated the median of trust in service providers' resolution ability. Based on the median, two groups were created: one below the median (low trust in resolution ability) and the other above the median (high trust in resolution ability). Thus, high trust in resolution ability (383 cases), and low trust in resolution ability (357 cases) were examined. I investigated trust in service provider's resolution ability, will moderate the proposed relationships between ability, motivations (intrinsic and extrinsic).

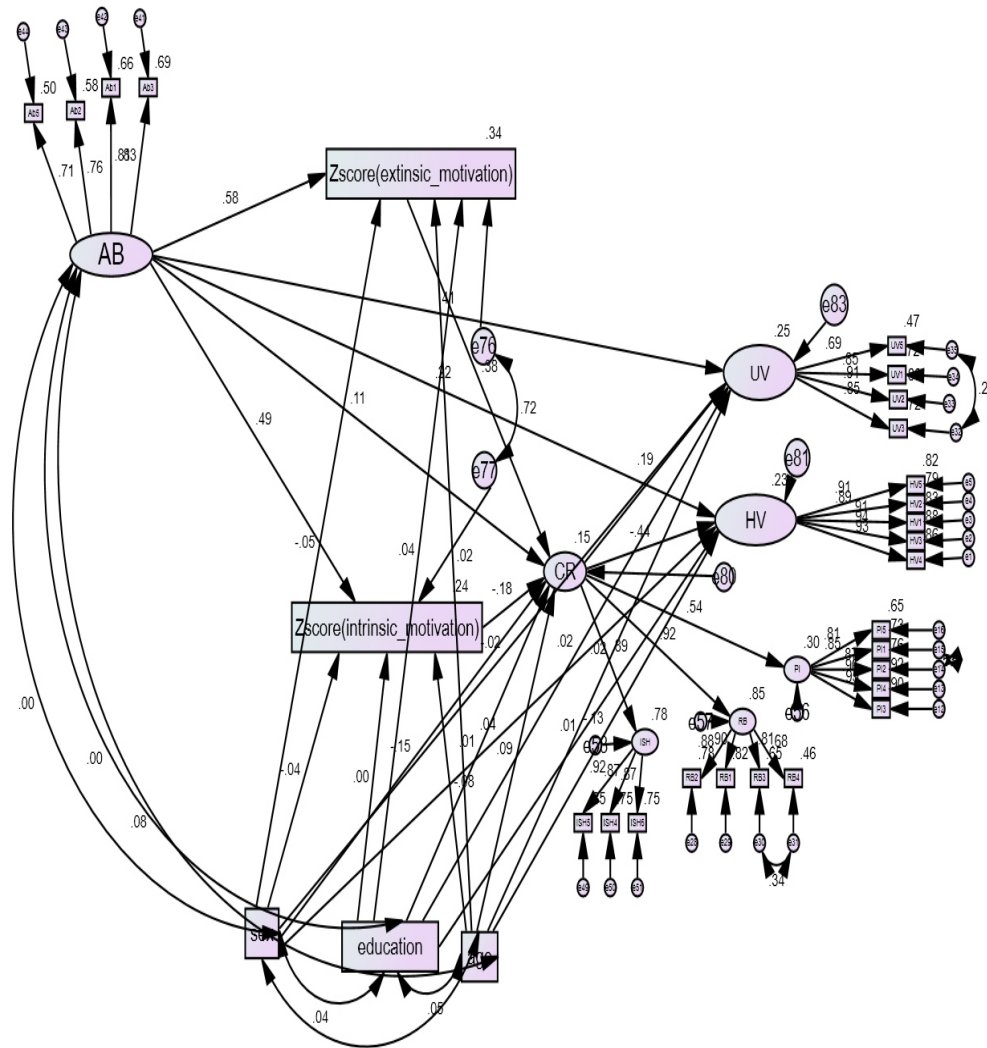
In other words, the direct paths between the independent variable and a set of dependent variables, as well as the other paths between variables differ between consumers with low and high trust in resolution ability.

The path diagram of the baseline model (unconstrained model) for those with low trust (383 subjects) with standardized estimates is presented in Figure 5-33, and the baseline model (unconstrained model) for those with high trust (357 subjects) with standardized estimates is presented in Figure 5-34.

model) (Figure 5-33 and Figure 5-34) present some differences it is necessary to further investigate whether their parameter estimates are significantly different.

The constrained models (structural weights models) for low and high trust in resolution ability are presented in Figure 5-35 and 5-36. The constrained model constrained the parameter estimates in measurement and structural weights to be equal in both groups.

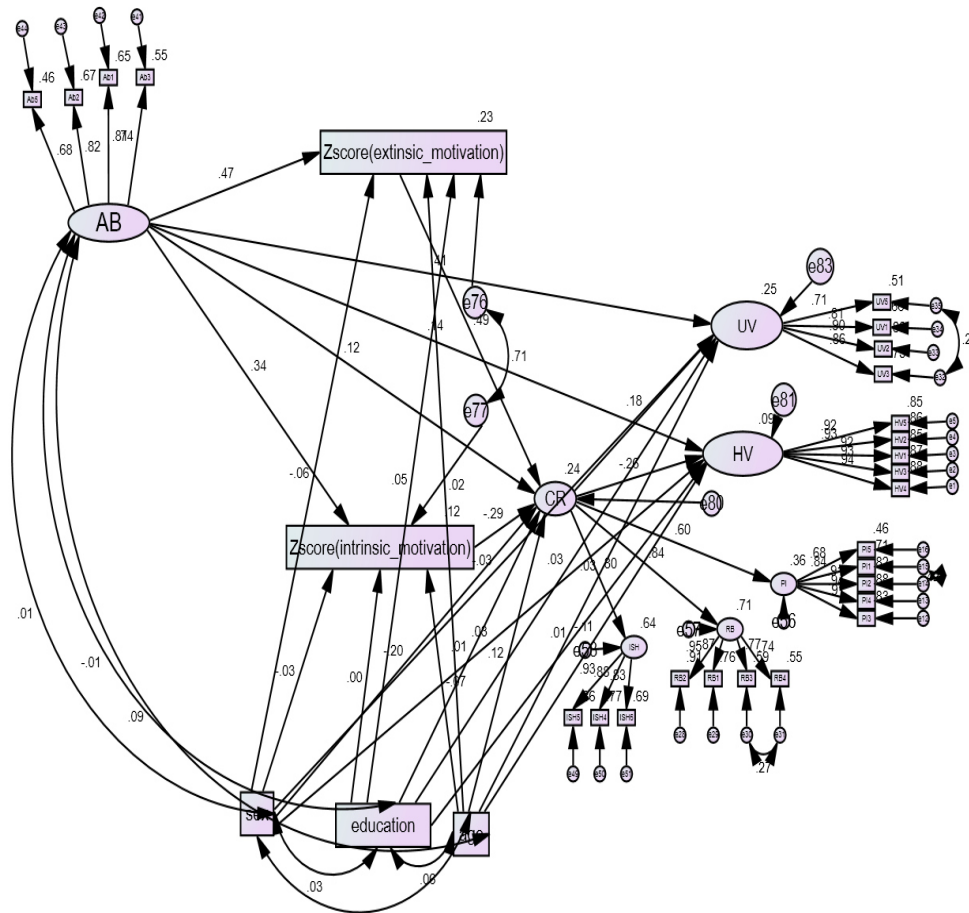
Figure 5-35: The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for low trust in resolution ability



Low internal trust in resolution ability standardized estimates, Chi-square=1545.283, Degree of Freedom=791, CMIN/DF=1.954, RMSEA=.036, TLI=.953, CFI=.957, NFI=.917.

Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

Figure 5-36: The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for high trust in resolution ability



High internal trust in resolution ability standardized estimates, Chi-square=1545.283, Degree of Freedom=791, CMIN/DF=1.954, RMSEA=.036, TLI=.953, CFI=.957, NFI=.917.

Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

The model fits the data for both groups well, it yields a χ^2 (chi-square) of 11545.283, degree of freedom = 791 and p value = 0.000. Other evidence also supports the goodness of fit of the model to the data (CMIN/DF = 1.954, RMSEA = 0.036, TLI = 0.953, CFI = 0.957, NFI = 0.917, (see Figure 5-35 and Figure 5-36).

As shown in Table 5.49, the two models were compared based on their chi-square and degree of freedom (df) values to empirically test significant differences between the two models.

Table 5.49 COMPARISON OF CHI-SQUARE AND DF VALUES FOR TRUST IN RESOLUTION ABILITY

	Trust in resolution ability fully constrained model	Trust in resolution ability unconstrained model	Difference
Chi-Square	1545.283	1458.317	86.966
df	791	746	45

The chi-square difference test reveals a significant difference across the baseline model and the constrained model according to these figures: the degree of freedom increases = 45 (791-746), and the CMIN increases = 86.966 (1545.283-1458.317), and p value = 0.000 (which is significant different). This result indicates that although both groups can use the same path diagram, they have a significant difference in structural weights estimates. This initial test provides evidence that at least one or more of the direct effects differs significantly across the two subgroups. It is recommended to estimate a series of models to identify the specific paths that differ significantly across the two groups (Holmes-Smith, Cunningham and Coote 2006).

After an initial test, further investigations have been made by analyzing a series of models. In this study, because there are 9 direct paths in the model, 9 rounds of investigations/analyses have been undertaken (executing the model 9 times, each time investigating the significant difference of each direct path). When finishing these analyses, paths that are significant different across the baseline model and structural weights model are identified.

It was found that three direct paths differ significantly across two groups (see Table 5.50). These direct paths are between ability and extrinsic motivation (Ability → ext. motivation), intrinsic motivation, and hedonic value (Ability → int. motivation, AB → HV).

More specifically, H9 posited the moderating roles of trust in resolution ability on the relationships in the proposed model. The influence of ability on extrinsic and intrinsic

motivation was different between the low and high trust groups (H3a: $\Delta\chi^2(1) = 15.77, p < 0.001$; H3b: $\Delta\chi^2(1) = 12.33, p < 0.001$). The effect of ability to co-recover on extrinsic motivation was stronger for the high trust group than for the low trust group ($\beta_{\text{low trust in resolution}} = 0.51, p < 0.001$; $\beta_{\text{high trust in resolution}} = 0.58, p < 0.001$). Similarly, the effect of ability to co-recover on intrinsic motivation was stronger for the high trust group than for the low trust group ($\beta_{\text{low trust in resolution}} = 0.42, p < 0.001$; $\beta_{\text{high trust in resolution}} = 0.46, p < 0.001$). Last, the effect of ability to co-recover on hedonic value (H6b: $\Delta\chi^2(1) = 8.83, p < 0.01$), was stronger for the high trust group than for the low trust group ($\beta_{\text{low trust in resolution}} = 0.15, p < 0.01$; $\beta_{\text{high trust in resolution}} = 0.29, p < 0.001$).

Table 5.50 Moderating role of Trust in resolution ability

	Low Trust (383)			High Trust (357)			T-value	
	Chi-square	$\Delta\chi^2$	Std. est.	Std. d. err	T-value	Std. est.		Std. err.
Ability → ext. motivation	1474.09	15.77**	.512	.03	10.09**	.589	.06	10.13***
Ability → int. motivation	1470.65	12.33**	.428	.03	8.20**	.464	.06	8.02***
Ext. motivation → value co-recovery behavior	1459.02	0.7	.337	.06	3.73**	.537	.06	5.23***
Int. motivation → value co-recovery in-role behavior	1458.86	0.5	-.158	.06	-1.96*	-.329	.04	-3.76***
AB → CR	1461.07	2.75	.054	.03	.843	.196	.04	2.53*
CR → HV	1458.31	0	-.435	.14	-6.25**	-.304	.20	-4.41***

Chapter 5. Data Analysis and Results

CR→UV	1458.4	0	.159	.12	2.66**	.209	.11	3.24**
	1							
AB→UV	1458.4	0	.418	.05	7.47**	.402	.07	6.24***
	0				*			
AB→HV	1467.1	8.83**	.153	.05	2.99**	.291	.11	4.56***
	5							

Note 1: *** p < .001, ** p < .01, * p < .05

Note 2: Unconstrained model: 1458.317, df: 746, CMIN/DF=1.955, RMSEA=.036, TLI=.953, CFI=.960, NFI=.922./ Fully constrained model 1545.283, df: 791, CMIN/DF=1.954, RMSEA=.036, TLI=.953, CFI=.957, NFI=.917. Notes: Ability: Ability to co-recover, ext. motivation : extrinsic motivation, int. motivation: intrinsic motivation, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

As shown in Table 5.50, the moderation test was significant, since the chi-square difference between the constrained and unconstrained model was greater than 3.84 (Byrne, 2010), for the paths (Ability → ext. motivation), and (Ability → int. motivation). Since these effects were stronger for those with high trust than those with low trust, the hypotheses H9a1 and H9a2, were supported.

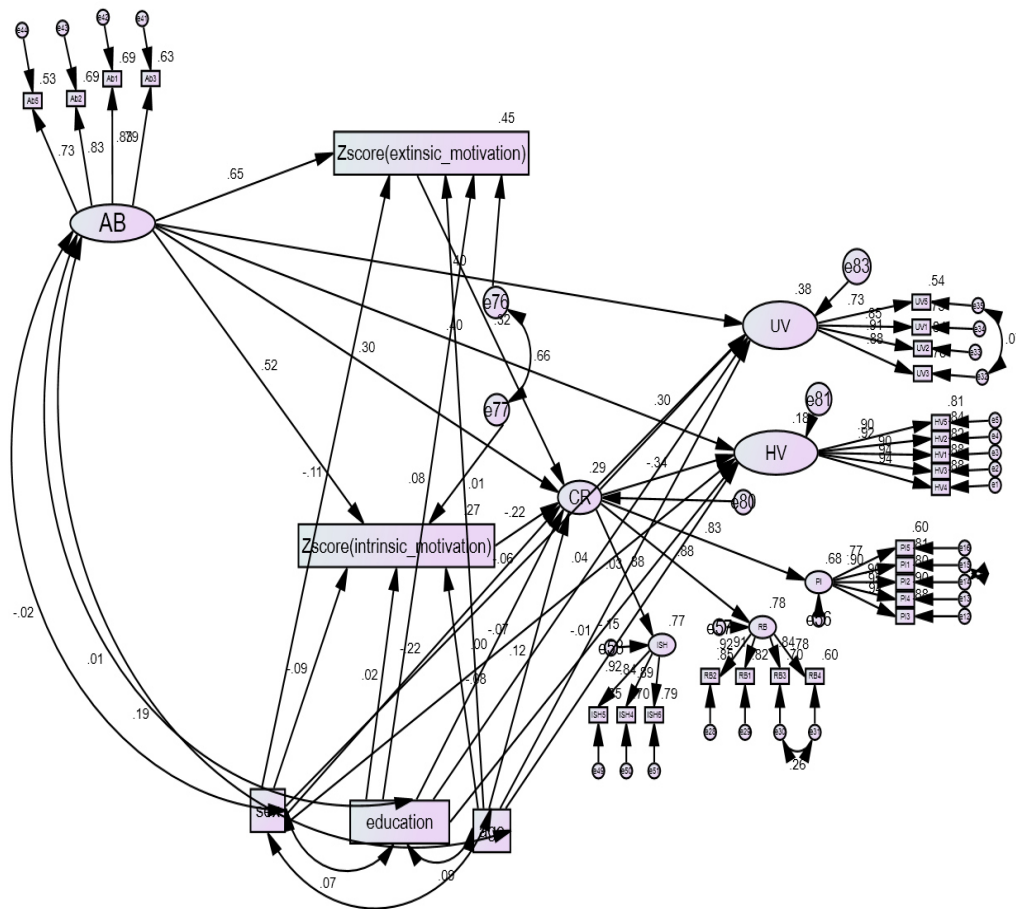
5.14.4.1 Negative-Discontent Emotions

I first calculated the median of negative emotions. Based on the median, two groups were created: one below the median (low negative emotions) and the other above the median (high negative emotions). There were 374 subjects with low negative emotions and 366 subjects with high negative emotions. Thus I investigated whether negative emotions, will moderate the proposed relationships between ability, motivations (intrinsic and extrinsic), value co-recovery in-role behavior and the perceived values (hedonic and utilitarian).

In other words, the direct paths between the independent variable and a set of dependent variables, as well as the other paths between variables differ between subjects with low and high negative emotions.

The path diagram of the baseline model (unconstrained model) for low negative emotions (374 subjects) with standardized estimates is presented in Figure 5-37, and the baseline model (unconstrained model) for those with high negative emotions (366 subjects) with standardized estimates is presented in Figure 5-38.

Figure 5-37: The Baseline Model (Multiple-Group Analysis) for low negative emotions with standardized Estimates

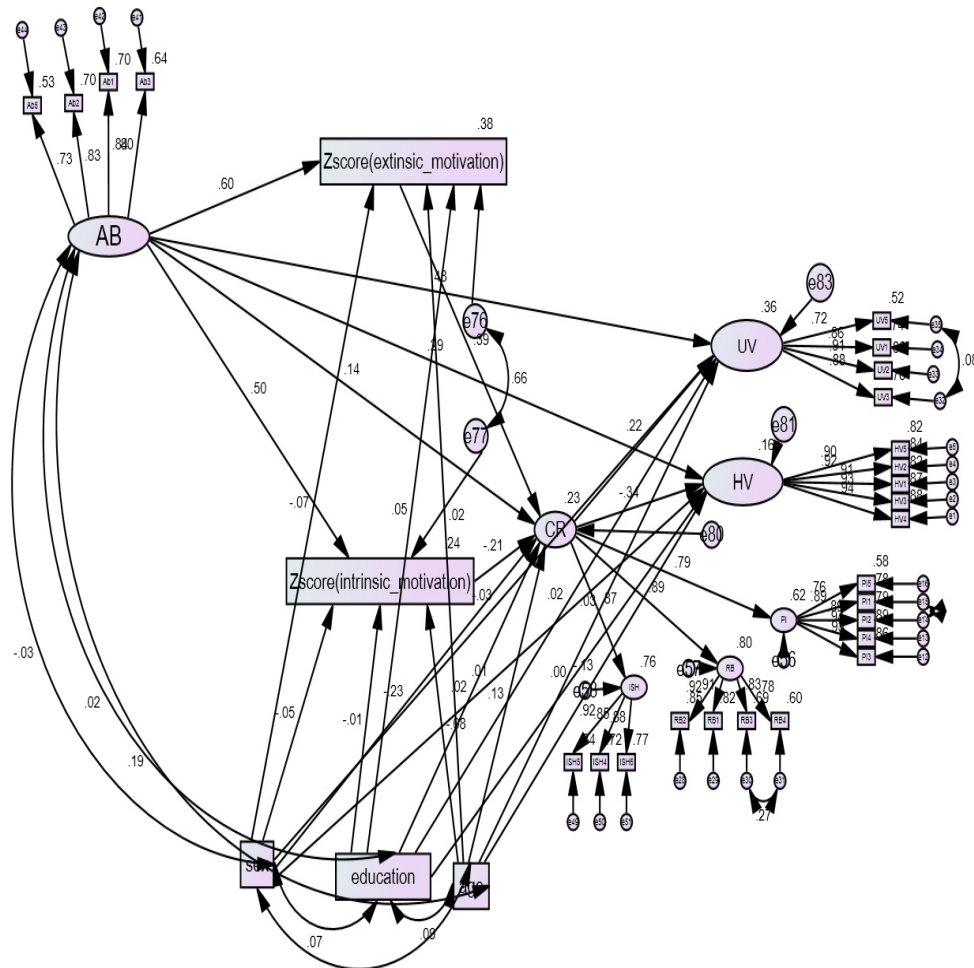


Low negative emotions Subjects standardized estimates, Chi-square=1458.504, Degree of Freedom=746, CMIN/DF=1.955, RMSEA=.036, TLI=.956, CFI=.962, NFI=.926.

Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

In simultaneous multiple-group analysis, the baseline model (unconstrained model) is generated (in Figure 5-37 and Figure 5-38). It yields a χ^2 (chi-square) of 1458.504, degree of freedom = 746 and p value = 0.000. It indicates that the model fits the data for two groups very well. Other evidence supports the goodness of fit of the model to the data (CMIN/DF = 1.955, RMSEA = 0.036, TLI = 0.956, CFI = 0.962, NFI = 0.926). It consequently indicates that all two groups use the same path diagram but possibly with different parameter estimates. Further investigation will be made to find out whether their parameter estimates are significantly different. The constrained models (structural weights models) for all two groups are presented in Figure 5-39, and Figure 5-40.

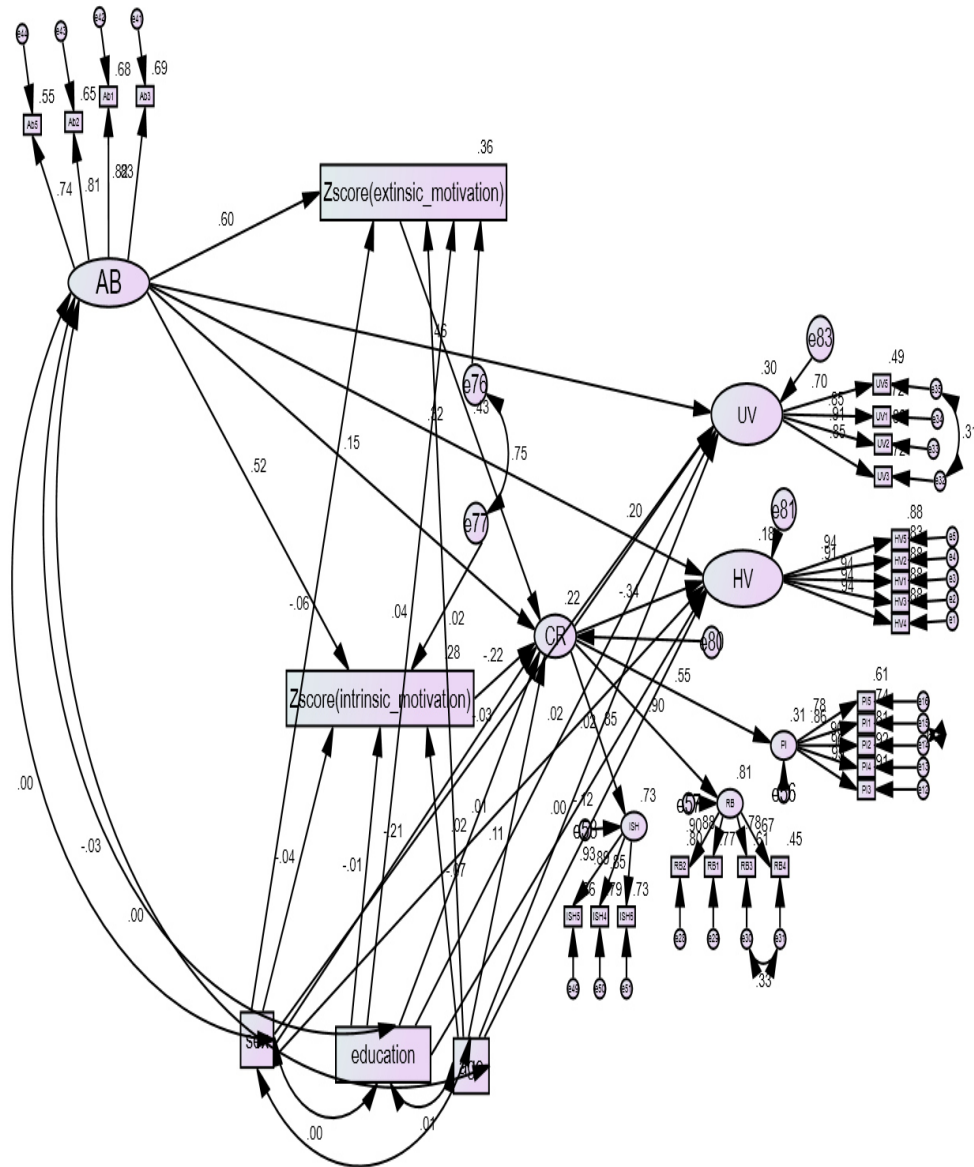
Figure 5-39: The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for low negative emotions



Low negative emotions standardized estimates, Chi-square=1545.283, Degree of Freedom=791, CMIN/DF=1.954, RMSEA=.036, TLI=.953, CFI=.957, NFI=.917.

Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

Figure 5-40: The Structural Weights Model (Multiple-Group Analysis) (standardized Estimates) for high negative emotions



High negative emotions standardized estimates, Chi-square=1545.283, Degree of Freedom=791, CMIN/DF=1.954, RMSEA=.036, TLI=.953, CFI=.957, NFI=.917.

Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

The model fits the data for both groups well, it yields a χ^2 (chi-square) of 1545.283, degree of freedom = 791 and p value = 0.000. Other evidence also supports the goodness of

fit of the model to the data (CMIN/DF = 1.954, RMSEA = 0.036, TLI = 0.953, CFI = 0.957, NFI = 0.917, (see Figure 5-39 and Figure 5-40).

As shown in Table 5.51, the two models were compared based on their chi-square and degree of freedom (df) values to empirically test significant differences between the two models.

