

Xuehui Gao

Customer experience
management: Expanding our
understanding of the drivers and
consequences of the customer
experience

Director/es

Sesé Oliván, Fco. Javier
Melero Polo, Iguácel

<http://zaguan.unizar.es/collection/Tesis>



© Universidad de Zaragoza
Servicio de Publicaciones

ISSN 2254-7606



Universidad
Zaragoza

Tesis Doctoral

**CUSTOMER EXPERIENCE MANAGEMENT:
EXPANDING OUR UNDERSTANDING OF THE
DRIVERS AND CONSEQUENCES OF THE
CUSTOMER EXPERIENCE**

Autor

Xuehui Gao

Director/es

Sesé Oliván, Fco. Javier
Melero Polo, Iguácel

UNIVERSIDAD DE ZARAGOZA
Escuela de Doctorado

2021



Departamento de
Dirección de Marketing e
Investigación de Mercados
Universidad Zaragoza

DOCTORAL DISSERTATION

**CUSTOMER EXPERIENCE MANAGEMENT: EXPANDING
OUR UNDERSTANDING OF THE DRIVERS AND
CONSEQUENCES OF THE CUSTOMER EXPERIENCE**

PhD Candidate:

Lily (Xuehui) Gao

Supervisors:

Dr. Francisco Javier Sesé Oliván

Dr. Iguácel Melero Polo



INDEX OF CONTENTS

CHAPTER I: INTRODUCTION.....	13
REFERENCES.....	29
CHAPTER II: CUSTOMER EQUITY DRIVERS, SOCIAL INFLUENCE, AND THEIR IMPACT ON THE CUSTOMER EXPERIENCE.....	37
2.1. INTRODUCTION	39
2.2. MOTIVATION.....	40
2.3. CONCEPTUAL FRAMEWORK.....	51
2.4. HYPOTHESES DEVELOPMENT	56
2.4.1. <i>Customer Equity Drivers and Customer Experience</i>	56
2.4.2. <i>Social Influence and Customer Experience Quality</i>	57
2.4.3. <i>Moderating Role of Social Influence in the Relationship between Value Equity and Customer Experience Quality</i>	60
2.4.4. <i>Moderating Role of Social Influence in the Relationship between Brand Equity and Customer Experience Quality.....</i>	61
2.4.5. <i>Moderating Role of Social Influence in the Relationship between Relationship Equity and Customer Experience Quality</i>	63
2.4.6. <i>Customer Experience Quality and Performance</i>	64
2.5. DATA AND METHODOLOGY.....	65
2.5.1. <i>Sample and Data</i>	65
2.5.2. <i>Variable Measurement</i>	66
2.5.3. <i>Methodology.....</i>	73
2.6. FINDINGS	75

2.7.	IMPLICATIONS.....	81
2.7.1.	<i>Theoretical Implications</i>	81
2.7.2.	<i>Managerial Implications</i>	87
2.8.	LIMITATIONS AND FUTURE RESEARCH.....	90
	SUMMARY	92
	REFERENCES.....	95

**CHAPTER III: WINNING YOUR CUSTOMER’S HEART OR MIND? THE
IMPACT OF CUSTOMER EXPERIENCE ON CUSTOMER RETENTION
AND THE MODERATING ROLE OF LOCK-IN 109**

3.1.	INTRODUCTION.....	111
3.2.	MOTIVATION	112
3.3.	THEORY AND CONCEPTUAL FRAMEWORK.....	122
3.3.1.	<i>Social Exchange Theory</i>	122
3.3.2.	<i>Experiential Learning Theory</i>	125
3.4.	HYPOTHESES DEVELOPMENT.....	127
3.4.1.	<i>Combinations of Lock-in Effects</i>	127
3.4.2.	<i>Joint Effects of Customer Experience and Lock-in</i>	128
3.5.	DATA AND VARIABLES OPERATIONALIZATION	131
3.6.	METHODOLOGY	136
3.6.1.	<i>Utility Specification</i>	136
3.6.2.	<i>Choice Probabilities Definition and Model Estimation</i>	140
3.7.	FINDINGS	141
3.7.1.	<i>Overall Model Fit</i>	141
3.7.2.	<i>Combinations of Lock-in Effects</i>	145
3.7.3.	<i>Joint Effects between Customer Experience and Lock-in</i>	145

3.8.	PROJECTED CUSTOMER RETENTION	147
3.9.	ROBUSTNESS CHECK.....	151
3.9.1.	<i>Model Comparison</i>	151
3.9.2.	<i>Endogeneity Assessment</i>	153
3.9.3.	<i>Customer Heterogeneity</i>	160
3.10.	DISCUSSION AND IMPLICATIONS	163
3.10.1.	<i>Theoretical Implications</i>	163
3.10.2.	<i>Managerial Implications</i>	164
3.11.	LIMITATIONS AND FUTURE RESEARCH.....	171
	SUMMARY	172
	REFERENCES.....	173

CHAPTER IV: THE DYNAMIC IMPACT OF THE CUSTOMER

EXPERIENCE ON RELATIONSHIP EXPANSION: A HIDDEN MARKOV

MODELING APPROACH 183

4.1.	INTRODUCTION.....	185
4.2.	MOTIVATION	186
4.3.	EXTANT PERSPECTIVE ON CUSTOMER EXPANSION.....	190
4.3.1.	<i>Customer Relationship Expansion in CRM</i>	190
4.3.2.	<i>Dynamic Nature of Customer Relationship Expansion</i>	195
4.4.	PROPOSED CONCEPTUAL FRAMEWORK	200
4.5.	CUSTOMER RELATIONSHIP EXPANSION HIDDEN MARKOV MODEL.....	203
4.5.1.	<i>Initial State Distribution</i>	204
4.5.2.	<i>Long-term Effect of Customer Experience</i>	204
4.5.3.	<i>Short-term Effect of RM Actions in Emission Probability</i>	207

4.5.4.	<i>Key Parameters and Estimation Algorithm</i>	209
4.6.	DATA DESCRIPTION.....	210
4.7.	FINDINGS	213
4.7.1.	<i>Number of States and Model Comparisons</i>	213
4.7.2.	<i>Identification of Customer Relationship Expansion States and Profiles</i>	216
4.7.3.	<i>Long-term Effect of Customer Experience Dimensions</i>	221
4.7.4.	<i>Short-term Effect of RM Actions</i>	224
4.8.	IMPLICATIONS.....	229
4.8.1.	<i>Theoretical Implications</i>	229
4.8.2.	<i>Managerial Implications</i>	231
4.9.	LIMITATIONS AND FUTURE RESEARCH.....	237
	SUMMARY	239
	REFERENCES.....	241
 CHAPTER V: CONCLUSIONS		249
5.1.	IMPLICATIONS FOR THEORY.....	256
5.2.	IMPLICATIONS FOR BUSINESS	259
5.3.	LIMITATION AND FUTURE RESEARCH LINES.....	261
	REFERENCES.....	267
 RESUMEN Y CONCLUSIONES		271
	Motivación.....	273
	Conclusiones	288
	REFERENCIAS	299

INDEX OF TABLES

CHAPTER I: INTRODUCTION 13

1.1. Doctoral dissertation research objectives	28
--	----

CHAPTER II: CUSTOMER EQUITY DRIVERS, SOCIAL INFLUENCE, AND THEIR IMPACT ON THE CUSTOMER EXPERIENCE 37

2.1. Literature review on the relationship between customer perceptions and customer profitability in the banking context	43
2.2. Descriptive statistics.....	68
2.3. Measurement scales.....	69
2.4. Correlation matrix	70
2.5. Model estimation for equation 1	78
2.6. Model estimation for equation 2	79
2.7. Hypothesis testing results.....	83

CHAPTER III: WINNING YOUR CUSTOMER’S HEART OR MIND? THE IMPACT OF CUSTOMER EXPERIENCE ON CUSTOMER RETENTION AND MODERATING ROLE OF LOCK-IN 109

3.1. Selective literature review	116
3.2. Descriptive statistics.....	135
3.3. Multinomial logit models estimation results.....	143
3.4. Correlation matrix	144
3.5. Robustness check – moderating role of lock-in strategies	152
3.6. Parameter estimates propensity score equation.....	156

3.7.	Endogeneity assessment via propensity score matching results	159
3.8.	Customer heterogeneity estimation results	162
3.9.	Summary of managerial takeaways.....	169

CHAPTER IV: THE DYNAMIC IMPACT OF THE CUSTOMER

EXPERIENCE ON RELATIONSHIP EXPANSION: A HIDDEN MARKOV

MODELING APPROACH..... 183

4.1.	Literature review about customer relationship expansion	193
4.2.	Literature review about customer relationship dynamic	197
4.3.	Descriptive statistics.....	212
4.4.	Fit statistics for different states solutions in HMM model.....	213
4.5.	Correlation matrix	215
4.6.	Transition probability parameter estimation results.....	223
4.7.	Emission probability parameter estimation.....	227

CHAPTER V: CONCLUSIONS 249

5.1.	Implications for theory and practice of this doctoral dissertation.....	255
5.2.	Future research agenda.....	265

INDEX OF FIGURES

CHAPTER I: INTRODUCTION	13
1.1. Literature review, research gaps, and questions.....	23
CHAPTER II: CUSTOMER EQUITY DRIVERS, SOCIAL INFLUENCE, AND THEIR IMPACT ON THE CUSTOMER EXPERIENCE	37
2.1. Conceptual framework	53
2.2. The moderating role of social influence on the relationship between value equity and customer experience quality	85
2.2. The moderating role of social influence on the relationship between brand equity and customer experience quality	86
CHAPTER III: WINNING YOUR CUSTOMER’S HEART OR MIND? THE IMPACT OF CUSTOMER EXPERIENCE ON CUSTOMER RETENTION AND MODERATING ROLE OF LOCK-IN	109
3.1. Linkage of experiential learning theory and social exchange theory ...	124
3.2. Conceptual framework	126
3.3. The evolution of the moderating role of lock-in strategies alongside customer experience	150
3.4. The moderating role of lock-in strategies	166
CHAPTER IV: THE DYNAMIC IMPACT OF THE CUSTOMER EXPERIENCE ON RELATIONSHIP EXPANSION: A HIDDEN MARKOV MODELING APPROACH.....	183
4.1. Conceptual framework	202

4.2.	Customer relationship expansion states identification	218
4.3.	Customer relationship expansion states distributions	220
4.4.	Overview of customer experience dimensions as strategic levers for migrations across states	233
4.5.	Customer relationship expansion states migrations simulations.....	236

CHAPTER I:

INTRODUCTION

Fueled by the rapidly evolving information and communication technology (ICT) and digital evolution, customers can interact with each other anywhere anytime through an array of myriad touch points, ranging from multiple channels, abundant media convergence to numerous smart digital devices (Holmlund et al., 2020; Lemon & Verhoef, 2016). As a consequence, customers have more options than ever before, thereby fundamentally altering the purchase experience and resulting in an increasingly competitive business landscape. This leaves companies early vying to their attention, hoping to stand out in a crowded marketplace by providing a superior *customer experience*.

Customer experience has become a top marketing concept for both academics and marketing practitioners and is considered to be a key determinant of long-term business success. This concept is understood as non-deliberate, spontaneous, internal, subjective responses and reactions provoked by a set of stimuli (Becker & Jaakkola, 2020), including not only the ones which the firm can control but also the ones that outside of the firm's control; it is dynamic in nature (Lemon & Verhoef, 2016). Current evidence shows that improving the entire experience skillfully can boost enormous advantages, including enhanced customer satisfaction, reduced churn, increased cross-selling and up-selling opportunities, and greater employee satisfaction (De Haan, Verhoef, & Wiesel, 2015; McColl-Kennedy, Zaki, Lemon, Urmetzer, & Neely, 2019; Witell et al., 2020). Certainly, following Forbes (2020), 86% of customers will pay more for great customer experience. As indicated by Gartner (2019), 74% of customer experience leaders expect budgets to rise in 2020. Similarly, according to PwC's recently conducted report (2020), the number of companies investing in the customer experience has jumped from 20% to 80%. Given the unprecedented disruption provoked by the COVID-19, elevating customer experience excellence has never been more vital to an organization (Accenture, 2021; McKinsey & Company, 2020). Customer experience as the differentiation strategy is therefore considered as the key to post-pandemic success (Forrester, 2020). According to a global survey

conducted by the Economist Intelligence Unit (2020), customer experience is considered as the most top strategic priority by organization executives by 2025. Apart from the empirical evidence, undoubtedly the paramount role of customer experience is widely recognized in academic area. Customer experience has been featured as one of top research priorities by Marketing Science Institute (MSI) for more than 10 years, covering the 2010-2022 period.

Overall, consistent with current acknowledged research priorities by MSI (2020), there is a growing need for an integrative framework that: (1) to identify the multiple determinants within firms' control and out of such control ("how will social influence affect customer experience") as the key drivers of customer experience in a way to bring the harmony to the field ("construct an integrated customer experience with a single view"); (2) to measure and communicate the return of marketing investment in customer experience and other activities ("will hard metrics sweep away soft?"; "how best capture behaviors, attitudes, and values") in order to create enduring customer value ("to enhance customer experience, understand customer behaviors, and sustain profitable growth"); (3) to recognize the importance of taking a dynamic perspective to view customer experience ("to be responsive to change – both internally and externally"). Thus, according to MSI acknowledged research priorities, for the period 2020-2022, there are still questions unresolved:

- ***Customer experience drivers related questions:***
 - *How will the social influence affect customer experience?*
 - *How to measure the value of social influencer impact?*
 - *How to construct an integrated customer experience with a single view?*

- ***Customer experience consequence related questions:***
 - *Will hard metrics sweep away soft?*

- *How to best capture behavior, attitudes and values?*
- ***Customer experience dynamic related question:***
 - *How to be responsive in time to change both internally and externally?*

The present doctoral dissertation aims to answer all these questions analyzing this new business landscape that suggests the importance of customer experience – its drivers and consequences from a dynamic perspective. The drivers of customer experience provide firms with crucial knowledge about the experience expectations and desires of the customers, thereby enabling firms to identify the key determinants which significantly shape customer perceptions toward the experience with the firm (Verhoef et al., 2009). This is very important for firms, since the effort dedicated by firms to improve customer experience is not always equally perceived and/or valued by customers (Kranzbühler, Kleijnen, Morgan, & Teerling, 2018). Likewise, integrating the consequences of customer experience allows firms to translate their investment in customer experience into specific opportunities and enhanced performance outcomes (financial, behavioral, and relational) (Petersen, Kumar, Polo, & Sese, 2018). This is specifically critical, considering that a customer experience perceived as favorable by customers might not have a positive impact on firm outcomes. Customer experience is not static but evolve over time (De Keyser, Lemon, Klaus, & Keiningham, 2015; Lemon & Verhoef, 2016). Taking into account the dynamic nature of customer experience allows firm to capture the occurred changes in customers and adjust the factors under their controls immediately to ensure alignment between customer experience expectations and firms' offerings (Keiningham et al., 2020). In this way, through a dynamic lens, we establish the linkage across what firms do, what customers think, what customers do, and finally what firms get (Gupta & Zeithaml, 2006; McColl-Kennedy et al., 2019).

Since it was first introduced by Holbrook and Hirschman (1982), academic publications on customer experience have flourished in high-ranked academic outlets and popular practitioner-oriented journals. Customer experience has been approached by a large variety of contexts: retailing, service, product, branding, multichannel, online and technology (Becker & Jaakkola, 2020; Bravo, Martinez, & Pina, 2019; Gao, Fan, Li, & Wang, 2021; Gao, Meleo, & Sese, 2020; Homburg, Jozić, & Kuehnl, 2017; Hoyer, Kroschke, Schmitt, Kraume, & Shankar, 2020; Puccinelli et al., 2009) and addressed with different focus: its conceptualization and nature (De Keyser et al., 2015; Lemon & Verhoef, 2016), its determinants (Grewal, Levy, & Kumar, 2009; Verhoef et al., 2009), its measurements and method development (Flacandji & Krey, 2020; Holmlund et al., 2020; Kuppelwieser & Klaus, 2021), experience design strategy and management (Homburg et al., 2017; Keiningham et al., 2020; Patrício, Fisk, & Falcão e Cunha, 2008; Patrício, Fisk, Falcão e Cunha, & Constantine, 2011; Witell et al., 2020). Despite the significant contribution delivered by such academic and practitioner work, there is a lack of clear, unified, and consistent understanding regarding what customer experience entails across time (Becker & Jaakkola, 2020; De Keyser, Verleye, Lemon, Keiningham, & Klaus, 2020; Kranzbühler et al., 2018). For instance, De Keyser et al. (2020) specifically highlight that “customer experience field is struggling to reach a level of maturity that can and should be expected” (p. 434). In a similar vein, Becker and Jaakkola (2020) point out that “confusion prevails about the scope and boundaries of the customer experience construct, its antecedents, and its consequents” (p. 630). As a result, a comprehensive view about the *drivers* and *consequences* of customer experience from a *dynamic* perspective is compulsory to improve customer experience management where managers are required to have clear cultural mindsets toward customer experience, strategic directions for designing customer experience, and firm capabilities for continually renewing customer experience, with the goals of achieving and sustaining long-term success (Homburg et al., 2017).

With regard to the drivers of customer experience, prior research is mainly oriented from the firm perspective by focusing on the factors and processes which are predominantly designed and controlled by the firm in terms of marketing mix related elements (Grewal et al., 2009; Gao, Meleo, & Sese, 2020), service interface and atmosphere design (Grewal & Schweiger, 2020; Liu, Mattila, & Bolton, 2018; McLean, Al-Nabhani, & Wilson, 2018; Naylor, Kleiser, Baker & Yorkston, 2008; Roggeveen, Grewal, & Schweiger, 2020; Stead, Odekerken-Schröder, & Mahr, 2020; Verhoef et al., 2009), and brand design and identity (Brakus, Schmitt, & Zarantonello, 2009). Meanwhile such factors can be controlled or designed by firms in a way to improve customer experience management (Homburg et al., 2017; Palmer, 2010; Patrício et al., 2008; Patrício et al., 2011), there is a lack of structured categorization of these factors which facilitate the identification and examination from the side of firms. Most importantly, in addition to factors within firm control, there is a broad range of factors outside of firm control (e.g., social influence), which exert significant influence in the perception of customer experience (Lemon & Verhoef, 2016; Lucia-Palacios, Perez-Lopez, & Polo-Redondo, 2018; McColl-Kennedy et al., 2019). In this regard, previous studies have emphasized the importance of combining the firm perspective and customer perspective to explore the potential drivers of customer experience as the key pain points to translate them into specific firm opportunities for improving the customer experience. However, the ones which integrate these two perspectives are mainly theoretical-oriented studies (i.e., Becker & Jaakkola, 2020; Bolton et al., 2018; De Keyser et al., 2020; Godovykh & Tasci, 2020; Keiningham et al., 2020; Kranzbühler et al., 2018; Lemon & Verhoef 2016; Lipkin, 2016). Therefore, we consider it is vital to pay special attention on factors within and outside firm control (research objective 1 and 2) to analyze their influence in the perception of customer experience.

To enhance customer experience management, it is essential to identify the key consequences of customer experience. In contrast to the drivers of customer experience, the

major attention on this topic has been placed from the customer perspective in the literature of customer experience by focusing on either perceptual consequences (e.g., customer satisfaction, loyalty, reputation, happiness) (Arnould & Price, 1993; Brakus et al., 2009; Brun, Rajaobelina, Ricard, & Amiot, 2020; Gonçalves, Patrício, Teixeira, & Wuenderlich, 2020; Iglesias, Markovic, & Rialp, 2019; Lucia-Palacios et al., 2018; Morgan-Thomas & Veloutsou, 2013; Schmitt, Brakus, & Zarantonello, 2015) or behavioral intentions (i.e., purchase intention, word-of-mouth) (e.g., Lemke, Clark, & Wilson, 2011; Rose, Clark, Samouel, & Hair, 2012; Rose, Hair, & Clark, 2011), with limited attention on financial performance (research objective 1), actual behaviors (research objective 2) and relational consequences for firms (research objective 3). More specifically, the existing studies on the behavioral consequence of customer experience is mainly developed in the context of one single product category (e.g., De Haan et al., 2015; McColl-Kennedy et al., 2019), ignoring the fact that customer experience perception might spill over to another (related or unrelated) category offered by firms (Dong & Chintagunta, 2016; Lemon & Verhoef, 2016) (research objective 2a). Moreover, given the lack of integration between firm perspective and customer perspective, there is a dearth of research which consider that the impact of customer experience might vary depending on whether the relationship is maintained by firms or customers (research objective 2b).

Regardless of customer or firm perspective, as indicated by prior research (De Keyser et al., 2015; Kranzbühler et al., 2018; Siebert, Gopaldas, Lindridge, & Simões, 2020), to fully capture the nature of customer experience, the dynamic perspective is indispensable. Customer experience is not static, but evolving over time and being considered as the reflective of multiple factors during the interaction between customers and firms (i.e., both within and outside firm control), which fundamentally determine the future customer relationship growth (Becker & Jaakkola, 2020; De Keyser et al., 2015; Lemon & Verhoef, 2016; Zhang & Chang, 2020). Successfully capture the linkage between customer experience and customer relationship

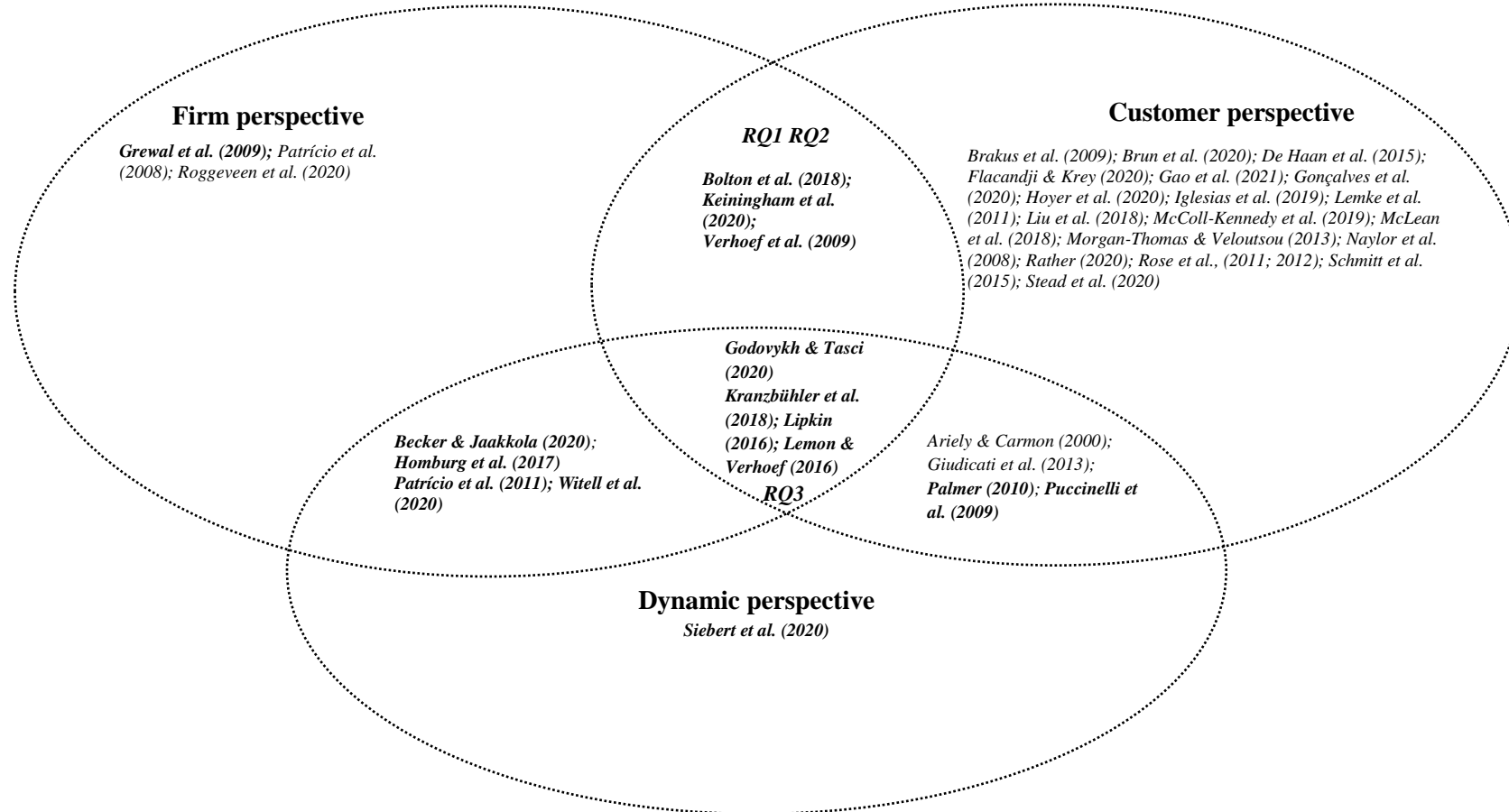
expansion enables firms to promote the relationship development at the right time via right customer experience strategic lever (Li, Sun, & Montgomery, 2011; Zhang, Watson, Palmatier, & Dant, 2006). To date, as revealed in the systematic literature review conducted by De Keyser et al. (2020), most customer experience research has largely relied on cross-sectional surveys for data collection, highlighting a lack of dynamic view in means of longitudinal research designs to create insights into the role played by customer experience in relational consequences (research objective 3). The underlying reasoning is that capturing such relational consequence is not an easy task, since the process is not directly observable but hidden (Palmatier, Houston, Dant, & Grewal, 2013), involving several dimensions – dynamic patterns of customer experience (Ariely & Carmon, 2000). Most complicated is that decoding such dynamic and hidden process, an advanced modeling approach is required (Netzer, Lattin, & Srinivasan, 2008; Zhang & Chang, 2020) (research objective 3b).

Figure 1.1 presents a brief overview of important studies on customer experience, which are categorized accordingly into firm perspective, customer perspective, dynamic perspective, which enable us to illustrate the identified research gaps. Overall, given the lack of linkage between firm perspective and customer perspective, no empirical studies have simultaneously captured customers' experience perceptions toward factors under and out of firms' control in a clear, structured, and solid manner, thereby failing to provide a comprehensive picture to help firms identifying the potential drivers of customer experience (study 1), and to appropriately assess the influence of customer experience on financial and behavioral outcomes (study 1 and 2), and how such influence would affect relationship expansion evolve over time (study 3).

Taking into account the MSI research priorities and all the gaps identified in current customer experience literature, the main objective of this doctoral dissertation is to analyze the drivers and consequences of customer experience by integrating the customer perspective and firm perspective in a dynamic manner to expand the understanding of customer experience

management. The main objective is divided into three specific research objectives to contribute to theory and practice. These three research objectives are developed in three different studies.

Figure 1.1: Literature review, research gaps, and questions



Note: The included studies are published in journals which are in the first quartile of latest Journal of Citation Report (2019). The bolded studies are conceptual papers.

- **Research objective 1:** *To further current literature on customer experience simultaneously analyzing the factors under and out of firm's control as the drivers of customer experience, and their joint financial performance in a service context.*

To tackle this research objective, we develop Study 1. This study investigates the impact of firms' investments in three key strategic levers (i.e., value, the brand, and the relationship) on the customer experience as well as the direct and moderating role played by social influence. We integrate research in customer relationship management (i.e., customer equity framework) (Rust, Lemon, & Zeithaml, 2004) and customer experience management (Lemon & Verhoef, 2016; Verhoef et al., 2009) and offer a unifying framework to understand the linkages between the three equity drivers (i.e., value equity, brand equity, relationship equity), social influence, the customer experience, and its ultimate impact on profitability.

We have longitudinal data from a financial services company between January 2012 and December 2012 and data from a questionnaire carried out during December 2012 that collected subjective information about customers. Combining both sources of information, we finally have an effective sample of 1,990 customers. We use STATA14 software to perform the empirical analysis.

- **Research objective 2:** *To investigate the behavioral consequence of customer experience given firm actively (firm-driven) and inactively (customer-driven) deployed lock-in mechanisms in a multi-service provider context.*
 - **Research objective 2a:** *To analyze how customer experience influence customer retention in one category and another related one – spillover effect.*

- **Research objective 2b:** *To explore how the impact of customer experience on customer retention vary across different lock-in (customer-driven and firm-driven) strategies.*

In pursuit of such aim, we develop Study 2. This study focuses on the separate and joint effects of customer experience and lock-in on customer retention. Building barriers to lock customers and improving the customer experience are two key strategies employed by firms to enhance customer retention. Although pursuing the same goal, these strategies work differently: the former relies more on a calculative, cost–benefit approach to the exchange, while the latter promotes the affective aspects of the relationship.

We draw from social exchange theory to identify two different types of lock-in situations, based on whether they are firm-driven (explicit strategies that aim to increase the relationship termination costs – e.g., binding contracts) or customer-driven (intrinsic motivational state of customers based on the relational benefits derived from the exchange relationship), and we examine their (separate and joint) effects on retention. Importantly, building on experiential learning theory, we jointly investigate how different types of lock-in affect the impact of a number of customer experience effects on customer retention, in terms of the main effect of the experience with the main product/service (Lemon & Verhoef, 2016), the potential spillover effects across categories (Dong & Chintagunta, 2016; Keller, Geyskens, & Dekimpe, 2020). By exploring the joint effects of customer experience and lock-in strategies on retention, we identify *whether* they complement or substitute each other and *when* these effects occur.

To empirically test our research objectives, we used a unique panel dataset in the telecom industry for a sample of 13,761 customers. This dataset covers all firms in the telecom market for two main different services (mobile and broadband) across four years of data (2013–2016).

Enabled by the collected dataset, we applied advanced multinomial logit modeling techniques. We use Rstudio software to perform the empirical analysis.

- **Research objective 3:** *To identify the relational consequences of different dimensions of customer experience from a dynamic perspective.*
 - **Research objective 3a:** *To explore the roles of different dimensions of customer experience in customer relationship expansion.*
 - **Research objective 3b:** *To capture and define the hidden customer relationship expansion states via hidden Markov modeling.*

To tackle these research objectives, we develop Study 3. Building on the premises of self-determination theory (Deci & Ryan, 1985; Vallerand, 1997), this study investigates how different dimensions of customer experience (recency effect, peak effect, trend effect, and fluctuation effect) and different relationship marketing (RM) actions (i.e., advertising communication, product innovation, and conflict) impact customer relationship expansion from a dynamic perspective, and distinguishes their short-term and long-term effects. Self-determination theory posits that motivation for pursuing activities are consisted of intrinsic (the ones originating from the self and one's desire) and extrinsic factors (originating from external demands).

Moreover, to comprehensively capture the evolution of customer relationship expansion states, we base on four aspects: (1) the usage level of the initially acquired product/or service category; (2) the number of product and/or service categories acquired from the focal firm; (3) the upgraded offering; (4) the adoption decision toward the innovative product/service category provided by the focal firm.

Using a panel dataset which combines both attitudinal and behavioral information for a sample of 12,946 customers, covering the four main service categories (mobile, broadband, TV, and landline) in the telecom industry in one European country for a period of 48 months, we test the framework empirically via HMM technique. We combine Latent Gold 5.1 and Rstudio software to perform the empirical analysis.

Table 1.1 summarizes the research objectives of this doctoral dissertation and the three studies we carry out. In the next three chapters, these three studies are developed in depth in order to contribute to the existing customer experience literature.

Table 1.1: Doctoral dissertation research objectives

	RESEARCH OBJECTIVES	CONCEPTUAL FRAMEWORK
DOCTORAL THESIS	<p>Research objective: Integrating the firm’s and customer’s perspective to comprehensively analyze the drivers (under and out of firm’s control) of customer experiences and its consequences in financial (customer profitability), behavioral (customer retention), and relational (customer relationship expansion) performance from a dynamic perspective.</p>	<p>The diagram shows two boxes on the left labeled 'CUSTOMER PERSPECTIVE' and 'FIRM PERSPECTIVE' grouped by a bracket. An arrow points from this group to a box labeled 'CUSTOMER EXPERIENCE'. From 'CUSTOMER EXPERIENCE', an arrow points to a stack of three boxes on the right: 'CUSTOMER PROFITABILITY', 'CUSTOMER BEHAVIORS', and 'CUSTOMER RELATIONSHIP'.</p>
<p>STUDY 1: Customer equity drivers, social influence, and their impact on the customer experience</p>	<p>Research objective 1: To further current literature on customer experience simultaneously analyzing the factors under and out of firm’s control as the drivers of customer experience, and their joint financial performance in a service context.</p>	<p>The diagram shows two boxes on the left: 'CUSTOMER EQUITY' and 'SOCIAL INFLUENCE'. A dashed arrow points from 'SOCIAL INFLUENCE' to 'CUSTOMER EQUITY'. An arrow points from 'CUSTOMER EQUITY' to a box labeled 'CUSTOMER EXPERIENCE'. From 'CUSTOMER EXPERIENCE', an arrow points to a box labeled 'CUSTOMER PROFITABILITY'.</p>
<p>STUDY 2: Winning your customer’s heart or mind? Trade-offs between customer experience and lock-in on customer retention</p>	<p>Research objective 2: To investigate the behavioral consequence of different dimensions of customer experience given firm actively (firm-driven) and inactively (customer-driven) deployed lock-in mechanisms. - Research objective 2a: To analyze how customer experience influence customer retention in one category and another related one – spillover effect. - Research objective 2b: To explore how the impact of customer experience on customer retention vary across different lock-in (customer-driven and firm-driven) strategies.</p>	<p>The diagram shows a box on the left labeled 'CUSTOMER EXPERIENCE' with two sub-sections: 'Main Effect' and 'Spillover Effect'. An arrow points from this box to a box on the right labeled 'CUSTOMER RETENTION'. Above this arrow is a box labeled 'LOCK-IN' with two sub-sections: 'Firm-driven' and 'Customer-driven'. A dashed arrow points from 'LOCK-IN' down to the arrow connecting 'CUSTOMER EXPERIENCE' to 'CUSTOMER RETENTION'.</p>
<p>STUDY 3: The dynamic impact of customer experience on relationship expansion: a hidden Markov modeling approach</p>	<p>Research objective 3: To identify the relational consequences of different dimensions of customer experience from a dynamic perspective. - Research objective 3a: To explore the roles of different dimensions of customer experience in customer relationship expansion. - Research objective 3b: To capture and define the hidden customer relationship expansion states via hidden Markov modeling.</p>	<p>The diagram shows two boxes on the left: 'CUSTOMER EXPERIENCE' and 'RM ACTIONS' grouped by a bracket. An arrow points from this group to a series of three ovals in the middle: 'State s¹', 'State s²', and 'State sⁿ', with an ellipsis between 'State s²' and 'State sⁿ'. From 'State s¹', an arrow points to a box on the right labeled 'RELATIONSHIP EXPANSION'. From 'RM ACTIONS', an arrow points up to 'RELATIONSHIP EXPANSION'.</p>

REFERENCES

- Accenture (2021). *Government experience in 2021: Agile and effective*. Available at <https://www.accenture.com/us-en/blogs/voices-public-service/government-experience-in-2021-agile-and-effective> (accessed 2 February 2021).
- Ariely, D., & Carmon, Z. (2000). Gestalt characteristics of experiences: The defining features of summarized events. *Journal of Behavioral Decision Making*, 13(2), 191-201.
- Arnould, E. J., & Price, L. L. (1993). River magic: Extraordinary experience and the extended service encounter. *Journal of Consumer Research*, 20(1), 24-45.
- Becker, L., & Jaakkola, E. (2020). Customer experience: Fundamental premises and implications for research. *Journal of the Academy of Marketing Science*, 48(4), 630-648.
- Bolton, R. N., McColl-Kennedy, J. R., Cheung, L., Gallan, A., Orsingher, C., Witell, L., & Zaki, M. (2018). Customer experience challenges: Bringing together digital, physical and social realms. *Journal of Service Management*, 29(5), 776-808.
- Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand experience: What is it? How is it measured? Does it affect loyalty?. *Journal of Marketing*, 73(3), 52-68.
- Bravo, R., Martinez, E., & Pina, J. M. (2019). Effects of service experience on customer responses to a hotel chain. *International Journal of Contemporary Hospitality Management*, 31(1), 389-405.
- Brun, I., Rajaobelina, L., Ricard, L., & Amiot, T. (2020). Examining the influence of the social dimension of customer experience on trust towards travel agencies: The role of experiential predisposition in a multichannel context. *Tourism Management Perspectives*. Advance online publication. doi: 10.1016/j.tmp.2020.100668.

- De Haan, E., Verhoef, P. C., & Wiesel, T. (2015). The predictive ability of different customer feedback metrics for retention. *International Journal of Research in Marketing*, 32(2), 195-206.
- De Keyser, A., Lemon, K. N., Klaus, P., & Keiningham, T. L. (2015). A framework for understanding and managing the customer experience. *Marketing Science Institute Working Paper Series*, 85(1), 15-121.
- De Keyser, A., Verleye, K., Lemon, K. N., Keiningham, T. L., & Klaus, P. (2020). Moving the customer experience field forward: Introducing the touchpoints, context, qualities (TCQ) nomenclature. *Journal of Service Research*, 23(4), 433-455.
- Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, 19(2), 109-134.
- Dong, X., & Chintagunta, P. K. (2016). Satisfaction spillovers across categories. *Marketing Science*, 35(2), 275-283.
- Economist Intelligence Unit (2020). *Customer experience: learning from online personal finance conversations*. Available at <https://eiuperspectives.economist.com/financial-services/customer-experience-learning-online-personal-finance-conversations> (accessed 12 December 2021).
- Flacandji, M., & Krey, N. (2020). Remembering shopping experiences: The shopping experience memory scale. *Journal of Business Research*, 107, 279-289.
- Forbes (2020). *4 actionable customer experience statistics for 2020*. Available at <https://www.forbes.com/sites/danielnewman/2020/06/23/4-actionable-customer-experience-statistics-for-2020/?sh=331baa041a84> (accessed 10 August 2020).
- Forrester (2020). *Forrester identifies five pandemic-induced trends that will change business and technology over the next decade*. Available at <https://go.forrester.com/press->

newsroom/forrester-identifies-five-pandemic-induced-trends-that-will-change-business-and-technology-over-the-next-decade/ (accessed 1 August 2020).

- Gao, W., Fan, H., Li, W., & Wang, H. (2021). Crafting the customer experience in omnichannel contexts: The role of channel integration. *Journal of Business Research, 126*, 12-22.
- Gao, L., Melero, I., & Sese, F. J. (2020). Multichannel integration along the customer journey: a systematic review and research agenda. *The Service Industries Journal, 40*(15-16), 1087-1118.
- Gartner (2019). *2019 customer experience management study*. Available at <https://www.gartner.com/en/marketing/research/2019-customer-experience-management-study> (accessed 6 January 2020).
- Godovykh, M., & Tasci, A. D. (2020). Customer experience in tourism: A review of definitions, components, and measurements. *Tourism Management Perspectives*. Advance online publication. doi: 10.1016/j.tmp.2020.100694.
- Gonçalves, L., Patrício, L., Teixeira, J. G., & Wuenderlich, N. V. (2020). Understanding the customer experience with smart services. *Journal of Service Management, 31*(4), 723-744.
- Grewal, D., Levy, M., & Kumar, V. (2009). Customer experience management in retailing: An organizing framework. *Journal of Retailing, 85*(1), 1-14.
- Gupta, S., & Zeithaml, V. (2006). Customer metrics and their impact on financial performance. *Marketing Science, 25*(6), 718-739.
- Holbrook, M. B., & Hirschman, E. C. (1982). The experiential aspects of consumption: Consumer fantasies, feelings, and fun. *Journal of Consumer Research, 9*(2), 132-140.

- Holmlund, M., Van Vaerenbergh, Y., Ciuchita, R., Ravald, A., Sarantopoulos, P., Ordenes, F. V., & Zaki, M. (2020). Customer experience management in the age of big data analytics: A strategic framework. *Journal of Business Research, 116*, 356-365.
- Homburg, C., Jozić, D., & Kuehnl, C. (2017). Customer experience management: Toward implementing an evolving marketing concept. *Journal of the Academy of Marketing Science, 45*(3), 377-401.
- Hoyer, W. D., Kroschke, M., Schmitt, B., Kraume, K., & Shankar, V. (2020). Transforming the customer experience through new technologies. *Journal of Interactive Marketing, 51*, 57-71.
- Iglesias, O., Markovic, S., & Rialp, J. (2019). How does sensory brand experience influence brand equity? Considering the roles of customer satisfaction, customer affective commitment, and employee empathy. *Journal of Business Research, 96*, 343-354.
- Keiningham, T., Aksoy, L., Bruce, H. L., Cadet, F., Clennell, N., Hodgkinson, I. R., & Kearney, T. (2020). Customer experience driven business model innovation. *Journal of Business Research, 116*, 431-440.
- Keller, K. O., Geyskens, I., & Dekimpe, M. G. (2020). Opening the umbrella: The effects of rebranding multiple category-specific private-label brands to one umbrella brand. *Journal of Marketing Research, 57*(4), 677-694.
- Kranzbühler, A. M., Kleijnen, M. H., Morgan, R. E., & Teerling, M. (2018). The multilevel nature of customer experience research: An integrative review and research agenda. *International Journal of Management Reviews, 20*(2), 433-456.
- Kuppelwieser, V. G., & Klaus, P. (2021). Measuring customer experience quality: the EXQ scale revisited. *Journal of Business Research, 126*, 624-633.

- Lemke, F., Clark, M., & Wilson, H. (2011). Customer experience quality: An exploration in business and consumer contexts using repertory grid technique. *Journal of the Academy of Marketing Science*, 39(6), 846-869.
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69-96.
- Li, S., Sun, B., & Montgomery, A. L. (2011). Cross-selling the right product to the right customer at the right time. *Journal of Marketing Research*, 48(4), 683-700.
- Lipkin, M. (2016). Customer experience formation in today's service landscape. *Journal of Service Management*, 27(5), 678-703.
- Liu, S. Q., Mattila, A. S., & Bolton, L. E. (2018). Selling painful yet pleasurable service offerings: An examination of hedonic appeals. *Journal of Service Research*, 21(3), 336-352.
- Lucia-Palacios, L., Pérez-López, R., & Polo-Redondo, Y. (2018). Can social support alleviate stress while shopping in crowded retail environments?. *Journal of Business Research*, 90, 141-150.
- Marketing Science Institute (MSI). (2020). *Research priorities 2020–2022*. Available at https://www.msi.org/wp-content/uploads/2020/06/MSI_RP20-22.pdf (accessed 26 June 2020).
- McColl-Kennedy, J. R., Zaki, M., Lemon, K. N., Urmetzer, F., & Neely, A. (2019). Gaining customer experience insights that matter. *Journal of Service Research*, 22(1), 8-26.
- McKinsey & Company (2020). *Adapting customer experience in the time of coronavirus*. Available at <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/adapting-customer-experience-in-the-time-of-coronavirus> (accessed 20 July 2020).

- McLean, G., Al-Nabhani, K., & Wilson, A. (2018). Developing a mobile applications customer experience model (MACE)-implications for retailers. *Journal of Business Research*, 85, 325-336.
- Morgan-Thomas, A., & Veloutsou, C. (2013). Beyond technology acceptance: Brand relationships and online brand experience. *Journal of Business Research*, 66(1), 21-27.
- Naylor, G., Kleiser, S. B., Baker, J., & Yorkston, E. (2008). Using transformational appeals to enhance the retail experience. *Journal of Retailing*, 84(1), 49-57.
- Netzer, O., Lattin, J. M., & Srinivasan, V. (2008). A hidden Markov model of customer relationship dynamics. *Marketing Science*, 27(2), 185-204.
- Palmatier, R. W., Houston, M. B., Dant, R. P., & Grewal, D. (2013). Relationship velocity: Toward a theory of relationship dynamics. *Journal of Marketing*, 77(1), 13-30.
- Palmer, A. (2010). Customer experience management: A critical review of an emerging idea. *Journal of Services Marketing*, 24(3), 196-208.
- Patrício, L., Fisk, R. P., & Falcão e Cunha, J. (2008). Designing multi-interface service experiences: The service experience blueprint. *Journal of Service Research*, 10(4), 318-334.
- Patrício, L., Fisk, R. P., Falcão e Cunha, J., & Constantine, L. (2011). Multilevel service design: From customer value constellation to service experience blueprinting. *Journal of Service Research*, 14(2), 180-200.
- Petersen, J. A., Kumar, V., Polo, Y., & Sese, F. J. (2018). Unlocking the power of marketing: Understanding the links between customer mindset metrics, behavior, and profitability. *Journal of the Academy of Marketing Science*, 46(5), 813-836.

- Puccinelli, N. M., Goodstein, R. C., Grewal, D., Price, R., Raghurir, P., & Stewart, D. (2009). Customer experience management in retailing: Understanding the buying process. *Journal of Retailing*, 85(1), 15-30.
- PwC (2020). *Experience is everything. Get it right.* Available at <https://www.pwc.com/us/en/services/consulting/library/consumer-intelligence-series/future-of-customer-experience.html> (accessed 10 December 2020).
- Rather, R. A. (2020). Customer experience and engagement in tourism destinations: The experiential marketing perspective. *Journal of Travel & Tourism Marketing*, 37(1), 15-32.
- Roggeveen, A. L., Grewal, D., & Schweiger, E. B. (2020). The DAST framework for retail atmospherics: The impact of in-and out-of-store retail journey touchpoints on the customer experience. *Journal of Retailing*, 96(1), 128-137.
- Rose, S., Clark, M., Samouel, P., & Hair, N. (2012). Online customer experience in e-retailing: An empirical model of antecedents and outcomes. *Journal of Retailing*, 88(2), 308-322.
- Rose, S., Hair, N., & Clark, M. (2011). Online customer experience: A review of the business-to-consumer online purchase context. *International Journal of Management Reviews*, 13(1), 24-39.
- Rust, R. T., Lemon, K. N., & Zeithaml, V. A. (2004). Return on marketing: Using customer equity to focus marketing strategy. *Journal of Marketing*, 68(1), 109-127.
- Schmitt, B., Brakus, J. J., & Zarantonello, L. (2015). From experiential psychology to consumer experience. *Journal of Consumer Psychology*, 25(1), 166-171.

- Siebert, A., Gopaldas, A., Lindridge, A., & Simões, C. (2020). Customer experience journeys: Loyalty loops versus involvement spirals. *Journal of Marketing*, 84(4), 45-66.
- Stead, S., Odekerken-Schröder, G., & Mahr, D. (2020). Unraveling customer experiences in a new servicescape: An ethnographic schema elicitation technique (ESET). *Journal of Service Management*. Advance online publication. doi: 10.1108/JOSM-02-2020-0048.
- Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. *Advances in Experimental Social Psychology*, 29, 271-360.
- Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of Retailing*, 85(1), 31-41.
- Witell, L., Kowalkowski, C., Perks, H., Raddats, C., Schwabe, M., Benedettini, O., & Burton, J. (2020). Characterizing customer experience management in business markets. *Journal of Business Research*, 116, 420-430.
- Zhang, J. Z., & Chang, C. W. (2020). Consumer dynamics: Theories, methods, and emerging directions. *Journal of the Academy of Marketing Science*, 49, 166-196.
- Zhang, J. Z., Watson Iv, G. F., Palmatier, R. W., & Dant, R. P. (2016). Dynamic relationship marketing. *Journal of Marketing*, 80(5), 53-75.

CHAPTER II:

CUSTOMER EQUITY DRIVERS, SOCIAL INFLUENCE, AND THEIR IMPACT ON THE CUSTOMER EXPERIENCE

2.1 INTRODUCTION

This doctoral thesis is framed in the field of customer experience management and it makes specific reference to both the drivers and the consequences of customer experience. To succeed in delivering positive experiences to customers, the first key question is to identify the key strategic levers which determine the perception of customer experience, since they consequently affect the potential returns which firms could obtain from the investment in customer experience. Although the importance of identifying the drivers of customer experience to ensure long-term strategic customer experience management thinking has been largely acknowledged in the literature (Becker & Jaakkola, 2020; Grewal, Levy, & Kumar, 2009; Lemon & Verhoef, 2016), there is a lack of clear and comprehensive understanding on this topic. Among the existing ones, they are mostly relied on firm perspective (McColl-Kennedy, Zaki, Lemon, Urmetzer, & Neely, 2019), ignoring the factors under customers' control in the examination of drivers of customer experience, thereby generating a fragmented view.

In this chapter, combining both firm perspective and customer perspective, we pay special attention to the drivers of the customer experience (i.e., customer equity drivers and social influence) and their joint impact on financial performance (i.e., customer profitability). Enabled by the customer equity drivers in terms of value equity, brand equity, and relationship equity proposed by Zeithaml, Lemon, and Rust (2001), we provide a set of factors in a comprehensive and well-organized manner for companies to consider while managing customer experience. In this way, among the factors which are under firms' control, firms may easily view and assess whether the value, brand, or relationship related aspects are effective in delivering favorable experiences to customers. In addition to factors under firms' control, in this chapter we also take into account the role of social influence – aspects outside firm control,

in the perception of customer experience. In a similar vein, while customers can be affected in a different manner by social influence, drawing on prior research we categorize social influence into three dimensions (i.e., exposure, value, and breadth), thus simplifying firms' identification of the roles of factors outside of firms' control. These effects are surprisingly under-researched in the literature despite their great importance, so we aim to clarify whether and to what extent customer equity drivers and social influence may affect customer experience, how profitable they might be for firms. Specifically, this chapter will respond to the first research objective: "to further current literature on customer experience simultaneously analyzing the factors under and out of firm's control as the drivers of customer experience, and their joint financial performance in a service context".

2.2 MOVITATION

As Ostrom, Parasuraman, Bowen, Patrício, and Voss (2015) indicated, the context in which service is delivered and experienced has changed fundamentally due to advances in technology which led to a proliferation of revolutionary services and changing the way how customers interact with firms. Moreover, service is increasingly commoditized (Ostrom et al., 2015), and that the contemporary customers demand engaging, robust, compelling and memorable customer experiences (Lemke, Clark, & Wilson, 2011). With recent evidence showing that those organizations able to manage the entire experience skillfully can reap enormous rewards (e.g., enhanced customer satisfaction, reduced churn, increased revenue, greater employee satisfaction; Helkkula, Kelleher, & Pihlström, 2012; Zomerdijk & Voss, 2010), many service organizations are placing the customer experience at the core of service offering (Lemon & Verhoef, 2016; Ostrom et al., 2010; Ostrom et al., 2015; Patrício, Gustafsson, & Fisk, 2018), therefore understanding and managing the customer experience has

become a top priority for business managers (Marketing Science Institute, 2016; 2020). For example, when top executives are asked about their strategic priorities for the future of their businesses, the customer experience appears as one of the most commonly reported (86% of respondents), with almost half of them recognizing that this is a “critically important” aspect (Accenture, 2016). As a result, well-known international companies such as KPMG, Amazon, and Google are now introducing chief customer experience managers responsible for creating and managing customer experiences (Lemon & Verhoef, 2016). Similarly, about 80% of executives believe that delivering a differentiated experience to customers links directly to business performance and provides a competitive advantage (Accenture, 2016). However, when it comes to the execution of a customer experience strategy, firms present considerable gaps. Only one out of four executives recognize taking steps to keep customers engaged (Accenture, 2016), and there are still significant gaps between customer expectations and firm execution in terms of customer experience (Loyalty One, 2017). This anecdotal evidence suggests an incomplete and inaccurate understanding of the customer experience and of how it should be managed in service settings (Bowen & Schneider, 2014; Homburg, Jozić, & Kuehnl, 2017), and calls for additional research in the emerging field of customer experience management (Lemon & Verhoef, 2016). Drawing from Lemke et al. (2011), the customer experience is defined as “the subjective response to the holistic direct and indirect encounter with the firm” (p. 848), whereas the customer experience quality is conceptualized as the “perceived judgment about the excellence or superiority of the customer experience” (p. 849).

Recent academic research has started to tackle this important research topic. Previous studies have primarily focused on providing a conceptual understanding of the customer experience, the nature and characteristics of this construct, its antecedents and consequences, potential moderating factors, and experience design elements (De Keyser, Lemon, Klaus, & Keiningham, 2015; Grewal et al., 2009; Meyer & Schwager, 2007; Patrício, Fisk, & Falcão,

2008; Patrício, Fisk, Falcão e Cunha, & Constantine, 2011; Puccinelli et al., 2009; Verhoef et al., 2009; Zomerdijk & Voss, 2010). However, empirical research on the customer experience is sparse. As noted by Lemon and Verhoef (2016, p.70), “there is limited empirical work directly related to customer experience”. Only a few studies to date have empirically addressed the customer experience, but with specific applications to the brand (Brakus, Schmitt, & Zarantonello, 2009; Gentile, Spiller, & Noci, 2007; Schouten, McAlexander, & Koenig, 2007), to the online context (Novak, Hoffman, & Yung, 2000; Rose, Hair, & Clark, 2012), to the service context (Arnould & Price, 1993; Chang & Horng, 2010; Chen & Chen, 2010; Hui & Bateson, 1991; Jaakkola, Helkkula, & Aarikka-Stenroos, 2015; Otto & Ritchie, 1996), or have been conducted at the firm level (Homburg et al., 2017; Teixeira et al., 2012). At the customer level, we still lack a proper understanding of the drivers of the customer experience (Lemon & Verhoef, 2016), as well as the performance consequences for firms (Verhoef et al., 2009).

In the context of financial services, there is a lack of attention to customer experience, as demonstrated by Table 2.1, since most studies focus on the role of customer satisfaction while aiming to link customer attitudes and customer profitability. However, customer satisfaction is a retrospective assessment (De Haan, Verhoef, & Wiesel, 2015) resulting from a single transaction, whereas customer experience is created by encompassing multiple elements (Verhoef et al., 2009), indicating customer experience as a broader concept than customer satisfaction (Lemon & Verhoef, 2016). Following Lemke et al. (2011, p. 848), customer experience can be defined as “the subjective response to the holistic direct and indirect encounter with the firm”, which encompasses every aspect of a company’s offering, including the quality of customer care, advertising, packaging, product and service features, ease of use, and reliability (Meyer & Schwager, 2007). And, as noted previously, customer experience quality refers to the perceived excellence or superiority of the customer experience (Lemke et al., 2011).

Table 2.1: Literature review on the relationship between customer perceptions and customer profitability in the banking context

<i>Study</i>	<i>Sample size</i>	Independent variables					Moderators		
		<i>Customer equity drivers</i>	<i>Customer satisfaction</i>	<i>Service quality</i>	<i>Commitment</i>	<i>Others</i>	<i>Customer perception</i>	<i>Customer characteristics</i>	<i>Others</i>
Bolton, Kannan, & Bramlett (2000)	405 customers <i>L</i>	-	✓	-	-	<i>Customer loyalty</i>	<i>Customer loyalty and customer satisfaction with competitors</i>	-	-
Cooil, Keiningham, Aksoy, & Hsu (2007)	4,319 households <i>L</i>	-	✓	-	-	-	-	✓	-
Gonçalves & Sampaio (2012)	1,210 customers <i>C</i>	-	✓	-	-	-	-	✓	-
Hallowell (1996)	59 divisions <i>L</i>	-	✓	-	-	-	-	-	-
Jha, Balaji, Yavas, & Babakus (2017)	872 customers <i>C</i>	-	-	-	-	<i>Role overload</i>	-	-	<i>Customer orientation</i>
Kamakura, Mittal, De Rosa, & Mazzon (2002)	5055 customers <i>C</i>	-	-	-	-	<i>Operational inputs and attributes performance</i>	-	-	-
Keiningham, Perkins-Munn, & Evans (2003)	348 customers <i>C</i>	-	✓	-	-	-	-	-	<i>Buyer group characteristics</i>

Chapter II: Customer equity drivers, social influence, and their impact on the customer experience

Keiningham, Zahorik, & Rust (1994)	400 customers C	-	-	-	-	Drivers of customer satisfaction	-	-	-
Larivière (2008)	522 customers L	-	-	-	-	Attributes performance	-	-	-
Larivière, Aksoy, Cooil, & Keiningham (2011)	802 households C	-	✓	-	-	-	-	✓	-
Liang & Wang (2008)	1,043 customers C	-	-	-	-	Perceived relationship investment	-	-	-
Liang, Wang, & Farquhar (2009)	396 customers C	-	-	-	-	Attributes performance	-	-	-
Loveman (1998)	450 branches L	-	-	✓	-	-	-	-	-
Ou & Verhoef (2017)	10,527 customers; 5 firms from banking industry C	✓	-	-	-	Emotion	Emotion	-	-
Ou, Verhoef, & Wiesel (2017)	301–781 customers from banking industry C	✓	-	-	-	Customer characteristics	-	✓	Firm and industry characteristics
Rust & Zahorik (1993)	100 customers C	-	✓	-	-	-	-	-	-

Chapter II: Customer equity drivers, social influence, and their impact on the customer experience

Rust, Lemon, & Zeithaml (2004)	355 customers C	✓	-	-	-	-	-	-	-
Varki & Colgate (2001)	828 customers C	✓ (Price perception)	-	✓	-	Customer value	-	-	-
Verhoef (2003)	1,677 customers in T0; 918 customers in T1 L	✓ (Payment equity)	✓	-	✓	Loyalty program and direct mailings	-	-	-
Verhoef, Frances, & Hoekstra (2002)	1,986 customers L	✓ (Payment equity)	✓	-	✓	Trust	-	✓	-
Vogel, Evanschitzky, & Ramaseshan (2008)	5,694 customers C	✓	-	-	-	-	-	-	-
Yavas, Babakus, & Ashill (2010)	50 branches C	-	-	-	✓	-	-	-	Service climate
Current study	1,990 customers C	✓	-	-	-	Social influence	-	-	Social influence

Note: In the column for sample size and study design, **C** means cross-sectional data and **L** refers to longitudinal data

Study	Sample size	Mediators				Dependent variables				
		Customer satisfaction	Customer loyalty	Service quality	Others	Profitability	Customer retention	Revenue	SOW	others
Bolton, Kannan, & Bramlett (2000)	405 customers L	-	-	-	-	-	✓	-	-	Usage level
Cooil, Keiningham, Aksoy, & Hsu (2007)	4,319 households L	-	-	-	-	-	-	-	✓	-
Gonçalves & Sampaio (2012)	1,210 customers C	-	-	-	-	-	✓	-	-	-
Hallowell (1996)	59 divisions L	-	✓	-	-	✓	-	-	-	-
Jha, Balaji, Yavas, & Babakus (2007)	872 customers C	✓	-	✓	-	-	-	✓	-	-
Kamakura, Mittal, De Rosa, & Mazzon (2002)	5055 customers C	-	-	-	Behavior intention and customer behavior	✓	-	-	-	-
Keiningham, Perkins-Munn, & Evans (2003)	348 customers C	-	-	-	-	-	-	-	✓	-
Keiningham, Zahorik, & Rust (1994)	400 customers C	✓	-	-	-	-	✓	-	-	-
Larivière (2008)	522 customers L	✓	-	✓	Retention and SOW	✓	-	-	-	-
Larivière, Aksoy, Cooil, &	802 households	-	-	-	-	-	-	-	✓	-

Keiningham (2011)	<i>C</i>									
Liang & Wang (2008)	1,043 customers <i>C</i>	✓	✓	-	<i>Trust /commitment</i>	-	✓	✓	-	-
Liang, Wang, & Farquhar (2009)	396 customers <i>C</i>	✓	✓	-	<i>Perceived benefits, trust and commitment</i>	-	✓	-	-	<i>Cross-buying</i>
Loveman (1998)	450 branches <i>L</i>	✓	✓	✓	<i>Employee satisfaction and loyalty</i>	✓	-	✓	-	-
Ou & Verhoef (2017)	10,527 customers; 5 firms from banking industry <i>C</i>	-	-	-	-	-	✓	-	-	-
Ou, Verhoef, & Wiesel (2017)	301–781 customers from banking industry <i>C</i>	-	-	-	-	-	✓	-	-	-
Rust & Zahorik (1993)	100 customers <i>C</i>	-	-	-	-	-	✓	-	-	<i>Market share</i>
Rust, Lemon, & Zeithaml (2004)	355 customers <i>C</i>	-	-	-	-	✓	-	-	-	-
Varki & Colgate (2001)	828 customers <i>C</i>	✓	-	-	-	-	✓	-	-	-

Verhoef (2003)	1,677 customers in T0; 918 customers in T1 L	-	-	-	-	-	✓	-	✓	-
Verhoef, Frances, & Hoekstra (2002)	1,986 customers L	-	-	-	-	-	-	-	-	Customer referrals and number of services purchased
Vogel, Evanschitzky, & Ramaseshan (2008)	5,694 customers C	-	✓	-	-	-	-	✓	-	-
Yavas, Babakus, & Ashill (2010)	50 branches C	✓	-	-	Service climate and employee performance	-	-	✓	-	-
Current study	1,990 customers C	-	-	-	Customer experience quality	✓	-	-	-	-

Note: In the column for sample size and study design, **C** means cross-sectional data and **L** refers to longitudinal data

To fill this important gap, in this study we build on two central premises of customer experience management to develop an empirical application that helps provide a better understanding of the drivers and consequences of the customer experience. First, companies invest in value, brands, and relationships (i.e., equity drivers; Zeithaml et al., 2001) to provide satisfactory experiences to customers in order to establish, develop, and maintain successful and profitable relationships with them. Second, the customer experience is created not only by those elements that companies can control (i.e., investments in value, brand, and relationships), “but also by elements that are outside of the [firm’s] control” (Verhoef et al., 2009, p. 32). Among these external forces, of particular relevance is the influence of others (Brodie, Hollebeek, Jurić, & Ilić, 2011; Chandler & Lusch, 2015; Colm, Ordanini, & Parasuraman, 2017; De Keyser et al., 2015). As noted by Verhoef et al. (2009, p.34), “the experience of each customer can impact that of others”, since in many forms of service setting, the stimulus presence of multiple customers is common (Jung, Yoo, & Arnold, 2017). Thus, our study aims to provide a better understanding of the impact of firms’ investments in building satisfactory experiences with customers, and of the role played by the social influence exerted by other customers’ experiences. The study also aims to explore the performance consequences of the customer experience.

To do so, this research offers a unified framework to understand the customer experience that integrates the customer’s perceptions of the firm’s investments in value, brand, and the relationship (equity drivers; Zeithaml et al., 2001), and the social influence exerted by other customers (Verhoef et al., 2009). Specifically, we argue that the way in which customers evaluate their experiences with companies is a function of (1) the assessment they make about the utility (i.e., benefits vs. sacrifices) of the good/service (i.e., value equity), (2) the subjective and intangible assessment of the brand (i.e., brand equity), and (3) the customer perceptions about the relationship with the firm (i.e., relationship equity). We argue that the perceptions

about the customer experience will be affected by social influence, or the degree to which individuals are exposed to and influenced by others' experiences. Importantly, we propose that the extent to which the three equity drivers influence the customer experience will be moderated by the social influence exerted by others. Our framework also establishes a direct link between the customer experience and financial performance (i.e., customer profitability). Combining cross-sectional (perceptual) data with longitudinal (actual) purchase behavior for a sample of 1,990 customers, the framework is tested empirically in the financial services industry.

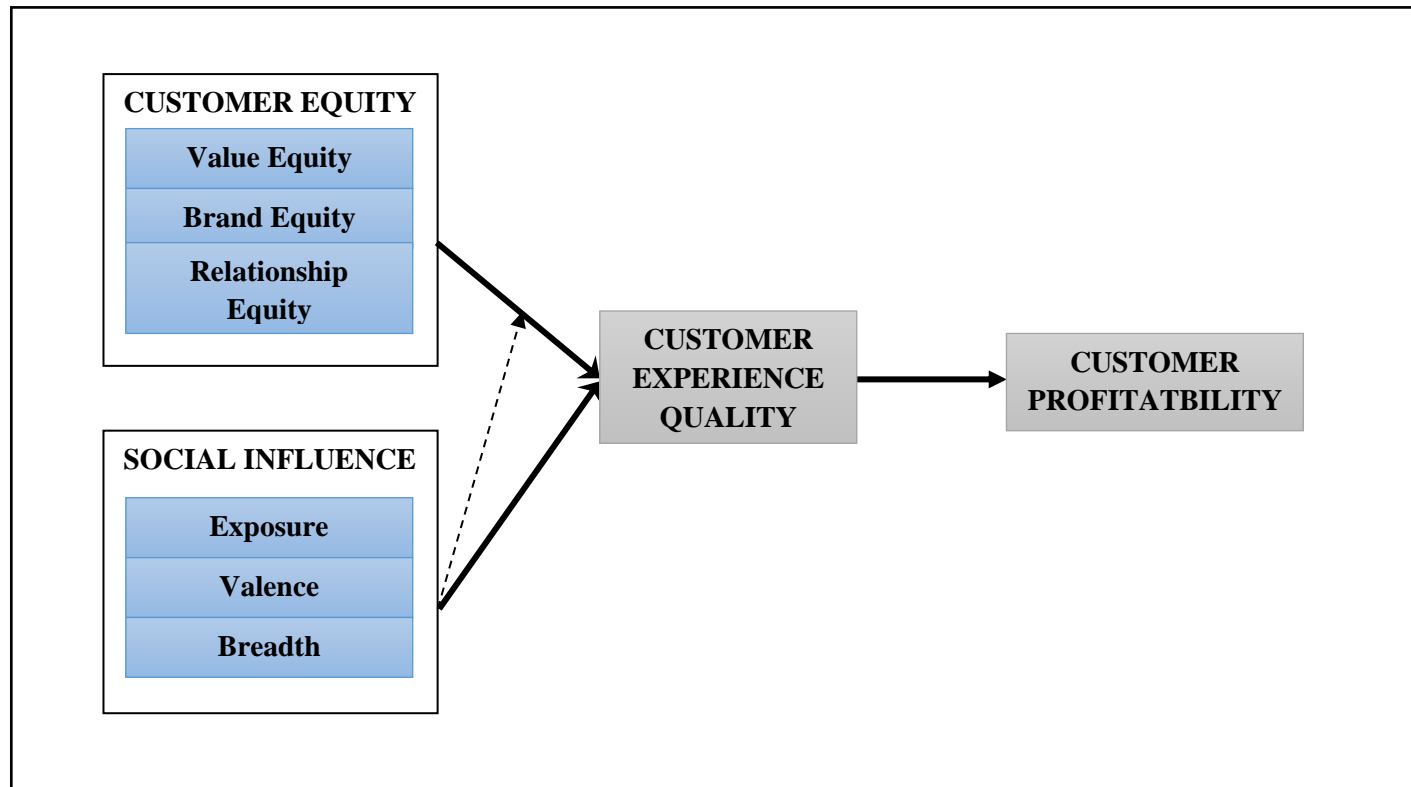
With these objectives in mind, this study intends to contribute to the emerging literature on the customer experience in three main ways. First, we connect insights on customer relationship management and on customer experience management and provide an integrative framework of the linkages between customer perceptions of marketing investments in value, the brand, and relationships (customer equity framework; Zeithaml et al., 2001) and the customer experience (customer experience framework, Lemon & Verhoef, 2016). Second, we address recent calls for a better understanding of the elements affecting the customer experience that fall outside the firm's control and investigate the impact of social influence (De Keyser et al., 2015). Importantly, we distinguish between three dimensions of social influence (i.e., extent, valence, and breadth), and examine their direct (and distinctive) impact on the customer experience as well as their moderating role in the linkages between the customer equity drivers and the customer experience. Finally, we relate the three equity drivers to the customer experience and, then, to performance outcomes (i.e., customer profitability). This enables us to provide a direct link between a firm's investments in value, the brand, and relationships and the firm's bottom line, and to offer evidence for the first time of the financial implications of the customer experience.

2.3 CONCEPTUAL FRAMEWORK

In this section, we develop a conceptual framework to understand the drivers and consequences of the customer experience. We draw from previous frameworks in customer relationship management and customer experience management, and offer an integrative view of the linkages between marketing investments in value, the brand, and the relationship, the customer experience, and performance outcomes. Specifically, we build on the customer equity framework, developed by Rust et al. (2004), under which customer perceptions of marketing investments in value, brand, and relationships affect customer attitudes and behaviors and, in turn, firm performance outcomes. Thus, we propose that the three equity drivers in the customer equity framework (i.e., value equity, brand equity, and relationship equity) will be central to understanding the customer experience. Importantly, by considering the three equity drivers and, thus, investments in marketing activities devoted to the products and services (i.e., value), the brand, and the relationship, we are simultaneously considering the wide variety of drivers that have been suggested by previous research (Lemke et al., 2011; Lemon & Verhoef, 2016; Verhoef et al., 2009). We also build on recent frameworks on customer experience management (Chandler & Lusch, 2015; De Keyser et al., 2015; Lemon & Verhoef, 2016) that recognize that, in addition to the firm's marketing investments, the customer experience is significantly influenced by elements that are outside the firm's control. The social environment (Verhoef et al., 2009) and, in particular, the influence exerted by other customers through sharing their own experiences (Lemon & Verhoef, 2016; Lemke et al., 2011) represent a strong force potentially affecting the customer experience. In our framework, drawing on previous studies (De Vries, Gensler, & Leeflang, 2012; Godes & Mayzlin, 2004; Nitzan & Libai, 2011; Weinberg & Pehlivan, 2011), we distinguish between three important dimensions of the social influence exerted by others: (1) exposure, (2) valence, and (3) breadth; and propose that social influence will have a direct effect on the customer experience and also an indirect effect by moderating

the influence of the three equity drivers on the customer experience. We combine these ideas in Figure 2.1, where we offer a graphical representation of the proposed framework. We now discuss the central constructs of our model.

Figure 2.1: Conceptual framework



Customer experience quality. Previous studies have conceptualized the customer experience in different ways (see Lemon & Verhoef, 2016 for a review on various conceptualizations of the construct). In general, these definitions view the customer experience as a holistic construct, incorporating the customer reaction to all interactions and touchpoints with the firm over time (Gentile et al., 2007; Verhoef et al., 2009). Within this line of thought, Lemke et al. (2011, p. 848) conceptualize the customer experience as “the subjective response to the holistic direct and indirect encounter with the firm”. Lemke et al. (2011) further argue that, similar to perceptions of product and service quality, individuals can articulate differences in the quality of experiences by making judgments about their excellence or superiority. They introduce the concept of customer experience quality, which we adopt in this research. The authors define this construct as the “perceived judgment about the excellence or superiority of the customer experience” (Lemke et al., 2011, p. 849). This is considered a superior construct, as it can help discriminate among different experiences based on their excellence or superiority and, thus, “link more strongly to customer relationship outcomes”.