Table 5.51 COMPARISON OF CHI-SQUARE AND DF VALUES FOR NEGATIVE-DISCONTENT EMOTIONS

	Negative emotions fully constrained model	Negative emotions unconstrained model	Difference
Chi-Square	1533.686	1458.504	75.182
df	791	746	45

The chi-square difference test reveals a significant difference across the baseline model and the constrained model according to these figures: the degree of freedom increases = 45 (791-746), and the CMIN increases = 75.182 (1533.686-1458.504), and p value = 0.003 (which is significant different). This result indicates that although both groups can use the same path diagram, they have a significant difference in structural weights estimates. This initial test provides evidence that at least one or more of the direct effects differs significantly across the two subgroups. It is recommended to estimate a series of models to identify the specific paths that differ significantly across the two groups (Holmes-Smith, Cunningham and Coote 2006).

After an initial test, further investigations have been made by analysing a series of models. In this study, because there are 9 direct paths in the model, 9 rounds of investigations/analyses have been undertaken (executing the model 9 times, each time investigating the significant difference of each direct path). When finishing these analyses, paths that are significant different across the baseline model and structural weights model are identified.

It was found that three direct paths differ significantly across two groups, while one other direct path was not differ across the two groups but was fully moderated (see Table 5.52). These direct paths are direct paths between ability and extrinsic motivation (Ability → ext. motivation), co-recovery in-role behavior and hedonic value (CR→HV), ability and hedonic value (AB→HV), while the path that was fully moderated was between ability to co-recover toward co-recovery in-role behavior (AB→CR).

More precisely, H10 hypothesized the moderating role of negative emotions on the relationships in the proposed model. The effect of ability to co-recover on extrinsic motivation (H3b: $\Delta\chi^2(1) = 6.51, p < 0.05$) was stronger for those with lower negative emotions than for those with higher negative emotions ($\beta_{\text{low negative emotions}} = 0.65, p < 0.001$; $\beta_{\text{high negative emotions}} = 0.54, p < 0.001$). The effect of ability to co-recover on customer value co-recovery in-role behavior (H2: $\Delta\chi^2(1) = 11.39, p < 0.01$) was significant only for the group with low negative emotions ($\beta_{\text{low negative emotions}} = 0.29, p < 0.001$; $\beta_{\text{high negative emotions}} = 0.002, n.s$). The negative effect of co-recovery in-role behavior on hedonic value (H5b: $\Delta\chi^2(1) = 3.95, p < 0.05$) was stronger for those with higher negative emotions than for those with lower negative emotions ($\beta_{\text{low negative emotions}} = -0.34, p < 0.001$; $\beta_{\text{high negative emotions}} = -0.37, p < 0.001$). Last, the effect of ability to co-recover on hedonic value (H6b: $\Delta\chi^2(1) = 6.79, p < 0.01$), was stronger for the lower negative emotions group than for the high negative emotions group ($\beta_{\text{low negative emotions}} = 0.40, p < 0.001$; $\beta_{\text{high negative emotions}} = 0.22, p < 0.001$).

Table 5.52 Moderating role of Negative-Discontent Emotions

	Low Negative Emotions (374)			High Negative Emotions (366)				
	Chi-square	$\Delta\chi^2$	Std. est.	Std. d. err	T-value	Std. est.	Std. err.	T-value
Ability → ext. motivation	1465.01	6.51*	.653	.04	12.88*	.541	.03	10.57***

Chapter 5. Data Analysis and Results

Ability → int. motivation	1459.6 7	1.17	.517	.04	9.71** *	.489	.03	9.43***
Ext. motivation → value co-recovery in-role behavior	1458.6 3	0.13	.319	.07	3.55** *	.446	.06	4.01***
Int. motivation → value co-recovery in-role behavior	1459.4 2	0.33	- .217	.06	- 2.88**	-.204	.05	-2.13**
AB → CR	1469.8 9	11.39* *	.296	.05	3.97** *	.028	.02	.403
CR → HV	1462.4 6	3.95* *	- .342	.11	- 5.27** *	-.370	.21	-5.03***
CR → UV	1458.8 3	0.33	.296	.08	5.02** *	.119	.15	2.08*
AB → UV	1461.3 7	2.86	.403	.05	7.03** *	.525	.06	9.27***
AB → HV	1465.3 0	6.79**	.402	.08	6.47** *	.223	.06	4.19***

Note 1: *** p < .001, ** p < .01, * p < .05

Note 2: Unconstrained model: 1458.504, df: 746 CMIN/DF=1.955, RMSEA=.036, TLI=.956, CFI=.962, NFI=.926. / Fully constrained model 1533.686, df: 791 CMIN/DF=1.954, RMSEA=.036, TLI=.953, CFI=.957, NFI=.917.

Notes: Ability: Ability to co-recover, ext. motivation : extrinsic motivation, int. motivation: intrinsic motivation, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

As shown in Table 5.52, the moderation test was significant, since the chi-square difference between the constrained and unconstrained model was greater than 3.84 (Byrne, 2010), for the hypothesized paths. Thus, hypotheses H10a, and H10c1 were supported. In contrast, regarding the impact of ability to co-recover on intrinsic motivation, the moderation test was not significant since the difference in chi-square value between the constrained and unconstrained model was less than 3.84 (Byrne, 2010). This result suggested that H10c2 was

rejected. Similarly, for the effect of co-recovery in-role behavior on utilitarian value, the moderation test was not significant, leading to rejection for H10d1. Moreover, since the effect of co-recovery in-role behavior on hedonic value was negative and not positive as predicted, this leads to the rejection of H10d2.

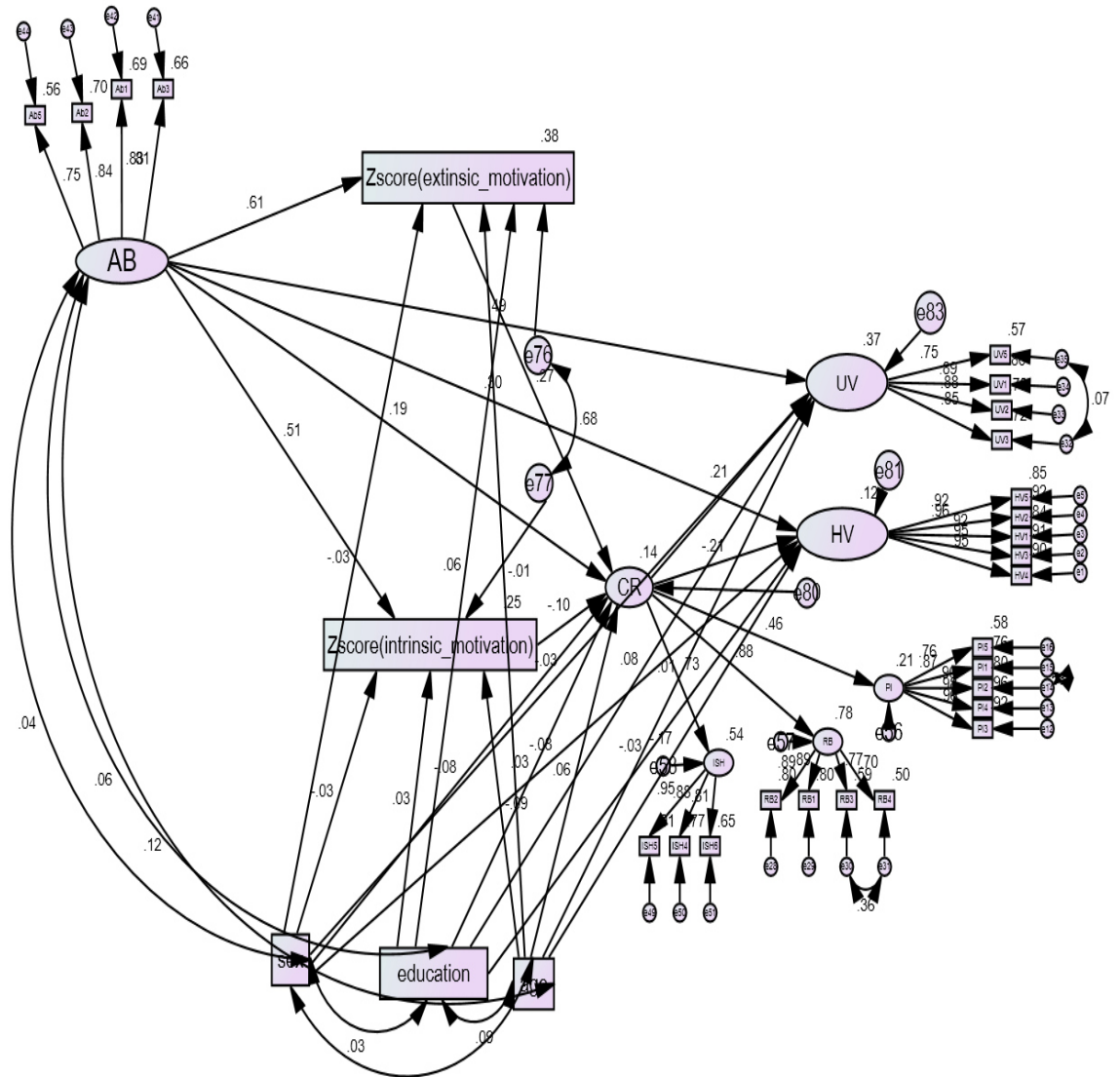
5.14.4.2 Negative-Concern Emotions

I first calculated the median of negative emotions. Based on the median, two groups were created: one below the median (low negative emotions) and the other above the median (high negative emotions). There were 370 subjects with low concern emotions and 370 subjects with high concern emotions. Thus I investigated whether negative emotions, will moderate the proposed relationships between ability, motivations (intrinsic and extrinsic), value co-recovery in-role behavior and the perceived values (hedonic and utilitarian).

In other words, the direct paths between the independent variable and a set of dependent variables, as well as the other paths between variables differ between subjects with low and high concern emotions.

The path diagram of the baseline model (unconstrained model) for low concern emotions (370 subjects) with standardized estimates is presented in Figure 5-41, and the baseline model (unconstrained model) for those with high concern emotions (366 subjects) with standardized estimates is presented in Figure 5-42.

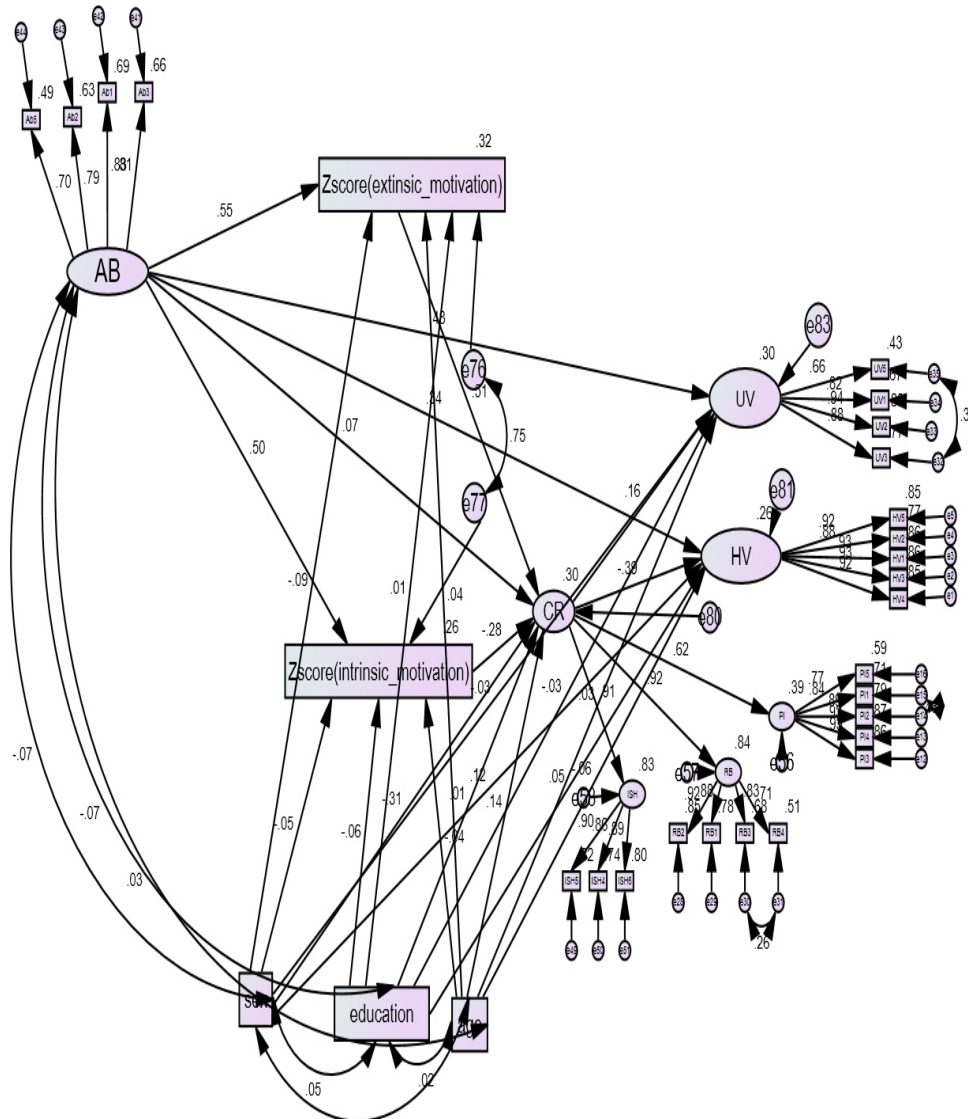
Figure 5-41: The Baseline Model (Multiple-Group Analysis) for low concern emotions with standardized Estimates



Low concern emotions Subjects standardized estimates, Chi-square=1441.237, Degree of Freedom=746, CMIN/DF=1.932, RMSEA=.036, TLI=.957, CFI=.963, NFI=.927.

Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

Figure 5-42: The Baseline Model (Multiple-Group Analysis) for high concern emotions with standardized Estimates



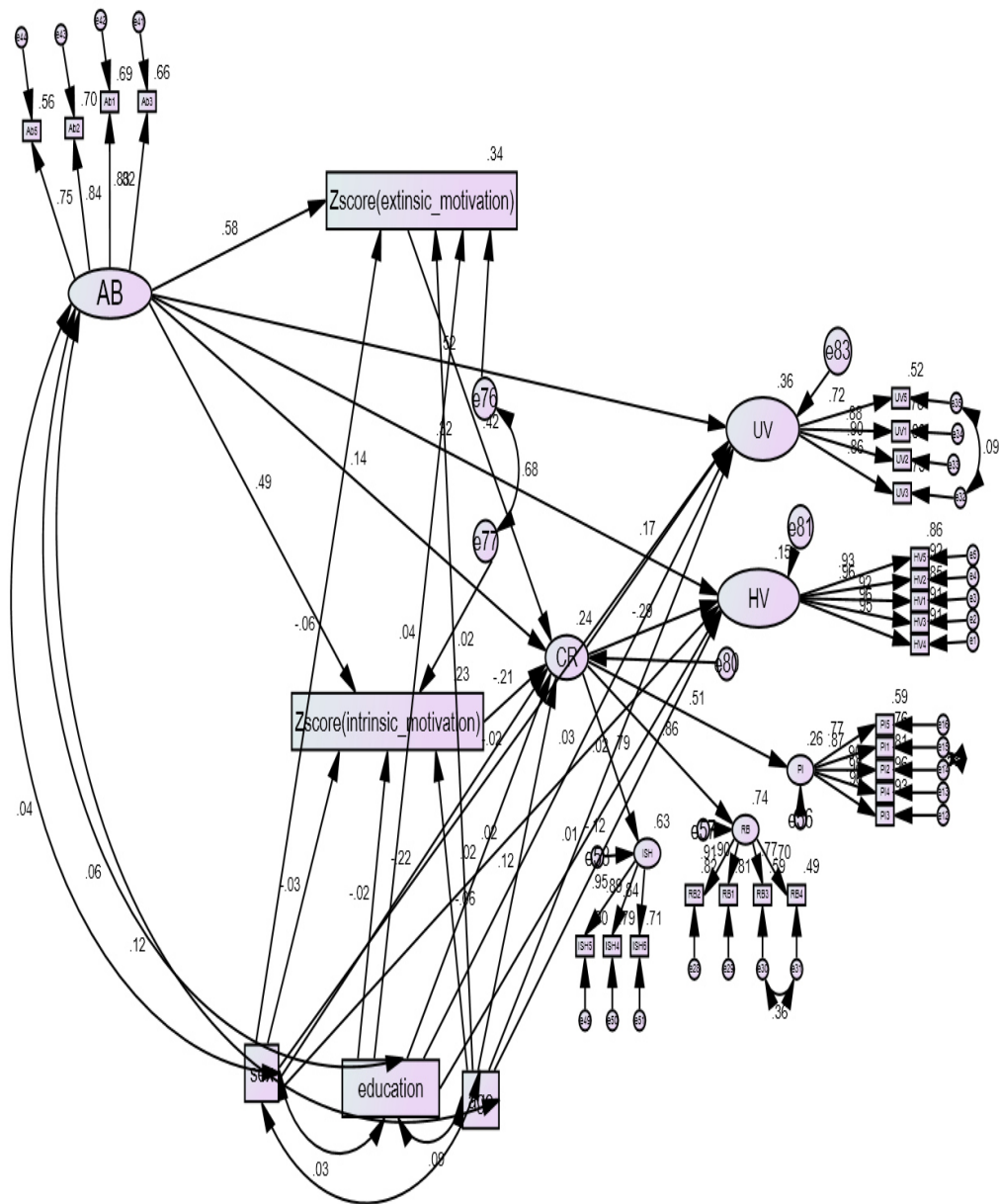
High concern emotions Subjects standardized estimates, Chi-square=1441.237, Degree of Freedom=746, CMIN/DF=1.932, RMSEA=.036, TLI=.957, CFI=.963, NFI=.927.

Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

In simultaneous multiple-group analysis, the baseline model (unconstrained model) is generated (in Figure 5.41 and Figure 5.42). It yields a χ^2 (chi-square) of 1441.237, degree of

freedom = 746 and p value = 0.000. It indicates that the model fits the data for two groups very well. Other evidence supports the goodness of fit of the model to the data (CMIN/DF = 1.932, RMSEA = 0.036, TLI = 0.957, CFI = 0.963, NFI = 0.927. It consequently indicates that all two groups use the same path diagram but possibly with different parameter estimates. Further investigation will be made to findout whether their parameter estimates are significantly different. The constrained models (structural weights models) for all two groups are presented in Figure 5-43, and Figure 5-44.

Figure 5-43: The Structural Weights Model (Multiple- Group Analysis) (standardized Estimates) for low concern emotions



Chapter 5. Data Analysis and Results

High concern emotions Subjects standardized estimates, Chi-square=1532.514, Degree of Freedom=791, CMIN/DF=1.937, RMSEA=.036, TLI=.957, CFI=.961, NFI=.923.

Notes: AB: Ability to co-recover, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

The model fits the data for both groups well, it yields a χ^2 (chi-square) of 1532.514, degree of freedom = 791 and p value = 0.000. Other evidence also supports the goodness of fit of the model to the data (CMIN/DF =1.937 RMSEA = 0.036, TLI = 0.957, CFI = 0.961, NFI = 0.923, (see Figure 5-43 and Figure 5-44).

As shown in Table 5.53, the two models were compared based on their chi-square and degree of freedom (df) values to empirically test significant differences between the two models.

TABLE 5.53 COMPARISON OF CHI-SQUARE AND DF VALUES OF CONCERN EMOTIONS

	Concern emotions fully constrained model	Concern emotions unconstrained model	Difference
Chi-Square	1532.514	1441.237	91.277
df	791	746	45

The chi-square difference test reveals a significant difference across the baseline model and the constrained model according to these figures: the degree of freedom increases = 45 (791-746), and the CMIN increases = 91.277 (1532.514-1441.237), and p value = 0.000 (which is significant different). This result indicates that although both groups can use the same path diagram, they have a significant difference in structural weights estimates. This initial test provides evidence that at least one or more of the direct effects differs significantly across the two subgroups. It is recommended to estimate a series of models to identify the specific paths that differ significantly across the two groups (Holmes-Smith, Cunningham and Coote 2006).

After an initial test, further investigations have been made by analysing a series of models. In this study, because there are 9 direct paths in the model, 9 rounds of investigations/analyses have been undertaken (executing the model 9 times, each time investigating the significant difference of each direct path). When finishing these analyses, paths that are significant different across the baseline model and structural weights model are identified.

It was found that only one direct path differs significantly across two groups, while one other direct path was not differ across the two groups but was fully moderated (see Table 5.54). This direct path between extrinsic motivation and consumer value co-recovery in-role behavior (ext. motivation→CR), while the path that was fully moderated was between intrinsic motivation toward co-recovery in-role behavior (int.motivation→CR).

Specifically, H10 hypothesized the moderating role of concern emotions on the relationships in the proposed model. The effect of extrinsic motivation on consumer value co-recovery in-role behavior (H1a: $\Delta\chi^2(1) = 10.17, p < 0.05$) was stronger for those with higher concern emotions than for those with lower concern emotions ($\beta_{\text{low concern emotions}} = 0.27, p < 0.05$; $\beta_{\text{high concern emotions}} = 0.51, p < 0.001$). However, the negative effect of intrinsic motivation on value co-recovery in-role behavior (H1b: $\Delta\chi^2(1) = 5.13, p < 0.05$) was significant only for those with high concern emotions ($\beta_{\text{low concern emotions}} = -0.10, \text{n.s.}$; $\beta_{\text{high concern emotions}} = -0.28, p < 0.01$).

Table 5.54 Moderating role of Negative- Concern Emotions

	Low Concern Emotions(370)					High Concern Emotions (370)		
	Chi-square	$\Delta\chi^2$	Std. est.	Std. err.	T-value	Std. est.	Std. err.	T-value
Ability → ext. motivation	1443.647	2.41	.612	.04	12.054***	.554	.03	10.732***

Chapter 5. Data Analysis and Results

Ability → int. motivation	1442.0 56	0.81	.506	.04	9.636***	.500	.03	9.536***
Ext. motivation → value co-recovery behavior	1451.4 09	10.1 7**	.273	.04	2.657**	.514	.08	5.325***
Int. motivation → value co-recovery in- role behavior	1446.3 68	5.13 *	- .104	.04	-1.173	- .284	.07	-3.265**
AB → CR	1441.7 07	0.47	.194	.03	2.386**	.066	.04	1.024
CR → HV	1441.4 13	0.17	- .210	.20	-3.200**	- .385	.12	-5.958***
CR → UV	1443.1 78	1.94	.213	.15	3.506***	.162	.10	2.755**
AB → UV	1441.4 60	0.22	.488	.05	8.529***	.477	.06	8.442***
AB → HV	1441.5 18	0.28	.302	.07	5.133***	.343	.06	6.332***

Note 1: *** p < .001, ** p < .01, * p < .05

Note 2: Unconstrained model $\chi^2=1441.237$, df: 746, CMIN/DF=1.932, RMSEA=.036, TLI=.957, CFI=.963, NFI=.927./ Fully constrained model $\chi^2=$, 1532.514 df:791, CMIN/DF=1.937, RMSEA=.036, TLI=.957, CFI=.961, NFI=.923.

Notes: Ability: Ability to co-recover, ext. motivation : extrinsic motivation, int. motivation: intrinsic motivation, CR: Co-recovery in-role behavior, UV: Utilitarian Value; HV: Hedonic Value

As shown in Table 5.54, the moderation test was significant, since the chi-square difference between the constrained and unconstrained model was greater than 3.84 (Byrne,

2010), for the path regarding the extrinsic motivation on value co-recovery in-role behavior. Thus, hypotheses H10b1 was supported. Moreover, regarding the effect of intrinsic motivation on co-recovery in-role behavior, although the moderation test was significant, however since this relationship was negative and no positive as predicted, this leads to the rejection of H10b2.

In addition to the testing of the proposed linkages between exogenous and endogenous variables as illustrated in the structural model, three control variables were defined in this research, namely, gender, education and age (See Chapter 3).

5.15 Testing of Control Variables

Control variables are treated similar to other exogenous variables in a process model. Although control variables are not of the focus of the research, however are held constant to better analyze the relationship between the effects of explanatory variables on outcome variables.

With regard to AMOS-SEM, in order to test for effects of the three control variables on the aforementioned model, the control variables, gender, education, and age were also treated as independent variables, with direct paths to all the dependent variables and covariance with the independent variable, ability to co-recover.

Gender was found to have a negative and significant effect on co-recovery in-role behavior ($\beta=-0.218$, $p<0.001$). Age was found to have a negative effect on intrinsic motivation ($\beta=-0.073$, $p<0.05$), hedonic value ($\beta=-0.122$, $p<0.001$), and a positive effect on value co-recovery in-role behavior ($\beta=0.114$, $p<0.01$). Last, education was not found to have a significant effect on the other variables.