Equity drivers. In one of the first attempts to connect marketing investments to performance outcomes, Rust et al. (2004) offer a conceptual framework to understand the impact of marketing activities on customer perceptions and preferences, which in turn affect customer behavioral reactions and, ultimately, the lifetime value of each individual customer. Aggregated across all the firm’s customers, this determines the equity of a firm (i.e., customer equity). This customer equity framework considers strategic investments in three core categories: (1) value (i.e., value equity), (2) the brand (i.e., brand equity), and (3) the relationship (i.e., relationship equity). Value equity refers to “the customers’ objective assessment of the utility of a brand based on perceptions of what is given up for what is received” (Vogel et al., 2008, p. 99). Brand equity considers “the customer’s subjective and intangible assessment of a brand, above and beyond its objectively perceived value” (Zeithaml et al., 2001,

p. 57). Finally, relationship equity refers to the “customer’s view of the strength of the relationship between the customer and the firm” (Zeithaml et al., 2001, p. 55–56).

Social influence. As noted previously, customer experience management research has acknowledged the central role that factors falling outside the firm’s control and, in particular, the role of other customers’ experiences (Chandler & Lusch, 2015; De Keyser et al., 2015; Verhoef et al., 2009) may play in understanding how individuals perceive their experiences with firms. This influence exerted by others, or social influence, is conceptualized as “the transfer of information from one customer (or a group of customers) to another customer (or group of customers) in a way that has the potential to change their preferences, actual purchase behavior, or the way they further interact with others” (Libai et al., 2010, p. 269). In this research, drawing on previous studies (De Vries et al., 2012; Godes & Mayzlin, 2004; Nitzan & Libai, 2011; Weinberg & Pehlivan, 2011), we distinguish between three central dimensions of social influence: (1) exposure, (2) valence, and (3) breadth. Exposure refers to the number of individuals in a customer’s personal social network to which the customer can potentially be exposed (Nitzan & Libai, 2011). Valence indicates whether the content of the messages to which the customer is exposed in his or her personal social network is predominantly positive or negative (De Vries et al., 2012). Breadth refers to the number or diversity of topics and perspectives discussed around the customer experience with a certain company in the conversations or interactions with other individuals that belong to the same social network (Godes & Mayzlin, 2004; Weinberg & Pehlivan, 2011). By distinguishing between these three central dimensions of social influence, our study intends to offer novel insights into the implications of the social environment for the customer experience.

Performance outcomes. In addition to investigating the drivers of customer experience (equity drivers and social influence), this study is concerned with its consequences in terms of firm performance outcomes. Specifically, we investigate the extent to which customer

experience quality may affect an individual-level measure of performance: customer profitability. Customer profitability is conceptualized as the difference between customer revenues and costs, which are central components in the calculation of customer lifetime value. By establishing the links between customer experience quality and customer profitability, this study intends to provide a connection between investments in marketing activities to improve value, the brand, and the relationship, and financial performance (Rust et al., 2004).

2.4 HYPOTHESES DEVELOPMENT

2.4.1 Customer Equity Drivers and Customer Experience Quality

We argue that customers' perceptions of the investments made by companies in the three key strategic levers of value, brand, and relationships will impact how customers internally and subjectively react to the holistic direct and indirect encounter with the firm. Thus, we expect value equity, brand equity, and relationship equity to have a positive impact on the customer experience.

With regard to value equity, equity theory maintains that perceived value equity produces positive affective states that lead to positive attitudes toward firms (Adams, 1965). Holbrook (1994) emphasizes that value equity is the fundamental basis for all marketing activity, since high value is one primary motivation for customer evaluations of the relationship and subsequent purchase behavior. In addition, customers' favorable perceptions of the outcome–input ratio promote the experience of inner fairness (Oliver & Swan, 1989), which leads to higher satisfaction with a firm's offerings when they perceive high value equity (Ou, De Vries, Wiesel, & Verhoef, 2014) and, thus, to the perception of a superior experience.

H1a: Value equity will have a positive impact on the quality of the customer experience.

On the subject of brand equity, Schmitt (1999) acknowledges the importance of this equity driver on the customer experience by noting that branding is a rich resource of sensory, affective, and cognitive associations that result in memorable and rewarding brand experiences. Similarly, Gentile et al. (2007) claim that a good brand leads to a strong emotional link with customers, involving their affective system through the generation of moods, feelings, and emotions. Thus, when the perceived brand equity is strong, customers should be more emotionally linked with the company, thus judging the experiences as superior.

H1b: Brand equity will have a positive impact on the quality of the customer experience.

Finally, better perceptions of the relationship positively influence customers' emotions toward or feelings associated with the firm and contribute to the formation of an affective component of attitude (Chaiken & Eagly, 1976). High relationship equity implies that customers are well treated and handled with particular care (Vogel et al., 2008) and feel familiar with the firm and its employees, which provides important psychosocial benefits (Vogel et al., 2008). Since the value derived from the relationship between customers and firms reflects the experiential, emotional, and affective worth of consumption (Lemke et al., 2011), higher perceptions of relationship equity will be associated with a superior experience.

H1c: Relationship equity will have a positive impact on the quality of the customer experience.

2.4.2 Social Influence and Customer Experience Quality

The customer experience is expected to be influenced not only by elements under the control of the firm (equity drivers through firm investments in value, brand, and relationships),

but also by aspects that fall outside the firm's control, such as social influence. As noted previously, we distinguish between three dimensions of social influence.

Exposure, or the extent to which a customer is exposed to a large number of individuals in her personal social network, is expected to affect the perceived quality of the customer experience. As noted on diffusion theory (Rogers, 1995), as well as in previous research in sociology (Chaiken, 1980; Weaver, Garcia, Schwarz, & Miller, 2007), individuals who are related to many members have a higher probability of being affected by others, since their related partners can provide more information about the product/service in question or the firm, ultimately exercising greater joint influential power (Katona, Zubcsek, & Sarvary 2011). In addition, if consumers continue receiving a large amount of similar exposures, they will be more easily persuaded, as several studies document that the simple repetition of statements increases the subjects' belief in their validity (Nickerson, 1998). Similarly, the mere number or quantity of exposures may be interpreted as a signal of popularity (Weaver et al., 2007) and, thus, irrespective of the nature of the information, lead to a higher preference and better assessment of the firm and the experience.

The impact of social influence on the customer experience will also depend on whether the content of the messages is predominantly positive or negative (Godes & Mayzlin, 2004). Being exposed to positive (negative) comments on experiences with the firm by other customers can lead to two divergent consequences: (1) an increase (decrease) in customer expectations that will reduce (increase) the quality of the experience (as experiences have been conceptualized also in terms of the expectation-disconfirmation paradigm; Lemon & Verhoef, 2016; Ofir & Simonson, 2007) and (2) an increase in the probability that customers will search for positive (negative) information that confirms their previous expectations based on comments by others (Shin, Song, & Biswas, 2014) and, thus, that social influence will color their perceived experiences in a similar way to the valence of the messages. Given that the

information customers receive comes from the personal social network in which they strongly trust, and that customers tend to conform to the opinions of others (Hu & Van den Bulte, 2014), we expect the second effect to dominate and, thus, that being exposed to positive (negative) information will lead to an increase (decrease) in the quality of the customer experience.

The breadth of social influence, or diversity of topics and perspectives discussed around the customer experience, is expected to lead to a decrease in the quality of the customer experience. Our expectation is based on information processing theories and the limited cognitive ability of customers when processing information (Puccinelli et al., 2009; Rottenstreich, Sood, & Brenner, 2006). According to the accessibility-diagnostics model (Feldman & Lynch, 1988), when information is perceived as wide and broad, it is considered more ambiguous and less diagnostic and, thus, is more easily ignored or discarded. Usually, a large range of topics contained in a conversation among customers will require more cognitive effort for consumers (Rottenstreich et al., 2006), and thus they might end with a frustrating and unpleasant experience. Instead, specific information about a problem or situation is considered more useful than wide or extensive information (Puccinelli et al., 2009). A source that has been shown to provide such information clearly is likely to be used more frequently than sources providing no concise information (Chaiken & Eagly, 1976). Thus, higher breadth of information concerning others' experiences will have a negative influence on the assessment of the customer experience.

***H2a:** Social influence in terms of exposure will have a positive impact on the quality of the customer experience.*

***H2b:** The positive valence of social influence will have a positive impact on the quality of the customer experience.*

***H2c:** Social influence in terms of breadth will have a negative impact on the quality of the customer experience.*

2.4.3 Moderating Role of Social Influence in the Relationship between Value Equity and Customer Experience Quality

Social comparison theory posits that people are generally motivated to evaluate their opinions and abilities, and that one way to satisfy this need for self-evaluation is to compare themselves to others (Festinger, 1954). Thus, in the relationship between the outcome to input ratio, or what is given up for what is received, and the customer experience, individuals will likely consider others' experiences to form an overall assessment of the fairness of the exchange that considers not only an internal perspective, but also an external component (i.e., others' performances or opinions; Festinger, 1954). In support of this, the argument of inequity in social exchange states that perceived equity can be affected by other persons through expectations, as individuals in social exchange compare with each other the ratios of their inputs into the exchange to their outcomes from the exchange (Adams, 1965).

Concerning the exposure dimension of social influence, we anticipate two potential effects operating in different directions. On the one hand, one of the arguments advanced previously suggested that individuals exposed to a large number of members in their social network sharing experiences may make judgments about the popularity of the firm and its products and services (Weaver et al., 2007), leading to an increase in their expectations for a positive input to outcome ratio and, in turn, to a weaker association between value equity and the customer experience. On the other hand, information processing suggests that high volumes of information are aversive given individuals' limited cognitive capacity (Rottenstreich et al., 2006). For consumers who are highly connected to other customers, making comparisons with other customers in terms of value equity will be more difficult due to the large amount of information received. Thus, the information can be ignored or discarded (Chaiken & Eagly, 1976). With regard to the valence of social influence, we expect positive (negative) information to increase (decrease) expectations (Oliver & Swan, 1989) and, thus, to lead to a less positive

(less negative) association between value equity and the quality of the customer experience. When the normative expectations of the person making social comparisons are violated, that is when customers that their outcomes and input are not in balance in relation to those of others, feelings of inequity will result (Bagozzi, 1975). Thus, for a given input to outcome ratio, being exposed to positive experiences shared by individuals in the personal social network will lead to a weaker effect of the value equity on the experience. With regard to the breadth of the social influence, we posit that the breadth of the information received will not significantly alter the link between value equity and the customer experience, because, applying the dual-process theory of information processing (Chaiken, 1980), consumers tend to discard ambiguous or less diagnostic information.

H3: The positive relationship between value equity and the quality of the customer experience will be moderated by social influence such that:

- a* it can be weakened or not affected by exposure
- b* it will be weakened by positive valence
- c* it will not be affected by breadth

2.4.4 Moderating Role of Social Influence in the Relationship between Brand Equity and Customer Experience Quality

According to schema theory (Eysenck & Wilson, 1984), human memory can be thought of as a network of nodes, denominated schemas, which represent encoded information. Knowledge about brands operates with these schemas that are stored in the mind and help structure and organize brand-related concepts and guide the processing of incoming brand information. When customers compare information received from other customers with their stored knowledge (Eysenck & Wilson, 1984), the degree of fit with previously established

brand perceptions affects subsequent processing of the information as well as the formation of attitudes toward it. Thus, we expect others' opinions on the brand to potentially affect the positive link of brand equity and customer experience.

An increased exposure to brand information facilitates the conscious retrieval of brand information-related nodes linking the process, and strengthening brand awareness by increasing the possibility of brand recognition and brand recall (Hutter, Hautz, Dennhardt, & Füller, 2013). In addition, information from other customers is retrieved more easily from memory and its impact on consumers is relatively greater (Herr, Kardes, & Kim, 1991). Thus, increased exposure to information about brands from other individuals can enhance the impact of brand equity on the customer experience. With regard to the valence of social influence, customers' discussions about positive brand experiences can generate empathy and positive feelings among information receivers (Bickart & Schindler, 2001). Considering that brand image is based upon the linkages a consumer holds in his/her memory structure regarding the brand (Keller, 1993), positive information from other customers will reinforce positive brand image sustained in the memory structure. However, the moderating impact of the breadth of the information exchanged with other customers about their experiences with the firm is more uncertain. On the one hand, broad-based and up-to-date information facilitates members' learning, increasing brand awareness. Godes and Mayzlin (2004) empirically show that the dispersion of conversations across brand communities offers more incremental information or brand knowledge. On the other hand, customers require relevant information that is useful or pertinent to the decision-making process (MacInnis, Moorman, & Jaworski, 1991). According to motivation, opportunity, and ability theory (MOA; MacInnis et al., 1991), the relevance of brand information to activated needs is the mechanism that stimulates information processing, and a large range of topics will reduce the level of relevance of the information, leading to a lower level of information-processing motivation.

H4: The positive relationship between brand equity and the quality of the customer experience will be moderated by social influence such that:

- a* it will be strengthened by exposure
- b* it will be strengthened by positive valence
- c* it will not be affected by breadth

2.4.5 Moderating Role of Social Influence in the Relationship between Relationship Equity and Customer Experience Quality

Social identity theory (Brewer, 1991) posits that in articulating their sense of self, individuals typically go beyond their personal identity to develop a social identity. The individual self-concept is thus derived from perceived membership in relevant social groups, with the relationships formed with companies playing a central role in the formation of the social identity, that is, consumers form relationships with a certain company to construct and express their desired identities (Bhattacharya & Sen, 2003).

People have a natural drive to be different (Brewer, 1991) and, according to the signaling identity approach developed by Berger and Heath (2008), individuals often tend to diverge from other individuals to ensure that they make desired identity inferences about them. As Berger and Heath (2008) contend, consumers usually experience a negative emotional reaction when they feel overly similar to others because of countervailing pressures for differentiation. Thus, being exposed to too many opinions from others on experiences with the firm may threaten an individual's self-concept and negatively affect the link between relationship equity and experience. With respect to the valence of information, people seek to craft a favorable self-presentation through verbally conveying positive self-related information (i.e., information related to a certain product, brand, and company; Bhattacharya & Sen, 2003). However, the

positive self-related information in one's own communication can be considered bragging (Berman, Levine, Barasch, & Small, 2015) and can lead to less than favorable impressions of both the communication and, potentially, the relationship with the related company (Ferraro, Kirmani, & Matherly, 2013). Therefore, messages that include cues signaling positive aspects in order to improve self-enhancement might decrease the persuasiveness of a boastful source of information (Ferraro et al., 2013). Finally, concerning the breadth of social influence, the literature on individual drives for differentiation suggests people diverge as a result of too much similarity, which increases social identity threat (Irmak, Vallen, & Sen, 2010). Thus, we speculate that a wide variety of topics discussed may reduce the threat in forming a differentiated social identity through the maintenance of a relationship with the firm, as the consumer realizes that individuals use the relationship to satisfy different self-identity needs (Brewer, 1991). As a result, the link between relationship equity and the customer experience will be reinforced under the higher breadth of information.

H5: The positive relationship between relationship equity and the quality of the customer experience will be moderated by social influence such that:

- a* it will be weakened by exposure
- b* it will be weakened by positive valence
- c* it will be strengthened by breadth

2.4.6 Customer Experience Quality and Performance

We follow previous conceptual arguments suggesting that providing superior experiences to customers is a key determinant of long-term success, leading to the development of strong customer–firm relationships, to superior attitudinal and behavioral reactions from customers, and even to the creation of a sustainable competitive advantage for firms (De Keyser

et al., 2015; Lemon & Verhoef, 2016). At the individual customer level, we expect customers who perceive their experiences with the company to be of a high quality to develop favorable behaviors toward the firm (e.g., cross-buying, increased product or service usage, repatronage, etc.) leading to both increased revenues and lower costs, and thus positively impacting the profitability of the firm.

H6: The quality of the customer experience will have a positive impact on customer profitability.

2.5 DATA AND METHODOLOGY

2.5.1 Sample and Data

We test empirically the proposed conceptual framework and its associated hypotheses in the financial services industry using data from a major bank in a European country that sells financial services in different categories (e.g., certificates of deposit, savings accounts, mortgages) to individual customers (B2C). The data combines transactional and perceptual information with targeted marketing activities and with demographic data to derive a comprehensive dataset that enables us to test the proposed framework.

Perceptual information (equity drivers, social effects, and customer experience quality) was obtained after carrying out a survey in December 2012 among customers from the collaborating bank using an external market research company. After designing the survey, a pre-test was carried out with financial services users (marketing students and researchers from several universities) in order to check the comprehensibility and adequacy of all the items. The market research company approached by telephone a total of 5,848 representative customers from the bank for which transactional information was available. Individuals taking part in the study were asked to score statements about the company from 1 (strongly disagree) to 7

(strongly agree). We obtained an effective sample of 1,990 questionnaires, which constitutes a response rate of 34.19%. Confidentiality and anonymity were ensured, and the market research company tried to avoid customers responding artificially or in a dishonest manner (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The design of the questionnaire introduced separations and pauses between the different variables in such a way that the respondents could not use their previous responses in subsequent answers. The design of the survey also ensured that the respondents could not establish cause–effect links between the dependent and independent variables. Given the use of perceptual information, we needed to ensure common method bias is not a concern in our study. We applied several procedural and statistical methods (Podsakoff et al., 2003; Podsakoff & Organ, 1986). We performed an exploratory factor analysis, where all the items loaded on their respective scales.

In addition to perceptual information, we also had access to objective data about the transactions made by the customers, the targeted marketing activities developed by the bank, customer profitability, as well as customer demographic information. To ensure causality in our models, we used 2012 to measure the customer transaction activity (e.g., cross-buy, number of channels used, relationship duration), as well as any targeted marketing activities by the bank (i.e., direct marketing) that could affect customer attitudes at the end of the year (as measured in the survey). Customer profitability was measured at the beginning of 2013 (January to March).

2.5.2 Variable Measurement

The description of the measurement of the variables in our study and their descriptive statistics are displayed in Table 2.2. The scales used to measure the perceptual variables appear in Table 2.3, which are all adapted from previous studies, as we discuss below. For all these

variables, respondents had to score the statements about the company from 1 (strongly disagree) to 7 (strongly agree). Table 2.3 also shows the Cronbach's alphas of the constructs, which all exceed the critical threshold of 0.7 (Nunnally & Bernstein, 1994). Table 2.4 includes a table with the correlation matrix for the study variables. Although the correlation values between subjective measures might be considered high, the results of the exploratory factor analysis carried out using SPSS including all of the scales led to a favorable factor solution where all items loaded on their respective scales.

Table 2.2: Descriptive statistics

		Description	Mean	SD
Dependent Variable	<i>Customer profitability</i>	Customer profitability (in euros) is measured as the sum of customer gross margin (customer incomes – costs), non-financial products, and commissions between January and March 2013 (<i>t2</i>).	238.67	450.72
Equity Drivers	<i>Value equity</i>	Value equity of customer <i>i</i> is measured as the average of three items collected through the survey (from 1: strongly disagree to 7: strongly agree) in December 2012 (<i>t1</i>).	4.84	1.66
	<i>Brand equity</i>	Brand equity of customer <i>i</i> is measured as the average of three items collected through the survey (from 1: strongly disagree to 7: strongly agree) in December 2012 (<i>t1</i>).	4.92	1.54
	<i>Relationship equity</i>	Relationship equity of customer <i>i</i> is measured as the average of four items collected through the survey (from 1: strongly disagree to 7: strongly agree) in December 2012 (<i>t1</i>).	4.95	1.64
Social Effects	<i>Exposure</i>	Exposure is measured as the degree to which customer <i>i</i> is exposed to other customers in his/her social network (from 1: strongly disagree to 7: strongly agree) in December 2012 (<i>t1</i>) and coded into a dummy variable (1 for > 4; 0 for ≤ 4).	.59	.49
	<i>Valence</i>	Valence is measured as the tone of messages (positive) that customer <i>i</i> receives from other customers in his/her social network (from 1: strongly disagree to 7: strongly agree) in December 2012 (<i>t1</i>) and coded into a dummy variable (1 for > 4; 0 for ≤ 4).	.55	.50
	<i>Breadth</i>	Breadth is measured as the variety of topics about the bank that customer <i>i</i> receives from other customers in his/her social network (from 1: strongly disagree to 7: strongly agree) in December 2012 (<i>t1</i>) and coded into a dummy variable (1 for > 4; 0 for ≤ 4).	.40	.49
Mediating Variable	<i>Customer experience quality</i>	Customer experience quality of customer <i>i</i> is measured as the average of seven items collected through the survey (from 1: strongly disagree to 7: strongly agree) in December 2012 (<i>t1</i>).	5.12	1.57
Control Variables	<i>Targeted marketing activities</i>	The total number of direct marketing communications initiated by the firm to customer <i>i</i> from January to December 2012 (<i>t0</i>) (i.e., offers of products/services, promotions, information, etc.).	.26	.28
	<i>Relationship duration</i>	The number of years that customer <i>i</i> has been a customer of the bank at (<i>t0</i>), December 2012	30.39	14.76
	<i>Cross-buy</i>	The total number of different products/services that customer <i>i</i> buys/contracts from January to December 2012 (<i>t0</i>).	3.74	2.05
	<i>Income</i>	Income of customer <i>i</i> is measured as a continuous variable according to the following values: (1) salary below €24,000 per year; (2) salary between €24,000 and €35,000 per year; (3) salary between €35,000 and €45,000 per year; (4) salary between €45,000 and €60,000 per year; and (5) salary above €60,000 per year. As of December 2012 (<i>t0</i>).	2.23	1.20
	<i>Gender</i>	Dummy variable (1 for men; 0 for women).	.53	.50
	<i>Age</i>	The age of customer <i>i</i> at (<i>t0</i>), as of December 2012.	53.78	13.93

Table 2.3: Scales from the literature to measure relational variables

EQUITY DRIVERS				
VALUE EQUITY (Vogel et al., 2008)		Cronbach's alpha	Factor loadings	Composite reliability
1.	I stay with this bank because both (this bank and I) can earn a profit from it.		.890	
2.	I want to keep working with this bank because it is difficult to find other banks like it.	.871	.885	.921
3.	I am happy with the service received from this bank.		.899	
BRAND EQUITY (Rust et al., 2004)		Cronbach's alpha	Factor loadings	Composite reliability
1.	I pay a lot of attention to everything about this bank.		.877	
2.	Everything related to this bank grabs my interest.	.866	.890	.918
3.	I identify myself with the values that this bank represents for me.		.896	
RELATIONSHIP EQUITY (Vogel et al., 2008; Rust et al., 2004)		Cronbach's alpha	Factor loadings	Composite reliability
1.	I have trust in this bank for hiring a financial service.		.850	
2.	I feel this bank is close to me.		.900	
3.	I think this bank makes several investments to improve our relationship.	.919	.917	.943
4.	I perceive that this bank makes an effort to improve our relationship.		.920	
SOCIAL INFLUENCE		Cronbach's alpha	Factor loadings	Composite reliability
EXPOSURE (Harrison-Walker, 2001)				
	Most of my environment (family, friends, etc.) are customers of this bank.	-	.847	-
VALENCE (Harrison-Walker, 2001)				
	Generally, the conversations I have with my environment about this bank have a positive tone.	-	.887	-
BREADTH (Cheung, Lee, & Rabjohn, 2008)				
	In conversations that I have with my environment about this bank, we discuss different topics (financial entity's products and services, profitability, image, etc.)	-	.909	-
CUSTOMER EXPERIENCE QUALITY (Chen & Chen, 2010; Otto & Ritchie, 1996)		Cronbach's alpha	Factor loadings	Composite reliability
1.	It is a pleasure for me to work with this bank.		.908	
2.	I feel comfortable when I interact with this bank.		.882	
3.	This bank meets my needs and covers my expectations.		.918	
4.	I like to interact with this bank.		.871	
5.	In my opinion, this bank really cares about keeping me as a customer.	.956	.874	.964
6.	Please value the quality of the relationship with this bank.		.901	
7.	I consider that the quality of the relationship with this bank has increased during recent months.		.870	

Table 2.4: Correlation matrix

Variables		1	2	3	4	5	6	7	8	9	10	11	12
Dependent Variables	Customer profitability	1											
	Customer experience quality	2	.1037*	1									
Equity Drivers	Value equity	3	.1037*	.9137*	1								
	Brand Equity	4	.0618*	.8233*	.7642*	1							
	Relationship equity	5	.0982*	.9382*	.8785*	.8138*	1						
Social Effects	Exposure	6	.0327	.4137*	.4031*	.3918*	.4143*	1					
	Valence	7	.0934	.6591*	.6361*	.5939*	.6591*	.3992*	1				
	Breadth	8	.0401	.4893*	.4995*	.5134*	.5063*	.4464*	.5651*	1			
Control Variables	Targeted marketing activities	9	.2518*	.0499*	.0477*	.0517*	.0565*	.0464*	.0506*	.0335	1		
	Relationship duration	10	-.0196	.0629*	.0672*	.1164*	.0743*	.2328*	.0590*	.1021*	.1685*	1	
	Gender	11	.1604*	-.1075*	-.0901*	-.1054*	-.0964*	-.0204	-.0130	-.0251	.2510*	.1568*	1
	Age	12	-.0112	.2169*	.2204*	.2639*	.2137*	.1353*	.1085*	.1440	.1729*	-.2754*	.5539*

Note: * $p < .05$: significant correlations are highlighted in bold.
 Sample size: 1,990 customers

Customer experience quality. Following Lemon and Verhoef (2016), the use of short scales is appropriate from a practical perspective, given the economic and time restrictions that firms frequently impose on the collection of perceptual information from surveys. Hence, to measure customer experience quality, we followed Chen and Chen (2010), who measured customer experience quality in the tourism context by applying the experience quality scale developed by Otto and Ritchie (1996) with four factors: hedonics, peace of mind, involvement, and recognition. According to Chen and Chen (2010), the hedonic component is associated with affective responses (i.e., excitement, enjoyment, and memorability), thus we asked customers to value the level of pleasure in working with the bank (indicating agreement with “It is a pleasure for me to work with this bank”). This item is commonly used in previous measurements of the customer experience (e.g., Cole & Scott, 2004; Lemke et al., 2011; Otto & Ritchie, 1996; Rose et al., 2012), since it is easier to deliver a memorable and positive customer experience when firms enable a pleasant and entertainment purchase journey for customers (Lemon & Verhoef, 2016). For peace of mind, which is concerned with the need for physical and psychological safety and comfort (Chen & Chen, 2010), we used two items. Customers were requested to examine the degree of comfort while interacting with the bank (indicating agreement with “I feel comfortable when I interact with this bank”) as well as personal security (indicating agreement with “This bank meets my needs and covers my expectations”). As customers’ expectations and needs determine the relative salience of products and service features (Puccinelli et al., 2009), customers usually evaluate their experience with the firm by noticing what has meaning for them (Puccinelli et al., 2009). Involvement refers to the desire to have choice and control in the service offering and the demand to be educated (Chen & Chen, 2010), thus “I like to interact with this bank” is used for this dimension. Finally, recognition is linked to feeling important and confident, with consumers being taken seriously (Chen & Chen, 2010). Therefore, we asked customers to

evaluate if the bank cares about keeping them as a customer as well as the relationship quality in relation to the bank (thus “In my opinion, this bank really cares about keeping me as a customer”; “Please value the quality of relationship with this bank”; “I consider that the quality of the relationship with this bank has increased during the last months”), as relationship quality being valued by customers by providing confidence, social, and special treatment (Lemke et al., 2011) reflects quite well the customer experience quality that customers have with firms. In total, we used seven items to identify the quality of the customer experience for the four dimensions of customer experience quality mentioned above.

Equity drivers. Value equity was measured based on the work of Vogel et al. (2008). We measured brand equity by adapting items from the research of Rust et al. (2004). Relationship equity was measured using the scales proposed by Rust et al. (2004) and Vogel et al. (2008).

Social influence. We used single-item measures for exposure, valence, and breadth of the social influence. Following Harrison-Walker (2001), exposure was measured as the extent to which many individuals in their personal social networks were discussing experiences regarding the bank (indicating agreement with “Most of my environment (family, friends, etc.) is a customer of this bank”), while valence was measured by asking respondents to identify whether the dominating tone of conversations with their social network about experiences with the bank was positive (indicating agreement with “Generally, the conversations I have with my environment about this company have a positive tone”). Breadth was measured based on the work of Cheung et al. (2008), by asking respondents to indicate the extent to which their conversations about experiences with the bank covered a wide number of different topics (indicating agreement with “In conversations I have with my environment about this bank we discuss different topics, i.e., products and services, interactions, brand image, etc.”). In line with previous research (Mende & Van Doorn, 2015), to facilitate interpretation of the moderating

effects, the three dimensions of social influence were recoded into dummy variables. Customers reporting high ratings on these three dimensions (values >4) are considered as showing high levels in the dimensions of social influence, and lower values (≤ 4) indicated low levels in the dimensions of social influence.

Customer profitability. Customer profitability was measured as the difference between customer revenues and costs, based on the information provided by the collaborating bank for each individual customer. In order to establish causal relationships between customer experience quality and customer profitability, we measure this variable in the three months following the survey (from January to March 2013). We also considered a number of additional variables, including customer purchase behavior, targeted firm activities, and demographic information. As noted previously, they are described in Table 2.1.

2.5.3 Methodology

We developed a two-equation seemingly unrelated regression (SUR) model to empirically test the proposed conceptual framework and its associated hypotheses. The SUR model is a system of linear equations with errors that are correlated across equations for a given individual (Zellner, 1962). The model consists of $j=1\dots m$ linear regression equations for $i=1\dots N$ individuals. There are a number of benefits to using the SUR modeling approach. The first is to gain efficiency in the estimation by combining information from different equations. A system of multiple equations produces more efficient estimations when the error terms of the regressions considered are allowed to correlate. When a joint relationship between the disturbances across a system of j equations is not taken into account, the results are inconsistent and biased (Ogundari, 2014). Secondly, “since some variables are dependent and independent

variables in different regressions, this technique allows us to alleviate endogeneity problems” (Autry & Golicic, 2010, p. 95).

To respect causality in the proposed chain of effects, we included objective customer-level information between January 2012 and December 2012 (t0); customer perceptual data from the questionnaire in December 2012 (t1); and customer profitability from January to March 2013 (t2). The model consists of $j=2$ linear regressions, (1) one for the antecedents of the customer experience, and (2) one for the consequences in terms of customer profitability.

For the antecedents of the customer experience, our dependent variable is customer experience quality, and we investigate the impact of a set of explanatory variables that include the three equity drivers, social influence in terms of the three dimensions that we consider, as well as a number of additional variables that control for additional sources of heterogeneity in experience. We specify a linear regression model in Equation (1) as follows:

$$\begin{aligned}
 CEQ_i = & \beta_0 + \beta_1 VE_i + \beta_2 BE_i + \beta_3 RE_i + \beta_4 Exposure_i + \beta_5 Valence_i + \beta_6 Breadth_i \\
 & + \beta_7 VE_i * Exposure_i + \beta_8 VE_i * Valence_i + \beta_9 VE_i * Breadth_i \\
 & + \beta_{10} BE_i * Exposure_i + \beta_{11} BE_i * Valence_i + \beta_{12} BE_i * Breadth_i \\
 & + \beta_{13} RE_i * Exposure_i + \beta_{14} RE_i * Valence_i + \beta_{15} RE_i * Breadth_i \\
 & + \beta_{16} Control_i + \varepsilon_i
 \end{aligned} \tag{1}$$

where CEQ_i represents the perceived customer experience quality by customer i , VE_i , BE_i , and RE_i capture the three equity drivers of value equity, brand equity, and relationship equity, respectively, as perceived by customer i ; $Exposure_i$, $Valence_i$, and $Breadth_i$ represent the three dimensions of social influence; $Control_i$ represents a vector of control variables including customer purchase behavior (e.g., relationship duration, cross-buy), targeted marketing activities, and demographic information; and ε_i is the error term. In this study, we are mainly

interested in the parameters β_1 – β_3 , which measure the direct impact of the three equity drivers on customer experience quality; the parameters β_4 – β_6 , which capture the direct impact of the three dimensions of social influence on the customer experience; and the parameters β_7 – β_{15} , which represent the moderating effect of social influence on the relationship between the equity drivers and the customer experience.

For the consequences, our dependent variable is an individual measure of customer profitability, and we investigate the impact of customer experience quality as well as a set of other explanatory variables that include transactional behavior and marketing activities together with demographic information. We specify a linear regression model in Equation (2) as follows:

$$CP_i = \alpha_0 + \alpha_1 CEQ_i + \alpha_1 Control_i + \omega_i \quad (2)$$

where CP_i represents customer profitability by customer i , $Control_i$ represents a vector of control variables including customer purchase behavior (e.g., relationship duration, cross-buy), targeted marketing activities, and demographic information; and ω_i is the error term for the equation. Here, we are interested in the parameter α_1 , which captures the impact of customer experience quality on customer profitability.

2.6 FINDINGS

In Tables 2.4 and 2.5, we report the coefficient estimates for the equation of the antecedents of customer experience quality and the estimates for the equation of the performance consequences of customer experience quality.

First, given the moderate correlations between some of the independent variables in our models, we assessed the extent to which multicollinearity might be an issue in the estimation. Following Ou and Verhoef (2017) and other papers related to customer equity drivers (e.g., Ou et al., 2017; Rust et al., 2004), we mean-centered equity drivers and social influence, as mean-centering limits multicollinearity problems in econometric models (Aiken & West, 1991; Cronbach, 1987; Shieh, 2011). Following standard practice, we computed variance inflation factor (VIF) scores to assess the presence of multicollinearity (Allison, 1999). The results show that the VIFs are below the commonly accepted threshold of 10 in studies including interacting effects (Auh & Menguc, 2005; Luo, Luo, Schatzberg, & Sia, 2013; Mason & Perreault, 1999; Phillips & Baumgartner, 2002; Teng, Shyu, Chiou, Fan, & Lam, 2010; Yang & Peterson, 2004), and therefore multicollinearity should not severely affect our regression results. Furthermore, drawing from Grewal, Cote, and Baumgartner (2004), Type II error rates become insignificant when composite reliability improves to .80 or higher R^2 reached to .75 and sample size becomes relatively large, as in our empirical application ($CR_{VE} = .921$; $CR_{BE} = .918$; $CR_{RE} = .943$; $R^2 = .925$; sample size = 1990).

Second, for the model for the drivers of the customer experience quality, in order to demonstrate the contribution of the variables to explaining the variance in the customer experience quality, we applied a hierarchy approach and introduced different categories of variables set by set. In total, three models were estimated. Model 0 is the base model that examines the impact of the control variables. Model 1 adds the main effects of the customer equity drivers and social influence. Finally, Model 2 includes the interaction terms among these variables. The results of the regression models are presented as a series of nested models (Table 2.4). An overall F-test shows that adding each set of variables improves the model fit significantly. As indicated by the model fit statistics, Model 1 fits better than null models with no explanatory variables ($F(9, 1781) = 2836.50$, $p < .001$), while Model 2 increases

significantly the explanatory power of the drivers of the customer experience quality in comparison with Model 1 ($F(12, 1778) = 2141.44, p < .001$).¹With regard to the interpretation of the findings, a positive (negative) sign for a coefficient indicates that an increase in the explanatory variable leads to an increase (decrease) in the dependent variable (perceived customer experience in the first equation, and customer profitability in the second equation).