5.55 Table of Control Variables

Age→intmotiv	-.073	-2.209*
Age→extmotiv	.019	.614
Age→CR	.114	3.056**
Age→HV	-.122	-3.443***
Age→UV	.024	.732
Education→intmotiv	-.013	-.400
Education→extmotiv	.039	1.291
Education→CR	.020	.537
Education→HV	.005	.140
Education→UV	.018	.561
Gender→intmotiv	-.039	-1.205
Gender→extmotiv	-.057	-1.855
Gender→CR	-.218	-5.677***
Gender→HV	.011	.297
Gender→UV	-.020	-.578

Note: *** $p < .001$, ** $p < .01$, * $p < .05$

CONCLUSION

In this chapter, I presented the the measurement scales of each construct, the validation of each construct, the measurement and the structural model. Moreover, I presented the methods, the research sample of Study 2. Study 2 has been conducted to test the direct hypotheses, the mediating and the moderating effects. I found that ability to co-recover affects extrinsic motivation, intrinsic motivation, value co-recovery in-role behavior, utilitarian value, and hedonic value. Furthermore, extrinsic motivation has a positive impact on value co recovery in-role behavior which in turn positively influences utilitarian value. Moreover, results showed that ability to co-recover had an indirect influence on co-recovery

in-role behavior through the mediation of extrinsic motivation, but intrinsic motivation did not mediate the effect of ability to co-recover on co-recovery in-role behavior. Last, the moderating effects of internal blame, role clarity, trust in service provider's resolution ability, and negative emotions in the proposed model were examined. Negative emotions were found to moderate most of the direct paths: the relationship between ability to co-recover and extrinsic motivation, between ability to co-recover and co-recovery in-role behavior, and last between motivation (extrinsic and intrinsic) and value co-recovery in-role behavior. Trust in service provider's resolution ability was found to moderate the relationship between ability and motivation (extrinsic and intrinsic). The role clarity was found to moderate the relationship between ability to co-recover and intrinsic motivation and the relationship between ability to co-recover and value co-recovery in-role behavior. Last internal blame was found to have different moderating effects in the relationships between ability to co-recover and extrinsic motivation, ability to co-recover and value co-recovery in-role behavior, ability to co-recover and extrinsic motivation, and ability to co-recover and intrinsic motivation. The next chapter will be the final chapter of the dissertation and includes the discussion and conclusion. The theoretical and managerial implication will be presented. In addition, limitations, strengths, and avenues for future research will be also presented.

Table 5.56: Results of Hypotheses Testing		
Hypothesis		Result
H1a(+)	When consumers' extrinsic motivation increases, they will express more value co-recovery in-role behavior.	Supported
H1b(-)	When consumers' intrinsic motivation increases, they will express more value co-recovery in-role behavior.	Not Supported
H2(+)	When consumers are better able to co-recover, they will express more value co-recovery in-role behavior.	Supported
H3a(+)	A customer's level of ability influences extrinsic motivation.	Supported
H3b(+)	A customer's level of ability influences intrinsic motivation.	Supported
H4a(+)	The relationship between the level of ability to co-recover (ability to integrate knowledge and skills) and value co-recovery in-role behavior will be mediated by extrinsic motivation.	Supported
H4b(-)	The relationship between the level of ability to co-recover (ability to integrate knowledge and skills) and value co-recovery in-role behavior will be mediated by intrinsic motivation.	Not Supported
H5a(+)	A higher level of customer value co-recovery in-role behavior leads to greater utilitarian value	Supported
H5b(-)	A higher level of customer value co-recovery in-role behavior leads to greater hedonic value during the co-recovery process.	Not Supported
H6a	As the level of customer ability to co-recover increases, the	Supported

Chapter 5. Data Analysis and Results

	consumer will perceive greater utilitarian value.	
H6b	As the level of customer ability to co-recover increases, the consumer will perceive greater hedonic value.	Not Supported
H7a	The positive relationship between ability to co-recover and value co-recovery in-role behavior will be stronger if the customer is high internal blamer in comparison to those who are low internal blamers.	Not Supported
H7b1	The positive relationship between a consumer's extrinsic motivation and value co-recovery in-role behavior will be stronger if the customer is high internal blamer in comparison to those who are low internal blamers.	Not Supported
H7b2	The positive relationship between a consumer's intrinsic motivation and value co-recovery in-role behavior will be stronger if the customer is high internal blamer in comparison to those who are low internal blamers.	Not Supported
H7c1	The positive relationship between ability to co-recover and extrinsic motivation will be stronger if the customer is high internal blamer in comparison to those who are low internal blamers.	Not Supported
H7c2	The positive relationship between ability to co-recover and intrinsic motivation will be stronger if the customer is high internal blamer in comparison to those who are low internal blamers.	Not Supported
H8a	The positive relationship between ability to co-recover and value co-recovery in-role behavior will be stronger if the customer has greater role clarity in comparison to those who have less role clarity.	Supported
H8b1	The positive relationship between a consumer's extrinsic motivation and value co-recovery in-role behavior will be stronger if the customer has greater role clarity in comparison to those who have less role clarity.	Not supported
H8b2	The positive relationship between a consumer's intrinsic motivation and value co-recovery in-role behavior will be stronger if the customer has greater role clarity in comparison to those who have less role clarity.	Not supported
H8c1	The positive relationship between ability to co-recover and a consumers' extrinsic motivation will be stronger if the customer has greater role clarity in comparison to those who have less role clarity.	Not supported
H8c2	The positive relationship between ability to co-recover and a consumers' intrinsic motivation will be stronger if the customer has greater role clarity in comparison to those who have less role clarity.	Supported
H8d1	The positive relationship between ability to co-recover and utilitarian value will be stronger if the customer has greater role clarity in comparison to those who have less role clarity.	Supported
H8d2	The positive relationship between ability to co-recover and hedonic value will be stronger if the customer has greater role	Supported

Chapter 5. Data Analysis and Results

	clarity in comparison to those who have less role clarity.	
H9a1	The positive relationship between ability to co-recover and extrinsic motivation will be stronger if the consumer has higher levels of trust in comparison to those with lower levels of trust.	Supported
H9a2	The positive relationship between ability to co-recover and intrinsic motivation will be stronger if the consumer has higher levels of trust in comparison to those with lower levels of trust.	Supported
H10a	The positive relationship between ability to co-recover and value co-recovery in-role behavior will be weaker if the customer experiences higher levels of negative emotions in comparison to those who experience lower levels of negative emotions.	Supported
H10b1	The positive relationship between a consumer's extrinsic motivation and value co-recovery in-role behavior will be weaker if the customer experiences higher levels of negative emotions in comparison to those who experience lower levels of negative emotions	Supported
H10b2	The positive relationship between a consumer's intrinsic motivation and value co-recovery in-role behavior will be weaker if the customer experiences higher levels of negative emotions in comparison to those who experience lower levels of negative emotions.	Not Supported
H10c1	The positive relationship between ability to co-recover and extrinsic motivation will be weaker if the customer experiences higher levels of negative emotions in comparison to those who experience lower levels of negative emotions.	Supported
H10c2	The positive relationship between ability to co-recover and intrinsic motivation will be weaker if the customer experiences higher levels of negative emotions in comparison to those who experience lower levels of negative emotions.	Not Supported
H10d1	The positive relationship between consumers' value co-recovery in-role behavior and utilitarian value will be weaker if the customer experiences higher levels of negative emotions in comparison to those who experience lower levels of negative emotions.	Not Supported
H10d2	The positive relationship between consumers' value co-recovery in-role behavior and hedonic value will be weaker if the customer experiences higher levels of negative emotions in comparison to those who experience lower levels of negative emotions.	Not Supported

Chapter 6. Discussion and conclusion

6.1 Discussion

6.1.1 Theoretical findings

This dissertation draws on S-D logic, service failure, recovery and customer participation literature, as well as process, motivational and institutional theories contributing to the existing literature in several ways. The purpose of this dissertation is to understand what contributes to co-created value in service recovery context. However, in order to understand this it is important first to understand the service failure in terms of value loss through the lens of S-D logic. Thus, service failure is reconceptualized through the lens of S-D logic by proposing that service failures are negative critical incidents in resource integration process. Therefore, service delivery, service failure, and service recovery are all parts of the resource integration process where customers acquired different forms of value. Through this reconceptualization “service failure” should be defined as the failure of employment operant to operand resources, a process-failure and not an outcome, since emphasis is given on the resource integration processes, rather than the resources in terms of output. Then, the role of operant resources in the form of ability to co-recover in co-recovery in-role behavior and co-created value in a service recovery context are examined, by addressing parallel several factors that enable or constrain the service recovery process. Theoretical and empirical findings are followed by a more detailed discussion.

From a theoretical perspective, this dissertation contributes to the existing literature by reconceptualizing service failures through the lens of S-D logic. I suggest that in terms of value, traditional service failures in goods and services are process-failures, since these resources are distribution mechanisms for value realisation. Therefore, these *failures* concern resources during the development of the service process. Thus, contrary to G-D logic literature in service failure (e.g Smith *et al.*, 1999) who argued that outcome-failure includes what customers actually receive, I contribute to the literature by arguing that from an S-D logic point of view, service failure is no longer perceived as transactional post-purchase activity but rather as a phenomenologically determined service experience. This is in line

with Tronvoll (2012) who argued that complaining behavior must be understood as a construct beyond the transaction of a post-transactional activity, which emerges from a lack of fit with the desired experience. Similarly, I extend this notion by arguing that from an S-D logic point of view service failures should no longer be perceived as emerging from a failure in the operand resources (i.e. a product failure), but as emerging from a failure in the application of knowledge and skills (operand resources) (see Tronvoll, 2012) and thus service failures are critical negative incidents in the resource integration process.

From an S-D logic point of view, service failure process is similar with value co-destruction process as suggested recently by Plé & Chumpitaz Cáceres (2010); Echeverri & Skålén (2011); Smith (2013). These authors suggested that misuse of operand resources and loss of operand resources trigger a co-destruction process. However, according to S-D logic from the point that a co-destruction process starts until the value loss is a long distance which gives the opportunity for value recovery. In order to understand this better, I developed an integrated framework of co-creation/co-destruction process by supporting the notion that this is a continuum process rather than dichotomy and depends on changes and the contradictions of resource-configuration process. In terms of outcome-failure from an S-D logic perspective I argue that this matches with the perceived value-loss. This is in line with Hilton *et al.*, (2012) who argued that value is the outcome of service process and therefore it is evaluated subjectively. Similarly, I suggest that the perception of value loss is the evaluation of the whole process as the outcome. This suggests the *outcome-failure* in S-D logic. Moreover, drawing on lifecycle and dialectic theories I treat service success and service failure (i.e. co-creation and co-destruction) as a sequence of events in a continuum process. Treating service process in this way, helps in understanding whether internal or external contradictions in each stage as well as the changes that occur form either a co-creation or a co-destruction process. The treatment of co-creation/co-destruction as a continuum process is in line with the view of Sivakumar *et al.*, (2014) who treated service delivery as a continuum process in which multiple opportunities exist for service failures and delights to occur. I transit this notion in an S-D logic perspective by adding two theories in order to understand better the service failure in terms of value, as a co-destruction process. As Chen *et al.*, (2009, p. 37) argue consistent with S-D logic service delivery can be perceived “as the process of applying specialized competences through goods (mechanisms)”, which is the resource integration process.

Furthermore, this approach also suggests that service recovery is no longer a transactional post-purchase phenomenon (e.g. Bitner *et al.*, 1990; Smith *et al.*, 1999) which occurs after a service failure but a dynamic process (co-recovery process) (Xu *et al.*, 2014a,b). This means that service recovery strategies provided by firms such as compensation and discount reflect neither the value nor the desired final output. Contrary service recovery instead of output is a process because it is the application of knowledge and skills (operant resources) (see Vargo and Lusch 2004, 2008) in order to create a solution between a firm and its customers. Consider for example a customer who has checked into a highly ski resort. During his/her stay, the ski team fails to meet the public's growing demand for skiing and consequently the schedule for beginner's ski lessons changes. However, the customer has only limited time to enjoy the resort activities. Thus, customer discusses his/her problem with the ski manager in order find a solution. Ski manager and the customer integrate their operant resources (skills and knowledge) in order to find another possible solution (e.g starting the ski lessons within 24 hours, or send the customer to another ski team for beginners in order to start immediately). In this way, co-recovery becomes a dynamic process rather than a transactional post-failure activity (e.g the provision of compensation, or apology) in terms of output, while the outcome of the process will be evaluated by the customer.

In terms of failure severity, I suggest two things. First, I believe that severity differentiated whether perceived as outcome of the whole process i.e value loss or as a resource misuse (as a tool) during the service process. In the first case, severity is high since co-destruction process results in value-through-misuse and is related with the outcome evaluation. Consider the above example in the ski center, a value-through-misuse could be consider the cancelation of skill lessons from the other ski team or starting the ski lessons when customer has to leave the ski resort. Second, as the level of severity decreases co-destruction process may result in value-in-reduction or value-in-recovery. Therefore in terms of process-failure the level of severity may vary in the development process. I suggest that major role for the evaluation of severity plays the availability of resources and the *operant resources*, since different activities require different resources, and the stage of service process since each stage has different importance in the resource integration process. In the above example in the ski center, if there are available resources (e.g time) the customer may start the ski lessons two days after and thus to perceive it as a negative critical incident with low severity. This is in line with Sivakumar *et al.*, (2014) who argues that measure failures in

a continuum each failure represents different level of severity. Therefore service failure severity is determined whether is related with an outcome (perceived value loss) or with a process (potential value loss). The most important contribution from a theoretical perspective is that offering a new perspective for services failures (processes and outcomes) and opens up important new avenues for the establishment of proactive recovery strategies before the value lost. To the best of our knowledge this is a first effort in transition from G-D logic to S-D logic regarding the concept of service failures and parallel provides an integrated model of co-creation/co-destruction by perceiving it as contradictions in resource integration process.

6.1.2 Empirical findings

Empirical findings of this dissertation contribute to the literature in several ways, as well. First, this study identifies the mechanisms by which the effect of operant resources is transferred to consumer value co-recovery in-role behavior. Second, it shows that consumer value co-recovery in-role behavior leads to both favorable and unfavorable outcomes in terms of co-created value. Third, it takes into account specific conditions for the evaluation of these outcomes. Fourth, it provides a basis for understanding how consumers co-recover after service failures. Specifically, this dissertation seeks to investigate why, how and when customers exhibit co-recovery in-role behavior after a service failure. Findings suggest that consumers co-recover through information sharing, responsible behavior, and personal interaction. Practically this means that consumers engage in co-recovery process with the service provider by explaining what they wanted from the service provider, based on what serves their needs better after the service failure, and facilitate the work of the service provider by giving all the appropriate information and answered all the employee's service-related questions. For example, a consumer bought a computer from a local store without installing the software for Windows. After, buying the computer, he/she went home and he/she tried to install Windows on it. He/she had a problem at the end of the installation and it would happen every time he/she tried. So, he/she called the shop where he/she bought it, and contacted with the technician in order to fix the problem. The technician asked for information related to the process installing. Thus, the consumer, started describing step-by-step the procedure of installation (information sharing). In this way the consumer *shared the information* about the problem with the employee. Thus, a collaborative process begins for value co-creation in a new resource integration process (service recovery). What's more, in this resource integration process in order to get a recovery consumers also should exhibit a

responsible behavior which means that they have to follow the service providers' instructions, by performed the appropriated tasks, completed the expected behaviors, fulfilled the responsibilities to the business, and followed the employee's directives or orders. In the aforementioned example, the technician except the information related to the installation may asked the consumer run some tasks (e.g. to give him/her some new instructions regarding the installation of the software, to asked him/her to restart the computer, or to asked him/her to wait and to call them the next day to find a solution). Consumer should demonstrate *responsible behavior*, by completing the aforementioned tasks (e.g. to restart the computer, or to reinstall the software and then input a new serial number, etc) and completed all the expected behaviors (to be patient and called the authorized service center tomorrow). Thus consumer *responsible behavior* is the second important dimension for co-recovery.

Last, consumers should be friendly, kind, polite, courteous, and do not act rudely in order to co-create a solution with the employees. These characteristics suggest *personal interaction*. All the aforementioned practices comprise the concept of consumer value co-recovery in-role behavior. Violation of these practices is likely to lead to less or none engagement co-recovery in-role behaviors and also to trigger different forms of behaviors such as exit behaviors. In the above example, if the consumer is rude, does not follow all the employees instructions (e.g. to restart the computer), does not provide the necessary information that the service provider needed for the service recovery (e.g. what is the serial number of software installed, what are the system requirements of the computer), does not explain what he/she wants from the service provider (e.g. Information and help on how to install the software program), co-recovery process is impossible. Because, in co-recovery process, service is exchanged for service, this requires the collaboration of both consumers and service providers. Thus, if consumers are not willing to collaborate through the aforementioned practices, no co-recovery exists. Contrary, consumers may expect a firm recovery or may perform a consumer recovery (Dong *et al.*, 2016). Previous studies in value co-creation in service recovery process have not yet provided explanations of how customers co-recover through specific practices. I identified those practices by adding to the literature that consumer co-recover the same way that co-creates value. My view that co-creation is the same with co-recovery draws on the work of Xu *et al.*, (2014b) and Skourtis *et al.*, (2014) who argue that value co-creation is the same under different circumstances before service failure and after service failure. Hence, co-creation in-role behavior could exist in service

recovery process, and contributes also to co-created value as well as before the service failure. Considering consumer as value co-creators during the whole resource integration process i.e, before the unfavorable service experience, and after the unfavorable service experience, reflects the dynamic nature of S-D logic. In such a way, the consumer integrates his operant resources to co-create a recovery with the service provider. Operant resources in the form of ability to co-recover plays fundamental role in co-recovery process. Thus, in support of S-D logic (Vargo and Lusch, 2004a, 2008a) co-recovery process is improved through ability to co-recovery which is an operant rather than operand resources.

Although the importance of operant resources as I mentioned has been highlighted in publications (Vargo and Lusch, 2004; 2008), limited empirical studies exist which confirm their importance. Previous authors (Yi, 2014) noted ability is an important determinant of co-creation in-role behavior. I contributed to this by showing the importance of ability to co-recover in service recovery process context. The results indicate that when customers have the ability to co-recover are engaged in co-recovery in-role behavior. In the above example, if consumer feels that he/she is qualified for an extra participation in finding a solution and he/she is confident in his/her ability in finding a solution with the service provider (*ability to co-recover*), then he/she will demonstrate more co-recovery in-role behavior (information sharing, responsible behavior, and personal interaction). In other words, consumers' confidence that they are able to successfully participate more in finding a solution to their problem increase the aforementioned activities related to co-recovery in-role behaviors. This finding also challenges traditional view of service recovery strategies which traditionally focused on operand resources for service recovery. As a result, many service organizations offer refunds, credit, discounts, replacement e.tc to compensate dissatisfied customers (Kelley *et al.*, 1993; Johnston, 1995; Boshoff, 1997, *cited in* Krishna *et al.*, 2011). As mentioned before, although, these operand resources may be useful for service recovery still, operant resources are also necessary for co-recovery process. Xu *et al.*, (2014b) noted that consumers use their justice perception to assess the integration of resources (monetary compensation, service skills and timing) in relation to the loss and inconvenience they suffered. I argue that consumers also used their abilities to co-recover and to act upon the operand resources (e.g computer, software, etc).

In addition, consumers' ability to co-recover positively affects extrinsic and intrinsic motivation. The finding is in line with previous research (Dellande *et al.*, 2004; Lusch *et al.*,

2007) which suggest that ability is an important determinant of motivation. I extend this finding in a service recovery context by arguing that ability affects both extrinsic and intrinsic motivation. Indeed, when a consumer is capable of participating in finding a solution to his/her complaint (ability to co-recover), he/she put all his/her effort in order to achieve the preferred solution to his/her problem (extrinsic benefits) as well as to get a personal feeling of worthwhile accomplishment (intrinsic benefits). Moreover, these studies did not take into account the intrinsic motivation. Generally, despite the importance of both extrinsic and intrinsic motivation (Zwass, 2010) in service dominant logic empirical studies concerning the intrinsic motivation for co-creation are neglected. Thus, I introduced it in the service recovery process. In line with this, as expected extrinsic motivation was positively related to co-recovery in-role behavior. This means that, when consumers expect to get the preferred recovery (e.g the installation of the software, or the replacement of the personal computer) they are more cooperative with the service provider.

Surprisingly, an intriguing finding which deserves attention is the negative impact of intrinsic motivation on consumer value co-recovery in-role behavior. That result challenges the findings of previous studies that intrinsic motivation positively relates to participation behavior (e.g Fernandes and Remelhe, 2015). A possible explanation could be the following. In non-recovery situations, intrinsic motivation arises from the interest in or enjoyment of completing or performing a task (Ryan and Deci, 2000). In a service recovery context, this means that by just engage in co-recovery in-role behavior task itself, are what satisfying the consumer. Although some authors argue that a co-recovery process can be viewed as a joyful and hopeful process (e.g Park and Ha, 2016), however, I believe that co-recovery process and thus co-recovery in-role behavior is characterized by stress and anxiety given that during service failure, consumers are forced to find a solution to their problem and thus further interaction with service providers is not always desirable. As Smith and Bolton (2002) notes after service failure negative emotions tend to overwhelm cognitions in recovery situations. Therefore, although the engagement in co-creation behavior is from gains in satisfaction where enjoyment is strong factor therefore the engagement in co-recovery behavior differs and it is characterized by stress and anxiety. As follows, consumers there are maybe highly intrinsically motivated based on interest and curiosity for service recovery process/and or looking for to have a joyful service recovery process however this may not be achieved through the co-recovery in-role behavior rather than a delivery of service recovery by the

employees, or a customer recovery. This finding may also explain the result of Heidenreich *et al.*, (2014) that initial level of customer co-creation in service delivery may result in lower satisfaction in case of a co-created service recovery. Similarly, when customers engage in co-creation in-role behaviors could be intrinsically motivated which affect their behavior, but after a negative critical incident there is no joy from the task of recovery itself as it was before the service failure. This justifies why consumer may be less satisfied after a co-creation of service recovery depending their previous level of participation in service delivery.

Another intriguing finding was the negative effect of co-recovery in-role behavior in hedonic value. As Park and Ha (2016) mentioned hedonic value of co-recovery refers to customer's evaluation as to how meaningful co-recovery by itself has been socially or emotionally. However, Pires *et al.*, (2015) argue that customers may evaluate their participation in the co-creation process positively or negatively. That negative effect can be explained by collaborative inertia (see Hibbert and Huxham 2005) which may occur when the co-creation is ineffective. If this happens, progress becomes slow and painful, and eventually it may decrease customer hedonic value. In the aforementioned example, if the consumer has difficulties to understand the technician's instructions regarding the task that has to be performed (e.g. due to lack of knowledge), although he/she may exhibit co-recovery in-role behavior, however the interaction and consequently the co-recovery process become slow and painful due to the above difficulties and thus enjoy less hedonic value. A solution to that problem could be high role clarity with regards to the co-recovery process (Hibbert and Huxham 2005). In this case, the technician should explain step-by-step to the consumer what he/she has to do. In the same vein, contrary to the idea that co-creation has beneficial aspects, some authors (e.g. Zwick *et al.*, 2008; Cova and Dalli, 2009; Arvidsson, 2005, 2006) argue that co-creation could be perceived as a form of customer exploitation. In a service recovery process, a "working consumer" may feel that his/her participation in value co-recovery is actually a form of exploitation carried out by the service provider. This perception of exploitation could be exacerbated if the service failure is the company's fault. Thus, working consumers may not derive any hedonic value from co-recovery because they feel that the company took advantage of their contribution in order to solve the problem. Contrary, as expected consumer value co-recovery in-role behavior increases utilitarian value.

Fourth, while the results of this study suggest a significant mediated relationship between ability to co-recover and co-recovery in role behavior via extrinsic motivation, the same was not true for intrinsic motivation. This finding is interesting as it reveals that the effect of ability on consumer's co-recovery in-role behavior is not under the influence of an intrinsic process such as motivation. An explanation could be that because ability to co-recover strengthens co-recovery in-role behavior while intrinsic motivation decreases consumer's co-recovery in-role behavior, thus no mediation effect exists. When it is tested the direct relationship ability to co-recover/consumer value co-recovery in-role behavior, there is positive effect (the higher the ability to co-recover the higher the co-recovery in-role behavior). Now, if we enter intrinsic motivation as mediator, it could be considered as the mechanism that ability to co-recover influences co-recovery in-role behavior. However, when intrinsic motivation as a mediator is tested, we can see that the higher the ability to co-recover, the higher the intrinsic motivation to co-recover (+), but the higher the intrinsic motivation to co-recover, the lower is the consumer co-recovery in-role behavior (-). In this case, direct and indirect effects will neutralize each other, and we can get insignificant total effect.