¹ To further perform the robustness check of the proposed model, we also estimated an alternative model by excluding the last two items of customer experience quality; the results of key variables remained the same. We thank an anonymous reviewer for this suggestion.

Table 2.5: Model estimation results for equation 1

EQUATION 1		Dependent variable: Customer Experience Quality		
Model alternatives	Model 0	Model 1	Model 2	
	R ² = .0791	R ² = .9346	R ² = .9251	
Intercept	3.5235***	.5652***	.1741***	
Independent variables				
<i>Value equity</i>	-	.2812***	.3549***	
<i>Brand equity</i>	-	.1171***	.1036***	
<i>Relationship equity</i>	-	.4164***	.5355***	
<i>Exposure</i>	-	-	.1960**	
<i>Valence</i>	-	-	.9010***	
<i>Breadth</i>	-	-	-.3296***	
Moderating effects				
<i>Value equity*Exposure</i>	-	-	.0017	
<i>Value equity*Valence</i>	-	-	-.0770***	
<i>Value equity*Breadth</i>	-	-	.0107	
<i>Brand equity*Exposure</i>	-	-	.0647***	
<i>Brand equity*Valence</i>	-	-	.0065	
<i>Brand equity*Breadth</i>	-	-	-.0485	
<i>Relationship equity*Exposure</i>	-	-	-.0953***	
<i>Relationship equity*Valence</i>	-	-	-.0849**	
<i>Relationship equity*Breadth</i>	-	-	.0888**	
Control variables				
<i>Customer profitability 2012 (Log)</i>	.1432**	.0153**	.0152**	
<i>Targeted marketing activities</i>	-.0101	-.0456	-.0489	
<i>Relationship duration</i>	-.0079***	-.0020**	-.0020**	
<i>Gender</i>	-.4557***	-.0426**	-.0421**	
<i>Age</i>	.0260***	.0004	.0005	
F-test				
Change in R ²	-	.8857	.0005	
F-statistics	F (5, 1758) = 30.66	F (9, 1781) = 2,836.50	F (12, 1778) = 2,141.44	
Pr > F	-	.0000***	.0032***	

Note: Significant parameters are highlighted in bold: *** $p < .01$; ** $p < .05$; * $p < .10$.
Sample size: 1,990 customers

Table 2.6: Model estimation results for equation 2

DEPENDENT VARIABLE	
EQUATION 2	Customer Profitability 2013 (Log)
R² = .8884	
Intercept	.0493
Independent variable	
<i>Customer experience quality</i>	.0159**
Control variables	
<i>Customer profitability 2012 (Log)</i>	.9683***
<i>Targeted marketing activities</i>	-.1182**
<i>Relationship duration</i>	-.0007
<i>Gender</i>	-.0083
<i>Age</i>	-.0040***

*Note: Significant parameters are highlighted in bold: *** $p < .01$; ** $p < .05$; * $p < .10$.
Sample size: 1,990 customers*

With regard to the model of the drivers of customer experience, the results reveal that each of the three equity drivers has a significant and positive impact on customer experience quality ($\beta_1 = .3549$, $p < .01$; $\beta_2 = .1036$, $p < .01$; $\beta_3 = .5355$, $p < .01$), and, thus, that customers who perceive high value equity, brand equity, and relationship equity will judge their experiences as superior, in support of H1a, H1b, and H1c. Concerning the three dimensions of social influence, we find support for our hypothesized effects (H2a, H2b, and H2c). The results reveal a positive and significant effect of exposure and valence on customer experience quality ($\beta_4 = .1960$, $p < .05$; $\beta_5 = .9010$, $p < .01$) and a negative and significant effect of the third dimension (breadth) on customer experience quality ($\beta_6 = -.3296$, $p < .01$).

Considering the moderating role of social influence in the relationship between the equity drivers and customer experience quality, we also find some significant results. We discover that the relationship between value equity and customer experience quality is only affected by the valence of social influence ($\beta_8 = -.0797$, $p < .01$), suggesting that being exposed

to positive experiences by other individuals in the personal social network weakens the relationship between these variables (in support of H3b). However, neither of the other two dimensions (i.e., exposure and breadth) ($\beta_7 = .0017, p > .10$; $\beta_9 = .0107, p > .10$), has a significant moderating impact, which is also partly consistent with our reasoning (H3a and H3c). Regarding the moderating role of social influence in the relationship between brand equity and customer experience quality, the results demonstrate that exposure is the only significant moderating dimension influence ($\beta_{10} = .0647, p < .01$). Being exposed to a large number of individuals in a social network sharing experiences about the firm strengthens the relationship between brand equity and customer experience quality (in support of H4a). While we also hypothesized a positive moderating effect of valence, the results show that this dimension does not moderate the relationship between brand equity and the customer experience ($\beta_{11} = .0065, p > .10$), failing to support H4b. The non-significant moderating role of breadth is consistent with our reasoning (H4c) ($\beta_{12} = -.0485, p > .10$). Finally, we hypothesized a negative moderating effect of exposure and valence, and a positive moderating effect of breadth, in the relationship between relationship equity and customer experience quality. The results show that being exposed to a large number of individuals sharing experiences about the firm weakens this relationship ($\beta_{13} = -.0953, p < .01$), supporting H5a. A similar result has been observed in the case of valence ($\beta_{14} = -.0849, p < .05$), in support of H5b. Finally, being exposed to a wide variety of experiences will strengthen the relationship ($\beta_{15} = .0888, p < .05$). This result offers support to H5c.

In our models, we also considered a number of control variables. First, a significant and positive association between lagged customer profitability and the customer experience quality was found ($\beta = .0152, p < .05$). The results also show a negative and significant association between relationship duration and customer experience quality ($\beta = -.0020, p < .05$). Customers

who have been with the company for longer might feel entitled to receive higher service levels; thus, their higher expectations of the experience may lead to a lower perception of its quality. Finally, we found a negative association between gender and the dependent variable ($\beta = -.0421$, $p < .05$).

In our model of the consequences of customer experience quality, we found support for hypothesis H4 that the expectation that judging experiences as superior in quality might lead to enhanced performance outcomes in the form of higher customer profitability. Specifically, customer experience quality is positively and significantly associated with customer profitability ($\alpha_1 = .0159$, $p < .05$). In line with previous customer profitability analyses (Bowman & Narayandas, 2004; Cambra-Fierro, Melero-Polo, & Sese, 2016; Reinartz, Thomas, & Kumar, 2005), the results also demonstrate that lagged customer profitability, targeted marketing activities, and age exert a strong influence in identifying the most profitable customers in the banking industry (lagged customer profitability: $\beta = .9683$, $p < .01$; targeted marketing activities: $\beta = -.1182$, $p < .05$; age: $\beta = -.0040$, $p < .01$).

2.7 IMPLICATIONS

2.7.1 Theoretical Implications

This study bridges customer experience management and customer relationship management by providing an integrative framework connecting the investments made by companies in the three strategic levers of value, the brand, and relationships and the assessment that customers make about the quality of the experience with the firm under different levels of social influence (i.e., exposure, valence, and breadth) (Table 2.7 offers a summary of the hypotheses testing results). We build on the customer equity framework proposed by Rust et al. (2004), which represents a central framework in the customer relationship management field to

manage customer relationships based on customer perceptions of value equity, brand equity, and relationship equity, and establish a direct connection with the customer experience. We also build on models of customer experience management that emphasize the central role played by elements that fall outside the company's control (De Keyser et al., 2015; Verhoef et al., 2009) and, in particular, the importance of the influence exerted by others' experiences (Colm et al., 2017). Combining these two central perspectives, we provide an integrative model that considers simultaneously customers' perceptions of a firm's investments in value, brand, and relationships (i.e., equity drivers), which capture the multidimensional nature of the customer experience through investments in different strategic levers (Gentile et al., 2007; Lemon & Verhoef, 2016; Schmitt, 1999), and social influence, and provide an empirical test of their impact on the customer experience. Importantly, given that customers can discriminate between experiences with different firms by assessing the quality of those experiences (Lemke et al., 2011), we offer a better understanding of the drivers of customer experience quality, addressing recent calls for research on this particular topic (Lemon & Verhoef, 2016).

Table 2.7: Hypothesis testing results

Hypothesis	Relationship	Moderating Effects		
		Exposure	Valence	Breadth
H1a	Positive relationship between Value Equity and Customer Experience Quality SUPPORTED	H3a	H3b	H3c
		The relationship will be weaker or not be affected PARTIALLY SUPPORTED	The relationship will be weaker SUPPORTED	The relationship will not be affected SUPPORTED
H1b	Positive relationship between Brand Equity and Customer Experience Quality SUPPORTED	H4a	H4b	H4c
		The relationship will be stronger (H4a) SUPPORTED	The relationship will be stronger (H4b) NOT SUPPORTED	The relationship will not be affected (H4c) SUPPORTED
H1c	Positive relationship between Relationship Equity and Customer Experience Quality SUPPORTED	H5a	H5b	H5c
		The relationship will not be weaker (H5a) SUPPORTED	The relationship will be stronger (H5b) SUPPORTED	The relationship will be stronger (H5c) SUPPORTED
H2a	Positive relationship between Exposure and Customer Profitability SUPPORTED			
H2b	Positive relationship between Valence and Customer Experience Quality SUPPORTED			
H2c	Negative relationship between Breadth and Customer Profitability SUPPORTED			

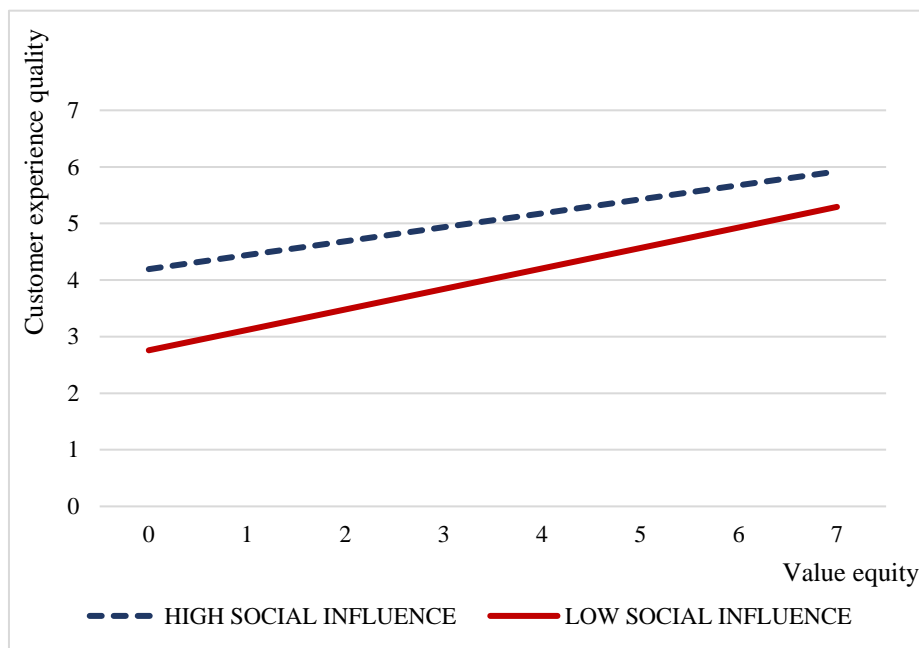
An important contribution of this study refers to providing an understanding of the role played by others' experiences in shaping an individual's perception about the superiority of her experience with the firm (Verhoef et al., 2009). We propose that social influence is multidimensional based on previous studies (De Vries et al., 2012; Godes & Mayzlin, 2004; Nitzan & Libai, 2011; Weinberg & Pehlivan, 2011), and investigate the different impact of exposure, valence, and breadth of influence on the customer experience. The results offer novel insights into the interplay between the different dimensions of social influence and the customer experience, demonstrating that being exposed to a large number of individuals sharing experiences (i.e., exposure) and to others' positive experiences (i.e., valence) enhances an

individual's perception of her experience with the firm, but that being exposed to a wide diversity of topics and perspectives discussed around the customer experience (i.e., breadth) reduces the quality of the experience. Hence, we demonstrate that an important part of the judgment that customers make about their experiences with a firm are not controlled by the firm. Importantly, we conceptually propose and empirically demonstrate that social influence exerts a moderating influence in the relationship between the three equity drivers and the customer experience. This result is important, as it suggests that the influence exerted by the investments made by companies to improve value, brand, and relationship perceptions in customer experiences is contingent on the influence that others exert on the individual through sharing their own experiences with the firm. Depending on the nature and specific dimensions of social influence, the impact of value equity, brand equity, and relationship equity on the customer experience can be strengthened or weakened. For example, being exposed to many individuals sharing experience in a social network enhances the impact of brand equity on the customer experience, but decreases the influence of relationship equity on this construct. This evidence contributes to refining our understanding of how social influence and its central dimensions of exposure, valence, and breadth operate to influence customer perceptions and behavior (De Vries et al., 2012; Godes & Mayzlin, 2004; Nitzan & Libai, 2011; Weinberg & Pehlivan, 2011).

For value equity, which relates to the need for accuracy, customers seek to compare their own choices with the standard value established on the basis of social influence. Thus, the impact of value equity on customer experience quality varies depending on the degree of social influence. The dissonance and unpleasant feelings generated from the perception of dissimilarity during the comparison process with other customers' perceived value equity would be evoked increasingly together with higher level of social influence. This is in line with our theoretical reasoning: the popularity derived from social influence might lead to an increase

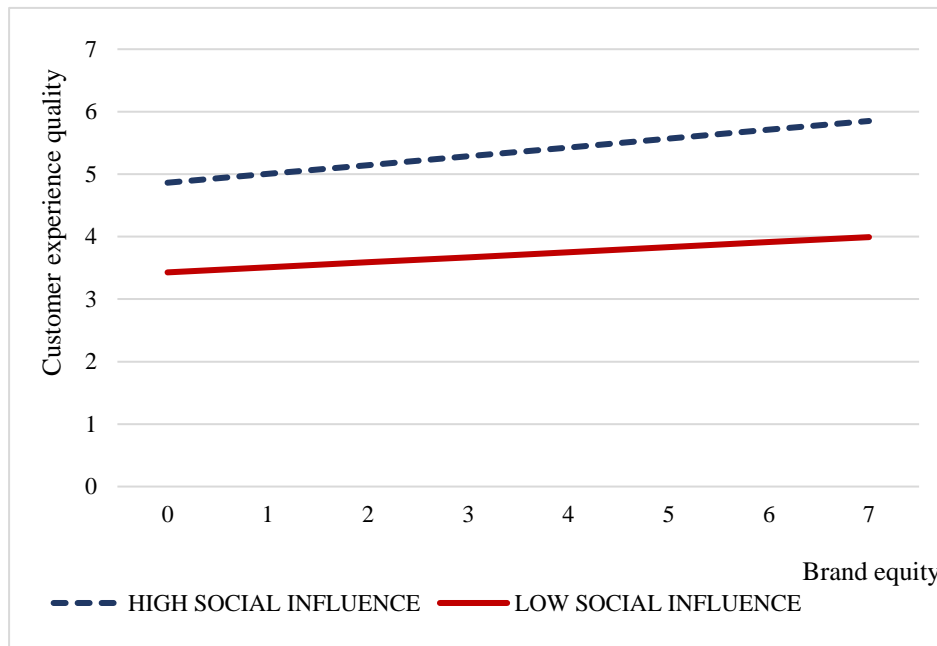
of expectation in terms of value equity, thereby boosting the possibility of an unfair customer experience. This negative feeling is especially relevant when the value equity is perceived to be low. Figure 2.2 shows these results graphically.

Figure 2.2. The moderating role of social influence on the relationship between value equity and customer experience quality



For brand equity, and the need for social identification, customers resort to brands as an identity signal to convey the desired identity to other customers in a social network. As we argued previously, a brand highly exposed by social influence might be easily considered as a symbolic resource for the construction of social identity, since it may serve as a communication tool to others, thus strengthening the impact of brand equity on customer experience quality. The role of social influence is even stronger when the brand equity is perceived as high, since customers tend to define or strengthen their positive social identity (Kirmani, 2009). Figure 2.3 shows these results graphically.

Figure 2.3. The moderating role of social influence on the relationship between brand equity and customer experience quality



The association between relationship equity and customer experience quality, the negative moderating effects caused by exposure and valence are neutralized by the positive moderating effects of breadth, thereby jointly leading to an insignificant influence of social influence in a joint manner. This evidence contributes to a refinement of our understanding of how social influence affects customer perceptions and behavior.

Finally, this study also contributes to a better understanding of the financial consequences of marketing investments in the customer experience (Lemke et al., 2011; Lemon & Verhoef, 2016; Palmer, 2010). Our study incorporates customer profitability as an outcome variable that is influenced by perceptions of the quality of the experiences that customers have with companies (Gentile et al., 2007; Grewal et al., 2009; Lemke et al., 2011; Palmer, 2010). Thus, we are able to establish a link between firms' marketing investments in the strategic levers of value, the brand, and the relationship (i.e., equity drivers), customer experience quality, and financial performance. In doing so, we provide direct evidence of the financial implications of

investments in creating superior experiences and enable marketers to quantify the economic return on those investments (Rust et al., 2004).

2.7.2 Managerial Implications

The management of the customer experience quality is considered to be a top strategic priority for most organizations in today's marketplace. Our study provides managers with a number of guidelines concerning how to manage marketing investments in ways that promote a superior experience quality that can be profitable for the firm.

An important aspect of our proposed framework is that it accounts for the multidimensional nature of customer experience quality, which is affected by investments in different strategic aspects, including value (product and service quality), brand, and the relationship. With this model, firms can identify the relative impact of each strategic lever on customer experience quality and, ultimately, on customer profitability. This can help firms prioritize their investments in ways that promote superior experience quality and enhance financial returns. Using the parameter estimates of our models, we calculated changes in customer experience quality when increasing each of the customer equity drivers by one standard deviation.² The results show that changes in customer experience quality are 22.35%, 6.02%, and 28.68% when firms are able to increase value equity, brand equity, and relationship equity, respectively, by one standard deviation. These changes ultimately result in significant improvements in customer profitability. The results suggest that relationship equity is the equity driver most highly associated with changes in customer experience quality and in customer

² We calculated changes in customer experience quality when increasing each customer equity driver by one standard deviation, as follows (Ou et al., 2017): $\frac{\beta_1 / \beta_2 / \beta_3 * \text{one SD of VE/BE/RE}}{\text{variance of customer experience quality}}$ where β_1 , β_2 , and β_3 are derived from Equation 1 of the model specification, and SD refers to the standard deviation of correspondent equity drivers.

profitability, then followed by value equity and brand equity. A useful recommendation is to develop relational targeted marketing activities as the primary task, as they are useful tools to create emotional bonds with the firm. These relational marketing activities may easily reinforce the customer's view of the strength of the relationship, thereby driving customer experience quality and profitability. Later, firms may turn to address their investments in informative targeted marketing activities in order to increase the customers' perceptions of value equity. Informative firm-initiated contacts may enable customers to better assess the utility of the offered services.

Another central issue in our study is the key role played by social influence in shaping an individual's perception of the quality of his/her experience with the firm. One direct implication is that customers who are exposed to the influence of more individuals will have richer and better experiences, owing to the reinforcing role played by the experiences of people in their social networks. This result reinforces the notion that firms should proactively leverage social information to deliver favorable experiences to their customers (Libai et al., 2010). Social influence has been regarded as a factor that falls outside a firm's control; however, we encourage firms to collect more social information about their customers, a task that is enabled by the proliferation of social media platforms (such as Facebook, Instagram, and YouTube) and by the availability and processing of big data. In some industries, such as telecommunications, interactions among consumers using telecom devices (including mobile phones) may provide a way to identify a personal social network and its specific dimensions (Nitzan & Libai, 2011; Risselada, Verhoef, & Bijmolt, 2014), while also allowing firms to gauge the nature of social influence by relying on internal transactional measures. Thus, empowered by the availability of richer information about an individual's social networks (Nitzan & Libai, 2011; Rafaeli et al., 2017), firms can now use this information strategically to improve the experiences of their customers.

Using the insights that we provide into the moderating role played by social influence in the link between the equity drivers and the customer experience quality, firms can tailor their marketing investments to the individual customer. Taking account of the characteristics of customers' social networks, firms may segment customers depending on the degree of social influence and manage their investment accordingly. For example, for individuals exposed to strong social influence, firms are advised to develop informational targeted marketing activities, as receiving valuable information from the company on its products and services will help customers to better evaluate the utility of their purchase and mitigate the negative effect of social influence. Our results suggest that investing in the brand may be more appropriate for customers who have a large number of individuals in their personal networks sharing experiences about the firm, but investing in improving the relationship will instead be more suited to customers with a small number of individuals sharing experiences. Given the potential role of social influence on brand equity and customer experience quality, firms can take a more active role in guiding interactions among customers. For instance, they can establish brand community (both online and offline) as a platform to encourage interactions and conversations among customers; the platform could be regarded as a trustworthy source of information for evaluation of products and services. For example, Sephora established a massive, well-organized forum called Beauty Talk, where their customers can ask questions, share ideas, and upload pictures of themselves wearing Sephora products. Similarly, Lego established Lego Ideas to encourage their customers to vote on their favorite products and to leave feedback on other customers' comments. Additionally, firms should pay special attention to the positive valence of social effects, as the results demonstrate that positive comments from other customers may weaken the favorable impact of value equity and relationship equity on customer experience quality, despite its positive direct influence on customer experience quality. Finally, while the breadth of social influence plays a negative role in formulating

positive customer experiences, it may strengthen the influence of relationship equity on the customer experience.

Finally, based on the connection we have established between customer experience quality and customer profitability, firms can quantify the impact on performance measures of investing in the promotion of superior experience. They can do this at the level of the individual customer, making it possible to demonstrate the contribution of marketing investment to profitability.

2.8 LIMITATIONS AND FURTHER RESEARCH

This study has a number of limitations. First, services are heterogeneous in nature and present different characteristics. Customer equity drivers and social influence are therefore likely be evaluated differently depending on the category of services (e.g., search, experience, and credence) (Jiménez & Mendoza, 2013; Kim, Lado, & Torres, 2009). We tested our framework empirically in the context of financial services, and the collaborating bank provides a broad range of banking services. Future studies could improve understanding of the customer experience by investigating the implications of the type of service, using the categories of search, experience, and credence (Kim et al., 2009).

A second limitation concerns the measurement of some of the variables. While this is a natural approach for the equity drivers and customer experience quality (Rust et al., 2004; Vogel et al., 2008), social influence can also be measured using more sophisticated measures based on actual behavioral data that is available in specific industries such as telecommunications (Nitzan & Libai, 2011; Risselada et al., 2014) or when social networking data is available. Additional dimensions of social influence such as tie strength or homophily should also be considered (Nitzan & Libai, 2011). In addition, we assume that social influence cannot be

affected by firms' strategies and, thus, treat this variable as a factor outside the firm's control. Future studies may consider the extent to which firms' social strategies influence the dimensions of social influence that we study and, in turn, the quality of the experiences. Finally, we used data from a single company. Although the sample is representative of the profile of customers of the collaborating bank, it might not be for other financial organizations.

SUMMARY:

This chapter focuses on the drivers of customer experience. Because of technological progress, the growing transparency of communications on the Internet, and the proliferation of revolutionary services, there are multiple factors out of firm's control. As a result, how to deliver compelling and memorable experiences to customers has increasingly become a relevant issue to be addressed for all organizations. In this study, we analyze the effects of aspects within and outside firms' control on customer experience. Specifically, we integrate research in customer relationship management (i.e., customer equity framework) and customer experience management and offer a unifying framework to understand the linkages between the three equity drivers (i.e., value equity, brand equity, relationship equity), the customer experience, and its ultimate impact on performance. More importantly, we take into account the moderating effects of social influence with its three dimensions (i.e., exposure, valence, and breadth) on the linkage between customer equity drivers and customer profitability in order to explain some of the proposed hypotheses in more detail.

We focus on the financial services industry. In pursuit of the proposed objective of this study, we carried out a survey based on scales consolidated in literature, to obtain information about customers' perceptions regarding customer equity drivers, social influence, and customer experience quality. In addition, we collected monthly transactional information for a sample of 1,990 customers who operated with the financial entity. By combining both sources of information, we tested the proposed hypotheses via a two-equation seemingly unrelated regression model. This methodology enables us to gain efficiency in the estimation by combining information about different equations.

As a theoretical contribution, we show the central role played by the factors both under the control of the firm (i.e., value, the brand, and the relationship) and out of its control (social

influence) in shaping customers' perceptions of the quality of their experiences. Especially, we offer new insights into the moderating role of social influence in the linkages between the equity drivers and the customer experience. As a managerial takeaway, this research demonstrates that the impact of equity drivers on the customer experience is contingent upon the influence exerted by others. Further, for the managers, we have shown that increase monetary returns to the firm can also be done by enhancing customer experience.

REFERENCES

- Accenture (2016). *Managing the B2B customer experience: Do enough to make an impact or don't bother doing it at all*. Available at <https://www.accenture.com/us-en/insight-managing-b2b-customer-experience>. (accessed 12 November 2017).
- Adams, J. S. (1965). Inequity in social exchange. *Advances in Experimental Social Psychology*, 2, 267-299.
- Aiken, L. A. and S. G. West (1991), *Multiple Regression: Testing and Interpreting Interactions*. Newbury Park, CA: Sage.
- Allison, Paul D. (1999), *Logistic Regression Using the SAS System: Theory and Application*. Cary, NC: SAS Institute.
- Arnould, E. J., & Price, L. L. (1993). River magic: Extraordinary experience and the extended service encounter. *Journal of Consumer Research*, 20(1), 24-45.
- Auh, S., & Menguc, B. (2005). Balancing exploration and exploitation: The moderating role of competitive intensity. *Journal of Business Research*, 58(12), 1652-1661.
- Autry, C. W., & Golicic, S. L. (2010). Evaluating buyer-supplier relationship-performance spirals: A longitudinal study. *Journal of Operations Management*, 28(2), 87-100.
- Bagozzi, R. P. (1975). Social exchange in marketing. *Journal of the Academy of Marketing Science*, 3(3), 314-327.
- Becker, L., & Jaakkola, E. (2020). Customer experience: Fundamental premises and implications for research. *Journal of the Academy of Marketing Science*, 48(4), 630-648.
- Berger, J., & Heath, C. (2008). Who drives divergence? Identity signaling, outgroup dissimilarity, and the abandonment of cultural tastes. *Journal of Personality and Social Psychology*, 95(3), 593.

- Berman, J. Z., Levine, E. E., Barasch, A., & Small, D. A. (2015). The Braggart's dilemma: On the social rewards and penalties of advertising prosocial behavior. *Journal of Marketing Research*, 52(1), 90-104.
- Bhattacharya, C. B., & Sen, S. (2003). Consumer–company identification: A framework for understanding consumers' relationships with companies. *Journal of Marketing*, 67(2), 76-88.
- Bickart, B., & Schindler, R. M. (2001). Internet forums as influential sources of consumer information. *Journal of Interactive Marketing*, 15(3), 31-40.
- Bowen, D. E., & Schneider, B. (2014). A service climate synthesis and future research agenda. *Journal of Service Research*, 17(1), 5-22.
- Bowman, D., & Narayandas, D. (2004). Linking customer management effort to customer profitability in business markets. *Journal of Marketing Research*, 41(4), 433-447.
- Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand experience: What is it? How is it measured? Does it affect loyalty?. *Journal of Marketing*, 73(3), 52-68.
- Brewer, M. B. (1991). The social self: On being the same and different at the same time. *Personality and Social Psychology Bulletin*, 17(5), 475-482.
- Brodie, R. J., Hollebeck, L. D., Jurić, B., & Ilić, A. (2011). Customer engagement: Conceptual domain, fundamental propositions, and implications for research. *Journal of Service Research*, 14(3), 252-271.
- Cambra-Fierro, J., Melero-Polo, I., & Sese, F. J. (2016). Can complaint-handling efforts promote customer engagement?. *Service Business*, 10(4), 847-866.
- Chaiken, S. (1980). Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology*, 39(5), 752.

- Chaiken, S., & Eagly, A. H. (1976). Communication modality as a determinant of message persuasiveness and message comprehensibility. *Journal of Personality and Social Psychology*, 34(4), 605.
- Chandler, J. D., & Lusch, R. F. (2015). Service systems: A broadened framework and research agenda on value propositions, engagement, and service experience. *Journal of Service Research*, 18(1), 6-22.
- Chang, T. Y., & Horng, S. C. (2010). Conceptualizing and measuring experience quality: The customer's perspective. *The Service Industries Journal*, 30(14), 2401-2419.
- Chen, C. F., & Chen, F. S. (2010). Experience quality, perceived value, satisfaction and behavioral intentions for heritage tourists. *Tourism Management*, 31(1), 29-35.
- Cheung, C. M., Lee, M. K., & Rabjohn, N. (2008). The impact of electronic word-of-mouth: The adoption of online opinions in online customer communities. *Internet Research*, 18(3), 229-247.
- Cole, S. T., & Scott, D. (2004). Examining the mediating role of experience quality in a model of tourist experiences. *Journal of Travel & Tourism Marketing*, 16(1), 79-90.
- Colm, L., Ordanini, A., & Parasuraman, A. (2017). When service customers do not consume in isolation: A typology of customer copresence influence modes (CCIMs). *Journal of Service Research*, 20(3), 223-239.
- Cronbach, Lee J. (1987). Statistical Tests of Moderator Variables: Flaws in Analyses Recently Proposed. *Psychological Bulletin*, 102 (3), 414-17.
- De Haan, E., Verhoef, P. C., & Wiesel, T. (2015). The predictive ability of different customer feedback metrics for retention. *International Journal of Research in Marketing*, 32(2), 195-206.

- De Keyser, A., Lemon, K. N., Klaus, P., & Keiningham, T. L. (2015). A framework for understanding and managing the customer experience. *Marketing Science Institute Working Paper Series*, 85(1), 15-121.
- De Vries, L., Gensler, S., & Leeflang, P. S. (2012). Popularity of brand posts on brand fan pages: An investigation of the effects of social media marketing. *Journal of Interactive Marketing*, 26(2), 83-91.
- Eysenck, Michael W. and Glenn Daniel Wilson (1984), *A Handbook of Cognitive Psychology*. London: Lawrence Erlbaum.
- Feldman, J. M., & Lynch, J. G. (1988). Self-generated validity and other effects of measurement on belief, attitude, intention, and behavior. *Journal of Applied Psychology*, 73(3), 421.
- Ferraro, R., Kirmani, A., & Matherly, T. (2013). Look at me! Look at me! Conspicuous brand usage, self-brand connection, and dilution. *Journal of Marketing Research*, 50(4), 477-488.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2), 117-140.
- Gentile, C., Spiller, N., & Noci, G. (2007). How to sustain the customer experience: An overview of experience components that co-create value with the customer. *European Management Journal*, 25(5), 395-410.
- Godes, D., & Mayzlin, D. (2004). Using online conversations to study word-of-mouth communication. *Marketing Science*, 23(4), 545-560.
- Grewal, D., Levy, M., & Kumar, V. (2009). Customer experience management in retailing: An organizing framework. *Journal of Retailing*, 85(1), 1-14.
- Grewal, R., Cote, J. A., & Baumgartner, H. (2004). Multicollinearity and measurement error in structural equation models: Implications for theory testing. *Marketing Science*, 23(4), 519-529.

- Harrison-Walker, L. J. (2001). The measurement of word-of-mouth communication and an investigation of service quality and customer commitment as potential antecedents. *Journal of Service Research*, 4(1), 60-75.
- Helkkula, A., Kelleher, C., & Pihlström, M. (2012). Characterizing value as an experience: Implications for service researchers and managers. *Journal of Service Research*, 15(1), 59-75.
- Herr, P. M., Kardes, F. R., & Kim, J. (1991). Effects of word-of-mouth and product-attribute information on persuasion: An accessibility-diagnostics perspective. *Journal of Consumer Research*, 17(4), 454-462.
- Holbrook, Moris B. (1994). The Nature of Customer Value: An Axiology of Services in the Consumption Experience. In R. Rust and R. Oliver (Eds.), *Service Quality: New Directions in Theory and Practice*. Thousand Oaks, CA: Sage.
- Homburg, C., Jozić, D., & Kuehnl, C. (2017). Customer experience management: Toward implementing an evolving marketing concept. *Journal of the Academy of Marketing Science*, 45(3), 377-401.
- Hu, Y., & Van den Bulte, C. (2014). Nonmonotonic status effects in new product adoption. *Marketing Science*, 33(4), 509-533.
- Hui, M. K., & Bateson, J. E. (1991). Perceived control and the effects of crowding and consumer choice on the service experience. *Journal of Consumer Research*, 18(2), 174-184.
- Hutter, K., Hautz, J., Dennhardt, S., & Füller, J. (2013). The impact of user interactions in social media on brand awareness and purchase intention: the case of MINI on Facebook. *Journal of Product & Brand Management*, 22(5-6), 342-351.

- Irmak, C., Vallen, B., & Sen, S. (2010). You like what I like, but I don't like what you like: Uniqueness motivations in product preferences. *Journal of Consumer Research*, 37(3), 443-455.
- Jaakkola, E., Helkkula, A., & Aarikka-Stenroos, L. (2015). Service experience co-creation: conceptualization, implications, and future research directions. *Journal of Service Management*, 26(2), 182-205.
- Jiménez, F. R., & Mendoza, N. A. (2013). Too popular to ignore: The influence of online reviews on purchase intentions of search and experience products. *Journal of Interactive Marketing*, 27(3), 226-235.
- Jung, J. H., Yoo, J. J., & Arnold, T. J. (2017). Service climate as a moderator of the effects of customer-to-customer interactions on customer support and service quality. *Journal of Service Research*, 20(4), 426-440.
- Kamakura, W. A., Mittal, V., De Rosa, F., & Mazzon, J. A. (2002). Assessing the service-profit chain. *Marketing Science*, 21(3), 294-317.
- Katona, Z., Zubcsek, P. P., & Sarvary, M. (2011). Network effects and personal influences: The diffusion of an online social network. *Journal of Marketing Research*, 48(3), 425-443.
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57(1), 1-22.
- Kim, M., Lado, N., & Torres, A. (2009). Evolutionary changes in service attribute importance in a crisis scenario the Uruguayan financial crisis. *Journal of Service Research*, 11(4), 429-440.
- Kirmani, A. (2009). The self and the brand. *Journal of Consumer Psychology*, 19(3), 271-275.
- Lemke, F., Clark, M., & Wilson, H. (2011). Customer experience quality: An exploration in business and consumer contexts using repertory grid technique. *Journal of the Academy of Marketing Science*, 39(6), 846-869.

- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69-96.
- Libai, B., Bolton, R., Bügel, M. S., De Ruyter, K., Götz, O., Risselada, H., & Stephen, A. T. (2010). Customer-to-customer interactions: Broadening the scope of word of mouth research. *Journal of Service Research*, 13(3), 267-282.
- Loyalty One (2017). *Customer experience intention VS. Impact: Making sense of the ever-evolving retail shopper journey*. Available at: <http://go.loyalty.com/cx-intention-vs-impact/> (accessed 24 November 2017).
- Luo, C., Luo, X. R., Schatzberg, L., & Sia, C. L. (2013). Impact of informational factors on online recommendation credibility: The moderating role of source credibility. *Decision Support Systems*, 56, 92-102.
- MacInnis, D. J., Moorman, C., & Jaworski, B. J. (1991). Enhancing consumers' motivation, ability, and opportunity to process brand information from ads: Conceptual framework and managerial implications. *Journal of Marketing*, 55(1), 32-53.
- Marketing Science Institute (2016). *Research Priorities 2016–2018*. Available at <http://www.msi.org/research/2016-2018-research-priorities/> (accessed 12 November 2017).
- Marketing Science Institute (MSI). (2020). *Research priorities 2020–2022*. Available at https://www.msi.org/wp-content/uploads/2020/06/MSI_RP20-22.pdf (accessed 26 June 2020).
- Mason, C. H., & Perreault Jr, W. D. (1991). Collinearity, power, and interpretation of multiple regression analysis. *Journal of Marketing Research*, 28(3), 268-280.
- McColl-Kennedy, J. R., Zaki, M., Lemon, K. N., Urmetzer, F., & Neely, A. (2019). Gaining customer experience insights that matter. *Journal of Service Research*, 22(1), 8-26.

- Mende, M., & Van Doorn, J. (2015). Coproduction of transformative services as a pathway to improved consumer well-being: findings from a longitudinal study on financial counseling. *Journal of Service Research, 18*(3), 351-368.
- Meyer, C., & Schwager, A. (2007). Understanding customer experience. *Harvard Business Review, 85*(2), 116.
- Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology, 2*(2), 175-220.
- Nitzan, I., & Libai, B. (2011). Social effects on customer retention. *Journal of Marketing, 75*(6), 24-38.
- Novak, T. P., Hoffman, D. L., & Yung, Y. F. (2000). Measuring the customer experience in online environments: A structural modeling approach. *Marketing Science, 19*(1), 22-42.
- Nunnally, Jum C. and Ira H. Bernstein (1994), *Psychological Theory*. New York: McGraw-Hill.
- Ofir, C., & Simonson, I. (2007). The effect of stating expectations on customer satisfaction and shopping experience. *Journal of Marketing Research, 44*(1), 164-174.
- Ogundari, K. (2014). The paradigm of agricultural efficiency and its implication on food security in Africa: What does meta-analysis reveal?. *World Development, 64*, 690-702.
- Oliver, R. L., & Swan, J. E. (1989). Consumer perceptions of interpersonal equity and satisfaction in transactions: A field survey approach. *Journal of Marketing, 53*(2), 21-35.
- Ostrom, A. L., Bitner, M. J., Brown, S. W., Burkhard, K. A., Goul, M., Smith-Daniels, V., ... & Rabinovich, E. (2010). Moving forward and making a difference: Research priorities for the science of service. *Journal of Service Research, 13*(1), 4-36.

- Ostrom, A. L., Parasuraman, A., Bowen, D. E., Patrício, L., & Voss, C. A. (2015). Service research priorities in a rapidly changing context. *Journal of Service Research*, 18(2), 127-159.
- Otto, J. E., & Ritchie, J. B. (1996). The service experience in tourism. *Tourism Management*, 17(3), 165-174.
- Ou, Y. C., & Verhoef, P. C. (2017). The impact of positive and negative emotions on loyalty intentions and their interactions with customer equity drivers. *Journal of Business Research*, 80, 106-115.
- Ou, Y. C., De Vries, L., Wiesel, T., & Verhoef, P. C. (2014). The role of consumer confidence in creating customer loyalty. *Journal of Service Research*, 17(3), 339-354.
- Ou, Y. C., Verhoef, P. C., & Wiesel, T. (2017). The effects of customer equity drivers on loyalty across services industries and firms. *Journal of the Academy of Marketing Science*, 45(3), 336-356.
- Palmer, A. (2010). Customer experience management: A critical review of an emerging idea. *Journal of Services Marketing*, 24(3), 196-208.
- Patrício, L., Fisk, R. P., & Falcão e Cunha, J. (2008). Designing multi-interface service experiences: The service experience blueprint. *Journal of Service Research*, 10(4), 318-334.
- Patrício, L., Fisk, R. P., Falcão e Cunha, J., & Constantine, L. (2011). Multilevel service design: From customer value constellation to service experience blueprinting. *Journal of Service Research*, 14(2), 180-200.
- Patrício, L., Gustafsson, A., & Fisk, R. (2018). Upframing service design and innovation for research impact. *Journal of Service Research*, 21(2), 3-16.
- Phillips, D. M., & Baumgartner, H. (2002). The role of consumption emotions in the satisfaction response. *Journal of Consumer Psychology*, 12(3), 243-252.

- Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12(4), 531-544.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879.
- Puccinelli, N. M., Goodstein, R. C., Grewal, D., Price, R., Raghurir, P., & Stewart, D. (2009). Customer experience management in retailing: Understanding the buying process. *Journal of Retailing*, 85(1), 15-30.
- Rafaeli, A., Altman, D., Gremler, D. D., Huang, M. H., Grewal, D., Iyer, B., ... & de Ruyter, K. (2017). The future of frontline research: Invited commentaries. *Journal of Service Research*, 20(1), 91-99.
- Reinartz, W., Thomas, J. S., & Kumar, V. (2005). Balancing acquisition and retention resources to maximize customer profitability. *Journal of Marketing*, 69(1), 63-79.
- Risselada, H., Verhoef, P. C., & Bijmolt, T. H. (2014). Dynamic effects of social influence and direct marketing on the adoption of high-technology products. *Journal of Marketing*, 78(2), 52-68.
- Rogers, E. M. (1995), *Diffusion of innovations*. New York: Free Press.
- Rose, S., Clark, M., Samouel, P., & Hair, N. (2012). Online customer experience in e-retailing: An empirical model of antecedents and outcomes. *Journal of Retailing*, 88(2), 308-322.
- Rottenstreich, Y., Sood, S., & Brenner, L. (2007). Feeling and thinking in memory-based versus stimulus-based choices. *Journal of Consumer Research*, 33(4), 461-469.
- Rust, R. T., Lemon, K. N., & Zeithaml, V. A. (2004). Return on marketing: Using customer equity to focus marketing strategy. *Journal of Marketing*, 68(1), 109-127.
- Schmitt, B. (1999). Experiential marketing. *Journal of Marketing Management*, 15(1-3), 53-67.

- Schouten, J. W., McAlexander, J. H., & Koenig, H. F. (2007). Transcendent customer experience and brand community. *Journal of the Academy of Marketing Science*, 35(3), 357-368.
- Shieh, G. (2011). Clarifying the role of mean centring in multicollinearity of interaction effects. *British Journal of Mathematical and Statistical Psychology*, 64(3), 462-477.
- Shin, D., Song, J. H., & Biswas, A. (2014). Electronic word-of-mouth (eWOM) generation in new media platforms: The role of regulatory focus and collective dissonance. *Marketing Letters*, 25(2), 153-165.
- Teixeira, J., Patrício, L., Nunes, N. J., Nóbrega, L., Fisk, R. P., & Constantine, L. (2012). Customer experience modeling: From customer experience to service design. *Journal of Service Management*.
- Teng, C. I., Shyu, Y. I. L., Chiou, W. K., Fan, H. C., & Lam, S. M. (2010). Interactive effects of nurse-experienced time pressure and burnout on patient safety: A cross-sectional survey. *International Journal of Nursing Studies*, 47(11), 1442-1450.
- Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of Retailing*, 85(1), 31-41.
- Vogel, V., Evanschitzky, H., & Ramaseshan, B. (2008). Customer equity drivers and future sales. *Journal of Marketing*, 72(6), 98-108.
- Weaver, K., Garcia, S. M., Schwarz, N., & Miller, D. T. (2007). Inferring the popularity of an opinion from its familiarity: A repetitive voice can sound like a chorus. *Journal of Personality and Social Psychology*, 92(5), 821.
- Weinberg, B. D., & Pehlivan, E. (2011). Social spending: Managing the social media mix. *Business Horizons*, 54(3), 275-282.

- Yang, Z., & Peterson, R. T. (2004). Customer perceived value, satisfaction, and loyalty: The role of switching costs. *Psychology & Marketing, 21*(10), 799-822.
- Zeithaml, Valarie A., Katherine N. Lemon, and Roland T. Rust (2001), *Driving Customer Equity: How Customer Lifetime Value Is Reshaping Corporate Strategy*. New York: Simon and Schuster.
- Zellner, A. (1962). An efficient method of estimating seemingly unrelated regressions and tests for aggregation bias. *Journal of the American Statistical Association, 57*(298), 348-368.
- Zomerdijk, L. G., & Voss, C. A. (2010). Service design for experience-centric services. *Journal of Service Research, 13*(1), 67-82.
- Rust, R. T., & Zahorik, A. J. (1993). Customer satisfaction, customer retention, and market share. *Journal of Retailing, 69*(2), 193-215.
- Keiningham, T., Zahorik, A. J., & Rust, R. T. (1994). Getting return on quality. *Journal of Retail Banking, 16*(4), 7-13.
- Hallowell, R. (1996). The relationships of customer satisfaction, customer loyalty, and profitability: An empirical study. *International Journal of Service Industry Management, 7*(4), 27-42.
- Loveman, G. W. (1998). Employee satisfaction, customer loyalty, and financial performance: An empirical examination of the service profit chain in retail banking. *Journal of Service Research, 1*(1), 18-31.
- Bolton, R. N., Kannan, P. K., & Bramlett, M. D. (2000). Implications of loyalty program membership and service experiences for customer retention and value. *Journal of the Academy of Marketing Science, 28*(1), 95-108.
- Varki, S., & Colgate, M. (2001). The role of price perceptions in an integrated model of behavioral intentions. *Journal of Service Research, 3*(3), 232-240.

- Verhoef, P. C., Franses, P. H., & Hoekstra, J. C. (2002). The effect of relational constructs on customer referrals and number of services purchased from a multiservice provider: Does age of relationship matter?. *Journal of the Academy of Marketing Science*, 30(3), 202-216.
- Verhoef, P. C. (2003). Understanding the effect of customer relationship management efforts on customer retention and customer share development. *Journal of Marketing*, 67(4), 30-45.
- Keiningham, T. L., Perkins-Munn, T., & Evans, H. (2003). The impact of customer satisfaction on share-of-wallet in a business-to-business environment. *Journal of Service Research*, 6(1), 37-50.
- Cooil, B., Keiningham, T. L., Aksoy, L., & Hsu, M. (2007). A longitudinal analysis of customer satisfaction and share of wallet: Investigating the moderating effect of customer characteristics. *Journal of Marketing*, 71(1), 67-83.
- Larivière, B. (2008). Linking perceptual and behavioral customer metrics to multiperiod customer profitability: A comprehensive service-profit chain application. *Journal of Service Research*, 11(1), 3-21.
- Larivière, B., Aksoy, L., Cooil, B., & Keiningham, T. L. (2011). Does satisfaction matter more if a multichannel customer is also a multicompany customer?. *Journal of Service Management*, 22(1), 39-66.
- Liang, C. J., & Wang, W. H. (2008). How managers in the financial services industry ensure financial performance. *The Service Industries Journal*, 28(2), 193-210.
- Liang, C. J., Wang, W. H., & Farquhar, J. D. (2009). The influence of customer perceptions on financial performance in financial services. *International Journal of Bank Marketing*, 27(2), 129-149.

- Yavas, U., Babakus, E., & Ashill, N. J. (2010). Testing a branch performance model in a New Zealand bank. *Journal of Services Marketing*, 24(5), 369-377.
- Gonçalves, H. M., & Sampaio, P. (2012). The customer satisfaction-customer loyalty relationship: Reassessing customer and relational characteristics moderating effects. *Management Decision*, 50(9), 1509-1526.
- Jha, S., Balaji, M. S., Yavas, U., & Babakus, E. (2017). Effects of frontline employee role overload on customer responses and sales performance: moderator and mediators. *European Journal of Marketing*, 51(2), 282-303.

CHAPTER III:

WINNING YOUR CUSTOMER'S HEART OR MIND? THE IMPACT OF CUSTOMER EXPERIENCE ON CUSTOMER RETENTION AND THE MODERATING ROLE OF LOCK-IN

3.1 INTRODUCTION

The previous chapter highlighted the need to integrate the firm perspective with the customer perspective to study key drivers of customer experience in a comprehensive manner. Consistent with our expectations, the results showed that, the factors within firms' control (i.e., value equity, relationship equity, and brand equity) exert significant influence in customer experience, and most importantly the way of how customer assess equity drivers varies depending on the aspects which are outside of firms' control, namely social influence.

In addition to customer experience drivers, to effectively manage customer experience, it is equally important for firms to quantify the consequences of their investment in customer experience. For multi-service firms the impact may be even larger, as previous studies have indicated the existence of spillover effects of customer experience, suggesting that customer attitudes and perceptions toward one product category can spill over to another product category, thereby affecting customer behaviors in that categories (Dong & Chintagunta, 2016; Keller, Geyskens, & Dekimpe, 2020; Lemon & Verhoef, 2016). While the conceptual basis for investing in customer experience is strong and suggests the need for companies to do that, empirical research mainly rely on customer perspective by focusing on perceptual consequences and behavioral intentions. Hence, empirical evidence on how (i.e., the process) and to what extent (i.e., the magnitude) customer experience investments might translate into behavioral responses are lacking (Becker & Jaakkola, 2020). The underlying reasoning is that establishing the linkage between customer experience and actual behavior (i.e., the decision to remain with the focal firm) is rather complicated, since it depends on whether the relationship is proactively maintained by firms (i.e., firm-driven lock-in) or customers (i.e., customer-driven lock-in) and through which product category the relationship is established.

To fill this gap, in this chapter we will focus on the direct impact of customer experience on customer retention in one category and another, and most importantly, the moderating effect of different types of lock-in in the context of multi-service provider. By exploring the joint effects of the lock-in and customer experience strategies on retention, we identify *whether* they complement or substitute each other and *when* these effects occur. Therefore, this chapter will respond to the second research objective: *“To investigate the behavioral consequence of customer experience given firm actively (firm-driven) and inactively (customer-driven) deployed lock-in mechanisms in a multi-service provider context”*. This global objective involves two specific research objectives: *“to analyze how customer experience influence customer retention in one category and another related one – spillover effect and, to explore how the impact of customer experience on customer retention vary across different lock-in (customer-driven and firm-driven) strategies”*.

3.2 MOTIVATION

Customer retention has always been a top priority for marketers to build successful relationships and create superior performance outcomes (Borah, Prakhya, & Sharma, 2020; Landsman & Nitzan, 2020; Neslin, Gupta, Kamakura, Lu, & Mason, 2006). The current economic landscape, marked by a global recession and intense competition between firms, inflates the centrality of building customer loyalty to keep businesses alive and sustain growth, while also raising important challenges about how to do that effectively in practice. More specifically, according to the survey developed by KPMG (2019), 78% of customers indicated that they would switch to companies with better offerings. Ascarza et al. (2018) noted the difficulties experienced by many top executives in achieving their retention goals, while recent evidence suggests that many retention initiatives do not produce the intended results. More

worryingly, a recent survey conducted by Gainsight (2020) revealed that 77.5% of the surveyed executives anticipate that their net retention rate would decrease by at least 3% and possibly by more than 20% during the global economic crisis.

Companies mainly resort to two central strategies when it comes to managing customer retention in practice. One is locking customers into the relationship through actions that increase the termination costs of the exchange (e.g., bundling, binding contract), which can lead to retention through a cognitive assessment of the costs and benefits of continuing the relationship with the firm (Andrews, Benedicktus, & Brady, 2010; Ascarza et al., 2018; Balachander, Ghosh, & Stock, 2010; Burnham, Frels, & Mahajan, 2003; Giudicati, Riccaboni, & Romiti, 2013; Jones, Reynolds, Mothersbaugh, & Beatty, 2007; Kashyap & Murtha, 2017; Nitzan & Ein-Gar, 2019; Wirtz, Xiao, Chiang, & Malhotra, 2014). We coin *firm-driven lock-in* for firms' explicit strategies to retain customers. The other is improving customer experiences, which may impact retention through the affective component of the exchange relationships (e.g., Becker & Jaakkola, 2020; Brakus, Schmitt, & Zarantonello, 2009; Brun, Rajaobelina, Ricard, & Berthiaume, 2017; De Haan, Verhoef, & Wiesel, 2015; De Keyser, Verleye, Lemon, Keiningham, & Klaus, 2020; Foroudi, Jin, Gupta, Melewar, & Foroudi, 2016; Homburg, Koschate, & Hoyer, 2006; Iglesias, Markovic, & Rialp, 2019; Ordenes, Theodoulidis, Burton, Gruber, & Zaki, 2014; Schouten, McAlexander, & Koenig, 2007). More complicated is that, in addition to the proactive efforts undertaken by firms to retain customers, customers might also be locked into the exchange relationship by themselves due to the intrinsic motivational state of customers arisen from the deeply established exchange relationship (Bolton, Lemon, & Verhoef, 2004). This is considered *customer-driven lock-in*. Examples of customer-driven lock-in would be cross-buying many products or services of one firm, or having high usage levels of one or more products or services. Such a lock-in makes it harder to switch because another firm might not offer the same (combinations of) products or services and the risk that the quality

level is not at least similar given the higher level of customer dependency on the focal firm (Gremier, Van Vaerenbergh, Brügger, & Gwinner, 2020).

A vast literature has accumulated on these two areas in recent years, providing empirical evidence that each of lock-in and customer experience as single strategy is vital to retain customers. In practice, such strategies have been frequently implemented together. However, as our selective literature overview in Table 3.1 shows, studies have looked at lock-in and customer experience effects separately. With companies simultaneously investing in lock-in and customer experience strategies and devoting significant human and economic resources to develop and implement these retention programs, providing an understanding of their joint effects on customer retention becomes essential for extending the current body of knowledge on customer retention and providing practical insights into managing relationships more effectively (Kidwell, Hardesty, Murtha, & Sheng, 2011; Kim & Kumar, 2018). Addressing such question is far more complicated than one may expect. One is that there are different ways to lock in customers, thus requiring a comprehensive view while assessing their joint effects with customer experience. However, Table 3.1 reveals that no research has simultaneously consider such different types of lock-in. Second, prior research has noted that the perception of customer experience is not limited to one product category, but also to other (related) ones (De Keyser et al., 2020). In the same vein, Table 3.1 further indicates that such aspects have been largely ignored in the customer experience related studies. Therefore, it remains unclear about a set of key questions. For example, consider a case in which a telecom firm offers to customers the option of a bundling and/or a binding contract with special benefits (i.e., reduced price or added supplementary product) in order to lock them into the exchange relationship. One key emerged question would be, is it necessary for them to dedicate further effort in improving customer experience? What would be the answer in the case where customers have obtained bad customer experience with another product from the focal firm (e.g., broadband internet)? Let us further

consider another customer, who has developed a deep exchange relationship with the firm, as it is reflected in his/her high level of usage; as such, this customer is likely to remain in the established relationship, since switching to a different firm might be risky. Thus, another emerged key question would be: should firms further deploy lock-in actions, such as bundling, binding contracts, or improve customer experience, or the combinations thereof?

Table 3.1: Selective literature review

Study	Focus of study	Method		Context	Focus on lock-in strategies			Customer experience/perceptual metrics features			Dependent variable	
		Main method	Endogeneity method		Firm-driven		Customer-driven	Main Aspects				
					Bundling	Binding contract	Usage level	Customer experience/ other metrics	Multiple category	Cover entire market		
<i>Customer experience focused</i>	Arnould & Price (1993)	Examining the effect of extraordinary customer experiences	Observation and interview		Service	-	-	-	✓	-	-	Customer satisfaction
	Brakus et al. (2009)	Developing brand experience measurement scales and examining its impact on customer satisfaction and loyalty	Structural equation model	-	Brand	-	-	-	✓	-	-	Customer satisfaction and loyalty
	Brun et al. (2017)	Examining the impact of customer experience on loyalty from a multichannel perspective	Structural equation model	-	Service	-	-	-	✓	-	-	Customer loyalty
	De Haan et al. (2015)	Examining the relationship between customer experience and customer retention	Multilevel probit regression model	A bivariate probit model	Service	-	-	-	✓	-	✓	Customer retention
	Foroudi et al. (2016)	Understanding the effect of customer experience and innovation capability on reputation and loyalty	Confirmatory factor analysis Fuzzy set qualitative comparative analysis	-	Retailing	-	-	-	✓	-	-	Loyalty and reputation
	Iglesias et al. (2019)	Examining the effect of sensory brand experience on brand equity through customer satisfaction and affective commitment	Structural equation model	Construct level correction (common method bias)	Service	-	-	-	✓	-	-	Brand equity

Chapter III: Winning your customer's heart or mind?

Liu, Mattila, & Bolton (2018)	Investigating customer response to service experiences that combine pleasure and pain	Experiment	-	Service	-	-	-	✓	-	-	Consumer response
McColl-Kennedy et al. (2019)	Providing a novel customer experience conceptual framework to better understand, manage, and improve customer experience	Data mining and design science research method	-	Service	-	-	-	✓	-	-	-
McLean, Al-Nabhani, & Wilson (2018)	Examining the role of customer experience in relation to retailers' m-commerce mobile applications	Structural equation model	-	Mobile application	-	-	-	✓	-	-	Customer satisfaction, positive emotion, and frequency of use
Morgan-Thomas & Veloutsou (2013)	Testing the impact of online brand Experience on customer satisfaction and behavioral intentions and their joint influence on the formation of online brand relationship	Structural equation model, partial least squares	-	Online brand	-	-	-	✓	-	-	Online brand relationship
Naylor, Kleiser, Baker, & Yorkston (2008)	Assessing the effect of transformational advertising on customers' retail experiences	Field study and controlled follow-up experiment	-	Retailing	-	-	-	✓	-	-	Retail experience
Ordenes et al. (2014)	Proposing a customer experience framework through a linguistic-based approach	Text mining	-	Service	-	-	-	✓	✓	-	-
Rose, Clark, Samouel, & Hair (2012)	Demonstrating the effect of an optimum experience on customer behavior	Structural equation model, partial least squares	-	Online shopping	-	-	-	✓	-	-	Online repurchase intention
Roy (2018)	Investigating the relevance of customer experience across service types, customer times from a dynamic perspective	Structural equation model	-	Service	-	-	-	✓	-	-	Customer satisfaction, loyalty, WOM

Chapter III: Winning your customer's heart or mind?

	Schouten et al. (2007)	Assessing the impact of transcendent customer experience on customers' integration with a brand community	Pre-test/post-test quasi-experimental field experiment	-	Brand	-	-	-	✓	-	-	Brand community integration
	Zhang, Hu, Guo, & Liu (2017)	Investigating which customer experience elevates customer engagement and consequent WOM intentions in online brand communities	Structural equation model	-	Smartphone community	-	-	-	✓	-	-	Community engagement and WOM intention
<i>Lock-in focused</i>	Andrews et al. (2010)	Examining the effect of service bundles on switching intentions	Experiment	-	Service	✓	-	-	-	-	-	Switching intention
	Balachander et al. (2010)	Examining jointly the effect of price promotions and bundle discounts on customer defection, and thereby on profitability	Game-theoretic model	-	-	✓	-	-	-	-	-	Customer defection
	Becker, Spann, & Schulze (2015)	Studying the impact of minimum contract durations on actual customer churn behavior	First stage logit model and Weibull proportional model	-	Telecom industry	-	✓	-	-	-	-	Customer churn
	Burnham et al. (2003)	Examining the antecedents and consequences of switching costs	Structural equation model	-	Service	✓	✓	✓	Customer satisfaction	-	-	Intention to stay
	Dong & Chintagunta (2016)	Studying the cross-category effects of satisfaction with financial services on retention behavior	Multivariate probit model; Bayesian estimation	A binary probit model	Financial service	-	-	✓	Customer satisfaction	✓	-	Customer retention and customer lifetime value
	Foubert & Gijsbrechts (2007)	Assessing the effect of bundle promotions on purchase and customer switching	Multinomial logit choice model	-	Packaged goods	✓	-	-	-	-	-	Purchase and customer switching
	Giudicati et al. (2013)	Exploring the effect of social influence, relationship length, and contract on customer retention	Probit model and survival analysis	-	Service	-	✓	-	-	-	-	Customer retention
	Jones et al. (2007)	Examining the effect of different types of switching costs on relational outcomes	Structural equation model	A structural equation model	Service	✓	✓	✓	Affective commitment; Emotion	-	-	Repurchase intentions and negative WOM

Chapter III: Winning your customer's heart or mind?

	Kim & Yoon (2004)	Exploring the determinants of customer churn and customer loyalty	Binomial logit model	-	Telecom industry	-	✓	-	Customer satisfaction	-	-	Customer churn
	Malhotra & Malhotra (2013)	Exploring the switching behavior of mobile service customers with a focus on service quality, innovation, and lock-in strategies	Focus group interview and ordinary least squares (OLS) regression	-	Mobile service	-	✓	-	-	-	-	Switching intention
	Nitzan & Ein-Gar (2019)	Exploring the role of bundling in the linkage between payment method and customer defection	Experiment	-	Multiple service industries	✓	-	-	Affective commitment	✓	-	Customer defection
	Wirtz et al. (2014)	Examining customer switching decisions in contractual service settings and contrasting the drivers of actual switching with those of switching intent	Generalized estimating equations	-	Mobile service	-	✓	✓	Customer satisfaction	-	-	Customer switching and switching intention
Current study	Improving the understanding of how (i.e., the process) and to what extent (i.e., magnitude) firms' interventions in lock-in and customer experience that promote the calculative or affective aspects can affect customer retention		Multinomial logit model	Propensity score matching	Telecom industry	✓	✓	✓	Customer experience	✓	✓	Customer retention

The novelty of our study lies in investigating the joint effects of (firm-driven and customer-driven) lock-in and customer experience on customer retention. We draw from social exchange theory to identify two different types of lock-in situations, based on whether they are firm-driven (explicit strategies developed by the firm that aim to increase the relationship termination costs – e.g., bundling, binding contracts) or customer-driven (intrinsic motivational state of customers arisen from the deeply established exchange relationship, reflected by their choice of high-level usage offering provided by the firm), and we examine their joint effects on retention. Importantly, building on experiential learning theory, we jointly investigate how different types of lock-in affect the impact of a set of customer experience effects on customer retention, in terms of the main effect of the experience with the main product/service (Lemon & Verhoef, 2016), and the potential spillover effects from other categories (Keller et al., 2020; Koschate-Fischer, Hoyer, & Wolframm, 2019). By exploring the joint effects of the lock-in and customer experience strategies on retention, we identify *whether* they complement or substitute each other and *when* these effects occur. To do this, we used a unique panel dataset in the telecom industry for a sample of 13,761 customers covering four years of data (2013–2016), which includes detailed information on the customers' monthly retention decisions and churn behaviors across all the available companies in the market for two different services (mobile and broadband), their perceived experience of each service, lock-in information (bundling offerings, binding contracts) and detailed transactional and contextual data.

We applied advanced multinomial logit modeling techniques to empirically test our research objectives and derive our findings. The study results reveal the following: (1) there are important trade-offs between lock-in and customer experience strategies, such that for customers who are locked into the relationship either due to firm-driven lock-in strategies or customer-driven lock-in, investing in improving the customer experience in one category another (related) one (spillover effect) becomes ineffective; however, customers who are

simultaneously retained by the firm-driven and customer-driven lock-in mechanisms, tend to value more favorable customer experience in one category as well as another (related) one – spillover effect; (2) the two types of lock-in considered lead to enhanced customer retention, although the effectiveness of firm-driven lock-in strategies is reduced when consumers have a higher intrinsic motivation to continue the relationship (customer-driven lock-in).

The study findings enable us to make a number of contributions to customer retention research and customer relationship management. First, and most notably, we provide an understanding of the interplay between lock-in and customer experience strategies in driving retention. These two strategies are commonly, and simultaneously, used to retain customers; hence, identifying their joint effects is central to the development of more effective retention strategies and to an optimal allocation of resources. Specifically, this study demonstrates the different effects of lock-in strategies (firm-driven vs. customer-driven) on retention depending on the level of the customer experience in one category and another (related) one acquired from the focal firm (i.e., spillover effect). Second, and to the best of our knowledge, this is the first work to distinguish between firm- and customer-driven lock-in, which enables us to offer novel insights into the way in which termination costs that have different origins lead to different effects on retention. These have been advanced in conceptual research, but they have lacked the empirical examination that we provide in detail in this paper. In doing so, this research sheds new light into *whether* the impact of these strategies complement or substitute each other (by revealing their joint impact on retention), and into *when* this happens (by identifying different situations based on the type of lock-in). In this spirit, our findings can offer advice for managers on how to optimally design their mix of strategies (i.e., lock-in and customer experience) to retain customers more effectively and increase their financial accountability.

3.3 THEORY AND CONCEPTUAL FRAMEWORK

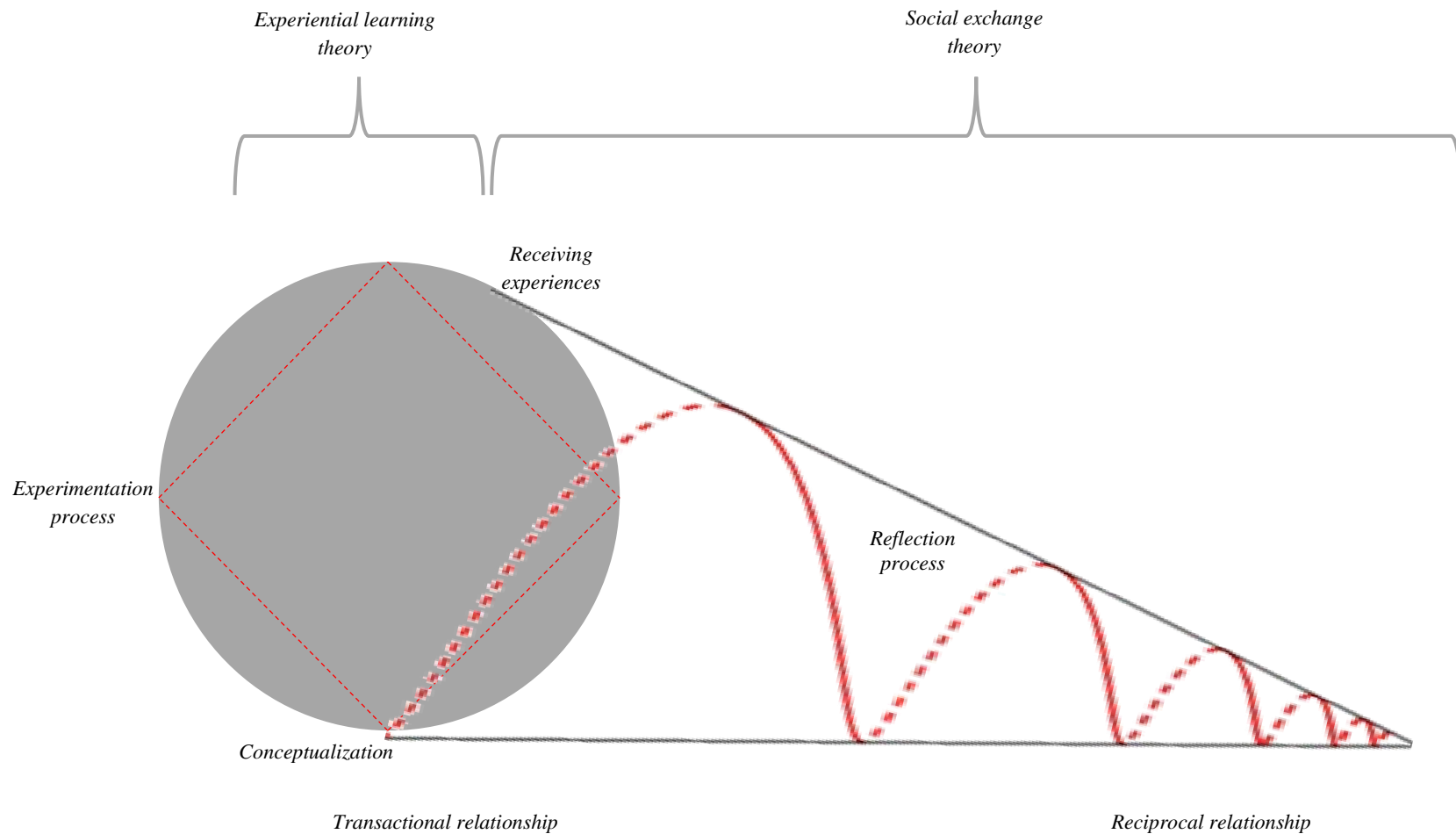
In order to provide an understanding of the joint effects of lock-in and customer experience on retention, we draw from two key theoretical lenses: social exchange theory and experiential learning theory. Social exchange theory allows us to determine and explore how the two different (or combinations of) lock-in mechanisms (firm-driven vs. customer-driven) that stimulate different exchange relationships can affect customer retention; and, most importantly, it enables us to investigate the moderating effects of these strategies on the linkage between customer experience and customer retention. Experiential learning theory (Kolb, 1984) illustrates a general idea about the role of customer experience with one product or service category, its spillover effect from other categories. However, this theory seldom mentions that the way in which customers process and learn from experiences fundamentally depends on the type of exchange relationships between customers and firms (Witell et al., 2020); consequently, it requires a further integration with social exchange theory.

3.3.1 Social Exchange Theory

Social exchange theory indicates that exchange relationships range across the continuum from purely transactional relations (at one extreme) to reciprocal relationships (at the other extreme) (Day, 2000). Depending on the established exchange relationships, how customers encode, reflect, and conceptualize the perceived experiences differs (Puccinelli et al., 2009; Witell et al., 2020). In transactional relationships, exchanges are based on formal binding agreements in which both customers and firms agree on the terms of the discrete, short-term exchange event that gives both partners benefit of equal value (Molm, Peterson, & Takahashi, 2003). *Firm-driven lock-in* thus occurs when firms adopt explicit strategies by emphasizing the monetary aspects or economic incentives (i.e., bundling and binding contract) of the offerings

to retain customers. It mainly promotes transactional relationships where customers rely on calculus-based reasoning, which elicits an analytic, detail-oriented processing strategy through which individuals carefully weigh the balance between the profit obtained from continuing the relationship and the loss caused by leaving (Aggarwal & Law, 2005). Conversely, reciprocal relationships are derived from the positive emotional and social sentiment for the firm, which usually results from an ongoing process of exchanges and multiple interactions-events between customers and firms (Witell et al., 2020). *Customer-driven lock-in* arises predominantly due to an intrinsic motivational state whereby customers enjoy the psychological comfort of maintaining the deeply established exchange relationships, reflected in customer's choice toward high level of usage (Bolton et al., 2004; Witell et al., 2020). Therefore, the main difference of the two types of lock-in resides in that the firm-driven lock-in, where firms predominantly provide offerings for customers to choose to increase customer retention; in contrast, customer-driven lock-in, where customers make choices by themselves in regard to whether to lock themselves into the exchange relationship. Customers engaged in reciprocal relationships usually think in a broader, more abstract fashion, such as by focusing on experiential benefits (Puccinelli et al., 2009). Figure 3.1 is elaborated to demonstrate the linkage between social exchange theory and experiential learning theory.

Figure 3.1: Linkage of experiential learning theory and social exchange theory



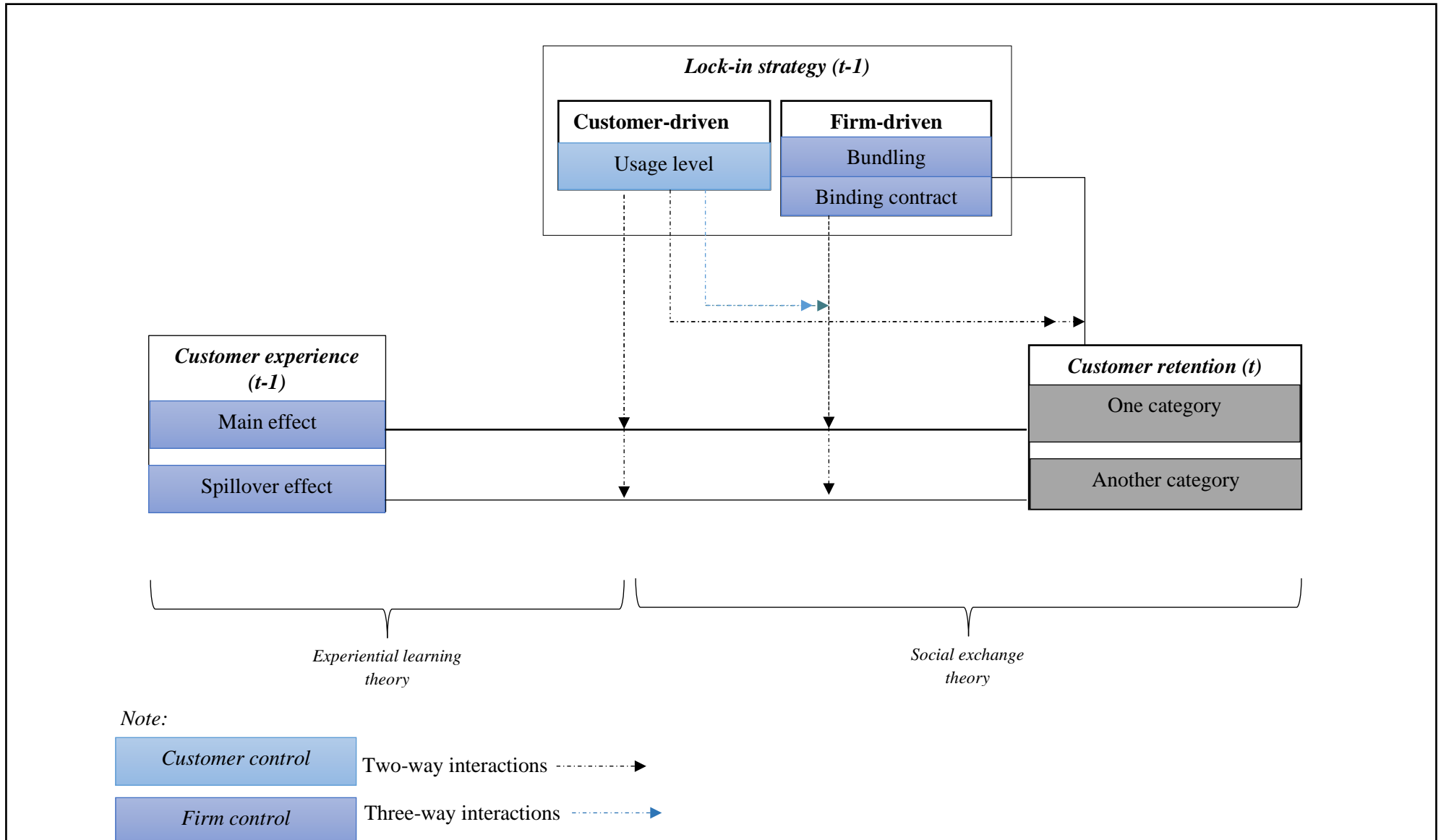
Calculative aspects play an important role in the initial stage of customer-firm relationships (transactional relationships) as customers lack experiences. Over time, as reciprocal relationships are established, the role of calculative aspects tends to be less prominent, and experiential aspects become more important.

3.3.2 *Experiential Learning Theory*

Experiential learning theory (Kolb, 1984) proposes that individuals learn through the experiences that they obtain from all parties ranging from various product categories to multiple firms, including the competing alternatives. Such experiences can serve as the basis for reflection, which allows the individual to gain a wide range of information about various product categories provided by different firms (reflection process). This information is later assimilated and distilled into abstract concepts, including the general perception of the experience with the focal firm (conceptualization process), which can serve as a guide for carrying out actions, including the decision to stay with the focal firm or to switch to a competitor (experimentation process). The ideas advanced by this theory suggest that, for a specific product or service, the customer decision to remain in a current relationship or switch to a competitor will be affected by the customer experience of that particular product or service. We refer to this as the *main effect of the customer experience* on retention (Keiningham et al., 2019; Lemon & Verhoef, 2016). In addition, the theory acknowledges that customer retention in a product category can also be affected by the experiences in other (related) categories with the focal firm, which we refer to as the *customer experience spillover effects* (Balachander & Ghose, 2003; Danaher, Danaher, Smith, & Loaiza-Maya, 2020; Dong & Chintagunta, 2016).

Having identified the two central types of lock-in (firm-driven and customer-driven) as well as the various customer experience effects on retention (main experience effect, spillover effect, and competitive effect), this study is concerned with understanding their joint effects on retention. In pursuit of such objective, we first explore the patterns of different types of lock-in on customer retention in a combined manner. Second and most importantly, we provide answers to important (yet unanswered) questions about: *whether* lock-in and customer experience effects act in a complementary or substitutive effect, and *when* this happens. Figure 3.2 graphically represents the conceptual framework and the aforementioned effects.

Figure 3.2: Conceptual framework



3.4 HYPOTHESES DEVELOPMENT

3.4.1 Combinations of Lock-in Effects

There is a broad consensus in the literature about the positive role of lock-in strategies in retaining customers (Blut, Frennea, Mittal, & Mothersbaugh, 2015; Johnson, Bellman, & Lohse, 2003; Kim & Kumar, 2018). Regardless of whether the type of lock-in situation is firm-driven or customer-driven, once customers are locked in an exchange relationship, they tend to remain with the focal firm. What remain unclear is that how firm-driven lock-in strategies might be perceived by customers if they have already been locked into the exchange relationship by themselves (i.e., customer-driven lock-in). Firm-driven lock-in strategies lead customers to focus more on the concerns of economic gains in an exchange relationship with the firm (Stremersh & Tellis, 2002). As suggested by Bolton et al. (2004), economic reward programs with their monetary benefits propositions may sound attractive to customers who are more calculative in orientation; hence, such programs will promote purchases in the short term. However, customers who are attached to the firm by themselves due to the deeply established exchange relationship, they tend to appreciate more experiential benefits (Aggarwal & Law, 2005) and value the economic-focused offerings less. Additionally, supported by social exchange theory, customers, when stimulated by customer-driven lock-in, are prone to establish a reciprocal exchange relationship with the firm (Gilliland & Bello, 2002). In such a situation, targeting customers with economic-focused benefits might be considered a signal of a firm's intention to initiate or maintain short-term transactional relationships (Clark & Finkel, 2004), thereby eroding how much customers like the firm (Bolton et al., 2004). Given the situation of firm-driven lock-in where customers are more rational oriented and focus more on instrumental gains, the chance of developing an intimate relationship with the firm is lower. The customer-driven lock-in is, therefore, less likely to occur (Gilliland & Bello, 2002). We thus argue that

customer-driven lock-in might negatively moderate the impact of firm-driven lock-in strategies on customer retention.

H1: *Customer-driven lock-in will weaken the impact of firm-driven lock-in on customer retention.*

3.4.2 Joint Effects of Customer Experience and Lock-in

The importance of customer experience in retaining customers has long been recognized and demonstrated in the marketing literature (i.e., De Haan et al., 2015; De Keyser et al., 2020; Lemon & Verhoef, 2016; Mittal & Kamakura, 2001). More specifically, such importance is not only reflected in its *main effect* - delivering a good experience in one category offered by the focal firm, but also in another related one (Balachander & Ghose, 2003; De Keyser et al., 2020), that is, the *spillover effects* (Keller et al., 2020; Erdem & Sun, 2002; Janakiraman, Sismeiro, & Dutta, 2009). Indeed, as noted previously, experiential learning theory clearly indicates that customer actions (e.g., customer switching decisions) are driven by grasping and transforming the concrete experiences acquired from all parties, including experiences from another product category as well as experiences from competitors. While the linkage between customer experience and customer retention are well established in the literature, the relevant but unanswered question is how such different patterns of customer experience will be assessed by customers while they are being locked into the exchange relationship via different manners. We therefore do not put forward specific hypotheses on the former³, but mainly focus on the latter, that is, the joint effects of customer experience and lock-in in the development of hypothesis.

³ Nonetheless we do include the effects of different patterns of customer experience (i.e., main effect and spillover effect) on customer retention in our modeling approach.

Firm-driven lock-in and customer experience. Firm-driven lock-in mechanisms are strategically designed to retain customers by offering incentives, such as providing a single package of various products at a discounted price (Nitzan & Ein-Gar, 2019) or enticing customers into contracts with an add-on product (Malhotra & Malhotra, 2013). In line with the central premise of social exchange theory, such economic-benefit-focused offers are expected to encourage customers to engage in transactional relationships, in which customers tend to rely on rational-calculative thinking to assess their relationships with firms, thereby decreasing customers' attention to affective aspects such as customer experience (Witell et al., 2020). This utilitarian concern for tangible results of firm-driven lock-in is devoid of emotion and sentiment for the firm (Gilliland & Bello, 2002), thereby decreasing the effectiveness of customer experience and its spillover effect on customer retention. In addition, assuming there is an established barrier to exit, customers may automatically continue the transaction with the focal firm until the end of the contract (Gilliland & Bello, 2002), regardless of the level of the perceived customer experience. As a result, firm-driven lock-in may lead customers to be less experience-conscious within one category and another (i.e., spillover effect), thereby undermining the role that customer experience plays in retaining customers.

***H2:** Firm-driven lock-in strategy will weaken the impact of (a) customer experience and (b) its spillover effect on customer retention.*

Customer-driven lock-in and customer experience. Customer-driven lock-in is grounded on reciprocal relationships where customers and firms have gone through multiple interactions during an ongoing process of exchanges, thereby stimulating an implicit emotional bond between customers and the focal firm (Witell et al., 2020). As emphasized in social exchange theory, customers primed with norms of reciprocal relationships do not look for an immediate comparable payback and are more generous (Witell et al., 2020). Instead of paying

attention to the detailed and item-specific information about the firm, which enables customers to track the cost–benefit balance, customers who are locked in due to relational benefits are prone to process their interactions at a high level of abstraction, namely customer experience (Aggarwal & Law, 2005). Most importantly, social exchange theory highlights that, motivated by feeling of appreciation, people who are involved in reciprocal relationships often reciprocate the experiential benefits they receive as a way of maintaining a long-term relationship with the firm.

***H3:** Customer-driven lock-in will strengthen the impact of (a) customer experience and (b) its spillover effect on customer retention.*

Combinations of lock-in and customer experience. Furthermore, in line with the logic of social exchange theory, we posit that the appreciation of customer experience, arising from customer-driven lock-in, could also mitigate the decreasing effectiveness of customer experience caused by firm-driven lock-in strategies. Individuals who are affectively attached to the firm tend to evaluate their interaction in a more abstract manner by focusing on the intrinsic factors (Aggarwal & Law, 2005), such as customer experience, that represent the perceptions of being trusted and cared about by firms (Clark & Finkel, 2004). Thus, it is likely that customers who have established stronger relational bonds to the firm tend to rely less on economic judgment when evaluating firms (Gilliland & Bello, 2002). Accordingly, we predict that customer-driven lock-in also weakens the negative moderating influence of firm-driven lock-in on the effect of customer experience within one category and another (i.e., spillover effect) – that is, the three-way interactions across customer-driven and firm-driven lock-in strategies, and customer experience.

H4: *Customer-driven lock-in will weaken the negative moderating impact of firm-driven lock-in strategies on the linkage between (a) customer experience and (b) its spillover effect on customer retention.*

3.5 DATA AND VARIABLES OPERATIONALIZATION

To empirically test the proposed conceptual framework, a unique and comprehensive dataset from the telecom industry in a European country was provided by a leading consulting company. In telecom industry, offering bundles and binding contracts as explicit strategies to lock customers into the exchange relationships are largely implemented by firms. Next to this, in this industry many customers may also be locked into the exchange relationship by themselves due to the intrinsic motivational state developed along the deep level of usage. The telecom industry therefore provides an adequate context to assess our proposed conceptual framework. The dataset included a total of 13,761 customers who were representative for the selected market that covers one entire country. This dataset contained monthly individual customer-level information for a time window of 48 months, covering the period from January 2013 to December 2016 for two major telecommunication service categories: mobile and broadband. While all firms operating in the industry at this time period were covered, the focus of this research was on the major companies in each service category.

One key strength of the dataset is that, enabled by the information of all firms in the industry together with the panel structure, we could comprehensively observe the dependent variable (customer retention) by capturing the competing firms that customers used before switching to the focal firm in both service categories on a monthly basis. To do so, we included only customers whose service provider in each category was known. As a consequence, our final sample consisted of 12,496 customers in the mobile service category and 11,097 customers

in the broadband service category. Among them, 10,175 customers were active in both categories, and thus information about the service providers in both categories was recorded. This enables us to provide very rich insights which distinguish between our study from prior related research. As highlighted in Table 3.1, most studies only have panel data on retention for one specific firm (e.g., Anderson, Fornell, & Lehmann, 1994) or cross-sectional data from multiple firms (e.g., De Haan et al., 2015), which consequently generates only a partial view of customer switching decisions (Du, Kamakura, & Mela, 2007).

For the set of independent variables, the dataset combined transactional and perceptual information. The transactional information covered monthly measured objective information, which enabled us to capture firm-driven lock-in and customer-driven lock-in. Firm-driven lock-in are represented by the offered lock-in strategies by firms to their customers, which are bundling and the binding contract. These two mechanisms are regarded as classic examples for firm-driven lock-in, since they are widely implemented by firms to lock their customers into the exchange relationship (Becker, Spann, & Schulze, 2015; Stremersch & Tellis, 2002). Furthermore, the dataset also provided information about customers' own choices about the usage level of each service which reflect the degree in which customers are willing to lock themselves into the exchange relationship, that is, customer-driven lock-in. Different from firm-driven lock-in, the perceived control about the degree of customer-driven lock-in resides in customers' own decisions. Following previous studies (Bolton & Lemon, 1999; Bolton et al., 2004), customers' choice toward the usage level is an observed indicator of the unobserved customers' expectation about the psychological attachment that they may derive from the exchange relationship. It thus reflects a desire and a need to continue the exchange relationship, thereby the degree of how customers would like to lock themselves into the exchange relationship. Overall, the three lock-in strategies that we focused on are those that (1) have conceptual and empirical support in the marketing literature (Becker et al., 2015; Murray &

Häubl, 2007; Shapiro & Varian, 1998; Stremersch & Tellis, 2002), (2) have been frequently implemented as lock-in mechanisms in practice across a wide range of industries (Johnson et al., 2003; Malhotra & Malhotra, 2013; Nitzan & Ein-Gar, 2019), and (3) are easily acted on or identified by managers (Malhotra & Malhotra, 2013; Stremersch & Tellis, 2002).

As well as the objective service usage information, we also had data on customers' annual perceptual measures, which quantify the customer experience with the firm for each service category. More specifically, the Net Promoter Score (NPS) proposed by Reichheld (2003) is measured annually for customer experience, and telecom firms have used it for years. The adequacy of NPS as measurement for customer experience has been largely acknowledged by previous studies from a theoretical perspective (Lemon & Verhoef, 2016; McColl-Kennedy et al., 2019) and supported by empirical evidence (De Haan et al., 2015). The average response rates across the four interactions in the mobile and broadband service categories were 28.17% and 44.42%, respectively. To deal with missing data, we conducted mean replacement, which is a commonly applied and well-performing method (Kamakura & Wedel, 2000). More specifically, for customers who did not participate in the survey in one year, the average value of customer experience across customers from the same firm in the corresponding service category of that year was imputed to replace the missing value. Accordingly, we created a dummy variable that indicates if the customer took part in the survey, which in our model captures potential deviations in behavior by customers who did not respond to the survey.

To rigorously test the conceptual framework, we supplemented our primary dataset with a set of control variables gathered from multiple sources. In particular, in addition to customer demographic characteristics that were included in the primary dataset – including gender, age, household number, working status, and social class – we further collected data on the variables relating to firm characteristics (market shares and advertising expenditures), which were obtained from the annual official report of the telecommunication sector in the corresponding

market. Furthermore, we collected context characteristics (acquisitions, new entrants, iPhone release dates, and social media mentions) from news websites and Google Trends. With the aim of increasing the ease of interpretation and decreasing the number of parameters, we recoded some of the control variables. Table 3.2 presents a summary of the variables included in our modeling framework and the corresponding descriptive statistics for each variable. In the following subsection, we provide additional details about the measurements for the key variables and their operationalization.

Table 3.2: Descriptive statistics (N=656,208)

Variables	Description	Time Unit	Mean	SD
Dependent variables	<i>Customer retention (M/B)</i>	Monthly	.9885/.9911	.1064/.0937
Lock-in effects	<i>Firm-driven lock-in (bundling)</i>	Monthly	.1465	.3536
	<i>Firm-driven lock-in (binding contract)</i>	Monthly	5.4631	3.9523
	<i>Customer-driven lock-in (M)</i>	Monthly	6.7884	7.4313
	<i>Customer-driven lock-in (B)</i>	Monthly	27.8654	11.8460
Experience effects	<i>Customer experience (M)</i>	Yearly	7.5910	1.215
	<i>Customer experience (B)</i>	Yearly	7.411	1.4441
Control variables	<i>Market share</i>	Quarterly	.2217	.15378
	<i>Advertising expenditure (log)</i>	Quarterly	11.8825	3.7951
	<i>Social media mention</i>	Monthly	46.1783	20.9333
	<i>iPhone release</i>	Monthly	.0978	.2970
	<i>Acquisition</i>	Monthly	.0427	.2023
	<i>New entrants</i>	Monthly	.0404	.1968
	<i>Gender</i>	Yearly	.5952	.4908
	<i>Working status</i>	Yearly	.4388	.4962
	<i>Social class</i>	Yearly	–	–
	<i>Age</i>	Yearly	42.7308	19.9295
	<i>Competitive customer experience (M/B)</i>	Yearly	.0055/.0135	.2334/.2387
	<i>Dummy customer experience (M/B)</i>	Yearly	.5918/.3725	.4915/.1664
	<i>Dummy binding contract</i>	Monthly	.6272	.4835
	<i>Dummy usage (B)</i>	Monthly	.3245	.4682
	<i>Bill</i>	Monthly	16.2047	38.0461
	<i>Customer tenure</i>	Monthly	21.5323	28.5062
<i>Number of services</i>	Monthly	1.9408	1.2099	

Note: Customer experience and lock-in related variables are measured in lagged form; (M) means mobile service category; (B) represents broadband service category;

⁴ Customers have the control to choose the level of usage in line with their own expectation while signing up the broadband service provided by firm *m* at time *t*, thus indicating the degree which customer *i* expects to attach to the exchange relationship with firm in broadband service category *m* at time *t*.

3.6 METHODOLOGY

3.6.1 Utility Specification

To test the proposed conceptual framework and the associated hypotheses, we developed a set of multinomial logit models formulated on the basis of random utility theory (McFadden, 1973), with one model for each service category. This methodology allowed us to identify key determinants that affect customer retention probabilities across multiple firms (Elshiewy, Guhl, & Boztuğ, 2017).

Following McFadden (1973), the model was derived as follows. Consider a set of customers $I = \{i | i = 1, 2, \dots, I\}$ that faces a choice set of available alternatives, which can be denoted as $M = \{m | m = 1, 2, \dots, M\}$ from each of the two service categories $S = \{s | s = j, k\}$, where j refers to the mobile service category and k represents the broadband service category. The customers' choices are observed over the period $T = \{t | t = 1, 2, \dots, T\}$, where T represents the observation window. From each of the alternatives, the customer would obtain a level of utility; let U_{imjt} denote the overall utility in the mobile service category j that customer i would perceive from firm alternative m at time t , whereas U_{imkt} is considered the overall utility in the broadband service category k that customer i would perceive from firm alternative m at time t . Researchers typically only observe actual customer choices and a set of attributes of the M alternatives (Elshiewy et al., 2017). Therefore, the utility of customer i for alternative m in each of the two service categories at time t is decomposed into the deterministic (observable) component, which can be denoted as V_{imjt} and V_{imkt} for mobile and broadband service categories, respectively, and the unobservable component, which is the error term, is denoted as ε_{imjt} and ε_{imkt} for mobile and broadband service categories, respectively. Most importantly, as noted previously, experiential learning theory suggests that customers tend to update their knowledge scheme through prior concrete experience within different product or service categories gained from

the focal firm as well as from competitors. We thus assume that customers update the current overall utility level at time t based on the previous customer experience in the mobile and the broadband service categories received from the focal firm and observed from its competitors at the previous time period $t-1$.

We specify the utility customer i derives from firm alternative m in service category j and k at time t in Equations (1) and (2) below:

$$U_{imj/kt} = V_{imj/kt-1} + \varepsilon_{imj/k} \quad (1)$$

Equation 1 suggests that the utility of choosing firm m in one of the service categories by customer i at time t will also depend on the customer experience with the focal firm within one category, its spillover effect from another category, and the observed customer experience from competing firms within one service category and another by customers at time $t-1$. In the Equation (1), $U_{imj/kt}$ represents the overall utility obtained from firm m by customer i in mobile service category j and broadband service category k at time period t . V_{imjt-1} and V_{imkt-1} are the true utility levels perceived by customer i in the mobile and broadband service categories from the corresponding service provider m at time $t-1$, and they are further specified in Equation (2) via attributes. ε_{imjt} and ε_{imkt} are the random error terms associated with customer latent utility perceptions in the mobile service and broadband service categories, respectively; they follow an identical and independent (iid) Gumbel distribution:

$$\begin{aligned} U_{imj/kt} = & \beta_0_{mj/k} + \beta_{1j/k} \mathbf{Bundling}_{imt-1} + \beta_{2j/k} \mathbf{Contract}_{imjt-1} + \beta_{3j/k} \mathbf{Usage}_{imj/kt-1} \\ & + \beta_{4j/k} \mathbf{Usage}_{imjt-1} * \mathbf{Bundling}_{imt-1} + \beta_{5j/k} \mathbf{Usage}_{imjt-1} * \mathbf{Contract}_{imjt-1} \\ & + \beta_{6j} \mathbf{CX}_{imjt-1} + \beta_{7k} \mathbf{CX}_{imkt-1} \\ & + \beta_{8j} \mathbf{Bundling}_{imt-1} * \mathbf{CX}_{imjt-1} + \beta_{9j} \mathbf{Contract}_{imjt-1} * \mathbf{CX}_{imjt-1} \\ & + \beta_{10k} \mathbf{Bundling}_{imt-1} * \mathbf{CX}_{imkt-1} + \beta_{11j/k} \mathbf{Contract}_{imjt-1} * \mathbf{CX}_{imkt-1} \end{aligned} \quad (2)$$

$$\begin{aligned}
 & + \beta_{12j/k} Usage_{imj/kt-1} * CX_{imjt-1} + \beta_{13j/k} Usage_{imkt-1} * CX_{imkt-1} \\
 & + \beta_{14j/k} Usage_{imjt-1} * Bundling_{imt-1} * CX_{imjt-1} \\
 & + \beta_{15j/k} Usage_{imjt-1} * Contract_{imjt-1} * CX_{imjt-1} \\
 & + \beta_{16j/k} Usage_{imjt-1} * Bundling_{imt-1} * CX_{imkt-1} \\
 & + \beta_{17j/k} Usage_{imjt-1} * Contract_{imjt-1} * CX_{imkt-1} \\
 & + \beta_{18j} (CX_{imjt-1} - \overline{CX_{(M-mjt)t-1}}) \\
 & + \beta_{19k} (CX_{imkt-1} - \overline{CX_{(M-mk)t-1}}) + \beta_{20j/k} Controlmis_{itm} \\
 & + \beta_{21j/k} Firm_{mt} + \beta_{22j/k} Context_{mt} + \beta_{23j/k} Demographic_{itm} + \epsilon_{imj/kt}
 \end{aligned}$$

Lock-in effects. $Bundling_{imt-1}$ and $Contract_{imjt-1}$ represent each of the two firm-driven lock-in mechanisms applied by firm m at time t in mobile service category j to retain customers. Specifically, the former is a dummy variable that represents the bundling offer which the firm m offers to customer i at time $t-1$, while the latter is the type of contracts which the focal firm m in mobile service category j at time $t-1$ offers to customer i . Due to the contractual requirements included in the binding contract, this variable indicates the number of months that customer i has to remain in the established relationship. $Usage_{imj/kt-1}$ refers to customer-driven lock-in mechanism at time t in mobile service category j or broadband service category k . It is measured via the choice of customer i toward the level of usage in the corresponding service category acquired from the firm m during the time period $t-1$.

Experience effects. Moreover, CX_{imjt-1} and CX_{imkt-1} in Equation (2) capture the perceived customer experience by customer i from firm m in mobile service category j and broadband service category k at time $t-1$. In the utility function of mobile service category, CX_{imjt-1} represents the main effect of customer experience while CX_{imkt-1} indicates the spillover effect of customer experience. Conversely, in the broadband service category utility function, CX_{imkt-1} and CX_{imjt-1} represent the main effect and spillover effect of customer experience, respectively.

Control variables. To better control the influence of customer experience in customer retention, a set of control variables were accordingly created. More specifically, two variables are created to capture how much the customer has a better (or worse, if the value is negative) customer experience than the average customer of the competing firms. The importance of the competitive experience effect has already been shown in previous studies (e.g., De Haan et al., 2015). Following the procedure of De Haan et al. (2015), the competitive experience effect in the mobile service category was obtained by transforming the means of the difference between the NPS of customer i at time t with the focal firm in the mobile service category and the average score on NPS for all of the focal firm's competitors at time t . The same procedure was followed for the calculation of the competitive experience effect in the broadband service category. Therefore, $(CX_{imjt-1} - \overline{CX_{(M-mjt)t-1}})$ and $(CX_{imkt-1} - \overline{CX_{(M-mkt)t-1}})$ represent the customer experience perceived by customer i from the focal firm m in mobile service category j and broadband service category k compared to the average value of customer experience of the competing firms in the corresponding service category at time t . Moreover, two more dummy variables were created to indicate if customers had responded to the survey question about their customer experience with firms in the mobile and broadband categories at time $t-1$. $Controlmis_{itm}$ are the variables that control missing data relating to customer experience and binding contract. $Firm_{mt}$, $Context_{mt}$, and $Demographic_{it}$ represent a vector of control variables including firm-related characteristics (market share, advertising expenditure, and social media mentions), context-related characteristics (acquisitions, new entrants, and iPhone release date) and customer demographic information (gender, age, working status, and social class). Finally, as noted above, ε_{imjt} and ε_{imkt} are the error term in the mobile service and broadband service categories, respectively.

In this study, we are interested in the parameters β_4 – β_5 , which gauge the effects of the combinations of these two different types of lock-in strategies. We are especially interested in

the parameters β_8 – β_{17} , which measure the joint effects between different lock-in (combination of) mechanisms and customer experience. Among them, the parameters β_8 – β_9 capture the joint effects of firm-driven lock-in and the main effect of customer experience, and β_{10} – β_{11} correspond to this moderating effect on the linkage between customer experience spillover effect and customer retention. In the same vein, β_{12} – β_{13} represent the joint impacts between customer-driven lock-in and the customer experience in terms of their main effect and spillover effect. Finally, the parameters β_{14} – β_{15} represent the joint effects across two different types of lock-in and the main effect of customer experience. Such three-way interactions across firm-driven lock-in, customer-driven lock-in, and customer experience spillover effects are represented by the parameters β_{16} – β_{17} .

3.6.2 Choice Probabilities Definition and Model Estimation

The multinomial logit model, as reflected in its function form, captures the possibility that customer i chooses firm alternative m in comparison with the other alternatives. For the estimation of the logit parameters, the maximum likelihood estimation method was applied. In order to represent choice probabilities, Equation (3) is elaborated below:

$$Pr(Y_{imj/kt}) = \frac{\exp^{V_{imj/kt-1}}}{\sum_{m=1}^M \exp^{V_{imj/kt-1}}} \quad (3)$$

Let $Y_{imj/kt} = \{f_{it1}, f_{it2}, \dots, f_{itM}\}$ denote the index vector of the firm alternatives chosen by customer i for the mobile and broadband service categories j and k , respectively. Consequently, $Pr(Y_{imjt})$ and $Pr(Y_{imkt})$ represent the possibility of observing the choice profile that customer i would

choose firm alternative m across the M alternatives at time t in the corresponding service category. Following Elshiewy et al. (2017), this possibility is conditioned as follows:

$$Pr(Y_{inj_t} | V_{inj_t-1}, \varepsilon_{inj}) = Pr(U_{inj_t-1} \geq \max U_{iMjt-1})$$

$$Pr(Y_{imkt} | V_{imkt-1}, \varepsilon_{imk}) = Pr(U_{imkt-1} \geq \max U_{iMkt-1})$$

3.7 FINDINGS

3.7.1 Overall Model Fit

To demonstrate the contribution of the variables to explaining the variance in customer retention, we applied a hierarchy approach and introduced different categories of variables set by set. In total, three models were estimated. Model 0 is the baseline model that examines the impact of the control variables. Model 1 adds the main effects of the customer experience, competitive customer experience in the mobile service category, and their spillover effect from the broadband category, while model 2 further takes into account the moderating role of firm-driven and customer-driven lock-in strategies. The same set of models were estimated for the broadband service category, thus yielding six models in total.

The results of the regression models are presented as a series of nested models in Table 3.3. The fit statistics indicate that adding each set of variables improves the model fit significantly, thus illustrating the incremental power of customer experience, competitive customer experience, and their spillover effect of customer experience in explaining customer retention, and their relative importance under different lock-in mechanisms. In particular, log-likelihood value and AIC (Akaike, 1998) were performed to assess the adequacy of the three models. While log-likelihood value suggests that the higher the value, the better the fit of the

model to the data, AIC indicates that the model with the lowest AIC is the optimal option. To infer whether our estimates might have been affected by multicollinearity, we followed standard practice by computing variance inflation factor (VIF) scores for each regression. Each of the VIFs was below the recommended cutoff of 10 (the maximum VIF score is 5.70), suggesting that multicollinearity should not severely affect the regression results (Hair, Black, Babin, Anderson, & Tatham, 1998). Additionally, Table 3.4 shows the correlations between the key variables, which do not signal multicollinearity.