Fifth, as expected, internal blame, role clarity, trust in resolution ability, and negative emotions play moderating roles in the proposed model but some results contradict the proposed hypotheses. As for internal blame, no blame-specific difference was found in paths from ability to intrinsic motivation, co-recovery in-role behavior to co-created value (hedonic and utilitarian), and ability to co-created value. Low blamers have stronger positive relationship between ability and extrinsic motivation. This means that although consumers may be capable of participating in a service recovery they are willing to participate only if they attributed low levels of blame to themselves. Contrary, consumers who experience higher levels of blame they are not willing to co-recover even though may have the abilities to do so. Furthermore, people who have the abilities and they are external motivated to co-recover they engage in co-recovery in-role behaviors only if they are low blamers. This finding contradicts Dong *et al.*'s (2016) study in which they found that when consumers feel a greater amount of responsibility for the failure they tend to participate more to resolve it. This inconsistency may be expected since this study does not investigate a specific co-produced service context as in theirs. Moreover, they focused on the expectancy dimension without taking into account the instrumentality and valence aspects of expectancy

theory. Nevertheless, high blamers will not engage in co-recovery in-role behaviors. This argument is in contrast with conventional beliefs that the more people blame themselves, the more they try to fix the problem themselves (Zhu *et al.*, 2013) because due to internal attribution customers may feel guilty for the flawed service outcome and feel obliged to solve the problem they caused (Heidenreich *et al.*, 2014). A possible explanation could be the following. According to the self-enhancement theory (Steele, 1988; Tesser 1988, *cited in* Dunn and Dahl, 2012) because consumers have a fundamental need to maintain a positive sense of self, when their self-concept is threatened, they experience a psychological sense of discomfort that they then become motivated to reduce (Dunn and Dahl, 2012). In a co-recovery context, internal attributions of service failure could be viewed as self-threat, consumers may seek to avoid their participation in service recovery in order to protect their self-esteem (e.g from negative feedback from the service provider) by selectively seeking other types of recovery (e.g firm recovery, or customer recovery). In other words, consumers' responsibility for the failure threatens their self-esteem during their engagement in co-recovery in-role behavior, and thus they avoid the co-recovery process. Last, intrinsic motivation decreases co-recovery in-role behavior only for those who have lower levels of internal blame.

With regards to the moderating role of role clarity several interesting results have been found. Generally, consumers' ability influences more positively the hedonic and utilitarian value when the service provider has service recovery process with high clarity regarding the role of the customer. Similarly, consumer's ability positively influences co-recovery behavior only in the cases of high role clarity. In other words, when consumers do not know what they have to do in order to attain service recovery, they prefer to save their resources (ability) instead of using them during co-recovery interactions; most likely they can use their abilities to find a solution for the service failure themselves. However, high role clarity does not always lead to higher co-recovery behavior, especially when it is related to extrinsic motivation. I found that the effect of consumers' abilities on extrinsic motivation and the latter's impact on value co-recovery behavior are stronger in cases of low role clarity. This is an interesting result which was not expected. In other words, consumers use more of their abilities when it seems that the service provider does not have a clear strategy about what consumers should do in order to obtain the recovered value. A possible explanation can

be that consumers consider the instrumentality of their co-recovery, which is one of the dimensions of motivation, to be more important in cases of low role clarity.

Regarding the negative discontent emotions (upset, sad, annoyed, angry and in a bad mood), findings suggest that those who experience lower negative emotions have stronger positive relationship between ability and extrinsic motivation compare to those who experience higher levels of negative emotions. Moreover, consumers who have the abilities to co-recover they engage in co-recovery in-role behaviors only if they experienced lower level of negative emotions. In his study Tronvoll (2010) found that negative emotions increase customer complaint behavior. However, in case of co-recovery in-role behavior it seems that higher levels of negative emotions constrain the customers to engage in information sharing, responsible behavior and personal interaction. This is in line with the argument of Smith and Bolton (2002) as I have already mentioned above, that negative emotions tend to overwhelm cognitions in recovery situations. I add to this view, by arguing that negative emotions tend to overwhelm co-recovery in-role behaviors by constrain them. Another possible explanation could be that due to higher levels of negative emotions consumers engage in exit-behaviors (Andreassen, 1999) or waiting for service provider recovery solutions rather than an engagement in co-recovery in-role behaviors.

Moreover, the negative impact of co-recovery in-role behavior on hedonic value is stronger for those with higher levels of negative emotions than for those with lower levels. As expected, this means that higher levels of negative emotions decrease the assessment of hedonic value during and after the co-recovery process. Last, for those who experienced lower negative emotions the effect of ability to co-recover was stronger in their evaluation of hedonic value than for those with higher negative emotions. Additionally, regarding the concern emotions (nervous, afraid) findings suggest that the effect of extrinsic motivation on co-recovery in-role behavior is stronger for those who are highly concerned for service recovery. This means that the more the consumers are highly concern to get service recovery awards (e.g compensation) they stronger their motivation for co-recovery affect their co-recovery in-role behavior. This seems logical, due to the fact that they are more motivated to engage in co-recovery behavior and thus they engage because they are concerned to get a solution which is very important to them. Contrary, consumers who have high levels of intrinsic motivation to co-recovery they avoid co-recovery in-role behaviors if they experienced higher level of concern emotions. This could be explained by the fact that

concern emotions also overwhelm the expected feelings from the service recovery process and thus there is no relationship between intrinsic motivation and co-recovery in-role behavior.

Finally, trust in employees' resolution ability plays a moderating role in some of the proposed relationships. Those with higher levels of trust in employee's resolution ability show a stronger relationship between ability and both extrinsic and intrinsic motivation. This is in line with the recent application of institutional theory in S-D logic and the notion that institutions enable or constrain resource integration process (Edvardsson *et al.*, 2014). I extend this notion into a service recovery context by showing that trust as a social norm i.e normative institution enables the co-recovery in-role behavior and thus the co-recovery process. Last but not least, ability to co-recover contributes to hedonic value in the case more for those with higher levels of trust in employee's resolution than for those with lower levels of trust. This is in line with Risch Rodie and Schultz Kleine, (2000) who argue that consumers' ability influences the amount of value-in-use that can be created. I add to this perspective by extending this into a service recovery context and parallel assessing the role of institutions in value that co-created.

6.2 Theoretical and managerial implications

6.2.1 Theoretical implications

Regarding the theoretical framework, this work offers several theoretical implications. First, although research has demonstrated lifecycle and dialectic theories in the customer complaint context (Tronvoll 2012) from the perspective of S-D logic applying these theories in the service failure context as part of resource integration is an important extension. Second, previous work in this area has primarily focused on describing value co-destruction process through practices, and misuse of resources as single occurrence. Contrary, I enriched theoretical understanding by suggesting that resource integration may have multiple processes that can take either the form of co-creation or the co-destruction, and consequently value co-destruction i.e service failure process is not a single event. Third, I suggested an important transition for service failures from G-D logic to S-D logic by treating as process-failures all the previous outcome-failures of G-D logic and by defining the outcome-failure of S-D logic as a personal evaluative judgement.

Regarding the empirical research, to the best of our knowledge, this study is the first who examines what contributes to value co-creation in a service recovery context. Thus, from a theoretical perspective, this research extends the literature on co-creation in service recovery in several ways.

First, an important contribution to the research stream of service recovery is the demonstrated utility of the measurement of motivation to co-recover, which is in line with the recommendation of S-D logic researchers (e.g. Füller, 2006, 2010; Hoyer *et al.*, 2010; Roberts *et al.*, 2014). Although previous studies have used expectancy theory to explain recovery actions (Zhu *et al.*, 2013), they have only assessed the expectancy-element. Thus, by also combining the other two elements (instrumentality and valence) as Vroom's theory (1964) originally suggested and multiplied these three components based on its mathematical equation to calculate motivation, and account the motivation as a psychological mechanism which drives or not behaviors is an important extension.

Second, the present research introduces the operant resources-i.e ability to co-recover- in service recovery context, as an antecedent of co-recovery motivation, co-recovery in-role behavior, and co-created value. The previous research in S-D logic has mainly noticed the importance of operant resources in value creation and co-creation process. This study finds the positive impact of ability to co-recover on co-recovery motivation, co-recovery in-role behavior, and co-created value (hedonic and utilitarian). Hence, this study supports the argument of previous studies that operant resources are the source of competitive advantage in value co-creation (Vargo and Lusch, 2004a, Lusch and Vargo, 2014), by extending the finding in a service recovery context.

Third, the study conceptualizes co-recovery motivation as a mediator that links ability to co-recover and co-recovery in-role behavior. To date, no known research has investigated the various reasons or motivations that lead customers to participate in service recovery. This lack is of significant concern because individuals' motivations have been identified as crucial to understanding and predicting their behaviors, such as customer motivation for co-creation in innovation process (Roberts *et al.*, 2014), virtual behavior motivation (Füller 2010), and the motivation of consumers as an antecedent of the degree of co-creation (Hoyer *et al.*, 2010). With an effort to conceptualize co-recovery motivation, this

study also develops and validates a measurement instrument of co-recovery motivation through a mixed method approach, a combination of qualitative and empirical research.

Fourth, previous authors treated customer co-creation in service recovery as a one-dimensional construct. In support of S-D logic literature, I add to this perspective, extending previous work (Dong *et al.*, 2008; Roggeveen *et al.*, 2012; Dong *et al.*, 2016) by transit the co-creation in-role behavior construct of Yi and Gong (2013) in service recovery context and considering it as a multidimensional construct (second order factor). Thus, I advance co-creation in service recovery research, by showing that consumers co-recover through information sharing, responsible behavior and personal interaction. My view to treat co-recovery in-role behavior as a co-creation in-role behavior after a service failure (by sharing the same dimensions) is based on the work of Xu *et al.*, (2014b) who argue that customers are also resource integrators in a service recovery context as they are in the service delivery context. I extend this work, by suggesting that consumers co-create and co-recover through the same dimensions.

Fifth, this study examines both co-recovery motivation and actual co-recovery in-role behaviors. Different co-recovery motivations were found to positively and negatively influence co-recovery in-role behavior. Thus, contrary to prior studies which have focused only to the element of expectancy for participation in service recovery (Zhu *et al.*, 2013; Dong *et al.*, 2016), this study extends the literature of service recovery by finding both positive and negative impacts of co-recovery motivation to co-recovery in-role behavior.

Sixth, this study is the first which assesses the role of institutions in a service recovery context, by examining trust in service providers' resolution ability. Since trust is normative institution, as I mentioned earlier, this finding suggests that indeed institutions coordinate resource integration process. Although recent contributions (Vargo and Lusch, 2016; Edvardsson *et al.*, 2014) argued that institutions as a part of context enable or constrain co-creation behaviors and value assessment I first empirically confirm that enable or constrain behaviors in a service recovery context as well as the assessment of value.

Seventh, this is the first study in S-D logic framework which shows that in-role behaviors affect co-created value (hedonic and/or utilitarian). This is surprisingly enough given that the central concept of co-creation is about value, and S-D logic framework studies how value is created and co-created among service systems (e.g stakeholders). However,

some researchers have recently attempted to empirically explore the consequences of in-role behaviors, focusing on traditional marketing constructs such as satisfaction (Vega-Vazquez, 2013), and loyalty (Cossío-Silva *et al.*, 2016). Therefore, this study confirms customer co-creation value as a crucial consequence of co-creation in-role behavior, and extend the literature by empirically showing that in a service recovery context co-creation in-role behaviors either increase (utilitarian) or decrease (hedonic) co-created value.

Last, this is the first study in the S-D logic literature, which assesses how emotions enable or constraint consumers' engagement in co-recovery in-role behaviors in a service recovery context. Despite the fact that, emotions are one of the most important aspect in service failure and recovery literature (Schoefer and Diamantopoulos, 2009) in understanding why and how customers respond to service recovery, surprisingly, previous researchers have only examined their role in assessing post-recovery outcomes (Park and Ha, 2016). Thus, by considering their impact on predict co-recovery in-role behaviors is an important extension.

6.2.2 Managerial implications

The aforementioned conceptualisation enables managers to establish more effective proactive recovery strategies by considering resource allocation and resource availability. Managers may use the IPOO framework as the general framework of co-creation/co-destruction of value by always taking into consideration consumers' perceived value and availability of resources in order to establish effective proactive recovery strategies in case of resource misuse. Until now authors, in S-D logic, treat service recovery as reactive strategy in terms of co-recovery (i.e Dong *et al.*, 2008; Roggeveen, Tsiros and Grewal 2012). However, this framework provides the opportunity to understand better the resource integration process and the role of operant resources. Availability of resources and operant resources should be taken into consideration since they determine in a manner what kind of resources should be integrated in order to recover as well as the resource allocation. For example, timing of service recovery (availability of resources) and consumers' operant resources (e.g. suggestions for recovery) are critical resources which should be integrated, based on the contextual conditions related to inconvenience caused and the consumers' value perception.

Chapter 6. Discussion and conclusion

Marketers need to know whether or not co-recovery consumer in-role behavior will have a positive impact on perceived value after service failures. This study presents marketers with some provisional implications with regards to why, how, and when co-recovery should be applied.

First, the current study provides marketers enhanced understanding concerning the factors that lead customers to implement co-recovery in-role behavior. In other words, marketers need to know the types of operant resources that lead customers to participate in co-recovery in-role behavior in order to co-create value with their customers. Specifically, this study helps marketers understand how customers' perceptions of ability to co-recover play a role in the inducement of co-recovery in-role behaviors from their customers. Thus, customers must have the ability to co-recover. In other words, service providers should engage in co-recovery with consumers who have high levels of ability regarding services, processes, and product technology. Otherwise, forcing consumers who do not have the necessary resources will lead to lower value extraction. This finding suggests that for low-ability to co-recover customers, timely assistance through firm recovery may be better received, while for high-ability to co-recover customers, engaging them in joint co-recovery may be more ideal.

Second, this study reveals the modes by which consumers co-recover after a service failure. Thus, consumers attempt to find a solution via information sharing, responsible behavior and personal interaction. This finding provides managers with opportunities to facilitate the co-recovery in-role behavior, given that firms operate as value facilitators (Grönroos and Voima, 2013). For example, since consumers co-recover through information sharing, service providers could train their employees in order to gain all the necessary information about what consumers want from a service recovery, as well as to be more flexible about the recovery options. Thus, understanding what consumers really want from service recovery, employ may offer the appropriate resources for service recovery or co-allocate the existence resources. Furthermore, a periodic measurement of consumer value co-recovery in-role behavior could help managers track changes over time, while the dimensions can also help managers develop appropriate training programs designed to improve the customer's understanding of the behaviors involved in value co-recovery process (Yi and Gong, 2013).

Chapter 6. Discussion and conclusion

Third, through knowledge of co-recovery motivation, marketers may build appropriate marketing strategies by understanding the overall picture regarding why customers are willing to participate in co-recovery in-role behavior that benefit their service organization. For example, customers may suggest ideas during co-recovery that help the service organization to improve service recovery and/or reduce service recovery time based on their value co-recovery expectations. Moreover, regarding the motivation, I would also like to emphasize the role of valence and instrumentality. Consumers who have been affected by a service failure should perceive co-recovery as something useful and necessary in order to get the outcome they are looking for. Furthermore, that outcome should be quite important for them (high valence) if they are going to actively engage in co-recovery behavior. Moreover, my results imply that intrinsic motivation leads to lower co-recovery. Obligatory engagement in co-recovery may lead to lower levels of value, especially for consumers with high intrinsic motivation.

Regarding conditional factors, I found that customers engage in co-recovery behavior more when they know what to do, feel little internal blame for the service failure, and do not have strong negative emotions. These results offer clear implications for service providers in terms of how and when they should use co-recovery practices. Generally, high levels of role clarity lead to higher value. As a way to enhance customers' role clarity and support during co-recovery, marketers may educate their employees to treat customers impartially and supportively. They should be careful to inform their customers the ways in which they support them and explain them carefully the steps in the co-recovery process. However, it should be noted that when consumers know less about what is expected of them during recovery, they tend to utilize their abilities to benefit from the external rewards more. At this point, service providers need to calculate the cost of providing external motivators against the amount of role clarification.

As regards consumers' perceived internal blame and negative emotions, service provider should employ practices that decrease both of them because consumers will therefore use more of their abilities in the co-recovery process. Relating to internal blame, because customers with high internal blame are less inclined to engage in co-recovery, marketers should either mitigate negative effects of blame by educating the employees to treat customers supportively or alternatively to offer a firm or customer recovery instead of co-recovery.

With regards to negative emotions, findings suggest that negative emotions constrain co-recovery motivation and co-recovery in-role behavior while also decrease perceptions of hedonic value. Marketers should manage their transactions and relationships with customers, after service failures process. Employees should be trained to decode emotional cues (Smith and Bolton, 2002), i.e to recognize when customers are angry, upset, in a bad mood, sad, annoyed. Since customers express negative emotions using distinct patterns of facial, postural, vocal, and verbal cues corresponding to negative emotions (Dubé and Menon 1998, *cited in* Smith and Bolton, 2002), decoding customers negative emotions enable service providers to adapt their performance and contribution in service recovery process. Thus, employees should be trained to help the affected customers, to alleviate any negative emotions caused by the service failure in order to engage in co-recovery process. Alternatively, service providers must offer other types of recovery (e.g customer recovery, or firm recovery) to customers who exhibit high negative emotional cues. Since customers who exhibit high negative emotions are not willing to participate in the co-recovery process even though they are motivated or have the necessary abilities, service providers must include a variety of recovery options.

Last, customers who trust the service provider are more likely to be motivated to co-recover because they feel that their participation will be worthwhile. Thus, marketers need to understand that they should maintain relationships with customers accordingly in order to facilitate customers' co-recovery motivation. However, this is challenging because consumers' and employees' abilities to build cooperative relationships with the aim of co-recovering value are significantly constrained by prevailing assumptions about human intentionality and relationships (Nahapiet, Gratton and Rocha 2005). Self-interest thus becomes the behavioral norm for individuals, whether they are customers or employees, and this works as a self-fulfilling prophecy, eventually decreasing the co-recovery behavior of both parties. However, companies that increase cooperation with customers during recovery should be aware that there is a need for value co-recovery among other members of the value chain (e.g. suppliers or distributors). This is difficult because each member of the value chain has different interests and values (Berger, Möslin, Piller and Reichwald, 2005) and thus their participation in co-recovery should not be taken for granted. Thus, regardless of the service provider's and customer's willingness and effort to co-recover value, recovery outcomes can

turn out to be less successful because of ineffective collaboration and the co-recovery of value by other members of the value chain.

6.3 Limitations and future research

Regarding the theoretical framework, I extended the S-D logic literature by a comprehensive synthesis of an integrated co-creation/co-destruction framework and by considering service failures as value co-destruction process in the service process. Several limitations of this framework provide interesting ground for further research in this area. First, one limitation of this study originate from the conceptual framework that was established. Considering the conceptual nature of the framework it is very difficult to reach full conceptual closer due to the broadness of the service failure literature. For example controllability of service failures is a topic that requires further research from an S-D logic perspective. Second, more knowledge is needed about how context affects resource-configuration in a misuse of resources as well as internal contradictions in a value co-destruction process. Third, empirical validation of the theoretical framework is needed in order to establish proactive recovery strategies. The framework provides excellent opportunities for the establishment of proactive strategies since value is not lost in the resource misuse but then a service failure process is triggered. In this direction the sequence of stages provide a blueprinting technique for the resource reintegration process after a resource misuse.

Fourth, another important perspective that must take into account is customer co-recovery behavioural intentions. Fifth, the model may be applicable better in certain circumstances where the process (e.g higher education, surgery), requires more complex resource integration and leads to higher perception of value (learning, healthing) than some others where the process (e.g hospitality) requires little resource integration. Finally, this framework could be extended in different fields of services such as healthcare, tourism etc., in order to adapt firm's strategies to customer's recovery preferences considering the expected value.

Chapter 6. Discussion and conclusion

Regarding the empirical study, this research extends the S-D logic literature into a service recovery context by considering how operant resources contribute to co-recovery in-role behavior through specific mechanisms, and how value is assessed through recovery behaviors. Generally, it was a first step into understanding what contributes to service recovery co-created value. Several limitations of this dissertation provide interesting ground for further research in this area. First, this study applies expectancy theory of motivation in co-recovery context. Future research could be consider other theories to explain co-recovery in-role behaviors such as self-determination theory (SDT) (Deci and Ryan, 2002) to explicate how different variables increased or decreased co-recovery in-role behaviors, respectively. Additionally, although ability to co-recover was found to have an impact on motivation to co-recover, however individual and situational factors that affect motivation in service recovery remain unexplored. For example, it is not yet known how different demographics variables as well as situational (e.g the presence of other customers) affect consumer value co-recovery in-role behavior. Understanding how other stakeholders with their behaviors may affect co-recovery in-role behavior, could be an important extension and opportunity for further research.

Second, regarding the application of institutions I only examined a normative institution, called trust in service provider's resolution ability. Thus regulative, cognitive, as well as other normative institutions and their role in enabling or constrain co-recovery in-role behavior deserve a careful examination. Because institutions are a recent extension in S-D logic framework and their role in value co-creation is fundamental, I suggest that in a service recovery context should be taken into consideration. As Xu *et al.*, (2014b) noted resource integration in service recovery is always context specific and experiential. Thus, understanding contextual specific factors that affect co-recovery behavior could provide fruitfully insights.

Third, previous research suggests that different types of service failures affect differently customers' reactions (Smith and Bolton, 2002). In this study, I did not specify the type of failure, but further research could consider how failure type affects both motivation to co-recover and co-recovery in-role behavior.

Fourth, previous studies suggest that service recovery preferences varying among consumers with different cultures (e.g Ringberg *et al.*, 2007). Thus, cultural differences (for

instance France vs USA) also could influence the effectiveness of co-recovery process. These factors remain to be explored and investigated in additional research.

Fifth, previous research has mainly focused on co-creation in service recovery context in a manner of understanding both positive and negative effects. However, many aspects of service recovery have not taken yet into consideration. For example, although double deviation are a common issue in service failure and recovery literature no study has examine until now what happens if a co-created service recovery fails. Moreover, how customers respond to failed co-created service recoveries (i.e., double deviations) as well as what affects failed co-created service recovery also remains unexplored. Hence, understanding the consumer value co-recovery in-role behavior in double deviation scenarios would be crucial for companies, in an era where customer is always a value co-creator.

Sixth, a replication of this study in different service settings would increase the generalizability of our findings. Co-recovery process may be different in other settings (e.g luxury services, online services, technical services), which means that consumers may react differently. For example, in an online service failure consumers may ask advice from other consumer before their interaction with the service provider. Understanding therefore the circumstances of each setting enables managers to build more effective and appropriate research strategies. Furthermore, customer evaluation of different types of products may lead to different reactions and consequently to different co-recovery behavior. Indeed, examining co-recovery reactions to different products is a research priority which is suggested to be analyzed for products with different levels of involvement.

Last, other categories of emotions (e.g positive, concern, involvement emotions) and its impact on co-recovery in-role behavior could be examined. Despite these shortcomings, this research broadens understanding of what contributes to co-created value, how and when customers engage in co-recovery in-role behaviors. Thus, it extends prior research on the roles of customers as value co-creators while parallel it opens up avenues for future research.

References

- Aarikka- Stenroos, Leena and Elina Jaakola (2012), “Value co- creation in knowledge intensive business services: A dyadic perspective on the joint problem solving process,” *Industrial Marketing Management*, 41 (1), 15- 26.
- Agrawal, Amit Kumar and Zillur Rahman (2014), “Roles and Resource Contributions of Customers in Value Co-creation,” *International Strategic Management Review*, 3, 144-160.
- Akaka, Melissa A., Daniela Corsaro, Carol Kelleher, Paul P. Maglio, Yuri Seo, Robert F. Lusch and Stephen L. Vargo (2014), “The role of symbols in value cocreation,” *Marketing Theory*, 14 (3), 311-326.
- Akaka, Melissa A., Stephen L. Vargo and Robert F. Lusch (2013), “The Complexity of Context: A Service Ecosystems Approach for International Marketing,” *Journal of International Marketing*, 21 (4), 1–20.
- Albinsson, Pia A., B. Yasanthi Perera and Pookie Truly Sautter (2016), “DART Scale Development: Diagnosing a Firm’s Readiness for Strategic Value Co- creation,” *Journal of Marketing Theory and Practice*, 24 (1), 42-58.
- Altinay, Levent, Marianna Sigala and Victoria Walligo (2016), “Social value creation through tourism enterprise,” *Tourism Management*, 54, 404-417.
- Altun, Koray, Türkiye Dereli and Adil Baykasoğlu (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.
- Anderson, James C. and David W. Gerbing (1988), “Structural equation modeling in practice: A review and recommended two-step approach,” *Psychological Bulletin*, 103 (3), 411–423.
- Anderson, James C., James A. Narus and Wouter van Rossum (2006), “Customer value propositions in business markets,” *Harvard Business Review*, 84 (3), 90–99.
- Andreassen, Tor Wallin (1999), “What Drives Customer Loyalty With Complaint Resolution?” *Journal of Service Research*, 1 (4), 324-332.