Table 3.3: Multinomial logit models estimation results

$N_{Mobile} = 2,176,734$ $N_{Broadband} = 1,784,657$		Dependent variable: customer retention	Model 0		Model 1		Model 2		
		Independent variables	M	B	M	B	M	B	
<i>Combinations of Lock-in Effects</i>									
<i>Main effects</i>	Firm-driven (bundling)		-	-	.174**	.372***	1.517***	2.624***	
	Firm-driven (binding contract)		-	-	.097***	.056***	.637***	.156***	
	Customer-driven (M/B)		-	-	.009***	.036***	.449***	.170***	
	Customer-driven (M/B) * Firm-driven (bundling)		-	-	-	-	-.137**	-.094***	
	Customer-driven (M/B) * Firm-driven (binding contract)		-	-	-	-	-.065***	-.016***	
<i>Joint Effects between Customer Experience and Lock-in</i>									
<i>Main effect</i>	Customer experience (M/B)		-	-	.314***	.287***	.533***	.501***	
	Customer experience spillover		-	-	.194***	.093***	.224***	.153***	
<i>Spillover effects</i>	Firm-driven (bundling)*Customer experience (M/B)		-	-	-	-	-.247***	-.113***	
	Firm-driven (binding contract) *Customer experience (M/B)		-	-	-	-	-.063***	-.008***	
	Firm-driven (bundling)* Customer experience spillover		-	-	-	-	.091***	-.177**	
<i>Firm-driven lock-in</i>	Firm-driven (binding contract) * Customer experience spillover		-	-	-	-	-.015***	-.015***	
	Customer-driven (M/B) *Customer experience (M/B)		-	-	-	-	-.052***	-.016***	
	Customer-driven (M/B) * Customer experience spillover		-	-	-	-	-.005***	-.004***	
<i>Customer-driven lock-in</i>	Customer-driven (M/B) * Firm-driven (bundling)*Customer experience (M/B)		-	-	-	-	.016**	.007***	
	Customer-driven (M/B) * Firm-driven (binding contract) * Customer experience (M/B)		-	-	-	-	.007***	-.0001	
	Customer-driven (M/B) * Firm-driven (bundling)*Customer experience spillover		-	-	-	-	.003	.004	
<i>Combinations of lock-in</i>	Customer-driven (M/B) * Firm-driven (binding contract) * Customer experience spillover		-	-	-	-	.0004	.0004*	
	<i>Control Variables</i>								
	<i>Competitive experience effects</i>	Competitive customer experience (M/B)		-	-	2.192***	1.084***	2.144***	1.107***
Competitive customer experience (B/M)			-	-	2.052***	1.060***	2.021***	.886***	
<i>Control variables for missing data</i>	Dummy customer experience (M)		-	-	-.103**	.026	-.143***	-.005	
	Dummy customer experience (B)		-	-	.352***	-.373***	.292***	-.195***	
	Dummy binding contract		-	-	.415***	-.163**	.165***	-.239***	
	Dummy usage(B)		-	-	-	.03	-	-.381***	
<i>Firm characteristics</i>	Market share		-2.593***	1.087***	-1.565***	1.703***	-1.695***	1.729***	
	Advertising expenditure		.005*	.006**	.008**	.010***	.009**	.011***	
	Social media mention		.009***	.004***	.006***	.004***	.006***	.004***	
<i>Context characteristics</i>	iPhone release		.276***	.216***	.072	-.005	.022	-.061	
	Acquisition		.024	-.089*	-.019	-.103*	-.002	-.097*	
	New entrants		.463***	.395***	.284**	.093	.257**	.047	
<i>Customer characteristics</i>	Gender (1=female)		.535***	.575***	.202***	.247***	.015	.110**	
	Working status (1=active)		.638***	.645***	.247***	.177***	.086*	.025	
	Social class (high vs. low)		.048	.318***	.230***	.183**	.083	.151*	
	Social class (medium vs. low)		.538***	.800***	.374***	.388***	.160**	.237***	
	Age		.066***	.063***	.027***	.029***	.011***	.016***	
	Household size		.819***	.812***	.276***	.361***	.097***	.166***	
<i>Intercept</i>	Intercept(firm1)		-.748***	-.737***	-.671***	-.715***	-.692***	-.700***	
	Intercept(firm2)		-.881***	-.377***	-.632***	-.214*	-.666***	-.213*	
	Intercept(firm3)		-1.529***	-3.319***	-1.585***	-3.516***	-1.632***	-3.543***	
	Intercept(firm4)		-1.606***	-.040	-1.389***	.215	-1.413***	.243	
	Intercept(firm5)		-2.415***	-.317**	-2.242***	-.100	-2.290***	-.088	
	Intercept(firm6)		-.759***	-.765***	-.894***	-.784***	-.918***	-.753***	
<i>Fit statistics</i>	Log-likelihood		-63,494.790	-46,531.650	-36,401.090	-32,379.810	-35,549.210	-32,021.960	
	Degree of freedom		18	18	28	29	40	41	
	AIC		125,965.72	93,099.31	71,906.77	64,817.62	71,178.42	64,125.93	

Notes: Customer experience and lock-in related variables are measured in lagged form; Significant levels: * $p < .1$; ** $p < .05$; *** $p < .01$; (M) means mobile service category; (B) represents broadband service category

Table 3.4: Correlation matrix (N=656,208)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
Mobile customer retention	1																						
Broadband customer retention	.726*	1																					
Firm-driven (bundling)	.280*	.328*	1																				
Firm-driven (binding contract)	.042*	.008*	-.050*	1																			
Customer-driven (M)	.012*	.018*	.133*	-.159*	1																		
Customer-driven (B)	.042*	.017*	-.015*	-.004	.029*	1																	
Customer experience (M)	.004	.007*	-.009*	.084*	.005	.058*	1																
Customer experience (B)	.007*	.021*	.021*	.029*	.001	.171*	.113*	1															
Competitive customer experience (M)	-.007*	-.075*	-.165*	.142*	.005*	.031*	.092*	-.015*	1														
Competitive customer experience (B)	.003	-.002	-.033*	.012*	.005*	.210*	-.002	.117*	.071*	1													
Market share	-.009*	-.033*	-.126*	.103*	-.103*	.049*	-.017*	.001	.004*	-.011*	1												
Advertising expenditure	-.005*	-.070*	-.156*	.074*	-.079*	-.016*	.039*	-.028*	.336*	-.146*	.215*	1											
Social media mention	-.008*	-.031*	-.140*	.174*	-.437*	-.038*	-.036*	-.006*	.006*	-.018*	.338*	.105*	1										
iPhone release	.002	.000	-.003	.016*	.024*	.004	.003	-.000	.036*	.006*	-.034*	-.019*	-.056*	1									
Acquisition	.002	.007*	.038*	-.022*	.066*	.021*	.001	.000	-.009*	-.003	-.041*	-.017*	-.103*	.107*	1								
New entrants	.002	-.004*	-.020*	.017*	-.061*	.014*	-.003	.002	.062*	.023*	.071*	.032*	.021*	.276*	-.033*	1							
Gender (1=female)	.011*	-.018*	-.004*	.008*	.011*	.004	.008*	-.004*	.011*	-.011*	-.011*	.010*	-.006*	.000	.003	-.000	1						
Working Status (1=active)	.003*	.034*	.055*	.039*	-.030*	.070*	.004	.006*	.017*	.010*	.004*	.002	-.001	-.000	-.003	-.001	-.072*	1					
Social class (high vs. low)	.109*	.183*	.053*	-.002	-.011*	.065*	.015*	-.021*	-.045*	.015*	.012*	-.024*	.015*	-.000	.001	.002	-.079*	.018*	1				
Social class (medium vs. low)	.078*	.118*	.046*	.012*	-.012*	-.034*	.027*	.016*	.020*	.008*	.008*	.002	.007*	-.001	-.002	.000	-.005*	.039*	-.474*	1			
Age	.203*	.130*	.125*	-.163*	.083*	.023*	-.118*	-.033*	-.133*	-.001	-.039*	-.045*	-.054*	.001	.027*	-.007*	.021*	-.116*	.071*	-.066*	1		
Household size	.047*	.139*	-.017*	.046*	-.008*	-.014*	.049*	-.015*	.035*	.001	.023*	.015*	.024*	-.003	-.010*	.001	-.015*	-.086	.164*	.167*	-.195*	1	

Notes: Notes: Customer experience and lock-in related variables are measured in lagged form

(M) means mobile service category; (B) represents broadband service category

Significance level: *p<.05

3.7.2 Combinations of Lock-in Effects

Although the main effects of lock-in on customer retention are not the major focus of our study, and we did not hypothesize them given these relations are well established, we still would like to indicate that the results are in line with previous studies. More specifically, both firm-driven – that is, bundling ($\beta^M_1 = 1.517, P < .01$; $\beta^B_1 = 2.624, P < .01$) and binding contract ($\beta^M_2 = .637, P < .01$; $\beta^B_2 = .156, P < .01$) – and customer-driven lock-in strategies ($\beta^M_3 = .449, P < .01$; $\beta^B_3 = .170, P < .01$) enhance customer retention.

More importantly, in regard to the effects of the combinations of two different lock-in strategies on customer retention, all the signs are in the expected direction and show significant influence ($\beta^M_4 = -.137, P < .01$; $\beta^M_5 = -.065, P < .0$; $\beta^B_4 = -.094, P < .01$; $\beta^B_5 = -.016, P < .01$), lending support to Hypothesis 1. This means that firm-driven lock-in strategies – in terms of bundling and binding contracts with their economic rewards, which are viewed as attractive offerings by most customers – are not likely to draw the same level of attention from customers who have developed an intimate relational bond via high usage level.

3.7.3 Joint Effects between Customer Experience and Lock-in

For the linkages between experience effects (i.e., main effect and spillover effect) and customer retention, although they are not hypothesized, the results confirm the findings of previous studies. As shown in Table 3, there is a positive impact of customer experience on customer retention in both the mobile and broadband service categories ($\beta^M_6 = .533, P < .01$; $\beta^B_6 = .501, P < .01$). Customer experience within one category (mobile/broadband) provided by the focal firm, that is, the spillover effect of customer experience, also has a positive and significant impact on customer retention in another category (broadband/mobile) ($\beta^M_7 = .224, P < .01$; β^B_7

= .153, $P < .01$). In what follows, we present the results about the joint effects between customer experience and lock-in, which are consisting of another focus of the proposed conceptual framework.

Firm-driven lock-in. In line with our expectation, the results show that customers who have acquired mobile and broadband services in a bundled form tend to remain with the focal firm regardless of the level of customer experience ($\beta^M_8 = -.247$, $P < .01$; $\beta^B_8 = -.113$, $P < .01$). With regards to binding contracts, the results reveal that, due to the associated restrictions in binding contracts, customers have to remain with the focal firm, thereby decreasing the importance of the main effect of customer experience ($\beta^M_9 = -.063$, $P < .01$; $\beta^B_9 = -.008$, $P < .01$). Therefore, we find support for Hypothesis 2a. For Hypothesis 2b, all the hypothesized effects are in line with our expectation ($\beta^B_{10} = -.177$, $P < .01$; $\beta^M_{11} = -.015$, $P < .01$; $\beta^B_{11} = -.015$, $P < .01$), except the interaction between bundling and customer experience spillover effect in the mobile service category ($\beta^M_{10} = .091$, $P < .01$), thus leading to partial support of this hypothesis. One possible explanation for this result could be that, as the mobile service is the dominant category, satisfactory customer experience from the broadband service category works as a memory trigger that can easily evoke information activation and retrieval, thereby enhancing the positive experience with the dominant category.

Customer-driven lock-in. We hypothesized positive joint effects between customer-driven lock-in and customer experience (i.e., main effects and spillover effects) on customer retention. In contrast to our expectation, we found negative and significant coefficients for such effects in both the mobile and the broadband service categories ($\beta^M_{12} = -.052$, $P < .01$; $\beta^B_{12} = -.016$, $P < .01$; $\beta^M_{13} = -.005$, $P < .01$; $\beta^B_{13} = -.004$, $P < .01$), which lead us to reject Hypotheses 3a and 3b. A rationale for these patterns could be that, enabled by a high level of usage, customers may develop a more intimate relationship with firms, but they will also have acquired more

information about the company, which thereby increases the richness of the customers' impressions about the service provider (Bolton & Lemon, 1999). As a consequence, customers will gain more confidence in their own beliefs when evaluating their relationships with firms, thus placing less weight on newly acquired customer experience (Bolton, 1998).

Combinations of lock-in. With regards to our expectation proposed in Hypothesis 4a, we found significant and positive joint effects among customer-driven lock-in, firm-driven lock-in, and the main effect of customer experience in both the mobile and broadband service categories ($\beta^M_{14} = .016, P < .05$; $\beta^B_{14} = .007, P < .01$; $\beta^M_{15} = .007, P < .01$), except for the interactive effects across customer-driven lock-in and binding contracts in the broadband service category ($\beta^B_{15} = -.0001, P > .1$). Hence, Hypothesis 4a is partially supported. When it comes to the joint effects across two types of lock-in strategies and the customer experience spillover effects, although the signs are in the expected direction, they are not statistically significant either in the mobile service or in the broadband service categories ($\beta^M_{16} = .003, P > .1$; $\beta^B_{16} = .004, P > .1$; $\beta^M_{17} = .0004, P > .1$), with the exception once again of the situation where a binding contract as the firm-driven lock-in strategy is deployed in the broadband service category ($\beta^B_{17} = .0004, P < .1$). Therefore, Hypothesis 4b is also partially supported.

3.8 PROJECTED CUSTOMER RETENTION

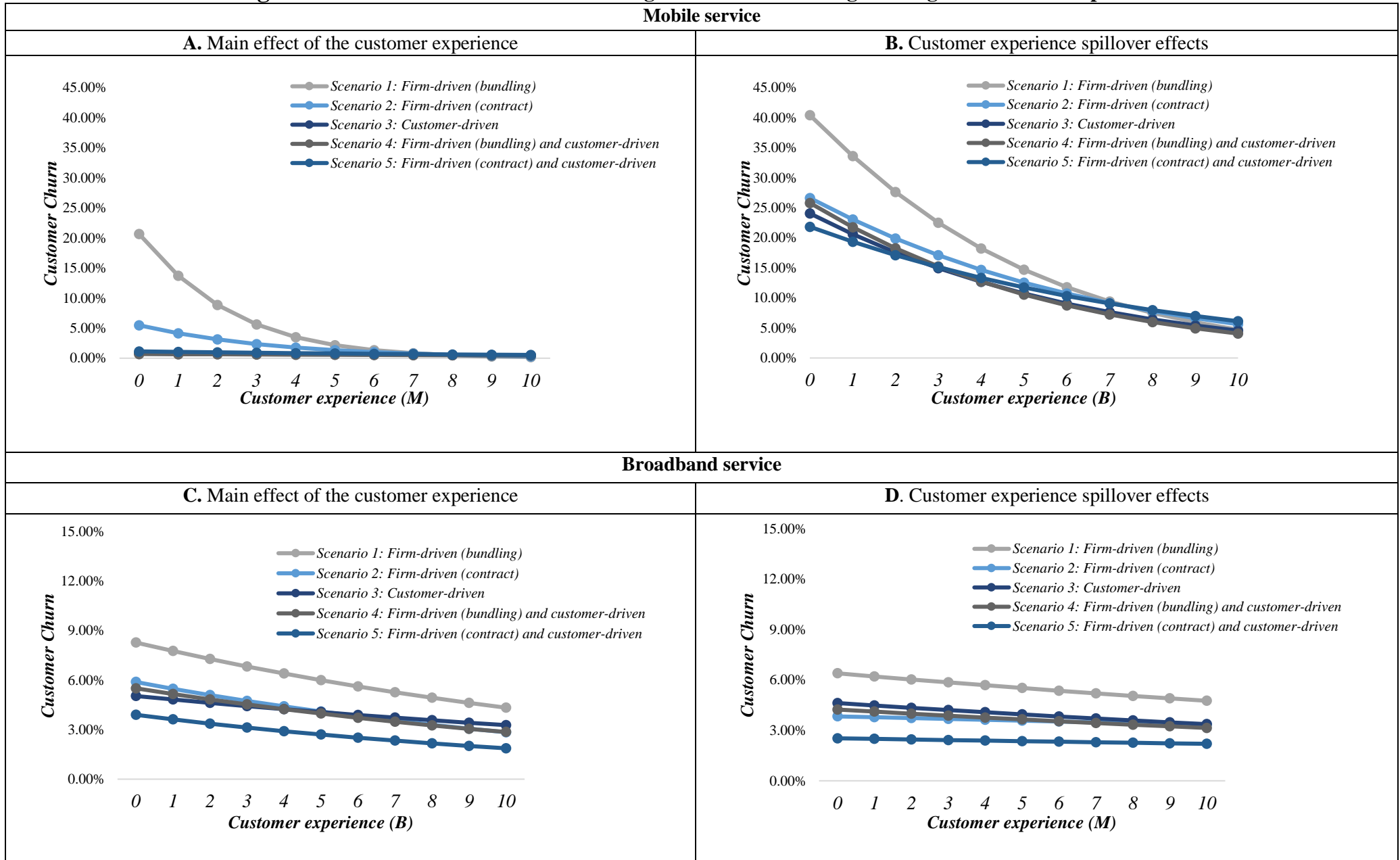
Figure 3.3 helps better view the effectiveness of the moderating effect of lock-in strategies alongside the evolution of customer experience in one category and another (i.e., the main effect and the spillover effect). To elaborate Figure 3.3, we conducted the first set of simulations by following two steps. In the first step, we generated a simulated dataset. The value of the mobile service category was imputed from 0 to 10, while the customer experience

of the broadband service category was at the mean value of the corresponding firm. This imputation was repeated for different types of lock-in strategies as well as for their combinations, which consisted of five scenarios: (1) bundling (firm-driven); (2) binding contract (firm-driven); (3) customer-driven; (4) bundling and customer-driven; and (5) binding contract and customer-driven. In each of the corresponding scenarios, the opted lock-in strategy was set to 1 and 0 for the rest of firm-driven lock-in strategies, while customer-driven lock-in and the other dependent variables were at their mean values. The same procedure was followed in the broadband service category. In the second step, we used the estimated parameters reported in Table 3.3 together with the simulated dataset to project customer retention for the joint effects of lock-in strategies alongside the evolution of customer experience in one category and another (i.e., the spillover effect).

Figure 3.3 consists of four panels, where panels A and B respectively represent the main effect and spillover effect of the customer experience in the mobile service category, and panels C and D display these effects in the broadband category. All panels in Figure 2 consistently illustrate that, given satisfactory customer experience, customer churn does not differ across different types of lock-in strategies, thereby showing the *substitution effects* between customer experience and lock-in strategies. Conversely, given poorly delivered customer experience by firms, customer churn varies among different (combinations of) lock-in strategies. Customers who are retained by firm-driven lock-in strategies are more likely to migrate to competing alternatives. This suggests that firm-driven lock-in strategies that promote transactional exchange relationships drive customers to be less tolerant of negative experiences. If customers are mainly locked into the established relationships by customer-driven lock-in or its combination with firm-driven lock-in strategies, bad customer experience does not substantially decrease customer churn. Thus, *complementary effects* between customer experience (i.e., main

and spillover effects) and lock-in are illustrated, and such effects are stronger in the mobile service category. Indeed, in comparison to panels A and B in which lock-in strategies display a similar tendency alongside the increased customer experience, panels C and D reveal much flatter inclinations.

Figure 3.3: The evolution of the moderating role of lock-in strategies alongside customer experience



3.9 ROBUSTNESS CHECK

3.9.1 Model Comparison

To conduct a robustness check, we compared the proposed model with three benchmark models to assess the validity of our models, especially with respect to the moderating role of customer-driven lock-in strategies in the effects of customer experience, its spillover effect, and firm-driven lock-in strategies on customer retention. As emphasized by Bolton et al. (2004), customer-driven lock-in mechanisms are reflected in different customer–firm exchange relationships, including the relationship depth, length, and breadth. Among them, the depth of relationship, which corresponds to the level of service usage over time (e.g., mobile and broadband usage), has already been assessed in this study. To demonstrate its robustness, we first estimated the proposed model by using the customer's bill as an alternative measure for service usage level. Similarly, using multinomial logit model, we considered the moderating impact of the length of a relationship, which refers to the duration of a relationship (e.g., customer tenure) as well as to the breadth of a relationship reflected in “add-on” buying, that is, the number of additional products or services purchased from a company over time (e.g., number of services acquired from the focal firm). The results displayed in Table 3.5 demonstrate that our overall conclusions remained robust to these alternate measures.

Table 3.5: Robustness check – moderating role of lock-in strategies

$N_{Mobile} = 2,176,734$ $N_{Broadband} = 1,784,657$		Independent variable: customer retention		Relationship depth (Bill)		Relationship length (Tenure)		Relationship breadth (Number services)	
Dependent variables		M	B	M	B	M	B	M	B
Combinations of Lock-in Effects									
<i>Main effects</i>	Firm-driven (bundling)	1.234	4.763***	.959*	2.605***	.361	3.638***		
	Firm-driven (binding contract)	.600***	.140***	.663***	.184***	.509***	.161***		
	Customer-driven (M/B)	.115***	-.019**	.161***	.038***	2.750***	2.177***		
	Customer-driven (M/B) *Firm-driven (bundling)	-.066***	-.020	-.03	-.035*	-.638	-1.382***		
	Customer-driven (M/B) *Firm-driven (binding contract)	-.011***	.001	-.025***	-.010***	-.245***	-.079***		
Joint Effects between Customer Experience and Lock-in									
<i>Main effect</i>	Customer experience (M/B)	.503***	.363***	.563***	.369***	.520***	.662***		
	Customer experience spillover	.223***	.101***	.220***	.110***	.222***	.144***		
<i>Spillover effects</i>	Firm-driven (bundling)*Customer experience (M/B)	-.249*	-.238***	-.194***	-.181***	-.120	-.365***		
	Firm-driven (binding contract)*Customer experience (M/B)	-.061***	-.008***	-.068***	-.009***	-.037***	.007		
	Firm-driven (bundling)*Customer experience spillover	.08	-.431***	.114***	-.163**	.008	-.326***		
<i>Firm-driven lock-in</i>	Firm-driven (binding contract)*Customer experience spillover	-.017***	-.009**	-.013***	-.014***	-.009	-.015***		
	Customer-driven (M/B)*Customer experience (M/B)	-.013***	-.001	-.020***	-.003***	-.254***	-.249***		
<i>Customer-driven lock-in</i>	Customer-driven (M/B)*Customer experience spillover	-.001**	.004***	-.0001	-.004**	-.080***	-.047***		
	Customer-driven (M/B)*Firm-driven (bundling)*Customer experience (M/B)	.008***	.001	.004	.002	.078	.159***		
<i>Combinations of lock-in effects</i>	Customer-driven (M/B)*Firm-driven (binding contract)*Customer experience (M/B)	.001***	.0002***	.003**	.001***	.018***	.003		
	Customer-driven (M/B)*Firm-driven (bundling)*Customer experience spillover	0.001	.002	-.0004	.003	.042	.104***		
	Customer-driven (M/B)*Firm-driven (binding contract)*Customer experience spillover	.0002***	-.0001	-.0001	.001**	.008***	.005**		
Control Variables									
<i>Competitive experience effects</i>	Competitive customer experience (M/B)	2.020***	1.613***	2.226***	1.563***	2.135***	1.768***		
	Competitive customer experience (B/M)	2.022***	.936***	2.028***	.941***	2.111***	.890***		
<i>Control variables for missing data</i>	Dummy customer experience (M)	-.161***	-.04	-.130***	-.007	-.140***	.003		
	Dummy customer experience (B)	.288***	-.413***	.281***	-.382***	.248***	-.102		
	Dummy binding contract	.197***	-.164**	.271***	-.135*	.125**	-.244**		
<i>Firm characteristics</i>	Market share	-1.602***	1.643***	-1.593***	1.641***	-1.666***	1.755***		
	Advertising expenditure (log)	.008**	.010***	.008**	.010***	.008**	.011***		
<i>Context characteristics</i>	Social media mention	.006***	.003**	.006***	.003**	.006***	.004***		
	iPhone release	.03	.046	.005	.041	.007	-.094		
	Acquisition	-.019	-.110*	-.021	-.110*	-.023	-.106*		
<i>Customer characteristics</i>	New entrants	.273**	.135	.208*	.121	.210*	-.023		
	Gender (1=female)	.049	.312***	-.013	.308***	-.031	-.007		
	Working status (1=active)	.090**	.258***	.051	.241***	.022	-.029		
	Social class (high vs. low)	.126*	.258***	.060	.279***	.044	.005		
	Social class (medium vs. low)	.210***	.482***	.108	.488***	.088	.096		
	Age	.014***	.035***	.008***	.035***	.006***	.007***		
<i>Intercept</i>	Household size	.137***	.422***	.068***	.417***	.048**	.055**		
	Intercept(firm1)	-.249*	-.744***	-.667***	-.747***	-.692***	-.703***		
	Intercept(firm2)	-.641***	-.252**	-.636***	-.257**	-.661***	-.219*		
	Intercept(firm3)	-1.590***	-3.552***	-1.606***	-3.564***	-1.640***	-3.518***		
	Intercept(firm4)	-1.374***	.147	-1.390***	.141	-1.425***	.209		
	Intercept(firm5)	-2.255***	-.11	-2.251***	-.111	-2.290***	-.064		
<i>Fit statistics</i>	Intercept(firm6)	-.892***	-.825***	-.903***	-.831***	-.925***	-.776***		
	Log-likelihood	-35,609.490	-32,443.320	-35,492.110	-32,410.450	-35,419.030	-31,918.110		
	R ²	.883	.885	.883	.885	.884	.887		
	Degree of freedom	40	40	40	40	40	40		
AIC	71,298.99	64,966.64	71,064.21	64,900.9	70,918.06	63,916.22			

Notes: Customer experience and lock-in related variables are measured in lagged form

Significance levels: *p<.1; **p<.05; ***p<.01

(M) means mobile service category; (B) represents broadband service category

3.9.2 Endogeneity Assessment

A problem with empirically studying lock-in is that this is often not exogenous; firms target customers with lock-in offerings as they believe (these) customers will accept these offers. Customers accept these offers because they see benefits in them (e.g., a lower price) and they might already have the intention to stay longer with the focal firm, thus reducing the negative aspects of the lock-in for the customers. This endogeneity issue, as revealed in Table 3.1, has rarely been assessed in previous studies related to lock-in and customer experience. Among the few papers that have developed an endogeneity assessment, they have simply developed a probit model or a structural model (e.g., De Haan et al., 2015; Dong & Chintagunta, 2016; Jones et al., 2007). In this research, to control for the endogeneity bias, we adopted propensity score matching (PSM) via greedy matching algorithm, which has been widely applied in the literature to examine endogeneity issue (Rosenbaum & Rubin, 1985). This method has proved advantageous to assess endogeneity in many fields (e.g., economics, medical studies, as well as marketing) (Garnefeld, Eggert, Helm, & Tax, 2013; Rutz & Watson, 2019). Most importantly, this method was specifically applied by prior research (Titus, 2007) to address the problem of the limited distributional assumption of the errors inherent in the endogenous switching and independent variables estimation variables, which was similar to our situation. It therefore indicates the adequacy of PSM as the endogeneity assessment method in this study.

More specifically, this research handled the potential endogeneity among customer retention and other key independent variables, ranging from different firm-driven lock-in strategies to customer experience. More specifically, the self-selection of respondents in the survey of customer experience may arise and potentially affect the findings. For example, customers who have a more positive customer experience might be more likely to accept the firm-driven lock-in (i.e., bundling and binding contract) proactively suggested by firms, thus

increasing the possibility to remain in the established exchange relationship. Following the same logic, in the situation where customers have had a worse customer experience from the firms, such firm-driven lock-in are less likely to be viewed from a positive perspective by customers, which consequently may decrease customer retention. One may also question if customer-driven lock-in might vary as a function of firm-driven lock-in. In other words, customers' choices toward the usage level in the correspondent service category might be due to the proactively suggested bundling or binding contract options by firms, thereby raising an additional endogeneity issue. Considering the nature of firm-driven and customer-driven lock-in, we do not consider there would be such issue. As noted above, bundling is a pricing and marketing strategy by firms that combine products or services together in order to sell them to customers as a single combined unit for a special price while the binding contract is offered by firms to customers with an added-value product (i.e., mobile handset). Instead of increasing usage level, these two strategies are considered as key drivers of service adoption instead of usage level, since customers are usually attracted by such firm's offerings due to the associated advantages (reduced prices and supplementary product). As supported in the literature (Bouwman, Carlsson, Molina-Castillo, & Walden, 2007; Ranganathan, Seo, & Babad, 2006; Tallberg, Hämmäinen, Töyli, Kamppari, & Kivi, 2007), bundling and binding contract exert significant influence in the adoption of services in telecom industry while no direct linkage with the level of service usage was founded, thus alleviating the endogeneity concern across firm-driven lock-in and customer-driven lock-in. Hence, we mainly focus on the endogeneity assessment across customer retention, firm-driven lock-in, and customer experience based on the analysis of PSM, in which the matching procedure was executed in three steps.

First, to calculate the propensity score of choosing bundling and a binding contract, we performed two binary logistic regressions as a function of observed variables (Rosenbaum & Rubin, 1985), which are expressed in Equation (4):

$$\Pr(\text{Choice}_{ib/ct}=1) = \Pr(\omega_0 + \gamma_1 X_{it-1} + \gamma_2 Z_{it} + \eta > 0) \quad (4)$$

where $\text{Choice}_{ib/ct}$ indicates if customer i has accepted the suggested bundling or a binding contract by the focal firm m at time t . Covariates X_{it-1} indicate customer experience, its spillover effect, and aspects relating to customer–firm relationships (i.e., customer tenure, service usage, and number of services) measured at time $t-1$, while Z_{it} is a vector of control variables, ranging from firm-, context-, and customer-characteristics. As the selected determinants were either collected before the treatment (i.e., bundling and binding contract) or fixed over time, we ensured that the treatment did not cause any of the selected exogenous variables (Caliendo & Kopeinig, 2008). We present the results from the logistic regressions in Table 3.6.

Table 3.6: Parameter estimates propensity score equation (N=310,962)

Dependent variable	Bundle choice_{it}	Dependent variable	Contract choice_{it}
Main effects			
Customer experience (M)	.017***	Customer experience (M)	.012**
Customer experience (B)	.012***	Customer experience (B)	.025***
Usage (M)	.037***	Usage (M)	-.022***
Customer tenure	-.012***	Customer tenure	-.134***
Number services (M)	1.201***	Number services (M)	.159***
Control variables			
<i>Advertising expenditure (log)</i>	-.026***	<i>Market share</i>	-1.807***
<i>Social media mention (log)</i>	-.296***	<i>Advertising expenditure (log)</i>	.077***
<i>iPhone release</i>	.058***	<i>Social media mention (log)</i>	.008***
<i>New entrant</i>	.085***	<i>iPhone release</i>	-.094***
<i>Gender (1=female)</i>	.082***	<i>New entrant</i>	-.306***
<i>Working status (1=active)</i>	.560***	<i>Acquisition</i>	-.104***
<i>Social class (high vs. low)</i>	-.271***	<i>Gender (1=female)</i>	.081
<i>Social class (high vs. low)</i>	.067***	<i>Working status (1=active)</i>	.687***
<i>Age</i>	.025***	<i>Social class (high vs. low)</i>	-.177***
<i>Intercept</i>	-5.221***	<i>Social class (high vs. low)</i>	.033**
		<i>Age</i>	.014***
		<i>Intercept</i>	-1.588***
Fit statistics			
Log-likelihood	-94,706.24	Log-likelihood	-94,563.13
Degree of freedom	15	Degree of freedom	17
AIC	189,442.50	AIC	189,160.30

Notes: Customer experience and lock-in related variables are measured in lagged form

Significance levels: * $p < .1$; ** $p < .05$; *** $p < .01$

(M) means mobile service category; (B) represents broadband service category

Second, once the propensity score had been estimated, the matching was computed via a one-to-one nearest neighbor without replacement within-caliper matching strategy. To ensure a sufficient matching quality, as suggested by Rosenbaum and Rubin (1985), a caliper of .25 standard deviation, which allows the removal of at least 90% of bias and sufficiently improves the quality of matching (Leite, 2016), was applied.

Third, drawing from the literature (Leite, 2016), several criteria – namely, variance ratio, standard mean difference, and common support graph – were used to gauge the covariate balance between the treatment and control groups and to ensure the matching quality. As shown in Table 3.7, the matching procedure achieved a good bias reduction. Customers who accepted the firm-driven lock-in recommended by firms exhibited different characteristics and behaviors before the matching procedure, but they are relatively similar afterward. The average variance ratio of the covariates is close to one after the propensity score adjustment (Chen & Kaplan, 2015), while the absolute mean differences are all below .25 for all covariates in both bundling and binding contract regardless of the service categories (Leite, 2016). Similarly, the common support graphs further illustrate that, after matching, both customers groups are indistinguishable with respect to bundling and binding contract choices.

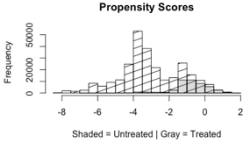
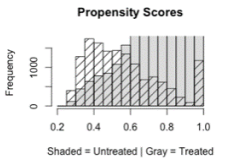
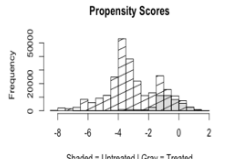
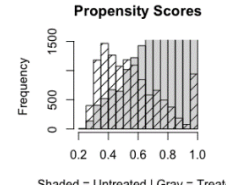
Fourth, we estimated the average treatment effect on the treated (ATT); that is, the difference that would be found if everyone in the treated group received the treatment (i.e., bundling or binding contract) compared with the situation where these individuals would not have received such treatment. The results reported in Table 3.7 reveal that all of the ATT values are negative and statistically significant, thereby indicating that, *ceteris paribus* (i.e., customer experience in one category and another category were rated equally while firm-, context-, and customer-characteristics remained similarly), the churn rate for customers who accepted firms' offering in terms of bundling or binding contract (treatment group) is significantly lower than

for customers who did not accept such options proposed by firms. To gauge the endogeneity reduction, the difference between the average treatment effect (ATE) and ATT was computed accordingly.

Fifth and finally, to assess hidden biases, which refer to the influence of unobservable variables on customer self-selection when accepting the firm-driven lock-in strategies, Rosenbaum's (2002) sensitivity test was developed. The results indicate that hidden bias is not a major concern in our study, because the p -values for Gamma in all cases met the usual threshold of $< .05$ (Rosenbaum, 2002).⁵

⁵ Following Rosenbaum (2002), we set the maximum value for Gamma at 2, with increments of 0.1.

Table 3.7: Endogeneity assessment via propensity score matching results

	Mobile service		Broadband service	
	<i>Bundling</i>	<i>Binding contract</i>	<i>Bundling</i>	<i>Binding Contract</i>
Number of observations	310,962	62,944 (left truncated<20%)	238,247	51,183 (left truncated<20%)
Matched pairs	44,911	11,032	44,044	9,009
Average variance ratio	1.019	.970	.995	1.017
Max absolute standard mean difference	.091	.170	.109	.121
Covariates with absolute standard mean difference	0% (0/17)	11.77% (2/17)	13.33% (2/15)	5.88% (1/17)
Common support figure				
ATT	-.002(***)	-.022(***)	-.002(***)	-.008 (***)
ATE	-.005(***)	-.023(***)	-.004(***)	-.008(***)
Endogeneity reduction	.003	.001	.002	.016

Significance levels: * $p < .1$; ** $p < .05$; *** $p < .01$

3.9.3 Customer Heterogeneity

From the estimation results for the firm alternative specific intercept β_0 (Table 3.3), we find considerable heterogeneity in the intrinsic propensity to maintain the established exchange relationship with different firms. Unmeasured customer-specific factors may influence customer retention decisions. To account for customer heterogeneity, following the study of Gönül and Srinivasan (1993), we estimated two mixed multinomial logit models. In mixed logit models, customer heterogeneity is recovered by assuming that coefficients in the utility function are randomly distributed. As indicated in Equation (5), the utility function is composed by the intercept and parameters of key explanatory variables which are assumed to vary from one individual to another:

$$\begin{aligned}
 U_{imj/kt} = & (\beta_{0\ mj/k} + \beta^u_{0\ mj/k}) + (\beta_{1j/k} \mathbf{Bundling}_{imt-1} + \beta^u_{1j/k} \mathbf{Bundling}^u_{imt-1}) & (5) \\
 & + (\beta_{2j/k} \mathbf{Contract}_{imjt-1} + \beta^u_{2j/k} \mathbf{Contract}^u_{imjt-1}) \\
 & + (\beta_{3j/k} \mathbf{Usage}_{imj/kt-1} + \beta^u_{3j/k} \mathbf{Usage}^u_{imj/kt-1}) \\
 & + (\beta_{4j} \mathbf{CX}_{imjt-1} + \beta^u_{4j} \mathbf{CX}^u_{imjt-1}) \\
 & + (\beta_{5k} \mathbf{CX}_{imkt-1} + \beta^u_{5k} \mathbf{CX}^u_{imkt-1}) \\
 & + \beta_{6j} (\mathbf{CX}_{imjt-1} - \overline{\mathbf{CX}_{(M-mjt)t-1}}) \\
 & + \beta_{7k} (\mathbf{CX}_{imkt-1} - \overline{\mathbf{CX}_{(M-mk)t-1}}) + \beta_{8j/k} \mathbf{Controlmis}_{im} + \varepsilon_{imj/kt}
 \end{aligned}$$

It is therefore a model that takes the customer heterogeneity into account via two resources. First, the random component in each intercept term (β^u_0) serves as a measure of variation on the customer' intrinsic propensity of maintaining the established relationships across firms (i.e., customer retention). Second, the magnitude of the variances of the random components of explanatory variables ($\beta^u_1 - \beta^u_5$) indicates the extent to which customers differ

in their response to different lock-in strategies and customer experience. The results presented in Table 3.8 highlight the importance of customer heterogeneity.

Table 3.8: Customer heterogeneity estimation results

Dependent variable=Customer retention	Mobile service				Broadband service			
	Coefficient	5%	95%	SD	Coefficient	5%	95%	SD
$N_{Mobile} = 2,176,734$								
$N_{Broadband} = 1,784,657$								
Intercept(firm1)	-.4399***	-4.1368	3.2571	5.4811	-1.2927***	-3.0008	.4154	2.5324
Intercept(firm2)	-.4379***	-2.2392	1.3635	2.6707	-.8546***	-1.6132	-.0960	1.1247
Intercept(firm3)	-1.3777***	-4.3440	1.5886	4.3978	-5.7986***	-10.6838	-.9134	7.2428
Intercept(firm4)	-1.3236***	-3.9190	1.2718	3.8480	-.7854***	-2.2362	.6654	2.1509
Intercept(firm5)	-1.8090***	-4.4637	0.8456	3.9358	-1.0228***	-2.2189	.1733	1.7733
Intercept(firm6)	-1.0227***	-4.2360	2.1906	4.7641	-1.5617***	-2.5854	-.5380	1.5177
Firm-driven (bundling)	.9186***	-1.1353	2.9725	3.0451	1.5901***	.1890	2.9913	2.0773
Firm-driven (binding contract)	.4837***	.2417	.7257	.3588	.3550***	.1715	.5385	.2721
Customer-driven (M/B)	.3855***	.2953	.4757	.1337	.4533***	.3981	.5085	.0818
Customer experience (M/B)	.8819***	.6827	1.0811	.2954	.3667***	.1693	.5641	.2926
Customer experience spillover	.5316***	.2515	.8117	.4153	.8136***	.4737	1.1535	.5039
Competitive customer experience (M/B)	-1.5415***	-	-	-	-.7700***	-	-	-
Competitive customer experience (B/M)	-.3441	-	-	-	.2082	-	-	-
Dummy customer experience (M)	.1707*	-	-	-	-.0064	-	-	-
Dummy customer experience (B)	.4772***	-	-	-	-.2037**	-	-	-
Dummy binding contract	.7352***	-	-	-	-.3234***	-	-	-
Dummy usage(B)	-	-	-	-	-.2245**	-	-	-
Fit Statistics								
Log-Likelihood	-45413	-	-	-	-47586	-	-	-
AIC	90990.71	-	-	-	95338.81	-	-	-

Note: Significance levels: * $p < .1$; ** $p < .05$; *** $p < .01$

3.10 DISCUSSION AND IMPLICATIONS

This research explores the joint effects of two central strategies on customer retention: lock-in mechanisms and customer experience. First and most importantly, our study reveals the important trade-offs between different types of lock-in and customer experience. For customers who are already locked into the established relationships via one of the lock-in strategies, dedicating more efforts to improving customer experience in one category and another one (spillover effect) do not substantially improve customer retention (substitution effect). Conversely customers who are “double” retained in the firm via two types of lock-in strategy do appreciate the improvement in customer experience (complementary effect). These results have important implications for research and practice. Second, we demonstrate the interplay across different types of lock-in strategy (firm-driven vs. customer-driven). In particular, while both of them are useful for retaining customers, the role of firm-driven lock-in strategies decreases with the increasing intrinsic motivation state to remain in the established exchange relationships (customer-driven lock-in).