- Andreu, Luisa, Isabel Sánchez and Cristina Mele (2010), "Value co-creation among retailers and consumers: New insights into the furniture market," *Journal of Retailing and Consumer Services*, 17 (4), 241–250.
- Arnould, Eric J., Linda L. Price and Avinash Malshe (2006), "Toward a Cultural Resource-Based Theory of the Customer," in *The Service Dominant Logic of Marketing: Dialog, Debate and Directions*, R. F. Lusch and S. L. Vargo (Eds.), Armonk, New York: ME Sharp, 320-333.
- Auh, Seigyoung, Simon J. Bell, Colin S. McLeod and Eric Shih (2007), "Co-production and customer loyalty in financial services," *Journal of Retailing*, 83 (3), 359-370.
- Bagozzi, Richard P. and Youjae Yi (1988), "On the evaluation of structural equation models," *Journal of the Academy of Marketing Science*, 16 (1), 74-94.
- Ballantyne, David (2004), "Dialogue and its role in the development of relationship-specific knowledge," *Journal of Business and Industrial Marketing*, 19 (2), 114–123.
- Ballantyne, David and Richard J. Varey (2006), "Creating value-in-use through marketing interaction: the exchange logic of relating, communicating and knowing," *Marketing Theory*, 6 (3), 335-348.
- Ballantyne, David and Richard J. Varey (2008), "The service-dominant logic and the future of marketing," *Journal of the Academy of Marketing Science*, 36 (1), 11-14.
- Banks, John and Jason Potts (2010), "Co-creating games: a co-evolutionary analysis," *New Media & Society*, 12 (2), 253-270.
- Barlow, Janelle and Claus Møller (1996), *A Complaint Is a Gift: Using Customer Feedback As a Strategic Tool*, San Francisco: Berrett-Koehler Publishers.
- Barney, Jay (1991), "Firm Recourses and Sustained Competitive Advantage," *Journal of Marketing*, 17 (1), 99-120.
- Baron, Reuben M. and David A. Kenny (1986), "The moderator-mediator distinction in social psychological research: Conceptual, strategic, and statistical considerations," *Journal of Personality and Social Psychology*, 51 (6), 1173–1182.
- Baron, Steve and Garry Warnaby (2011a), "Individual customer's use and integration of resources: Empirical findings and organizational implications in the context of value co-creation," *Industrial Marketing Management*, 40 (2), 211-218.
- Baron, Steve and Garry Warnaby (2011b), "Value Co-creation from the Consumer Perspective," in *Service Systems Implementation*, H. Demirkan, J. C. Sphorer and V. Krishna, V. (Eds.), New York, NY: Springer, 199-210.

- Bartikowski, Boris and Gianfranco Walsh (2001), "Investigating mediators between corporate reputation and customer citizenship behaviors," *Journal of Business Research*, 64 (1), 39–44.
- Belk, Russel W. (2006), *Handbook of Qualitative Research Methods in Marketing*, Great Britain: Edward Elgar Publishing Inc.
- Bendapudi, Neeli and Robert P. Leone (2003), "Psychological Implications of Customer Participation in Co-Production," *Journal of Marketing*, 67 (1), 14-28.
- Berger, Christoph, Kathrin Modein, Frank Piller and Ralf Reichwald (2005), "Co-designing modes of cooperation at the customer interface: Learning from exploratory research," *European Management Review*, 2 (1), 170-167.
- Bertilsson, Jon and Cecilia Cassinger (2011), "Governing Consumers Through Freedom," in *E - European Advances in Consumer Research Volume 9*, A. Bradshaw, C. Hackley and P. Maclaran (Eds.), Duluth, MN : Association for Consumer Research, 412-416.
- Bettencourt, Lance A. (1997), "Customer voluntary performance: Customers as partners in service delivery," *Journal of Retailing*, 73 (3), 383–406.
- Bhalla, Gaurav (2011), *Collaboration and Co-creation: New Platforms for Marketing and Product Innovation*, New York: Springer.
- Bitner, Mary Jo (1990), "Evaluating service encounters: The effects of physical surroundings and employee responses," *Journal of Marketing*, 54 (2), 69- 82.
- Bitner, Mary Jo, Bernard H. Booms and Mary Stanfield Tetreault (1990), "The Service Encounter: Diagnosing Favorable and Unfavorable Incidents," *Journal of Marketing*, 54 (January), 71-84.
- Bitner, Mary Jo, William T. Faranda, Amy R. Hubbert and Valarie A. Zeithaml (1997), "Customer contributions and roles in service delivery," *International Journal of Service Industry Management*, 8 (3), 193 – 205.
- Bove, Liliana L., Simon J. Pervan, Sharon E. Beatty and Edward Shiu (2009), "Service worker role in encouraging customer organizational citizenship behaviors," *Journal of Business Research*, 62 (7), 698–705.
- Brinkmann, Svend (2013), *Qualitative Interviewing (Understanding Qualitative Research)*, New York: Oxford University Press.
- Brown, Steven P. and Richard F. Beltramini (1989), "Consumer complaining and word of mouth activities: field evidence," *Advances in Consumer Research*, 16 (1), 9-16.

- Buhrmester, Michael, Tracy Kwang and Samuel D. Gosling (2011), "Amazon's Mechanical Turk a new source of inexpensive, yet high-quality, data?" *Perspectives on Psychological Science*, 6 (1), 3–5.
- Byrne, Barbara M. (2010), *Structural Equation Modeling With AMOS: Basic Concepts, Applications, and Programming (Multivariate Applications Series)(2nd Edition)*, New York, NY: Routledge.
- Cabiddu, Francesca, Tsz- Wai Lui and Gabriele Piccoli (2013), "Managing value co- creation in the tourism industry," *Annals of Tourism Research*, 42 (July), 86-107.
- Cadiz, David, John E. Sawyer and Terri L. Griffith (2009). "Developing and validating field measurement scales for absorptive capacity and experienced community of practice," *Educational and Psychological Measurement*, 69 (6), 1035-1058.
- Cambra-Fierro, Jesús, Juan M. Berbel-Pineda and Rocío Ruiz-Benítez, and Rosario Vazquez-Carrasco (2011), "Managing service recovery processes: the role of customers' age," *Journal of Business Economics and Management*, 12 (3), 503- 528.
- Cambra-Fierro, Jesús, Juan M. Berbel-Pineda and Rocío Ruiz-Benítez, and Rosario Vazquez-Carrasco (2011), "Does the Customers' Educational Level Moderate Service Recovery Processes?" *International Journal of Business and Social Science*, 21 (2), 59-71.
- Carmines, Edward G. and Richard A. Zeller (1979), *Reliability and Validity Assessment (Quantitative Applications in the Social Sciences)*, Beverly Hills, California: Sage Publications Inc.
- Carvalho, Sergio W., Etayankara Muralidharan and Hari Bapuji (2014), "Corporate Social 'Irresponsibility': Are Consumers' Biases in Attribution of Blame Helping Companies in Product–Harm Crises Involving Hybrid Products?" *Journal of Business Ethics*, 130 (3), 651-663.
- Cermak, Dianne S. P., Karen Maru File and Russ Alan Prince (1994), "Customer Participation In Service Specification And Delivery," *Journal of Applied Business Research*, 10 (2), 90-97.
- Chan, Kimmy Wa, Chi Kin (Bennett) Yim and Simon S.K. Lam (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.
- Chandler, Jennifer D. and Stephen L. Vargo (2011), "Contextualization and value-in-context: How context frames exchange," *Marketing Theory*, 11 (1), 35–49.

- Chang, Artemis, Ying Yi Chih, Eng Chew and Anne Pisarski (2013), “Reconceptualising mega project success in Australian Defence: Recognising the importance of value co-creation,” *International Journal of Project Management*, 31 (8), 1139-1153.
- Chen, Chih-Cheng Volvic, Chih-Jou Chen and Ming-Ji James Lin (2015), “The impact of customer participation: the employee’s perspective,” *Journal of Business & Industrial Marketing*, 30 (5), 486 – 497.
- Chen, Ja-Shen, Hung Tai Tsou and Astrid Ya-Hui Huang (2009), “Service Delivery Innovation,” *Journal of Service Research*, 12 (1), 36-55.
- Cheung, Gordon W. and Roger B. Rensvold (2002), “Evaluating goodness-of-fit indexes for testing measurement invariance,” *Structural Equation Modeling*, 9 (2), 233-255.
- Choi, Sunmee and Anna S. Mattila (2008), “Perceived Controllability and Service Expectations: Influences on Customer Reactions Following Service Failure,” *Journal of Business Research*, 61 (1), 24-30.
- Chou, En-Yi, Cheng-Yu Lin and Heng-Chiang Huang (2016), “Fairness and devotion go far: Integrating online justice and value co-creation in virtual communities,” *International Journal of Information Management*, 36 (1), 60–72.
- Chowdhury, Ilma Nur, Thorsten Gruber and Judy Zolkiewski (2016), “Every cloud has a silver lining — Exploring the dark side of value co-creation in B2B service networks,” *Industrial Marketing Management*, doi:10.1016/j.indmarman.2016.02.016
- Chuang, Shih-Chieh, Yin-Hui Cheng, Chai-Jung Chang and Shun-Wen Yang (2012), “The effect of service failure types and service recovery on customer satisfaction: a mental accounting perspective,” *The Service Industries Journal*, 32 (1-2), 257- 271.
- Claycomb, Cindy, Cynthia A. Lengnick-Hall, Lawrence W. Inks (2001), “The Customer as a A Pilot Study and Strategic Implications,” *Productive Resource: Journal of Business Strategies*, 18 (1), 47-69.
- Constantin, James A. and Robert F. Lusch (1994) *Understanding Resource Management*, Oxford, OH: The Planning Forum.
- Cossío-Silva, Francisco-José, María-Ángeles Revilla-Camacho, Manuela Vega-Vázquez and Beatriz Palacios-Florencio (2016), “Value co-creation and customer loyalty,” *Journal of Business Research*, 69 (5), 1621–1625.
- Costello, Anna B. and Jason W. Osborne (2005), “Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis,” *Practical Assessment*, 10 (7), 1-9.

- Cova, Bernard and Daniele Dalli (2009), “Working consumers: the next step in marketing theory?” *Marketing Theory*, 9 (3), 315-339.
- Cova, Bernard and Robert Salle (2008), “Marketing Solutions in Accordance with the S-D Logic: Co-Creating Value with Customer Network Actors,” *Industrial Marketing Management*, 37 (3), 270-277.
- Cranage, David A. and Anna S. Mattila (2006), “Service Recovery and Pre-Emptive Strategies for Service Failure: Both Lead to Customer Satisfaction and Loyalty, But for Different Reasons,” *Journal of Hospitality & Leisure Marketing*, 13 (3-4), 161-181.
- Czernek, Katarzyna and Wojciech Czakon (2016), “Trust-building processes in tourist coopetition: The case of a Polish region,” *Tourism Management*, 52 (February), 380–394.
- Dabholkar, Pratibha A. (1996), “Consumer Evaluations 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.
- Daley Amanda and Ann O’ Gara (1998), “Age, Gender and Motivation for Participation in Extra Curricular Physical Activities in Secondary School Adolescents,” *European Physical Education Review*, 4 (1), 47-53.
- Daly, Timothy M. and Rajan Nataraajan (2015), “Swapping bricks for clicks: Crowdsourcing longitudinal data on Amazon Turk,” *Journal of Business Research*, 68 (12), 2603–2609.
- Darshan, Desai, A. (2010), “Co-creating learning: insights from complexity theory,” *The Learning Organization*, 17 (5), 388 – 403.
- Davidow, Mosche (2000), “The bottom line impact of organizational responses to customer complaints,” *Journal of Hospitality and Tourism Research*, 24 (4), 473-490.
- Davis, Donna F., Susan L. Golicic and Courtney N. Boerstler (2011), “Benefits and challenges of conducting multiple methods research in marketing,” *Journal of the Academy of Marketing Science*, 39 (3), 467-479.
- Day, George S., John Deighton, Das Narayandas, Evert Gummesson, Shelby D. Hunt, C.K. Prahalad, Roland T. Rust, Steven M. Shugan (2004), “Invited Commentaries on “Evolving to a New Dominant Logic for Marketing,” *Journal of Marketing*, 68 (1), 18-27.

- Deci, Edward L. and Richard M. (1985), *Intrinsic motivation and self-determination in human behavior*, New York, NY: Plenum Press.
- Deci, Edward L. and Richard M. Ryan (2002), "Overview of self- determination theory: An organismic dialectical perspective," in *Handbook of self- determination research*, E.L. Deci and R.M. Ryan (Eds.), Rochester, NY: University Rochester Press.
- Deery, Stephen, Roderick Iverson and Janet Walsh (2002), "Work relationships in telephone call centers: Understanding emotional exhaustion and employee withdrawal," *Journal of Management Studies*, 39 (4), 471-496.
- Dellande, Stephanie, Mary C. Gilly and John L. Graham (2004), "Gaining Compliance and Losing Weight: The Role of the Service Provider in Health Care Services," *Journal of Marketing*, 68 (3), 78-91.
- DeVellis, Robert F. (1991), *Scale Development: Theory and Applications*, Thousand Oaks, California: SAGE Publications.
- De Wulf, Kristof and Gaby Odekerken-Schroder (2001), "A critical review of theories underlying relationship marketing in the context of explaining consumer relationships," *Journal for the Theory of Social Behavior*, 31 (1), 73-101.
- Dey, Bidit Lal, Ameet Pandit, Mike Saren, Sanjay Bhowmick and Helen Woodruffe-Burton (2016), "Co-creation of value at the bottom of the pyramid: Analyzing Bangladeshi farmers' use of mobile telephony," *Journal of Retailing and Consumer Services*, 29 (2016), 40–48.
- Diaz-Mendez, Monsterrat and Evert Gummesson (2012), "Value co-creation and university teaching quality: Consequences for the European Higher Education Area," *Journal of Service Management*, 23 (4), 571 – 592.
- Dobrzykowski, David D. Oanh Tran and Monideepa Tarafdar, (2010), "Value co-creation and resource based perspectives for strategic sourcing," *Strategic Outsourcing: An International Journal*, 3 (2), 106 – 127.
- Dong, Beibei, Kenneth R. Evans and Shaoming Zou (2008), "The effects of customer participation in co- created service recovery," *Journal of the Academy of Marketing Science*, 36 (1), 123-137.
- Dunn, Lea and Darren W. Dahl (2012), "Self-Threat and Product Failure: How Internal Attributions of Blame Affect Consumer Complaining Behavior," *Journal of Marketing Research*, 49 (5), 670-681.

- Echeverri, Per and Per Skålén (2011), “Co-creation and co-destruction: A practice-theory based study of interactive value formation,” *Marketing Theory*, 11 (3), 351-373.
- Edvardsson, Bo, Michael Kleinaltenkamp, Bård Tronvoll, Patricia McHugh and Charlotta Windahl (2014), “Institutional logics matter when coordinating resource integration,” *Marketing Theory*, 14 (3), 291-309.
- Edvardsson, Bo, Per Skålén and Bård Tronvoll (2012), “Service Systems as a Foundation for Resource Integration and Value Co-Creation,” in *Special Issue – Toward a Better Understanding of the Role of Value in Markets and Marketing (Review of Marketing Research, Volume 9)*, S. L. Vargo, R. F. Lusch (Eds.), Emerald Group Publishing Limited, 79 – 126.
- Edvardsson, Bo, Bård Tronvoll and Thorsten Gruber (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.
- Eisingerich, Andreas B., Seigyoung Auh and Omar Merlo (2014), “Acta Non Verba? The Role of Customer Participation and Word of Mouth in the Relationship Between Service Firms’ Customer Satisfaction and Sales Performance,” *Journal of Service Research*, 17 (1), 40-53.
- Elg, Mattias, Jon Engström, Lars Witell and Bozena Poksinska (2012), “Co-creation and learning in health-care service development,” *Journal of Service Management*, 23 (3), 328 – 343.
- Elsharnouby, Tamer H. (2015), “Student co-creation behavior in higher education: the role of satisfaction with the university experience,” *Journal of Marketing for Higher Education*, 25 (2), 238-262.
- Fernandes, Teresa and Pedro Remelhe (2015), “How to engage customers in co-creation: Customers’ motivations for collaborative innovation,” *Journal of Strategic Marketing*, 24 (forthcoming), 1-16.
- Finsterwalder, Jörg and Sven Tuzovic (2010), “Quality in group service encounters: A theoretical exploration of the concept of a simultaneous multi-customer co-creation process,” *Managing Service Quality*, 20 (2), 109 – 122.
- Fischer, Merja (2014), “Positive Emotions Foster the Co-Creation of Mutual Value in Services: Four Positively Deviant Performances,” in *Emotions and the Organizational Fabric (Research on Emotion in Organizations, Volume 10)* N. M. Ashkanasy, W. J. Zerbe, C. E. J. Hätel (Eds.), Emerald Group Publishing Limited, 13 – 47.

- Fisher, Dan and Scott Smith (2011), "Cocreation is chaotic: What it means for marketing when no one has control," *Marketing Theory*, 11 (3), 325-350.
- Fiske, Susan T. and Shelley E. Taylor (2013), *Social cognition: From Brains to Culture (2nd edition)*, London: Sage.
- Flick, Uwe (2014), *The SAGE Handbook of Qualitative Data Analysis*, UK: Sage.
- Folkes, Valerie S. (1988), "Recent Attribution Research in Consumer Behavior: A Review and New Directions," *Journal of Consumer Research*, 14 (4), 548-65.
- Folkes, Valerie S., Susan Koletsky and John L. Graham (1987), "A field study of causal inferences and consumer reaction: the view from the airport," *Journal of Consumer Research*, 13 (4), 534-9.
- Fornell, Claes and David F. Larcker (1981), "Evaluating structural equation models with unobservable variables and measurement errors," *Journal of Marketing Research*, 18 (1), 39–50.
- Frow, Pennie and Adrian Payne (2008), "The Value Proposition Concept: Evolution, Development and Application in Marketing," *Academy of Marketing Annual Conference 2008 - Reflective Marketing in a Material World*, Aberdeen, United Kingdom, 10th July 2008.
- Frow, Pennie and Adrian Payne (2011), "A stakeholder perspective of the value proposition concept," *European Journal of Marketing*, 45 (1/2), 223-40.
- Frow, Pennie, Adrian Payne and Kaj Storbacka (2011) "Co-Creation: A Typology and Conceptual Framework," in *Proceedings of ANZMAC 2011*, ANZMAC, Perth, WA, 1 - 6, presented at ANZMAC 2011, Perth, WA, 1 November 2011.
- Füller, Johann (2006), "Why Consumers Engage in Virtual New Product Developments Initiated by Producers," *Advances in Consumer Research*, 33 (1), 639-646.
- Füller, Johann (2007), "What Consumers' Expect from Virtual Co-Creation," The 2007 World Conference on Mass Customization & Personalization (MCP).
- Füller, Johann (2010), "Refining virtual co-creation from a consumer perspective," *California Management Review*, 52 (2), 98-122.
- Füller, Johann, Katja Hutter and Rita Faullant (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.

- Füller, Johann, Hans Mühlbacher, Kurt Matzler and Gregor Jawecki (2009), “Consumer Empowerment Through Internet Based Co- Creation,” *Journal of Management Information Systems*, 26 (3), 71-102.
- Fyrberg, Anna and Rein Jürjado (2009), “What about interaction? Networks and brands as integrators within a service-dominant logic,” *Journal of Service Management*, 20 (4), 420–432.
- Gebauer, Heiko, Mikael Johnson and Bo Enquist, (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: An International Journal*, 20 (6), 511 – 530.
- Gebauer, Johannes, Johann Füller and Roland Pezzeri (2013), “The dark and the bright side of co-creation: Triggers of member behavior in online innovation communities,” *Journal of Business Research*, 66 (9), 1516-1527.
- Gelbrich, Katja and Holger Roschk (2011), “A meta-analysis of organizational complaint handling and customer responses,” *Journal of Service Research*, 14 (1), 24-43.
- Gerbing, David W. and James C. Anderson (1988), “An updated paradigm for scale development incorporating unidimensionality and its assessment,” *Journal of Marketing Research*, 25 (2), 186-192.
- Gillham, Bill (2005), *Research interviewing: The range of techniques*, UK: McGraw Hill International.
- Giner, Gabriela Ribes and Agustín Peralt Rillo (2016), “Structural equation modeling of co-creation and its influence on the student’s satisfaction and loyalty towards university,” *Journal of Computational and Applied Mathematics*, 291 (2016), 257–263.
- Gong, Taeshik, Jin Nam Choi and Samantha Murdy, “Does customer value creation behavior drive customer well-being?”, *Social Behavior and Personality- an international journal*, 44 (1), 59-76.
- Gordon, Barry J. (1964), “Aristotle and the Development of the Value Theory,” *The Quarterly Journal of Economics*, 78 (1), 115-128.
- Greer, Dominique A. (2015), “Defective co-creation: Developing a typology of consumer dysfunction in professional services,” *European Journal of Marketing*, 49 (1/2), 238-261.

- Grégoire, Yani, Daniel Laufer and Thomas M. Tripp (2010), “A comprehensive model of customer direct and indirect revenge: understanding the effects of perceived greed and customer power,” *Journal of the Academy of Marketing Science*, 38 (6), 738-758.
- Grégoire, Yani, Thomas M. Tripp and Renaud Legoux (2009), “When customer love turns into lasting hate: the effects of relationship strength and time on customer revenge and avoidance,” *Journal of Marketing*, 73 (6), 18–32.
- Grissemann, Ursula S. and Nicola E. Stokburger-Sauer (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.
- Grönroos, Christian (2000), “Service reflections: service marketing comes of age,” in *Handbook of Services Marketing & Management*, T. A. Swartz and D. Iacobucci (Eds), London, UK: Sage Publications Inc., 13-20.
- Grönroos, Christian (2001), *Service Management and Marketing: A Customer Relationship Management Approach* (2nd ed.), New York: Wiley.
- Grönroos, Christian (2006), “Adopting a service logic for marketing,” *Marketing theory*, 6 (3), 317-333.
- Grönroos, Christian (2008), “Service Logic Revisited: Who Creates Value? And Who Co-creates?” *European Business Review*, 20 (4), 298-314.
- Grönroos, Christian (2011), “Value co-creation in service logic: A critical analysis,” *Marketing Theory*, 11 (3), 279-301.
- Grönroos, Christian (2012), “Conceptualising value co-creation: A journey to the 1970s and back to the future,” *Journal of Marketing Management*, 28 (13-14), 1520-1534.
- Grönroos, Christian and Evert Gummesson (Eds.), (1985), *Service Marketing: Nordic School Perspectives*, Stockholm: Stockholm University School of Business.
- Grönroos, Christian and Annika Ravald (2011), “Service as business logic: implications for value creation and marketing,” *Journal of Service Management*, 22 (1), 5 – 22.
- Grönroos, Christian and Päivi Voima, (2013), “Critical service logic: making sense of value creation and co-creation,” *Journal of the Academy of Marketing Science*, 4 (2), 133-150.
- Groth, Markus (2005), “Customers as Good Soldiers: Examining Citizenship Behaviors in Internet Service Deliveries,” *Journal of Management*, 31 (1), 7-27.

- Gruen, Thomas W., Talai Osmonbekov and Andrew J. Czaplewski (2007), "Customer-to-customer exchange: Its MOA antecedents and its impact on value creation and loyalty," *Journal of the Academy of Marketing Science*, 35 (4), 537-549
- Gummesson, Evert (1996), "Relationship Marketing and Imaginary Organizations: A Synthesis," *European Journal of Marketing*, 30 (2), 31-44.
- Gummesson, Evert (2007), "Exit services marketing – enter service marketing," *Journal of Customer Behaviour*, 6 (2), 113-41.
- Gummesson, Evert and Christian Grönroos (2012), "The emergence of the new service marketing: Nordic School perspectives," *Journal of Service Management*, 23 (4), 479 - 497.
- Gummesson, Evert and Cristina Mele (2010), "Marketing as value co-creation through network interaction and resource integration," *Journal of Business Market Management*, 4 (4), 181-198.
- Gunn, Holly (2002), "Well based surveys: Changing the Survey Process", *First Monday*, 7 (12), <http://dx.doi.org/10.5210/fm.v7i12.1014>.
- Guo, Lin, Sherry L. Lotz, Chuanyi Tang and Thomas W. Gruen (2016), "The Role of Perceived Control in Customer Value Cocreation and Service Recovery Evaluation," *Journal of Service Research*, 19 (1), 39-56.
- Gustafsson, Anders, Per Kristensson and Lars Witell (2012), "Customer co-creation in service innovation: a matter of communication?" *Journal of Service Management*, 23 (3), 311 – 327.
- Hair, Joseph F., Barry J. Babin, Arthur H. Money and Phillip Samouel (2003), *Essentials of Business Methods Research*. Hoboken, NJ: Wiley.
- Hair, Joseph F., William C. Black, Barry J. Babin, Rolph E. Anderson and Ronald L. Tatham (2006), *Multivariate data analysis*, New Jersey: Pearson Education.
- Hair, Joseph F., Robert Bush and David Ortinau (2003), *Marketing Research Within a Changing Information Environment*, New York, NY: McGraw-Hill.
- Hajli, Mahmood and Mohammad Hajli (2013), "Organisational development in sport: co-creation of value through social capital," *Industrial and Commercial Training*, 45 (5), 283 – 288.
- Hakanen, Taru and Elina Jaakkola (2012), "Co-creating customer-focused solutions within business networks: a service perspective," *Journal of Service Management*, 23 (4), 593 – 611.

- Handrich, Matthias and Sven Heidenreich (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.
- Harris, Katherine E., Dhruv Grewal, Lois A. Mohr and Kenneth L. Bernhardt (2006), "Consumer Responses to Service Recovery Strategies: The Moderating Role of Online Versus Offline Environment," *Journal of Business Research*, 59 (4), 425-31.
- Harris, Katherine E., Lois A. Mohr and Kenneth L. Bernhardt (2006), "Online service failure, consumer attributions and expectations," *Journal of Services Marketing*, 20 (7), 453 – 458.
- Hart, Christopher W., James L. Heskett and W. Earl Sasser Jr. (1990), "The profitable art of service recovery," *Harvard Business Review*, 68 (July-August), 148-156.
- Hartman, David E. and John H. Lindgren (1993), "Consumer Evaluations of Goods and Services - Implications for Services Marketing," *Journal of Services Marketing*, 7 (2), 4 - 15.
- Harwood, Tracy and Tony Garry (2010), "It's mine: Participation and ownership within virtual value co-creation environments," *Journal of Marketing Management*, 26 (3-4), 290-301.
- Hatch, Mary J. and Majken Schultz (2010), "Toward a theory of brand co-creation with implications for brand governance," *Journal of Brand Management*, 17 (8), 590-604.
- Hau, Le Nguyen, Pham Ngoc Tram Anh and Pham Ngoc Thuy (2016), "The effects of interaction behaviors of service frontliners on customer participation in the value co-creation: a study of health care service," *Service Business*, March 2016, 1-25.
- Haukkamaa, Jussi, Pia Yliräisänen-Seppänen and Eija Timonen (2010), "Characteristics of value co-creation in a learning environment by service design and service dominant logic frameworks," ServDes in 2010 Second Nordic Conference on Service Design and Service Innovation.
- Hausman, Angela (2004), "Modeling the patient-physician service encounter: Improving patient outcomes," *Journal of the Academy of Marketing Science*, 32 (4), 403-417.
- Hays, Julie M. and Arthur V. Hill (1999), "The market share impact of service failures," *Production and Operations Management*, 8 (3), 208-20.
- Heidenreich, Sven, Kristina Wittkowski, Matthias Handrich and Tomas Falk (2015), "The dark side of customer co-creation: exploring the consequences of failed co-created services," *Journal of the Academy of Marketing Science*, 43 (3), 279-296.

- Hess, Ronald L., Shankar Ganesan and Noreen Klein (2003) "Service failure and recovery: the impact of relationship factors on customer satisfaction," *Journal of the Academy of Marketing Science*, 31 (2), 127–45.
- Hesse-Biber, Sharlene Naggy and Patricia L. Leavy (2006), *The practice of qualitative research*, Thousand Oaks, CA: Sage.
- Hibbert, Sally, Heidi Winklhofer and Mohamed S. Temerak (2012), "Customers as resource integrators: toward a model of customer learning," *Journal of Service Research*, 15 (3), 247–261.
- Hilton, Toni, Tim Hughes and David Chalcraft (2012), "Service co-creation and value realization," *Journal of Marketing Management*, 28 (13-14), 1504-1519.
- Hjalager, Anne- Mette and Henna Konu (2011), "Co- Branding and Co- Creation in Wellness Tourism: The Role of Cosmeceuticals," *Journal of Hospitality Marketing & Management*, 20 (8), 879- 901.
- Holbrook, Morris B. (1996) "Customer Value – A Framework for Analysis and Research," *Advances in Consumer Research*, 23 (1), 138–42.
- Holbrook, Morris B. (1999), "Introduction to Consumer Value," in *Consumer Value. A Framework for Analysis and Research*, M.B. Holbrook (ed.), 1–28. London: Routledge
- Holmes-Smith, Philip, Everarda Cunningham and Leonard V. Coote (2006), *Structural Equation Modelling: From the fundamentals to advanced topics*, School Research, Evaluation and Measurement Services, Education& Statistics Consultancy, Statsline.
- Holt, Douglas B. (2002), "Why do brands cause trouble? A dialectical theory of consumer culture and branding," *Journal of Consumer Research*, 29 (1), 70-90.
- Hoyer, Wayne D., Rajesh Chandy, Matilda Dorotic, Manfre Krafft and Siddharth S. Singh (2010), "Consumer co-creation in new product development," *Journal of Service Research*, 13 (3), 283-296.
- Hsiao, Chan, Yi- Hsuan Lee and Wan- Jun Chen (2015), "The effect of servant leadership on customer value co-creation: A cross-level analysis of key mediating roles," *Tourism Management*, 49 (August 2015), 45-57.
- Hsieh, Jung-Kuei, Yi-Ching Hsieh (2015), "Dialogic co-creation and service innovation performance in high-tech companies," *Journal of Business Research*, 68 (11), 2266–2271.

- Hu, Li-tze and Peter Bentler (1995), "Evaluating model fit," in *Structural equation modelling: Concepts, issues and applications* R.H. Hoyle (Ed.), (pp.76-99). London: Sage
- Hu, Changya Yu- Hsuan Wang (2010), *Bootstrapping in AMOS, Powerpoint*, Retrieved from http://www3.nccu.edu.tw/~changya/SEMworkshop/Amos_bootstrapping_20100630.pdf.
- Hull, Frank M. (2004), "Innovation Strategy and the Impact of a Composite Model of Service Product Development on Performance," *Journal of Service Research*, 7 (2), 167-180.
- Humphreys, Ashlee and Kent Grayson (2008), "The Intersecting Roles of Consumer and Producer: A Critical Perspective on Co-production, Co-creation and Prosumption," *Sociology Compass*, 2 (3), 963-980.
- Hunt, Shelby D. (2000), *A General Theory of Competition: Resources, Competences, Productivity, Economic Growth*, Thousand Oaks, CA: Sage Publications
- Hunt, Shelby D. (2004), "On the services-centered dominant logic for marketing," *Journal of Marketing*, 68 (1), 21-22.
- Hunt, Shelby D. and Robert M. Morgan (1995), "The Comparative Advantage Theory of Competition," *Journal of Marketing*, 59 (2), 1-15.
- Iglesias, Oriol, Nicholas Ind and Manuel Alfaro (2013), "The organic view of the brand: A brand value co-creation model," *Journal of Brand Management*, 20 (8), 670-688.
- Ind, Nicholas and Nick Coates (2013), "The meanings of co-creation," *European Business Review*, 25 (1), 86-95.
- Ind, Nicholas, Oriol Iglesias and Majken Schultz (2013), "Building Brands Together: Emergence and outcomes of co-creation," *California Management Review*, 55 (3), 5-26.
- Ipeirotis, Panagiotis G. (2010), "Analyzing the Amazon Mechanical Turk marketplace," *XRDS: Crossroads, The ACM Magazine for Students*, 17 (2), 16-21.
- Jaakkola, Elina and Taru Hakanen (2013), "Value co-creation in solution networks," *Industrial Marketing Management*, 42 (1), 47-58.
- Jick, Todd D. (1979), "Mixing qualitative and quantitative methods: Triangulation in action", *Administrative Science Quarterly*, 24 (4), 602-611.
- Johnson, R. Burke and Anthony J. Onwuegbuzie (2004), "Mixed Methods Research: A Research Paradigm Whose Time Has Come," *Educational Researcher*, 33 (7), 14-26.

- Johnson, Jennifer Wiggins and Adam Rapp (2010), “A more comprehensive understanding and measure of customer helping behavior,” *Journal of Business Research*, 63 (8), 787–792.
- Johnston, Robert (1995), “Service failure and recovery: Impact, attributes, and processes,” in *Advances in services marketing and management* (4, 211-228).T. Swartz, D. E. Bowen, & S. W. Brown (Eds.), Greenwich, CT: JAI Press.
- Johnston, Robert and Adrian Fern (1999), “Service recovery strategies for single and double deviation scenarios,” *The Service Industries Journal*, 19 (2), 69–82.
- Jong- Kuk, Shin, Park Min-Sook, Oh Mi-Ok and Kim Mi-Ri (2010), “How Do Customers Respond to Service Failure When They Participate in Service Co-creation?” *International Journal of Arts and Sciences*, 3 (7), 444-455.
- Kahn, Robert L., Donald M. Wolfe, Robert P. Quinn, J. Diedrick Snoek and Robert A. Rosenthal (1964), *Organizational stress: Studies in role conflict and ambiguity*, New York, NY: John Wiley & Sons.
- Kaplowitz, Michael D. (2000), “Statistical Analysis of Sensitive Topics in Group and Individual Interviews,” *Quality and Quantity*, 34 (4), 419-431.
- Karatepe, Osman M. (2006), “Customer complaints and organizational responses: The effects of complainants’ perceptions of justice on satisfaction and loyalty,” *International Journal of Hospitality Management*, 25 (1), 69-90.
- Kashif, Muhammad and Anna Zarkada (2015), “Value co-destruction between customers and frontline employees: A social system perspective,” *International Journal of Bank Marketing*, 33 (6), 672 – 691.
- Katrien, Verleye, (2015), “The co-creation experience from the customer perspective: its measurement and determinants,” *Journal of Service Management*, 26 (2), 321 - 342.
- Keaveney, Susan M. (1995), “Customer Switching Behavior in Service Industries: An Exploratory Study,” *Journal of Marketing*, 59 (2), 71-82.
- Keeffe, Dominique A., Rebekah Russell-Bennett, Alastair Tombs (2007), “Chapter 6 The Intentional Use of Service Recovery Strategies to Influence Consumer Emotion, Cognition and Behavior,” in *Functionality, Intentionality and Morality (Research on Emotion in Organizations, Volume 3)* Ch. E.J. Härtel, N. M. Ashkanasy, W. J. Zerbe (Eds.), Emerald Group Publishing Limited, 141 – 175.
- Keiningham, Timothy L., Carly M.Frennea, Lerzan Aksoy, Alexander Buoye and Vikas Mittal (2015), “A Five- Component Customer Commitment Model- Implications for

- Repurchase Intentions in Goods and Services Industries,” *Journal of Service Research*, 18 (4), 443-450.
- Kelley, Scott W. and Mark A. Davis (1994), “Antecedents to customer expectations for service recovery,” *Journal of the academy of Marketing Science*, 22 (1), 52 – 61.
- Kelley, Scott W., Steven J. Skinner and James H. Donnelly Jr. (1992), “Organizational socialization of service customers,” *Journal of Business Research*, 25 (3), 197-214.
- Kleinaltenkamp, Michael, Roderick J. Brodie, Pennie Frow, Tim Hughes, Linda D. Peters and Herbert Woratschek (2012), “Recourse integration,” *Marketing Theory*, 12 (2), 201- 205.
- Kline, Rex B. (2011), *Principles and Practice of Structural Equation Modeling (3rd ed.)*, New York: The Guilford Press.
- Kohler, Thomas, Johann Fueller, Kurt Matzler and Daniel Stieger (2011), “Co-creation in virtual worlds: the design of the user experience,” *Journal MIS Quarterly*, 35 (3), 773-788.
- Krishna, Anupam, G.S. Dangayach and Rakesh Jain (2011), “Service recovery: Literature review and research issues,” *Journal of Service Science Research*, 3 (August), 71-121.
- Krishnakumar, Sukumarakurup and Kay Hopkins (2014), “The role of emotion perception ability in motivation to lead,” *Management Research Review*, 37 (4), 334-347.
- Kristensson, Per, Jonas Matthing and Niklas Johansson (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.
- Lacoste, Sylvie (2016), “Sustainable value co-creation in business networks,” *Industrial Marketing Management*, 52 (2016), 151–162.
- Lanning, Michael J. and Edward G. Michaels (1988), “A business is a value delivery system,” *Staff paper, McKinsey & Company*, 41, 1-16.
- Leavy, Brian and Venkat Ramaswamy (2013), “A ten-year perspective on how the value co-creation revolution is transforming competition,” *Strategy & Leadership*, 41 (6), 11 – 17.
- Le Bon, Joël and Dwight Merunka (2006), “The Impact of Individual and Managerial Factors on Salespeople’s Contribution to Marketing Intelligence Activities,” *International Journal of Research in Marketing*, 23 (4), 395–408.

- Lee, Hsin-Hsuan Meg and Willemijn van Dolen (2015), "Creative participation: Collective sentiment in online co-creation communities," *Information & Management*, 52 (8), 951-964.
- Lefebvre, Isabelle and Loïc Plé (2011), "Emergence of value co-destruction in B2B context," in *Service dominant logic, network & systems theory and service science: Integrating three perspectives for a new service agenda*, E. Gummesson, C. Mele, and F. Polese (Eds.), Napoli: Giannini.
- Lengnick-Hall, Cynthia A., Vincentia Claycomb and Lawrence W. Inks (2000), "From recipient to contributor: examining customer roles and experienced outcomes," *European Journal of Marketing*, 34 (3/4), 359-383.
- Leonidou, Constantinos N., Constantine S. Katsikeas and Neil A. Morgan (2013), "'Greening' the marketing mix: do firms do it and does it pay off?" *Journal of the Academy of Marketing Science*, 41 (2), 151-170.
- Levine, Charles H. Glen Fisher (1984), "Citizenship and Service Delivery: The Promise of Coproduction," *Public Administration Review*, 44 (Special Issue: Citizenship and Public Administration), 178- 189.
- Liao, Li- Chu Chang, Hsiao- Ming Chang and Tsai-Fu Tsai (2012), "Study of volunteers' participation motivation, work satisfaction, and perceived value in mega-sports event: Case of the 2009 World Games," *International Conference on Innovation and Information Management, IACSIT Press Singapore*, 36, 315-318.
- Lincoln, Yvonna S. and Egon E. Guba (1985), *Naturalistic Enquiry*, Beverly Hill, CA: SAGE.
- Liu, Peggy, Cait Lamberton and Kelly L. Haws (2015), "Should Firms Use Small Financial Benefits to Express Appreciation to Consumers? Understanding and Avoiding Trivialization Effects," *Journal of Marketing*, 79 (3), 74-90.
- Lloyd, Alison E. (2003), *The role of culture on customer participation in services*, China, Hong Kong: The Hong Kong Polytechnic University.
- Loane, Susan Stewart, Cynthia M. Webster¹ and Steven D'Alessandro (2015), "Identifying Consumer Value Co-created through Social Support within Online Health Communities," *Journal of Macromarketing*, 35 (3), 353-367.
- Lovelock, Christopher H. and Evert Gummesson (2004), "Whither services marketing? In search of a new paradigm and fresh perspectives," *Journal of Service Research*, 7 (1), 20-41.

- Lovelock, Christopher H., Jochen Wirtz, Hean Tat Keh (2002), *Services Marketing in Asia, Managing People, Technology and Strategy*, Singapore: Prentice Hall International Incorporation.
- Luo, Nuan, Mingli Zhang and Wenhua Liu (2015), “The effects of value co-creation practices on building harmonious brand community and achieving brand loyalty on social media in China,” *Journal Computers in Human Behavior*, 48 (C), 492-499.
- Lusch, Robert F. and Stephen L. Vargo (2006), *The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions*, Armonk, NY: M.E. Sharpe.
- Lusch, Robert F. and Stephen L. Vargo (2014), *Service-Dominant Logic Premises, Perspectives, Possibilities*, United Kingdom: Cambridge University Press.
- Lusch, Robert F., Stephen L. Vargo and Matthew O’Brien (2007), “Competing through service: Insights from service-dominant logic,” *Journal of Retailing*, 83 (1), 5-18.
- Lusch, Robert F., Stephen L. Vargo and Gunter Wessels (2008), “Toward a Conceptual Foundation for Service Science: Contributions from Service-Dominant Logic,” *IBM Systems Journal*, 47 (1), 5-14.
- Macdonald, Emma K. and Mark D. Uncles (2007), “Consumer savvy: Conceptualisation and measurement,” *Journal of Marketing Management*, 23 (5-6), 497-518.
- Madhavaram, Sreedhar and Shelby D. Hunt (2008), “The service-dominant logic and a hierarchy of operant resources: developing masterful operant resources and implications for marketing strategy,” *Journal of the Academy of Marketing Science*, 36 (1), 67-82.
- Maglio, Paul P., Cheryl A. Kieliszewski and James C. Spohrer (Eds.), (2010), *Handbook of Service Science*, New York: Springer Science+Business Media.
- Maglio, Paul P., Stephen L. Vargo, Nathan Caswell and Jim Spohrer (2009), “The service system is the basic abstraction of service science,” *Information Systems and e-Business Management*, 7 (4), 395-406.
- Mallinckrodt, Brent, W. Todd Abraham, Meifen Wei and Daniel W. Russel (2006), “Advances in Testing the Statistical Significance of Mediation Effects,” *Journal of Counseling Psychology*, 53 (3), 372-378.
- Martin, Charles L. (1999), “The history, evolution and principles of services marketing: poised for the new millennium,” *Marketing Intelligence & Planning*, 17 (7), 324 – 328.

- Marx, Carl (1859), *A Contribution to the Critique of Political Economy*, Moscow: Progress Publishers.
- Mathis, Elaine F., Hyelin (Lina) Kim, Muzaffer Uysal, Joseph M. Sirgy and Nina K. Prebensen (2016), “The effect of co-creation experience on outcome variable,” *Annals of Tourism Research*, 2016, 57 (c), 62-75.
- Mattila, Anna S., Wonae Cho and Heejung Ro (2009), “The joint effects of service failure, recovery effort, and gender on customer’s post recovery satisfaction,” *Journal of Travel & Tourism Marketing*, 26 (2), 120-128.
- Mattila, Anna S. and David Cranage (2005), “The impact of choice on fairness in the context of service recovery,” *Journal of Services Marketing*, 19 (5), 271-279.
- Maxham, James G. (2001), “Service recovery’s influence on consumer satisfaction, positive word-of mouth and purchase intentions,” *Journal of Business Research*, 54 (1), 11-24.
- Maxham, James G. III and Richard G. Netemeyer (2002) “A longitudinal study of complaining customers’ evaluation of multiple service failures and recovery efforts,” *Journal of Marketing*, 66 (4), 57–71.
- McCoach, D. Betsy, Robert K. Gable and John P. Madura (2013), *Instrument Development in the Affective Domain (3rd edition)*, New York: Springer.
- McColl-Kennedy, Janet R. and Amy K. Smith (2006), “Chapter 10 Customer Emotions in Service Failure and Recovery Encounters,” in *Individual and Organizational Perspectives on Emotion Management and Display (Research on Emotion in Organizations, Volume 2)*, W. J. Zerbe, N. M. Ashkanasy, Ch. E.J. Härtel (Eds.), Emerald Group Publishing Limited, 237 – 268.
- McColl- Kennedy, Janet R., Stephen L. Vargo, Tracey S. Dagger, Jill C. Sweeney and Yasmin van Kasteren (2012), “Health care customer value co- creation practice styles,” *Journal of Service Research*, 15 (4), 370-389.
- McCullough, Michael A., Leonard L. Berry and Manjit S. Yadav (2000), “An empirical investigation of customer satisfaction after service failure and recovery,” *Journal of Service Research*, 3 (2), 121-37.
- McCracken, Grant D. (1988), *The long interview*, Newbury Park, CA: Sage.
- McDaniel, Carl and Roger Gates (2008), *Marketing Research Essentials (6th ed.)*, Hoboken, NJ: John Wiley & Sons.

- McDonald, Heath and Adam J. Karg (2014), “Managing co-creation in professional sports: The antecedents and consequences of ritualized spectator behavior,” *Sport Management Review*, 17 (3), 292–309.
- McIntyre, Kevin, Terry Tomazic, Barry Katz and Hisako Matsuo (2004), *The Online Survey: Its Contributions and Potential Problems*, Saint Louis University and Saint Louis University and Saint Louis University and Saint Louis University.
- Mele, Christina (2011), “Conflicts and value co-creation in project networks,” *Industrial Marketing Management*, 40 (8), 1377- 1385.
- Mele, Cristina, Tiziana Russo Spena and Maria Colurcio (2010), “Co-creating value innovation through resource integration,” *International Journal of Quality and Service Sciences*, 2 (1), 60 – 78.
- Mentzer, John T. , Daniel J. Flint, G. Tomas and M. Hult (2001), “Logistics Service Quality as a Segment-Customized Process,” *Journal of Marketing*, 65 (4), 82-104.
- Merz, Miwa Y., David Czerwinski and Michael A. Merz (2013), “Exploring the Antecedents for Value Cocreation during Healthcare Service Provision,” *Journal of Business and Behavior Sciences*, 25 (2), 152-166.
- Meuter, Matthew L., Mary Jo Bitner, Amy L. Ostrom and Stephen W. Brown (2005), “Choosing among alternative service delivery modes: An investigation of customer trial of self-service technologies,” *Journal of Marketing*, 69 (2), 61–83.
- Michel, Stefan (2004), “Consequences of perceived acceptability of a bank’s service failures,” *Journal of Financial Services Marketing*, 8 (4), 367- 377.
- Michel, Stefan, David Earl Bowen and Robert Johnston (2009), “Why service recovery fails: Tensions among customer, employee and process perspectives,” *Journal of Service Management*, 20 (3), 253 – 273.
- Milfont, Taciano Lemos and Ronald Fischer (2010), “Testing measurement invariance across groups: Applications in cross-cultural research,” *International Journal of Psychological Research*, 3 (1), 111-121.
- Moeller, Sabine (2008), “Customer Integration - A key to an implementation perspective of service provision,” *Journal of Service Research*, 11 (2), 197-210.
- Morgan, Neil A. and Nigel F. Piercy (1998), “Interactions Between Marketing and Quality at the SBU Level: Influences and Outcomes,” *Journal of the Academy of Marketing Science*, 26 (3), 190–208.

- Moynihan, Donald P. and Sanjay K. Pandey (2007), "Finding Workable Levers Over Work Motivation, Comparing Job Satisfaction, Job Involvement, and Organizational Commitment," *Administration & Society*, 39 (7), 803-832.
- Mustak, Mekhail, Elina Jaakkola and Aino Halinen (2013), "Customer participation and value creation: a systematic review and research implications," *Managing Service Quality: An International Journal*, 23 (4), 341 - 359.
- Muthen, Bengt O. (1994), "Multilevel covariance structure analysis," *Sociological Methods & Research*, 22 (3), 376-398.
- Nahapiet, Janine, Lynda Gratton and Hector O. Rocha (2005), "Knowledge and relationships: when cooperation is the norm," *European Management Review*, 2 (1), 3-14.
- Nambisan, Satish and Robert A. Baron (2007), "Interactions in virtual customer environments: Implications for product support and customer relationship management," *Journal of Interactive Marketing*, 21 (2), 42-62
- Nambisan, Satish and Robert A. Baron (2009), "Virtual Customer Environments: Testing a Model of Voluntary Participation in Value Co-creation Activities," *The Journal of Product Innovation Management*, 26 (4), 388-406.
- Nassar-McMillan, Sylvia C. L. Dianne Borders (2002), "Use of focus groups in survey item development," *The Qualitative Report*, 7 (1), Retrieved May 16, 2007 from <http://www.nova.edu/ssss/QR/QR7-1/nassar.html>.
- Navarro, Susana, Dolores Garzón and Norat Roig-Tierno (2015), "Co- creation in hotel-disable customer interactions," *Journal of Business Research*, 68 (7), 1630-1634.
- Navarro, Susana, Carmen Llinares and Dolores Garzon (2016), "Exploring the relationship between co-creation and satisfaction using QCA," *Journal of Business Research*, 69 (4), 1336–1339.
- Noble, Charles H. and Michael P. Mokwa (1999), "Implementing marketing strategies: Developing and testing a managerial theory," *Journal of Marketing*, 63 (4), 57–73.
- Noble, Stephanie M. and Joanna Phillips (2004), "Relationship hindrance: why would customers not want a relationship with a retailer?" *Journal of Retailing*, 80 (4), 289-304.
- Normann, Richard and Rafael Ramirez (1994), *Designing Interactive Strategy: From Value Chain to Value Constellation*, Bloomington, IN: Wiley.
- North, Douglass C. (1990), *Institutions, Institutional Change and Economic Performance*, Cambridge, UK: Cambridge University Press.

- O’Cass, Aron and Liem Viet Ngo (2012), “Creating Superior customer value for B2B firms through supplier firm capabilities,” *Industrial Marketing Management*, 41 (1), 125-135.
- O’Hern, Matthew S. and Aric Rindfleisch (2009), “Customer Co-Creation: A Typology and Research Agenda,” in *Review of Marketing Research* (6), K. Naresh and K. Malholtra (Eds.), Emerald Group Publishing Limited, 84 – 106.
- Oliver, Richard L. (1974), “Expectancy Theory Predictions of Salesmen’s Performance,” *Journal of Marketing Research*, 11 (3), 243–253.
- Onkvisit, Sak and John J. Shaw (1991), “Is Services Marketing “Really” Different?” *Journal of Professional Services Marketing*, 7 (2), 3 - 17.
- Ostrom, Amy L. (2003), “Achieving reviewer readiness,” *Journal of Academy of Marketing Science*, 31 (3), 337-340.
- Parasuraman, A., Valarie A. Zeithaml, and Leonard L. Berry (1985), “A Conceptual Model of Service Quality and Its Implications for Future Research,” *Journal of Marketing*, 49 (Autumn), 41-50.
- Park, Ji Yong (2012), “Design process excludes users: the co-creation activities between user and designer,” *Digital Creativity*, 23 (1), 79-92.
- Park, Joohyung and Ha Sejin (2016), “Co-creation of service recovery: Utilitarian and hedonic value and post-recovery responses,” *Journal of Retailing and Consumer Services*, 28 (January), 310-316.
- Patton, Michael Quinn (2002), *Qualitative Research & Evaluation Methods (3rd Edition)*, USA, California: Sage Publications Inc.
- Payne, Adrian F., Kaj Storbacka, and Pennie Frow (2008), “Managing the Co-creation of Value,” *Journal of the Academy of Marketing Science*, 36 (1), 83-96.
- Payne, Adrian F., Kaj Storbacka, Pennie Frow and Simon Knox (2009), “Co-creating brands: Diagnosing and designing the relationship experience,” *Journal of Business Research*, 62 (3), 379-389.
- Perks, Helen, Thorsten Gruber and Bo Edvardsson (2012), “Co- creation in Radical Service Innovation: A Systematic Analysis of Microlevel Processes,” *Journal of Product Innovation Management*, 29 (6), 935-951.
- Peters, Linda D., Helge Löbler, Roderick J. Brodie, Christoph F. Breidbach, Linda D. Hollebeek, Sandra D. Smith, Davida Sörhammar and Richard J. Varey (2014),

- “Theorizing about resource integration through service-dominant logic,” *Marketing theory*, 14 (3), 249-268.
- Piligrimiene, Zaneta, Aiste Dovaliene and Regina Virvilaite (2015), “Consumer Engagement in Value Co-Creation: what Kind of Value it creates for Company?” *Engineering Economics*, 26 (4), 452-460.
- Pires, Guilherme D., Alison Dean and Muqqadas Rehman (2015), “Using service logic to redefine exchange in terms of customer and supplier participation,” *Journal of Business Research*, 68 (5), 925-932.
- Plé, Loïc and Rubén Chumpitaz Cáceres, (2010), “Not always Co-creation: Introducing Interactional Co-destruction of Value in Service-dominant Logic,” *Journal of Services Marketing*, 24 (6), 430–37.
- Prahalad, Coimbatore K. and Venkat Ramaswamy (2000), “Co-opting Customer Competence,” *Harvard Business Review*, 78 (January-February), 79-87.
- Prahalad, Coimbatore K., and Venkat Ramaswamy (2002), “The Co-Creation Connection,” *Strategy and Business*, 27, 50-61.
- Prahalad, Coimbatore K. and Venkat Ramaswamy (2004a), “Co-creating unique value with customers,” *Strategy & Leadership*, 32 (3), 4-9.
- Prahalad, Coimbatore K., and Venkat Ramaswamy (2004b), “Co-creation experiences: The next practice in value creation,” *Journal of Interactive Marketing*, 18 (3), 5-14.
- Preacher, Kristopher J. and Andrew F. Hayes (2004), “SPSS and SAS procedures for estimating indirect effects in simple mediation models,” *Behavior Research Methods, Instruments, & Computers*, 36 (4), 717–731.
- Preacher, Kristopher J. and Andrew F. Hayes (2008), “Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models,” *Behavior Research Methods*, 40 (3), 879-891.
- Prebensen, Nina K. , Joseph S. Chen and Muzaffer Uysal (Eds.), (2014), *Creating Experience Value in Tourism*, Boston MA, USA: CABI.
- Prebensen, Nina K. and Lene Foss (2010), “Coping and co-creating in tourist experiences,” *International Journal of Tourism Research*, ” 13 (1), 54-67.
- Pugh, S. Douglas and Mahesh Subramony (2016), “Taking services seriously: New directions in services management theory and research,” *Human Resource Management Review*, 26 (1), 1-3.

- Purvis, Martin K. and Maryam A. Purvis (2012), "Institutional expertise in the Service-Dominant Logic: Knowing how and knowing what," *Journal of Marketing Management*, 28 (13-14), 1626-1641.
- Rajah, Edwin, Roger Marshall and Inwoo Nam (2008), "Relationship Glue: Customers and Marketers Co-Creating a Purchase Experience," in *NA - Advances in Consumer Research Volume 35*, A. Y. Lee and D. Soman (Eds.), Duluth, MN : Association for Consumer Research, Pages: 367-373.
- Ramaswamy, Venkat (2008), "Co-creating value through customers' experiences: the Nike case," *Strategy & Leadership*, 36 (5), 9 – 14.
- Ramaswamy, Venkat (2011) "It's about Human Experiences...and Beyond, to Co-Creation," *Industrial Marketing Management*, 40 (2), 195–96.
- Ramaswamy, Venkat and Ozcan Kerimcan (2013), "Strategy and co-creation thinking," *Strategy & Leadership*, 41 (6), 5 – 10.
- Randall, Wesley S., Michael J. Gravier and Victor R. Prybutok (2011), "Connection, trust, and commitment: dimensions of co-creation?" *Journal of Strategic Marketing*, 19 (1), 3-24.
- Read, David, Yao H. Jin and Stanley E. Fawcett (2014), "Trust in Value Co-Creation Strategies: Moving Toward a Conceptualization We Can Trust," *Journal of Business Logistics*, 35 (1), 97-98.
- Ren, Steven Jifan, Caihong Hu, E.W.T. Ngai and Mingjian Zhou (2015), "An empirical analysis of inter-organisational value co-creation in a supply chain: a process perspective," *Production planning and control*, 26 (12), 969-980.
- Revilla-Camacho, María Ángeles, Manuela Vega-Vázquez and Francisco José Cossío-Silva (2015), "Customer participation and citizenship behavior effects on turnover intention," *Journal of Business Research*, 68 (7), 1607–1611.
- Reynolds, Nina and Adamantios Diamantopoulos (1998), "The effect of pretest method on error detection rates," *European Journal of Marketing*, 32 (5/6), 480 - 498.
- Rihova, Ivana, Dimitrios Buhalis, Miguel Moital and Mary Beth Gouthro (2013), "Social layers of customer-to-customer value co-creation," *Journal of Service Management*, 24 (5), 553 – 566.
- Ringberg, Torsten, Gaby Odekerken-Schröder and Glenn L. Christensen (2007), "A Cultural Models Approach to Service Recovery," *Journal of Marketing*, 71 (3),194-214.

- Risch-Rodie, Amy and Susan Schultz Kleine (2000), "Customer participation in services production and delivery," in *Handbook of services marketing and management*, T. Swartz and D. Iacobucci (Eds.) Thousand Oaks, Calif.: Sage, 111-125.
- Roberts, Deborah L., Mathew Hughes and Kia Kertbo (2014), "Exploring consumers' motivations to engage in innovation through co-creation activities," *European Journal of Marketing*, 48 (1/2), 147 - 169.
- Robertson, Nichola, Michael Polonsky and Lisa McQuilken (2014), "Are my symptoms serious Dr Google? A resource-based typology of value co-destruction in online self-diagnosis," *Australian Marketing Journal (AMA)*, 22 (3), 246-256.
- Roggeveen, Anne L., Michael Tsiros and Dhruv Grewal (2012), "Understanding the co-creation effect: when does collaborating with customers provide a lift to service recovery?" *Journal of the Academy of Marketing Science*, 40 (6), 771- 790.
- Roos, Inger (1999), "Switching processes in customer relationships", *Journal of Service Research*, 2 (1), 68-85.
- Rose, Gregory M., Altaf Merchant, Ulrich R. Orth and Florian Horstmann (2016), "Emphasizing brand heritage: Does it work? And how?" *Journal of Business Research*, 69 (2), 936-943.
- Roser, Thorsten, Alain Samson, Patrick Humphreys and Eidi Cruz-Valdivieso (2009) *New pathways to value: co-creating products by collaborating with customers*, London, UK: LSE Enterprise.
- Roth, Aleda V. and Larry J. Menor (2003), "Insights into service operations management: a research agenda," *Production and Operations Management*, 12 (2), 145-64.
- Rucker, Derek D., Kristopher J. Preacher, Zakary L. Tormala and Richard E. Petty (2011), "Mediation Analysis in Social Psychology: Current Practices and New Recommendations," *Social and Personality Psychology Compass*, 5 (6), 359–371.
- Russo-Spena, Tiziana and Cristina Mele (2012), "Five Co-s in innovating: a practice-based view," *Journal of Service Management*, 23 (4), 527-553.
- Ryan, Richard M. and Edward L. Deci (2000), "Intrinsic and extrinsic motivations: Classic definitions and new direction," *Contemporary educational psychology*, 25 (1), 54-67.
- Saarijärvi, Hannu (2012), "The mechanisms of value co-creation," *Journal of Strategic Management*, 20 (5), 381- 391.

- Sánchez-Fernández, Raquel and M. Ángeles Iniesta-Bonillo (2007), “The concept of perceived value: a systematic review of the research,” *Marketing Theory* December, 7 (4), 427-451.
- Sandström Sara, Bo Edvardsson, Per Kristensson and Peter Magnusson (2008), “Value in use through service experience,” *Managing Service Quality*, 18 (2), 112-126.
- Schoefer, Klaus and Adamantios Diamantopoulos (2009), “A Typology of Consumers' Emotional Response Styles during Service Recovery Encounters,” *British Journal of Management*, 20 (3), 292-308.
- Seyedeh Khadijeh, Taghizadeh, Krishnaswamy Jayaraman, Ishak Ismail and Syed Abidur Rahman (2016), “Scale development and validation for DART model of value co-creation process on innovation strategy,” *Journal of Business & Industrial Marketing*, 31 (1), 24 – 35.
- Sfandla, Chouki and Peter Björk (2013), “Tourism Experience Network: Co-creation of Experiences in Interactive Processes,” *International Journal of Tourism Research*, 15 (5), 495-506.
- Shamim, Amjad, Zulkipli Ghazali and Pia A. Albinsson (2016) “An integrated model of corporate brand experience and customer value co-creation behavior,” *International Journal of Retail & Distribution Management*, 44 (2), 139 – 158.
- Silva, Antonio, Milton Farina, Maria Gouvãa and Denis Donaire (2015), “A Model of Antecedents for the Co-Creation of Value in Health Care: An Application of Structural Equation Modeling,” *Brazilian Business Review*, 12 (6), 121-149.
- Sivakumar, K., Mei Li and Beibei Dong (2014), “Service Quality: The Impact of Frequency, Timing, Proximity, and Sequence of Failures and Delights,” *Journal of Marketing*, 78 (1), 41-58.
- Skaggs, Bruce C. and Tammy Ross Huffman (2003), “A Customer Interaction Approach to Strategy and Production Complexity Alignment in Service Firms,” *The Academy of Management Journal*, 46 (6), 775-786.
- Skålen, Per, Johanna Gummerus, Catharina Von Koskull and Peter R. Magnusson (2015), “Exploring value propositions and service innovation: a service-dominant logic study,” *Journal of the Academy of Marketing Science*, 43 (2), 137-158.
- Skålén, Per, Stefano Pace and Bernard Cova (2015), “Firm-brand community value co-creation as alignment of practices,” *European Journal of Marketing*, 49 (3/4), 596 – 620.

- Skourtis, Georgios, Jean- Marc Decaudin and Ioannis Assiouras (2015), “Conceptualizing Service Failures through the lens of service-dominant logic: a value-based approach,” accepted to be presented to *American Marketing Association (AMA) Winter Marketing Educators’ Conference*, San Antonio Texas, USA, February 13-15, 2015.
- Smith, Adam (2000), “The Wealth of Nations” first printed in 1776, New York: The Modern Library.
- Smith, Anne M. (1990), “Quality Aspects of Services Marketing,” *Marketing Intelligence & Planning*, 8 (6), 25-32.
- Smith, Anne M. (2013) “The value co–destruction process: a customer resource perspective,” *European Journal of Marketing*, 47 (11/12), 1889–1909.
- Smith, Amy K. and Ruth N. Bolton (1998), “An Experimental Investigation of Customer Reactions to Service Failure and Recovery Encounter: Paradox or Peril?” *Journal of Service Research*, 1 (1), 65-81.
- Smith, Amy K. and Ruth N. Bolton (2002), “The Effect of Customers’ Emotional Responses to Service failures on the Their Recovery Effort Evaluations and Satisfaction Judgments,” *Journal of the Academy of Marketing Science*, 30 (1), 5-23.
- Smith, Amy K., Ruth N. Bolton and Janet Wagner (1999), “A model of customer satisfaction with service encounters involving failure and recovery,” *Journal of Marketing Research*, 36 (3), 356-372.
- Sogn-Grundvåg, Geir, Stein Arne Rånes, Kjell Grønhaug and Brendan Gray (2008), “Co-Creating Value in a Retail Market Setting,” *Journal of Food Products Marketing*, 15 (1), 1-14.
- Solberg, Sølven K. (2012), “The fallacy of the service economy: A materialist perspective,” *European Business Review*, 24 (4), 308–319.
- Steenkamp, Jan-Benedict E.M. and Hans Baumgartner (1998), “Assessing measurement invariance in crossnational consumer research,” *Journal of Consumer Research*, 25 (1), 78-107.
- Stieler, Maximilian , Friederike Weismann and Claas Christian Germelmann (2014), “Co-destruction of value by spectators: the case of silence protests,” *European Sport Management Quarterly*, 14 (1), 72-86.
- Swanson, Scott R. and Scott W. Kelley, (2001), “Service recovery attributions and word-of-mouth intentions,” *European Journal of Marketing*, 35 (1/2), 194 – 211.

- Syvvertsen, Carsten Martin (2012), "Towards the Business Federation in Top Management Consulting in Europe: The Role of Co-creation," *International Business Research*, 5 (3), 16-25.
- Tabachnick, Barbara G. and Linda S. Fidell (2006), *Using Multivariate Statistics* (5th Edition), Needham Heights, MA, USA : Allyn & Bacon.
- Tax, Stephen S. and Stephen W. Brown (1998), "Recovering and Learning from Service Failure," *MIT Sloan Management Review*, 40 (1), 75-88.
- Tax, Stephen S., Stephen W. Brown and Murali Chandrashekar (1998), "Customer Evaluations of Service Complaint Experiences: Implications for Relationship Marketing," *Journal of Marketing*, 62 (April), 60-76.
- Thompson, Debora V. and Prashant Malaviya (2013), "Consumer- Generated Ads: Does Awareness of Advertising Co- Creation Help or Hurt Persuasion?" *Journal of Marketing*, 77 (3), 33- 47.
- Thorster , Roser, Robert DeFillippi and Alain Samson (2013), "Managing your co-creation mix: co-creation ventures in distinctive contexts," *European Business Review*, 25 (1) 20-41.
- Todd, Zazie, Brigitte Nerlich, Suzanne McKeown and David D.Clarke (2004), *The integration of qualitative and quantitative methods in theory and practice*, New York: Psychology Press.
- Toffler, Alvin (1980), *The Third Wave*, New York: William Morrow.
- Tronvoll, Bård (2010), "Negative emotions and their effect on customer complaint behavior," *Journal of Service Management*, 22 (1), 111-134.
- Tronvoll, Bård (2012), "A dynamic model of customer complaining behaviour from the perspective of service-dominant logic," *European Journal of Marketing*, 46 (1/2), 284 - 305.
- Tseng, Fang- Mei and Lang- Lung (Luke) Chiang (2016), "Why does customer co-creation improve new travel product performance?" *Journal of Business Research*, 69 (6), 2309- 2317.
- Tyagi, Pradeep K. (1985), "Relative importance of key job dimensions and leadership behaviors in motivating salesperson work performance," *Journal of Marketing*, 49 (3), 76–86.
- Tynan, Caroline, Sally McKechnie and Celine Chhuon (2010), "Co-creating value for luxury brands," *Journal of Business Research*, 63 (11), 1156-1163.

- Valjakka, Tiina, Minna Kansola, Taru Hakanen and Katri Valkokari (2012), “Antecedents of Value Co-Creation in B2B Networks,” in *The Philosopher's Stone for Sustainability*, Proceedings of the 4th CIRP International Conference on Industrial Product-Service Systems, Tokyo, Japan, November 8th - 9th, 2012, Y. Shimomura and K. Kimita (Eds.), 173-177.
- Vallaster, Christine and Sylvia Von Wallpach (2013), “An online discursive inquiry into the social dynamics of multi- stakeholder brand meaning co- creation,” *Journal of Business Research*, 66 (9), 1505- 1515.
- Van de Ven, Andrew H. (1992), “Suggestions for studying strategy process: a research note,” *Strategic Management Journal*, 13 (5), 169-88.
- Van Dijk, Joyce, Gerrit Antonides and Niels Schillewaert (2014), “Effects of co- creation claim on consumer brand perceptions and behavioral intentions,” *International Journal of Consumer Studies*, 38 (1), 110-118.
- Van Manen, Max (1990), *Researching lived experience*, New York: The State University of New York.
- Varela-Neira, Concepción, Rodolfo Vázquez-Casielles and Víctor Iglesias (2010), “The effects of customer age and recovery strategies in a service failure setting,” *Journal of Financial Services Marketing*, 15 (1), 32-48.
- Vargo, Stephen L. (2008), “Customer Integration and Value Creation, Paradigmatic Traps and Perspectives,” *Journal of Service Research*, 11 (2), 211-215.
- Vargo, Stephen L. (2009), “Toward a transcending conceptualization of relationship: a service-dominant logic perspective,” *Journal of Business & Industrial Marketing*, 24 (5/6), 373–379.
- Vargo, Stephen L. and Melissa Archpru Akaka (2009), “Service-Dominant Logic as a Foundation for Service Science: Clarifications,” *Service Science*, 1 (1), 32-41.
- Vargo, Stephen L. and Robert F. Lusch (2004a), “Evolving to a New Dominant Logic for Marketing,” *Journal of Marketing*, 68 (1), 1-17.
- Vargo, Stephen L. and Robert F. Lusch (2004b), “The four service marketing myths: remnants of a goods-based, manufacturing model,” *Journal of Service Research*, 6 (4), 324-35.
- Vargo, Stephen L. and Robert F. Lusch (2008a), “From goods to service(s): Divergences and convergences of logics,” *Industrial Marketing Management*, 37 (3), 254–259.

- Vargo, Stephen L. and Robert F. Lusch (2008b), “Service-dominant logic: continuing the evolution,” *Journal of the Academy of Marketing Science*, 36 (1), 1-10.
- Vargo, Stephen L. and Robert F. Lusch (2008c), “Why “service”?” *Journal of the Academy of Marketing Science*, 36 (1), 25–38.
- Vargo, Stephen L. and Robert F. Lusch, (2011), “It’s all B2B...and Beyond: Toward a Systems Perspective of the Market,” *Industrial Marketing Management*, 40 (2), 181–87.
- Vargo, Stephen L. and Robert F. Lusch (2014), “Inversions of service-dominant logic,” *Marketing Theory*, 14 (3), 239–248.
- Vargo, Stephen L. and Robert F. Lusch (2016), “Institutions and axioms: an extension and update of service-dominant logic,” *Journal of the Academy of Marketing Science*, 44 (1), 5–23.
- Vargo, Stephen L., Robert F. Lusch and Melissa Archpru Akaka (2010), “Advancing Service Science with Service-Dominant Logic: Clarifications and Conceptual Development,” in *Handbook of Service Science, Service Science: Research and Innovations in the Service Economy*, Springer Science+Business Media.
- Vargo, Stephen L. Robert F. Lusch, Melissa Archpru Akaka and Yi He (2010), “Service-Dominant Logic,” in *Review of Marketing Research (Review of Marketing Research, Volume 6)*, N. K. Malhotra (Ed.) Emerald Group Publishing Limited, 125 – 167.
- Vargo, Stephen L., Paul P. Maglio and Melissa A. Akaka (2008), “On Value and Value Co-creation: A Service Systems and Service Logic Perspective,” *European Management Journal*, 26 (3), 145-152.
- Vargo, Stephen L. Heiko Wieland and Melissa Archpru Akaka (2015), “Innovation through institutionalization: A service ecosystems perspective,” *Industrial Marketing Management*, 44 (January), 63-72.
- Vega-Vazquez , Manuela, María Ángeles Revilla-Camacho and Francisco J. Cossío-Silva (2013) “The value co-creation process as a determinant of customer satisfaction,” *Management Decision*, 51 (10), 1945 - 1953.
- Von Hippel, Eric (2001), “PERSPECTIVE: User toolkits for innovation,” *Journal of Product Innovation Management*, 18 (4), 247-257.
- Vroom, Victor H. (1964), *Work and Motivation*, New York: John Wiley & Sons.

- Walsh, Gianfranco, Sharon E. Beatty and Edward M.K. Shiu (2009), “The customer- based corporate reputation scale: Replication and short form”, *Journal of Business Research*, 62 (10), 924-930.
- Wang, Mo and Steven S. Russell (2005), “Measurement equivalence of the job descriptive index across Chinese and American workers: Results from confirmatory factor analysis and item response theory,” *Educational and Psychological Measurement*, 65 (4), 709-732.
- Weber, Rolf H. and Mira Burri (2012), *Classification of services in the digital economy*, Berlin: Springer Science & Business Media.
- Weiner, Bernard (2000), “Attributional thoughts about consumer behavior,” *Journal of Consumer Research*, 27 (3), 382–387.
- Weun, Seungoo, Sharon E. Beatty and Michael A. Jones (2004), “The impact of service failure severity on service recovery evaluations and post-recovery relationships,” *Journal of Services Marketing*, 18 (2), 133 - 146.
- Whitaker, Gordon P. (1980), “Coproduction: Citizen Participation in Service Delivery,” *Public Administration Review*, 40 (3), 240-246.
- Wiersma, Wybo (2016), *The Validity of Surveys: Online and Offline*, Oxford Internet Institute.
- Witell, Lars, Per Kristensson, Anders Gustafsson and Martin Löfgren (2011), “Idea generation: customer co-creation versus traditional market research techniques,” *Journal of Service Management*, 22 (2), 140-159.
- Worthington, Steve and Mark Durkin (2012), “Co-destruction of value in context: Cases from retail banking,” *The Marketing Review*, 12 (3), 291- 307.
- Wright, Kevin B. (2005), “Researching Internet-Based Populations: Advantages and Disadvantages of Online Survey Research, Online Questionnaire Authoring Software Packages, and Web Survey Services,” *Journal of Computer-Mediated Communication*, 10 (3), 00.
- Wyatt, Jeremy C. (2000), “When to use Web- based Surveys,” *Journal of the American Medical Informatics Association*, 7 (4), 426–429.
- Xie, Chunyan, Richard P. Bagozzi and Sigurd V. Troye (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.

- Xie, Chunyan, Richard P. Bagozzi and Sigurd V. Troye (2007), “Trying to prosume: toward a theory of consumers as co-creators of value,” *Journal of the Academy of Marketing Science*, 36 (1), 109-122.
- Xu, Yingzi, Roger Marshall, Bo Edvardsson and Bård Tronvoll (2014), “Show you care: initiating co-creation in service recovery,” *Journal of Service Management*, 25 (3), 369 – 387.
- Xu, Yingzi, Bård Tronvoll and Bo Edvardsson (2014), “Recovering service failure through resource integration,” *The Service Industries Journal*, 34 (16), 1253-127.
- Yi, Youjae and Taeshik Gong (2008), “The effects of customer justice perception and affect on customer citizenship behavior and customer dysfunctional behavior,” *Industrial Marketing Management*, 37 (7), 767–783.
- Yi, Youjae and Taeshik Gong (2013), “Customer value co-creation behavior: Scale development and validation,” *Journal of Business Research*, 66 (9), 1279–1284.
- Yngfalk, Anna Fyrberg (2013), “‘It’s not us, it’s them!’ – Rethinking value co-creation among multiple actors,” *Journal of Marketing Management*, 29 (9-10), 1163- 1181.
- Yung, Yiu –Fai and Peter M. Bentler (1996), “Bootstrapping techniques in analysis of mean and covariance structures,” in *Advanced structural equation modeling: Issues and techniques*, G. A. Marcoulides and R. E. Schumacker (Eds.), Mahwah, NJ: Erlbaum, 195–226.
- Zeithaml Valerie A. (1981), “How Consumer Evaluation Processes Differ between Goods and Services,” reprinted in *Services Marketing (2nd edition)*, (1991), C. Lovelock (Ed.), New Jersey, Upper Saddle River: Prentice Hall.
- Zeithaml, Valerie A. (1988), “Consumer Perceptions of Price, Quality, and Value: A Means–end Model and Synthesis of Evidence,” *Journal of Marketing*, 52 (3), 2–22.
- Zeithaml, Valerie A., Mary Jo Bitner and Dwayne Gremler (2009), *Services Marketing: integrating customer focus across the firm (5th ed.)*, New York: McGraw- Hill.
- Zeithaml, Valerie A., A. Parasuraman, A. and Leonard L. Berry (1985), “Problems and Strategies in Services Marketing,” *Journal of Marketing*, 49 (Spring), 33-46.
- Zhang, Xiang and Rongqiu Chen (2008), “Examining the mechanism of the value co-creation with customers,” *International Journal of Production Economics*, 116 (2), 242- 250.
- Zhang, Hong, Yaobin Lou, Bing Wang and Sibin Wu (2015), “The impacts of technological environments and co-creation experiences on customer participation,” *Journal Information and Management*, 52 (4), 468- 482.

- Zhang, Min, Xiande Zhao, Chris Voss and Guilong Zhu (2016), “Innovating through services, co-creation and supplier integration: Cases from China,” *International Journal of Production Economics*, 171 (2), 289–300.
- Zhang, Xiang, Chen Ye, Rongqiu Chen and Zhaohua Wang (2011), “Multi- focused strategy in value co-creation with customers: Examining cumulative development pattern with new capabilities,” *International Journal of Production Economics*, 132 (1), 122-130.
- Zhou, Zhenhua (2016), *The Development of Service Economy; A General Trend of the Changing Economy in China*, Singapore: Springer Science+Business Media.
- Zhu, Zhen, Cheryl Nakata, K. Sivakumar and Dhruv Grewal (2013), “Fix it or leave it? Customer recovery from self-service technology failures,” *Journal of Retailing*, 89 (1), 15–29.
- Zhu, Zhen, K. Sivakumar and A. Parasuraman (2004), “A Mathematical Model of Service Failure and Recovery Strategies,” *Decision Sciences*, 35 (3), 493–525.
- Zhuang, Weiling, Barry Babin and Joanne Tran (2004), “Does Co- Creation Always Produce Values: An Experimental Study,” *Journal of Selling- Northern Illinois University*, 14 (2), 30- 42.
- Zikmund, William G. , Barry J. Babin, Jon C. Carr and Mitch Griffin (2012), *Business Research Methods (with Qualtrics Printed Access Card) 9th Edition*, USA, Mason OH: South-Western College Pub.
- Zwass, Vladimir (2010), “Co-Creation: Toward a Taxonomy and an Integrated Research Perspective,” *International Journal of Electronic Commerce*, 15 (1), 11-48.
- Zwick, Detlev, Samuel K. Bonsu and Aron Darmody (2008), “Putting Consumers to Work Co-creation and new marketing govern-mentality,” *Journal of consumer culture*, 8 (2), 163-196.

Appendix-Interview Example

Interviewer: Could you think of a time when, as a client, you had a quite negative experience with a service provider? Which organisation was it and what exactly happened?

Interviewee: I had a contract with WIND for an internet connection only, it was a one-year-contract and I kept this contract for about 2,5 to 3 years. At some point I got married and relocated, and so I wanted to discontinue this connection. The contract was for my old place, where I lived with my mother. I went to WIND and told them I wanted to terminate my contract. They told me I could do it, no problem, since my contract was longer than the time needed, there was no problem.

Interviewer: You mean the time required for the termination of the contract.

Interviewee: Yes, the time required. We submitted our request thinking that everything will be fine and that I will be able to terminate my contract with them. At the end of the month I received a bill at my home. First I went to my nearby shop and told them, “Guys, we have terminated our contract”. They had a look and they told me that because I terminated my contract some days after the beginning of the month, about 5 days or so, I would have to pay for that month. They also informed me that I would not get any other bills. I didn’t want to go into much trouble, so I thought all right, we also pay for this month and it will be over. One month later I got yet another bill. I went to the shop and told them “Guys, we have terminated our contract”. They told me that they were not responsible for this, because they had sent the termination of my contract to their WIND headquarters and that I should contact their head offices. So, I called their head offices and they told me they had not received any contract termination. They asked me to go to the shop where I submitted my contract termination and where I had made my original contract. I was told they were responsible for this and that I should sort it out with them. So, I went again to the shop and they insisted they had sent my termination request. They also offered to show me a copy of the document they had sent to terminate the contract, with the date. I don’t recall which date it was now. I told them, “Listen guys, there is absolutely no way I am paying for yet another month”. They reassured me and told me they would give me the number to which they had sent the fax. They asked me to talk again with their head offices, because they were responsible for this.

Interviewer: So they referred you to someone else.

Interviewee: The shop was referring me to the main phone line of their head offices, in

which case I could not have a contact with someone to get this sorted out, and the head offices referred me back to the shop. I called their head offices again using the number they gave me and I told them what happened with my old connection and they told me that they had not received anything and that I should go again to the shop. I went to the shop and told them that there was absolutely no way I would leave from there unless they talked themselves with someone at their head offices and explain to them what has happened and that my contract is terminated. I told them there was absolutely no way I would pay that last bill. They asked me to wait for their chief, who was out of the office. I had to wait for 20 minutes until he came and then he called their head offices and he told me that I didn't have to pay for that bill and also reassured me that I would not receive any other bill. I was relieved, I thought to myself, all right, it's over. Next month, I got yet another bill. It was a bill for that month with the addition of the amount I had not paid for the previous month. So, it was a bill for two months actually.

Interviewer: So, you actually got a double amount to pay.

Interviewee: Yes, and I spoke over the phone with their head offices first, since when I was at the shop I had been informed that they are the ones responsible. But they told me to go back to the shop. I went back to the shop, and you know, at that moment I lost my patience a little bit, I threatened them and told them there was absolutely no way I would pay that bill. I threatened to contact the Consumer's Association. I told them I would sue them and that I would not pay anything. I also told them they could keep sending me bills if they wanted to, I would pay absolutely nothing and if they would ever try to sue me I would contact the Consumer's association. So, one week after this happened, I received a bill with a zero balance, showing that I owed them nothing. So, it took 2,5 – 3 months for this to occur.

Interviewer: So, the entire incident lasted for 2,5 – 3 months, during which time all this happened with the...

Interviewee: I had to go to the shop 6-7 time and I had to talk a similar number of times with WIND's head offices.

Interviewer: What was the behavior of the employees during this time, when all this was happening. Were they polite... Did they want to find a solution, did they give you the possibility to...

Interviewee: No, I believe they wanted to make a profit, they were trying to have some

bills paid. They probably tried to earn as much as they could for as long as they could, although they knew the connection would be discontinued anyway. Because I had explained that there was no way this connection could continue to exist, as the apartment was empty, nobody lived there any more and nobody uses the internet. They knew all this, so I think they were only trying to make as much profit as they could out of it.

Interviewer: So, they were not very willing to find a solution nor were they willing to let you suggest a possible solution...

Interviewee: They were not willing at all, they were totally negative and only in the end, when I threatened to contact the Consumer's Association, did they realize I really meant it and that I would not pay any more bills. I told them I would not pay, they might as well sue me. Apparently that was the point when they really contacted their head offices and found some solution to stop sending me bills.

Interviewer: All right. How did you react before you reached this final stage, how did you react during this incident...

Interviewee: In the beginning I was polite and I was trying to find a solution, thinking that they were right. For instance, the first time they told me I had to contact their head offices.

Interviewer: Yes, so you were thinking you had to follow their suggestions and do what they told you to do...

Interviewee: Yes, I thought I had to do what they said so we can find a solution. I wanted to end story on this, so I didn't have to keep paying bills. When I went to the shop they would show me a copy of the fax they sent to their head offices, they would say they were not responsible for this, that they did what they should have done for the termination of my contract. Then I started to get upset and frustrated. In the beginning I tried to be kind and polite, while at the end I totally lost it I think, and probably that's what helped to really solve this, otherwise they would probably keep sending me bills.

Interviewer: So, you believe that if you didn't act this way the problem wouldn't have been solved, that they wouldn't be willing to...

Interviewee: Although they were helpful in the beginning, when I wanted to buy services from them, and they called me to handle the details of my connection, etc., when I wanted to terminate my contract I believe they were very negative and that they were trying at some point they even suggested I did not go to another provider and they offered to relocate my internet to my new address. Maybe they tried to make me decide to just have my

existing connection relocated so they wouldn't lose a client.

Interviewer: Yes, I guess that's important for you. This was a well known provider.

Interviewee: Yes, I had a mobile telephony package too with WIND at the time.

Interviewer: This was an important factor, I mean that they were a well known provider, so you trust them. You could trust they would find a solution, because you thought it would be impossible for such a big company to not find a solution...

Interviewee: In the beginning I trusted them and I thought that yes, they are a big company, and that this was not a serious problem, I was confident they would find a solution. Then after everything that happened I really thought they were a scam, that they were a totally unreliable company.

Interviewer: So, that's why you told them you will go to court if they didn't find a solution for you.

Interviewee: That's right.

Interviewer: But if you really confident that they are a reliable company and that they will find a solution. Otherwise you wouldn't have reached this point, you wouldn't be a client.

Interviewee: No, absolutely no way. What happened made me advise many friends, relatives and acquaintances to not even try to have a contract with WIND for internet services or telephony. I told them to be careful, and informed them they would be in serious trouble afterwards if they tried to terminate their contract. I was really very disappointed from their behavior and attitude.

Interviewer: This happened at the end of your experience with the company.

Interviewee: Yes, that's right, at the end.

Interviewer: During the time when you were trying to get your contract terminated, those 2-3 months until you managed to get the matter resolved, did you speak against WIND to friends and acquaintances?

Interviewee: Yes, to everybody. I was sharing my problem with them and they would understand me. They even advised me to address myself to the Consumers' Association.

Interviewer: So, they actually offered advice.

Interviewee: They were telling me that since I could not really reach an agreement and understanding with them, and since they were really unreliable, both at the shop and at their headquarters, my friends were advising me to not try to get it resolved with them, but to really go to the Consumers' Association. They thought if I did this I would really be able to

find a solution to the problem.

Interviewer: So, they advised you to contact the Consumers' Association so you could really resolve this. How would you describe your feelings and your behavior towards the employees and in general during the whole procedure? I know you said you were really upset and frustrated in the end...

Interviewee: In the beginning I tried to be friendly to them. I actually thought they were not really the cause of the problem, because they seemed to be trying to offer a good service to me. They showed me the fax they had sent to get my contract terminated. But on the other hand, they offered no solution to me. None of them did in the beginning. Had I not insisted and had I not told them they should contact their head offices directly to find a solution, they wouldn't have helped. They didn't take the initiative to contact their headquarters. I mean, they belong to the same company. The head offices were not coordinated with a shop that belonged to the same company. They didn't do the simple thing of calling one another to resolve this. The shop didn't contact the headquarters to just tell them they had sent a fax with a contract termination. They both just referred me to one another. And they tried to convince me they did what they should have done.

Interviewer: So, they tried to justify themselves,...

Interviewee: That's right. Obviously it is their responsibility to contact one another and to find a solution for something like that. It should not be my responsibility to try to do their job.

Interviewer: Yes, so I understand there was no coordination and communication between offices of the same company. So you wouldn't advise somebody you know to buy services from them.

Interviewee: That's right and I do so even now. After some 3-4 years since this incident, if a friend tells me they are thinking of buying services from WIND I would tell them of my negative experience with them.

Interviewer: Yes, and even though you tried to be patient, and really trying to work this out with them and tried to do all you could to get the matter resolved.

Interviewee: Yes, because I was satisfied with the quality of my connection, I never had quality problems or any other technical problems. I didn't have problems with the speed of my connection. I was happy with the services they offered. In the end, however, getting my contract terminated was impossible, if I just tried to do the usual and normal thing. I did

what I should have done but it didn't work. I had already asked them a couple of months before my planned termination date what I should do to get my contract terminated. They had replied that I just had to inform them one month earlier and that my contract would be terminated in one month, it would not be a problem. The thing is that what they told me did not happen.

Interviewer: So, really no solution was found. If you had not asked friends and people you knew for advice you would have not told them what you actually told them in the end, that you would address yourself to...

Interviewee: I would have maybe not threatened to go to the Consumers' Association, but I would have definitely not paid what they were asking for. I would have refused to pay, and would have told them they could sue me, I wouldn't pay.

Interviewer: So, you were influenced by the advice and behavior of your friends.

Interviewee: Yes, I was influenced. And I truly believe that threatening to go to the Consumers' Association actually helped because apparently they probably have been sued by other clients for similar matters. In the end I really thought this was done on purpose. I don't think this is something that happened only to me. So, they truly realized they could not win with me, they knew they just had to terminate the contract at that point. I still hold the same opinion; I think they were doing this on purpose, I think it wasn't a mistake, or maybe they didn't really send my termination request to their headquarters. They did this on purpose to make as much profit as possible or to convince me to have my contract transferred to my new address, so that I wouldn't have it terminated.

Interviewer: Yes, they wanted you to either have your contract transferred to your new address or at least not terminated. In your opinion, what is the behavior one should have in order to be able to get such a matter resolved? What would be the ideal behavior in such a situation, when he is faced with a similar problem, so that he can really manage to find a solution?

Interviewee: First he has to be polite, and he really has to try to find a solution to the problem. If he sees that the staff is careless or they do nothing to help with the problem at hand, then unfortunately in Greece specifically, you have to raise the tone of your voice, otherwise they will not help you find a solution to the problem.

Interviewer: So, you are saying it is not possible to...

Interviewee: Unfortunately, in Greece, in some areas you really cannot find any solution. If

you don't raise the tone of your voice or you don't threaten them, you really cannot manage to defend yourself.

Interviewer: Is there any behavior the client should avoid, because it could actually make it more difficult for him to solve his problem?

Interviewee: In the beginning the consumer should not be upset, he/she should give them a chance.

Interviewer: So, getting upset might actually have a negative effect.

Interviewee: Well, being upset might end up in the other person avoiding you and not dealing with you on purpose, because you offended them or something like that. So, I really believe that in the beginning you can really achieve more by being polite with them. If you then see that they don't offer a good service then of course you don't have a choice, you can't do otherwise.

Interviewer: So, in that case you would have to...

Interviewee: But in the beginning I believe you can be polite, if the other person is willing to work with you, because they will offer a better service.

Interviewer: Yes, I understand. So, I can imagine you don't wish to buy services in the future from this particular company.

Interviewee: No way.

Interviewer: Not only internet, but also mobile telephony services?

Interviewee: If I would ever buy anything from this company, it would be without a contract.

Appendix Questionnaire**Welcome!**

Thank you in advance for participating in this web-based research session being conducted by University of Toulouse I, Capitole in France. You are invited to participate in this research project If you have recently (i.e., within the past 6 months) complained to a service provider (bank, airline, hotel, etc.) about some aspects of its service, while trying to find a solution.

Your participation in this study will help advance academic knowledge of consumer behavior related to how consumers react to service failure. We also hope that participating will give you some insight into what service failure is related to and how marketing research is conducted.

To participate in this research, you must be at least 18 years of age, and you may participate only once. Your participation in this study is voluntary. You are free to choose not to participate in this study or to withdraw at any time if you choose not to answer some of the questions.

Your individual results in the study will be kept anonymous and you will not be identified in the data that will be collected or in the results that will be reported. By completing this session, you will earn \$ 1.

Please make sure to allocate adequate time (approximately 15 minutes) to complete the session in one sitting. Otherwise, we may not be able to use your responses. Also, please find a quiet location and minimize any outside distractions while completing the studies. Keep in mind that there is no “right” or “wrong” answers. Please read the instructions for each section carefully. When you are ready to begin, click the "Next" button below.

If you have questions about your rights as a research participant or wish to report a research-related injury, please contact: Université Toulouse 1 Capitole, Toulouse, 31042, E-mail: gioskourtis@hotmail.com, Telephone: +306974303453.

Thanks again!

****1. I am 18 years old. I have read this consent form and I freely and voluntarily choose to participate. I understand that I may withdraw at any time.***

- Yes
 NO

****2. I have recently (i.e., within the past 6 months) complained to a service provider (bank, airline, hotel, etc.) about some aspects of their service.***

- Yes

No

***3. Please rate your level of agreement with each of the following statements.**

PART 1- FAILURE IDENTIFICATION

The problem that I faced was due to mistakes made by my own actions.

I was responsible for the problem that I faced.

Items were measured on seven-point Likert scales anchored by Strongly disagree and Strongly agree.

PART 2 - THE SERVICE RECOVERY PROCESS

***4. AFTER THE FAILURE**

Please rate your level of agreement with each of the following statements.

1. I could count on the service provider that they would do the right thing for me.
2. I had faith that the service provider would solve my problem.
3. I completely trusted the service provider that they were capable of solving my problem.
4. I had great confidence that the service provider would find a solution.

Items were measured on seven-point Likert scales anchored by Strongly disagree and Strongly agree.

PART 3- PARTICIPATION DURING THE SERVICE RECOVERY

***5. Please rate your level of agreement with each of the following statements.**

I was feeling certain about how to participate more effectively in finding a solution to my complaint.

The steps in the process of my participation in finding a solution to my complaint were clear to me.

Items were measured on seven-point Likert scales anchored by Strongly disagree and Strongly agree.

***6. Please rate your level of agreement with each of the following statements.**

I was fully capable of participating in finding a solution to my complaint.

I was confident in my ability in finding a solution with the service provider.

Participating more in finding a solution to my complaint was well within the scope of my abilities.

I didn't feel that I was qualified for an extra participation in finding a solution to my complaint.

My past experiences increased my confidence that I was able to successfully participate more in finding a solution to my complaint.

In total, participating more in finding a solution to my complaint involved things that were more difficult than I was capable of.

Items were measured on seven-point Likert scales anchored by Strongly agree and Strongly disagree.

7. I was thinking during the HANDLING OF MY COMPLAIN that

-if I tried hard, I could successfully participate more in the service recovery.
-if I put all my effort in it, I could successfully participate more in the service recovery.
-making the effort to participate would result in the service recovery successfully

Items were measured on seven-point Likert scales anchored by Strongly disagree and Strongly agree.

***8. By PARTICIPATING MORE in the service recovery I was thinking that,**

-I would get the preferred solution to my problem.
-I would get a quicker recovery.
-I would get the recovery that I deserved.
-I would get a fair recovery.
-this would provide me more control over the recovery process.

Items were measured on seven-point Likert scales anchored by Strongly disagree and Strongly agree.

***9. By PARTICIPATING MORE in the service recovery I was thinking that, this would**

-
-provide me with personal feelings of worthwhile accomplishment.
-provide me with feelings of enjoyment from finding the solution to my problem.
-provide me the feeling of independence.
-allow me to feel innovative in how I interact with a service provider in order to solve my problem.
-allow me to have increased confidence in my skills.

Items were measured on seven-point Likert scales anchored by Strongly disagree and Strongly agree.

***10. Regarding my participation in the service recovery, I would say that IT WAS DESIRABLE**

- to get the preferred solution to my problem.
- to get a quick recovery.
- to get the recovery that I deserved.
- to get a fair recovery.
- to have more control over the recovery process.
- to get a personal feeling of worthwhile accomplishment.
- to get a personal feeling of enjoyment.
- to get a feeling of independence.
- to get a feeling innovative in how I interact with a service provider.
- to get increased confidence in my skills.

Items were measured on seven-point Likert scales anchored by Strongly disagree and Strongly agree.

***11. Please indicate to what extent you experienced the following emotional states DURING the course of the RESOLUTION of your complaint.**

upset
angry
sad
in a bad mood
annoyed
afraid
nervous

Items were measured on five-point Likert scales anchored by not at all agree and extremely.

***12. Please rate your level of agreement with each of the following statements regarding YOUR PARTICIPATION during the service recovery procedure.**

I asked others for information on how I can solve the problem.
I searched for information on how I can solve the problem.
I paid attention to how others have tried to solve the problem.
I clearly explained what I wanted the employee to do.
I gave the employee proper information.
I provided necessary information so that the employee could perform his or her duties.
I answered all the employee's service-related questions.

Items were measured on seven-point Likert scales anchored by Strongly disagree and Strongly agree.

***13.. Please rate your level of agreement with each of the following statements regarding YOUR PARTICIPATION during the service recovery procedure.**

I performed all the tasks that were required.
I adequately completed all the expected behaviors.
I fulfilled responsibilities to the business.
I followed the employee's directives or orders.
I was friendly to the employee.
I was kind to the employee.
I was polite to the employee.
I was courteous to the employee.
I didn't act rudely to the employee.

Items were measured on seven-point Likert scales anchored by Strongly disagree and Strongly agree.

PART 4 - THE OUTCOME OF THE RECOVERY

***14. MY PARTICIPATION in the service recovery process was...**

effective
helpful
functional
necessary

practical
fun
exciting
delightful
thrilling
enjoyable

Items were measured on seven-point Likert scales anchored by Strongly disagree and Strongly agree.

Please provide the following information:

24. How old are you?

***25. Are you...**

- Female?
- Male?

***26. What is the highest degree you have earned?**

- None
- High School
- GED
- Associates Degree
- College Degree
- Graduate Degree
- Bachelor's

***27. Do you work?**

- No
- Part-time
- Full-time

English Summary

Title: The impact of operant resources on consumer value co-recovery in-role behavior and co-created value

Abstract

Service-dominant logic is a mindset in marketing literature which embraces a process orientation rather than an output orientation. Moreover, S-D logic emphasizes the role of operant resources (e.g skills) rather than operand (tangible) resources, which importance is high as there are the source of competitive advantage. The most important contribution of this emerging school of thought is that customers shift from being passive to active, who always co-create value with firms and other stakeholders. Understanding therefore what leads to value co-creation is a major issue and also neglected. Furthermore, although this shift has important implications for all service activities, very little research has focused on service recovery context. What is more it is not yet known what contributes to value co-creation and what is the role of operant resources in a service recovery context, while prior studies have not examined under which circumstances value is co-created and what motivates customers to contribute their resources in the service recovery process.

With the goal of addressing these issues, this study focuses on the underlying mechanism of how operant resources are utilized during service recovery and, in turn, under which conditions co-allocation of these resources generates co-created value. It argues that the consumers' ability to integrate their resources to co-recover from a service failure motivates them to express higher value co-recovery in-role behavior and hence enjoy higher hedonic and utilitarian values. To test this claim, this dissertation investigates the impact of consumers' ability to co-recover on value co-recovery in-role behavior by taking into account extrinsic and intrinsic motivation as mediators. It also explores the role of several moderating variables (role clarity, internal blame, trust in service provider's resolution ability, and negative emotions) to gain a deeper understanding of the co-recovery process. The results reveal that only extrinsic motivation partially mediates the relationship between ability to co-recover and value co-recovery in-role behavior. Furthermore, outcomes demonstrate that value co-recovery in-role behavior increases utilitarian value but decreases hedonic value.

Keywords: co-creation, service recovery, motivation, operant resources, consumers

French Summary

Résumé

Titre: la co-crédation de valeur dans le rétablissement de la relation de service

La *service-dominant logic* (*S-D logic*) est une approche qui montre l'importance de créer le marketing avec les consommateurs (orienté-processus) et non vers les consommateurs (orienté-output). En outre, la *S-D logic* souligne l'importance des ressources opérantes (immatérielles, par exemple les compétences) plutôt que les ressources opérandes

(matérielles). La contribution la plus importante de la *S-D logic* est que le consommateur n'est pas considéré comme un acteur passif mais comme un partenaire actif toujours co-créateur de valeur. La compréhension de ce qui mène à la co-création de valeur et son importance est rarement étudiée. De plus, bien que la *S-D logic* ait des implications majeures pour toutes les autres activités de marketing, il n'existe que peu de recherches abordant le processus de rétablissement de service après un incident. Plus spécifiquement, les études précédentes ont peu abordé des points tels que ce qui contribue à la co-création de la valeur, le rôle des ressources opérantes, le moment de co-création de la valeur et la motivation des consommateurs à contribuer au processus de rétablissement du service.

Cette recherche se propose de répondre à ces questions en étudiant le mécanisme psychologique sous-jacent à la façon dont les ressources opérantes sont utilisées pour le processus de rétablissement de service et sur leurs conditions de co-affectation pour générer une valeur co-créée. Cette thèse soutient que la capacité des consommateurs à intégrer leurs ressources pour co-créer le rétablissement de service les motive à exprimer une volonté plus forte de co-création et les amène à profiter de valeurs hédoniques et utilitaires. Pour tester cette hypothèse, cette thèse étudie l'impact de la capacité des consommateurs pour la co-création de rétablissement de service sur leur participation à ce rétablissement en tenant compte des motivations extrinsèque et intrinsèque en tant que médiateurs. De plus, elle explore le rôle de plusieurs variables modératrices (clarté du rôle, blâme interne, confiance dans la capacité de résolution du fournisseur de services et émotions négatives) pour acquérir une meilleure compréhension de la co-création de rétablissement de service. Les résultats révèlent que seulement la motivation extrinsèque médiate partiellement la relation entre la capacité des consommateurs pour la co-création et la participation des consommateurs au rétablissement du service. En outre, les résultats démontrent que la participation des consommateurs au rétablissement de service augmente sa valeur utilitaire mais diminue sa valeur hédonique.

Mots-clés : co-création, rétablissement de service, motivation, ressources opérantes, consommateurs.