3.10.1 Theoretical Implications

First, despite the merit of previous studies in advancing knowledge about customer retention, the two key marketing strategies for managing customer retention (i.e., lock-in and customer experience strategies) have been largely studied in a separate manner (see Table 3.1), thereby leading to a fragmented view of the role played by each of these strategies in retaining customers. To fill this important research gap, this study integrates social exchange theory and experiential theory to offer a comprehensive framework about the joint impacts of different types of lock-in situations and various customer experience effects on customer retention. In

this way, we respond to two relevant yet unanswered research questions: *whether* the impact of these strategies complement or substitute each other, and *when* this happens.

Second, whereas prior research on lock-in has mainly focused on the nature of involved constraints in switching costs to classify lock-ins, this study distinguishes firm-driven lock-in from customer-driven lock-in through the criteria of whether they are explicitly intended company actions. Enabled by this conceptual classification, our research sheds light on how firms can identify their opportunities to take an active role of intervention in customer retention. More specifically, the captured decreasing effectiveness of a firm-driven lock-in strategy in retaining customers under the situation where customers are already locked into the relationships via customer-driven lock-in reveals that firm-driven lock-in is not always desirable (Blut et al., 2015; Jones et al., 2007).

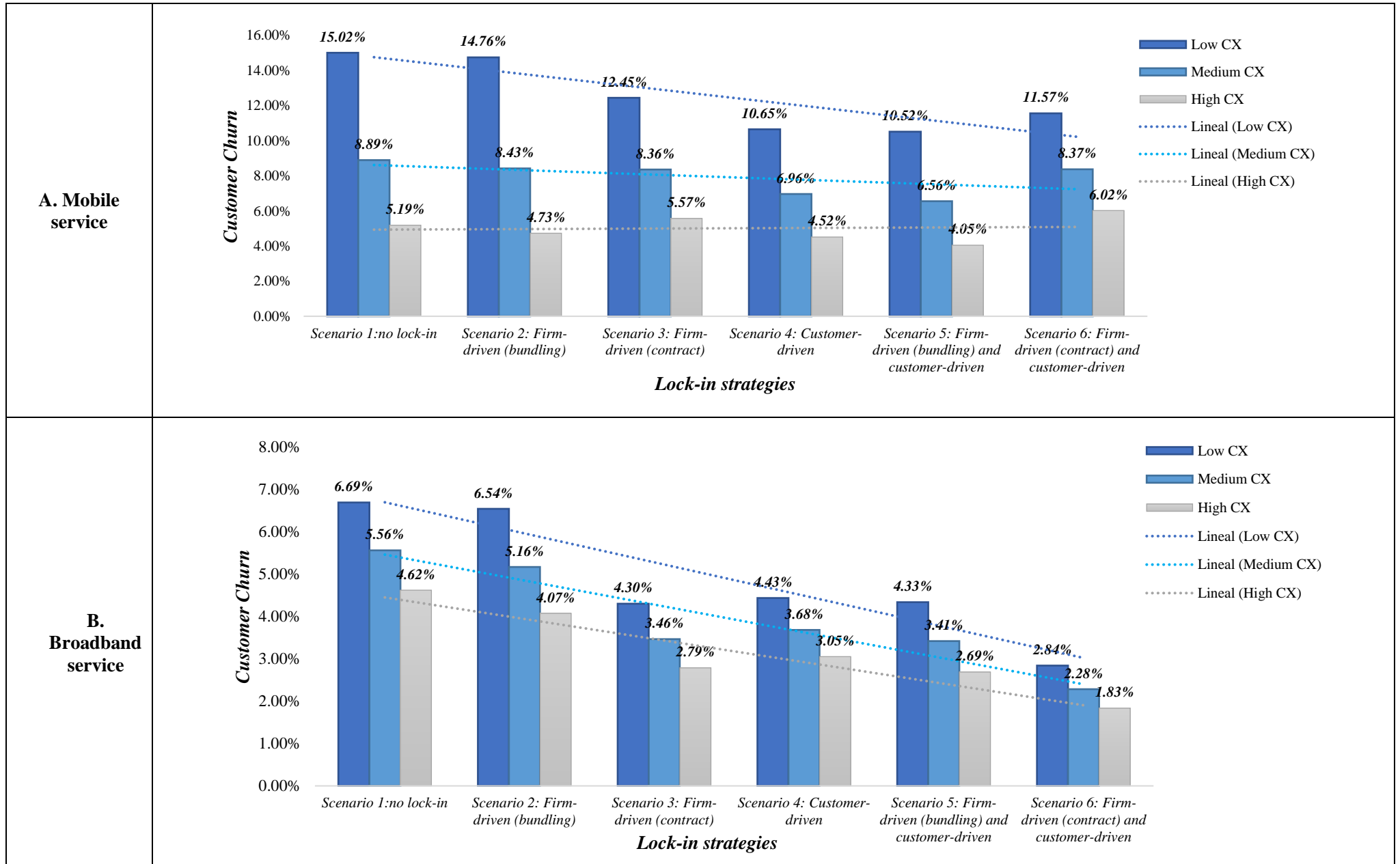
3.10.2 Managerial Implications

The results of this study allow us to address two issues of managerial interest for marketing practitioners. The first is to take the firm-level perspective to question *how* crucial strategies in pursuit of the same goal (i.e., customer retention) should be deployed properly across product categories – more strategies are not always better. The second is to take the customer-level perspective to discuss for *whom* firms should take their actions.

How to properly manage key strategies according to firms' profile – more is not better. We challenge the common-sense suggestions that imply that the more strategies deployed to retain customers the better. To illustrate this point, we performed one more simulation using the same set of estimated parameters in Table 3.3. In this simulation, we projected customer retention under six lock-in scenarios: (1) no lock-in strategy; (2) a single firm-driven bundle; (3) a single

firm-driven binding contract; (4) a customer-driven lock-in; (5) a combination of firm-driven (bundle) and customer-driven lock-in; and (6) a combination of binding contract and customer-driven lock-in. These were considered alongside three levels of customer experience (low, medium, and high). The setting for the medium level was based on the average value of customer experience across customers from the same firm, while the low and high levels were 2.5 points inferior and superior to the medium level, respectively. This setting was repeated for each of the six scenarios. In the first scenario where no lock-in strategies are implemented, all firm-driven lock-in strategies were imputed as 0 while customer-driven and the rest of the dependent variables were at their mean values. For the rest of the scenarios, the data was simulated in the same way as the first simulation. Customer churn in each scenario was accordingly obtained by assuming customer experience at low, medium, and high levels. To be managerially substantive, the graphical approach was followed (De Haan, Kannan, Verhoef, & Wiesel, 2018). In particular, Figure 3.4 is elaborated to facilitate specific guidelines for companies depending on whether their orientation is to customer experience or to lock-in strategies.

Figure 3.4: The moderating role of lock-in strategies



For companies that are customer experience oriented, we therefore suppose that they are able to deliver customer experience at least to a medium level and have not opted for any of the lock-in strategies (scenario 1). The answer to the question about whether to focus *solely* on their central customer experience strategy (remaining in scenario 1) or *simultaneously* to invest in one of the lock-in strategies (choosing from scenarios 2 to 6) varies across product categories. In the mobile service category, maintaining or improving customer experience is recommended. If customer experience is managed successfully, investing in lock-in strategies does not substantially improve customer retention and could even obtain the opposite result. As demonstrated in Figure 2, given a high level of customer experience, a bad choice of lock-in strategy (i.e., scenario 6) may even increase customer churn (from 5.19% to 6.02%). If customer experience is at a medium level, the decrease in customer churn via customer experience from a medium to a high level (from 8.89% to 5.19%) is higher than the optimal combination of lock-in strategy (scenario 5) where the customer churn rate is 6.56%. In the broadband service category, however, choosing the correct lock-in strategy is more important than improving customer experience. As indicated by Figure 3.4, the best combination of lock-in strategies (scenario 6) gives firms the opportunity to reduce customer churn from 4.62% to 1.83% under a high level of customer experience. Given a medium level of customer experience, such customer churn can be reduced to 2.28%. Meanwhile customer churn can only be reduced to 4.42% (medium-high) via improving customer experience from a lower level to a higher level.

For companies oriented toward lock-in strategies, we therefore consider that at least one of the lock-in strategies (from scenarios 2 to 6) should be applied while customer experience is at the low level. Here, the question faced by firms is whether to find the best option of lock-in strategies (choosing from scenarios 2 and 6) or to improve customer experience. The response again differs across product categories. In the mobile service category, we suggest firms

dedicate more effort to improving customer experience while retaining the applied lock-in strategy. Figure 3 shows that the customer churn at the medium level of customer experience in the worst scenario (8.89% in scenario 1) is even lower than the optimal combination of lock-in strategy (10.52% in scenario 5) at the low level of customer experience. In the broadband service category, however, firms may consider changing the lock-in strategies to improve customer retention. Figure 3.4 shows that the best combination of lock-in strategies gives firms the opportunity to reduce customer churn to 2.84% (scenario 6). Such customer churn is lower than the achievement that firms can obtain from any other option (from scenarios 1 to 5) via improving customer experience.

For whom should firms take their active roles according to customers' profile? Our research also generates a detailed and insightful scheme that can serve to guide managers in properly allocating their efforts depending on the profile of customers. As shown in Table 3.9, firms may define customers' characteristics based on customer experience and customer-driven and lock-in strategies in four quadrants. The intensity of usage, which reflects the degree of customers' emotional attachment to the firm, can also be low or high, and the level of customer experience can be low or high. Drawing on Pansari and Kumar (2017), we have labeled the quadrants ranging from I to IV respectively as indifferent customers, addictive customers, devoted customers, and rational customers. In what follows, we discuss specific strategies for effectively managing each of these groups.

Table 3.9: Summary of managerial takeaways

Customer-driven Lock-in	High	<p style="text-align: center;">II: Addictive customers</p> <p>Characteristics: -Poor customer experience -More emotionally attached to the focal firm</p> <p>Suggestions: -The core strategy is customer experience management. Firms should dedicate efforts to improving customer experience</p>	<p style="text-align: center;">III: Devoted customers</p> <p>Characteristics: -Satisfied customer experience -More emotionally attached to the focal firm</p> <p>Suggestions: -Listen to customers' opinions and understand their needs to satisfy them in the best manner -Encourage customers to participate in co-creation activities to maintain the established emotional attachment -Firm-driven lock-in is highly unrecommended</p>
	Low	<p style="text-align: center;">I: Indifferent customers</p> <p>Characteristics: -Poor customer experience -Less emotionally attached to the focal firm</p> <p>Suggestions: -Firm-driven lock-in strategies, such as bundling and binding contract with their economic rewards, are suggested as means to retain customers</p>	<p style="text-align: center;">IV: Rational customers</p> <p>Characteristics: -Satisfied customer experience -Less emotionally attached to the focal firm</p> <p>Suggestions: -Firms may opt for a cross-selling strategy that allows customers to get to know better the range of products or services offered by the focal firm</p>
		Low	High
Customer experience			

We categorize customers in quadrant I as “indifferent customers” because they tend to display a neutral disposition toward the firm due to a lower level of intrinsic motivation to remain in the firm and their poor customer experience. Thus, customers in this segment are more likely to switch to competitors when better options are available. Firm-driven lock-in strategies (i.e., bundling and binding contract) with their economic rewards are recommended for retaining this segment of customers.

In quadrant II, despite their unsatisfactory customer experience, customers still maintain a close and familiar relationship due to the psychological comfort arising from the exchange relationships. Thus, we label this segment of customers as “addictive customers”. Here, customers are more responsive to experiential aspects than to economic ones, with the result that they attach greater value to firms’ efforts to provide better experiences. A core strategy here is customer experience management, which enables firms to move these customers to quadrant III.

Customers in the third quadrant are profiled as “devoted customers”. They not only exhibit a high-level intrinsic motivation state in relation to the firm, but they are also highly satisfied with the experience gained from the firm. The key strategy is to maintain the current situation. To do so, firms should listen to their customers’ opinions and understand their needs so that they can satisfy them in the best way. Firms can also encourage customers to get involved in co-creation activities and make customers feel that they are members of the firm. Deploying firm-driven lock-in strategies should be highly avoided, as promoting economically attractive offerings might erode customers’ positive feelings toward the firm.

Finally, customers in quadrant IV are referred to as “rational customers”. Although these customers exhibit a positive experience with the firm, they have low relational attachment to the firm. The main reason that these customers choose a product is due to its convenience (Pansari & Kumar, 2017). The negative interactions between customer experience and lock-in

strategies illustrate that creating a deeper relational connection with such customers or promoting cost-effective firm-driven lock-in strategies would be irrelevant as a way of enhancing customer retention further. As these customers are quite cautious about opting for offerings that require certain promises, an appropriate strategy here would be to cross-sell other products or services offered by the focal firm.

3.11 LIMITATIONS AND FUTURE RESEARCH

We acknowledge several limitations of our study, which can therefore be considered as future research lines. First, we measured customer experience by a single-item metric (i.e., NPS in the mobile service category and a similar five-point Likert scale in the broadband category). Although simple measures are easily understood by marketing practitioners (Lemon & Verhoef, 2016) and the superior predictive power of NPS for customer retention in comparison to other perception metrics is well demonstrated in the literature (De Haan et al., 2015), we suggest future research could take into account other customer experience metrics. Additionally, future studies might collect the information about customers' perceptions toward competitors to better capture the influence of competitors instead of being quantified through the difference between the experience gained from the focal firm and the average value for the rest of the competitors. Finally, to better quantify the behavioral consequences and marketing returns of the efforts dedicated to customer experience, it is also important to establish the linkage with other behavioral metrics (e.g., word-of-mouth and co-creation) and financial metrics (e.g., customer profitability and customer lifetime value [CLV]).

SUMMARY:

This study aims to answer an important research question that has not been addressed in the marketing literature on how (i.e., the process) and to what extent (i.e., the magnitude) customer experience investments might translate into real behavioral implications. Building barriers to lock customers and improving the customer experience are two key strategies employed by firms to enhance customer retention. Although pursuing the same goal, these strategies work differently: the former relies more on a calculative, cost–benefit approach to the exchange, while the latter promotes the affective aspects of the relationship. Integrating social exchange theory with experiential learning theory, this study provides an integrative conceptual understanding of the separate and joint effects of lock-in (both firm- and customer-driven) and customer experience on customer retention.

To test the conceptual framework of our study, we based on a dataset containing behavioral, perceptual, and longitudinal information for a sample of 13,761 customers covering all firms in the telecom market for two different services. To empirically examine the proposed hypotheses, we applied multinomial logit modeling.

The results offer novel insights into the presence of trade-offs between the two strategies and across the two types of lock-in. We show that with one lock-in, the role of customer experience becomes weaker. However, with multiple lock-in methods where negative interaction is captured, customer experience does matter. The contribution of this chapter consists of identifying *whether* lock-in and customer experience complement or substitute each other and *when* such effects occur, thereby helping firms optimally allocate marketing resources to retain customers.

REFERENCES

- Accenture (2020). We, the post-digital people. Available at https://www.accenture.com/us-en/insights/technology/_acnmedia/Thought-Leadership-Assets/PDF-2/Accenture-Technology-Vision-2020-Full-Report.pdf (accessed 6 September 2020).
- Aggarwal, P., & Law, S. (2005). Role of relationship norms in processing brand information. *Journal of Consumer Research*, 32(3), 453-464.
- Akaike, H. (1998). Information theory and an extension of the maximum likelihood principle. In *Selected Papers of Hirotugu Akaike* (pp. 199-213). New York, NY: Springer.
- Anderson, E. W., Fornell, C., & Lehmann, D. R. (1994). Customer satisfaction, market share, and profitability: Findings from Sweden. *Journal of Marketing*, 58(3), 53-66.
- Andrews, M. L., Benedicktus, R. L., & Brady, M. K. (2010). The effect of incentives on customer evaluations of service bundles. *Journal of Business Research*, 63(1), 71-76.
- Arnould, E. J., & Price, L. L. (1993). River magic: Extraordinary experience and the extended service encounter. *Journal of Consumer Research*, 20(1), 24-45.
- Ascarza, E., Neslin, S. A., Netzer, O., Anderson, Z., Fader, P. S., Gupta, S., ... & Schrift, R. (2018). In pursuit of enhanced customer retention management: Review, key issues, and future directions. *Customer Needs and Solutions*, 5(1), 65-81.
- Balachander, S., & Ghose, S. (2003). Reciprocal spillover effects: A strategic benefit of brand extensions. *Journal of Marketing*, 67(1), 4-13.
- Balachander, S., Ghosh, B., & Stock, A. (2010). Why bundle discounts can be a profitable alternative to competing on price promotions. *Marketing Science*, 29(4), 624-638.
- Becker, J. U., Spann, M., & Schulze, T. (2015). Implications of minimum contract durations on customer retention. *Marketing Letters*, 26(4), 579-592.
- Becker, L., & Jaakkola, E. (2020). Customer experience: Fundamental premises and implications for research. *Journal of the Academy of Marketing Science*, 48(4), 630-648.

- Blut, M., Frennea, C. M., Mittal, V., & Mothersbaugh, D. L. (2015). How procedural, financial and relational switching costs affect customer satisfaction, repurchase intentions, and repurchase behavior: A meta-analysis. *International Journal of Research in Marketing*, 32(2), 226-229.
- Bolton, R. N. (1998). A dynamic model of the duration of the customer's relationship with a continuous service provider: The role of satisfaction. *Marketing Science*, 17(1), 45-65.
- Bolton, R. N., & Lemon, K. N. (1999). A dynamic model of customers' usage of services: Usage as an antecedent and consequence of satisfaction. *Journal of Marketing Research*, 36(2), 171-186.
- Bolton, R. N., Lemon, K. N., & Verhoef, P. C. (2004). The theoretical underpinnings of customer asset management: A framework and propositions for future research. *Journal of the Academy of Marketing Science*, 32(3), 271-292.
- Borah, S. B., Prakhya, S., & Sharma, A. (2020). Leveraging service recovery strategies to reduce customer churn in an emerging market. *Journal of the Academy of Marketing Science*, 48(5), 848-868.
- Bouwman, H., Carlsson, C., Molina-Castillo, F. J., & Walden, P. (2007). Barriers and drivers in the adoption of current and future mobile services in Finland. *Telematics and Informatics*, 24(2), 145-160.
- Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand experience: What is it? How is it measured? Does it affect loyalty?. *Journal of Marketing*, 73(3), 52-68.
- Brun, I., Rajaobelina, L., Ricard, L., & Berthiaume, B. (2017). Impact of customer experience on loyalty: A multichannel examination. *The Service Industries Journal*, 37(5-6), 317-340.

- Burnham, T. A., Frels, J. K., & Mahajan, V. (2003). Consumer switching costs: A typology, antecedents, and consequences. *Journal of the Academy of Marketing Science*, 31(2), 109-126.
- Caliendo, M., & Kopeinig, S. (2008). Some practical guidance for the implementation of propensity score matching. *Journal of Economic Surveys*, 22(1), 31-72.
- Chen, J., & Kaplan, D. (2015). Covariate balance in Bayesian propensity score approaches for observational studies. *Journal of Research on Educational Effectiveness*, 8(2), 280-302.
- Clark, M. S., & Finkel, E. J. (2004). Does expressing emotion promote well-being? It depends on relationship context. In L. Z. Tiedens, & C. W. Leach (Eds.), *The Social Life of Emotions* (pp. 105-126). New York, NY: Cambridge University Press
- Danaher, P. J., Danaher, T. S., Smith, M. S., & Loaiza-Maya, R. (2020). Advertising effectiveness for multiple retailer-brands in a multimedia and multichannel environment. *Journal of Marketing Research*, 57(3), 445-467.
- Day, G. S. (2000). Managing market relationships. *Journal of the Academy of Marketing Science*, 28(1), 24-30.
- De Haan, E., Kannan, P. K., Verhoef, P. C., & Wiesel, T. (2018). Device switching in online purchasing: Examining the strategic contingencies. *Journal of Marketing*, 82(5), 1-19.
- De Haan, E., Verhoef, P. C., & Wiesel, T. (2015). The predictive ability of different customer feedback metrics for retention. *International Journal of Research in Marketing*, 32(2), 195-206.
- De Keyser, A., Verleye, K., Lemon, K. N., Keiningham, T. L., & Klaus, P. (2020). Moving the customer experience field forward: Introducing the touchpoints, context, qualities (TCQ) nomenclature. *Journal of Service Research*, 23(4), 433-455.
- Dong, X., & Chintagunta, P. K. (2016). Satisfaction spillovers across categories. *Marketing Science*, 35(2), 275-283.

- Du, R. Y., Kamakura, W. A., & Mela, C. F. (2007). Size and share of customer wallet. *Journal of Marketing*, 71(2), 94-113.
- Elshiewy, O., Guhl, D., & Boztuğ, Y. (2017). Multinomial logit models in marketing—from fundamentals to state-of-the-art. *Marketing: ZFP—Journal of Research and Management*, 39(3), 32-49.
- Erdem, T., & Sun, B. (2002). An empirical investigation of the spillover effects of advertising and sales promotions in umbrella branding. *Journal of Marketing Research*, 39(4), 408-420.
- Foroudi, P., Jin, Z., Gupta, S., Melewar, T. C., & Foroudi, M. M. (2016). Influence of innovation capability and customer experience on reputation and loyalty. *Journal of business research*, 69(11), 4882-4889.
- Foubert, B., & Gijsbrechts, E. (2007). Shopper response to bundle promotions for packaged goods. *Journal of Marketing Research*, 44(4), 647-662.
- Gainsight (2020). Churn is coming: 12 learnings from a survey of SaaS CxOs. Available at <https://www.gainsight.com/blog/churn-is-coming-12-learnings-from-survey-of-saas-cxos/> (accessed July 18 2020).
- Garnefeld, I., Eggert, A., Helm, S. V., & Tax, S. S. (2013). Growing existing customers' revenue streams through customer referral programs. *Journal of Marketing*, 77(4), 17-32.
- Gilliland, D. I., & Bello, D. C. (2002). Two sides to attitudinal commitment: The effect of calculative and loyalty commitment on enforcement mechanisms in distribution channels. *Journal of the Academy of Marketing Science*, 30(1), 24-43.
- Giudicati, G., Riccaboni, M., & Romiti, A. (2013). Experience, socialization and customer retention: Lessons from the dance floor. *Marketing Letters*, 24(4), 409-422.

- Gönül, F., & Srinivasan, K. (1993). Modeling multiple sources of heterogeneity in multinomial logit models: Methodological and managerial issues. *Marketing Science*, 12(3), 213-229.
- Gremler, D. D., Van Vaerenbergh, Y., Brügggen, E. C., & Gwinner, K. P. (2020). Understanding and managing customer relational benefits in services: A meta-analysis. *Journal of the Academy of Marketing Science*, 48(3), 565-583.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate Data Analysis*. Upper Saddle River, NJ: Prentice Hall.
- Homburg, C., Koschate, N., & Hoyer, W. D. (2006). The role of cognition and affect in the formation of customer satisfaction: A dynamic perspective. *Journal of Marketing*, 70(3), 21-31.
- Iglesias, O., Markovic, S., & Rialp, J. (2019). How does sensory brand experience influence brand equity? Considering the roles of customer satisfaction, customer affective commitment, and employee empathy. *Journal of Business Research*, 96, 343-354.
- Janakiraman, R., Sismeiro, C., & Dutta, S. (2009). Perception spillovers across competing brands: A disaggregate model of how and when. *Journal of Marketing Research*, 46(4), 467-481.
- Johnson, E. J., Bellman, S., & Lohse, G. L. (2003). Cognitive lock-in and the power law of practice. *Journal of Marketing*, 67(2), 62-75.
- Jones, M. A., Reynolds, K. E., Mothersbaugh, D. L., & Beatty, S. E. (2007). The positive and negative effects of switching costs on relational outcomes. *Journal of Service Research*, 9(4), 335-355.
- Kamakura, W. A., & Wedel, M. (2000). Factor analysis and missing data. *Journal of Marketing Research*, 37(4), 490-498.

- Kashyap, V., & Murtha, B. R. (2017). The joint effects of ex ante contractual completeness and ex post governance on compliance in franchised marketing channels. *Journal of Marketing*, 81(3), 130-153.
- Keiningham, T., Aksoy, L., Bruce, H. L., Cadet, F., Clennell, N., Hodgkinson, I. R., & Kearney, T. (2020). Customer experience driven business model innovation. *Journal of Business Research*, 116, 431-440.
- Keller, K. O., Geyskens, I., & Dekimpe, M. G. (2020). Opening the umbrella: The effects of rebranding multiple category-specific private-label brands to one umbrella brand. *Journal of Marketing Research*, 57(4), 677-694.
- Kidwell, B., Hardesty, D. M., Murtha, B. R., & Sheng, S. (2011). Emotional intelligence in marketing exchanges. *Journal of Marketing*, 75(1), 78-95.
- Kim, H. S., & Yoon, C. H. (2004). Determinants of subscriber churn and customer loyalty in the Korean mobile telephony market. *Telecommunications Policy*, 28(9-10), 751-765.
- Kim, K. H., & Kumar, V. (2018). The relative influence of economic and relational direct marketing communications on buying behavior in business-to-business markets. *Journal of Marketing Research*, 55(1), 48-68.
- Kolb, David A. (1984). *Experience as the source of learning and development*. Upper Saddle River, NJ: Prentice Hall.
- Koschate-Fischer, N., Hoyer, W. D., & Wolframm, C. (2019). What if something unexpected happens to my brand? Spillover effects from positive and negative events in a co-branding partnership. *Psychology & Marketing*, 36(8), 758-772.
- KPMG (2019). How do customers define loyalty? Available at <https://home.kpmg/xx/en/home/insights/2019/11/customer-loyalty-survey.html> (accessed 1 January 2020).

- Landsman, V., & Nitzan, I. (2020). Cross-decision social effects in product adoption and defection decisions. *International Journal of Research in Marketing*, 37(2), 213-235.
- Leite, W. (2016). *Practical propensity score methods using R*. Thousand Oaks, CA: Sage Publications.
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69-96.
- Liu, S. Q., Mattila, A. S., & Bolton, L. E. (2018). Selling painful yet pleasurable service offerings: An examination of hedonic appeals. *Journal of Service Research*, 21(3), 336-352.
- Malhotra, A., & Malhotra, C. K. (2013). Exploring switching behavior of US mobile service customers. *Journal of Services Marketing*, 27(1), 13-24.
- McColl-Kennedy, J. R., Zaki, M., Lemon, K. N., Urmetzer, F., & Neely, A. (2019). Gaining customer experience insights that matter. *Journal of Service Research*, 22(1), 8-26.
- McFadden, D. (1973). Conditional logit analysis of qualitative choice behavior. In P. Zarembka (Ed.), *Frontiers of Econometrics* (pp. 105-142). New York, NY: Academic Press.
- McLean, G., Al-Nabhani, K., & Wilson, A. (2018). Developing a mobile applications customer experience model (MACE)-implications for retailers. *Journal of Business Research*, 85, 325-336.
- Mittal, V., & Kamakura, W. A. (2001). Satisfaction, repurchase intent, and repurchase behavior: Investigating the moderating effect of customer characteristics. *Journal of Marketing Research*, 38(1), 131-142.
- Molm, L. D., Peterson, G., & Takahashi, N. (2003). In the eye of the beholder: Procedural justice in social exchange. *American Sociological Review*, 68(1), 128-152.
- Morgan-Thomas, A., & Veloutsou, C. (2013). Beyond technology acceptance: Brand relationships and online brand experience. *Journal of Business Research*, 66(1), 21-27.

- Murray, K. B., & Häubl, G. (2007). Explaining cognitive lock-in: The role of skill-based habits of use in consumer choice. *Journal of Consumer Research*, 34(1), 77-88.
- Naylor, G., Kleiser, S. B., Baker, J., & Yorkston, E. (2008). Using transformational appeals to enhance the retail experience. *Journal of Retailing*, 84(1), 49-57.
- Neslin, S. A., Gupta, S., Kamakura, W., Lu, J., & Mason, C. H. (2006). Defection detection: Measuring and understanding the predictive accuracy of customer churn models. *Journal of Marketing Research*, 43(2), 204-211.
- Nitzan, I., & Ein-Gar, D. (2019). The “Commitment Projection” Effect: When Multiple Payments for a Product Affect Defection from a Service. *Journal of Marketing Research*, 56(5), 842-861.
- Ordenes, F. V., Theodoulidis, B., Burton, J., Gruber, T., & Zaki, M. (2014). Analyzing customer experience feedback using text mining: A linguistics-based approach. *Journal of Service Research*, 17(3), 278-295.
- Pansari, A., & Kumar, V. (2017). Customer engagement: The construct, antecedents, and consequences. *Journal of the Academy of Marketing Science*, 45(3), 294-311.
- Puccinelli, N. M., Goodstein, R. C., Grewal, D., Price, R., Raghurir, P., & Stewart, D. (2009). Customer experience management in retailing: Understanding the buying process. *Journal of Retailing*, 85(1), 15-30.
- Ranganathan, C., Seo, D., & Babad, Y. (2006). Switching behavior of mobile users: Do users' relational investments and demographics matter?. *European Journal of Information Systems*, 15(3), 269-276.
- Reichheld, F. F. (2003). The one number you need to grow. *Harvard Business Review*, 81(12), 46-55.
- Rose, S., Clark, M., Samouel, P., & Hair, N. (2012). Online customer experience in e-retailing: An empirical model of antecedents and outcomes. *Journal of Retailing*, 88(2), 308-322.

- Rosenbaum, P. R. (2002). Overt bias in observational studies. In *Observational Studies* (pp. 71-104). New York, NY: Springer.
- Rosenbaum, P. R., & Rubin, D. B. (1985). Constructing a control group using multivariate matched sampling methods that incorporate the propensity score. *The American Statistician*, 39(1), 33-38.
- Roy, S. (2018). Effects of customer experience across service types, customer types and time. *Journal of Services Marketing*, 32(4), 400-413.
- Rutz, O. J., & Watson, G. F. (2019). Endogeneity and marketing strategy research: An overview. *Journal of the Academy of Marketing Science*, 47(3), 479-498.
- Schouten, J. W., McAlexander, J. H., & Koenig, H. F. (2007). Transcendent customer experience and brand community. *Journal of the Academy of Marketing Science*, 35(3), 357-368.
- Shapiro, C., Carl, S., & Varian, H. R. (1998). *Information Rules: A Strategic Guide to the Network Economy*. Boston, MA: Harvard Business Press.
- Stremersch, S., & Tellis, G. J. (2002). Strategic bundling of products and prices: A new synthesis for marketing. *Journal of Marketing*, 66(1), 55-72.
- Tallberg, M., Hämmäinen, H., Töyli, J., Kamppari, S., & Kivi, A. (2007). Impacts of handset bundling on mobile data usage: The case of Finland. *Telecommunications Policy*, 31(10-11), 648-659.
- Titus, M. A. (2007). Detecting selection bias, using propensity score matching, and estimating treatment effects: An application to the private returns to a master's degree. *Research in Higher Education*, 48(4), 487-521.
- Wirtz, J., Xiao, P., Chiang, J., & Malhotra, N. (2014). Contrasting the drivers of switching intent and switching behavior in contractual service settings. *Journal of Retailing*, 90(4), 463-480.

- Witell, L., Kowalkowski, C., Perks, H., Raddats, C., Schwabe, M., Benedettini, O., & Burton, J. (2020). Characterizing customer experience management in business markets. *Journal of Business Research*, 116, 420-430.
- Zhang, M., Hu, M., Guo, L., & Liu, W. (2017). Understanding relationships among customer experience, engagement, and word-of-mouth intention on online brand communities. *Internet Research*, 27(4), 839-857.

CHAPTER IV:

THE DYNAMIC IMPACT OF THE CUSTOMER EXPERIENCE ON RELATIONSHIP EXPANSION: A HIDDEN MARKOV MODELING APPROACH

4.1 INTRODUCTION

In the last two chapters, integrating firm perspective with customer perspective, we identified a set of key drivers of customer experience, ranging from the ones under to the ones outside firms' control and we assessed financial consequence of customer experience. Enabled by the integration of these two perspectives, we examined how customer experience in one product category and another (related on unrelated) one could affect customer retention under different lock-in situations (i.e., firm-driven lock-in and customer-driven).

To improve the understanding of customer experience management in a step further, it is vital to study the dynamic nature of customer experience in greater depth (Becker & Jaakkola, 2020; Zhang & Chang, 2020). Such importance is specifically highlighted in the domain of customer relationship management in means of determining customer relationship expansion (Du, Netzer, Schweidel, & Mitra, 2021), that is, the relational consequence.

The importance of taking the dynamic perspective to visualize the impact of customer experience is widely recognized in the literature of customer experience. However, as revealed by the De Keyser, Verleye, Lemon, Keiningham, and Klaus (2020) in the recently conducted systematic literature review, it is clear that there is a lack of research that empirically analyzes how customer experience might affect the relationship expansion between customers and firms from a dynamic manner due to a set of associated difficulties.

To fill in this research gap, in this chapter we examine the roles of different dimensions of customer experience (i.e., recency, peak, trend, and fluctuation) in expanding the customer-firm relationship. To capture the process through which relationship is expanded in a detailed detail, we have taken into account different customer relationship expansion behaviors (i.e.,

usage level, number of acquired product categories, acceptance of upgraded offering, and adoption toward innovative product category) and carried out hidden Markov modeling (HMM).

By doing so, we identified the different hidden customer relationship expansion states and most importantly the rate of migration from one state to another given expansion state and the different customer experience dimensions. As a consequence, we highlight the importance of our third research objective: *“to identify the relational consequences of different dimensions of customer experience from a dynamic perspective”*. This global objective encompasses two specific research objectives: *“to explore the roles of different dimensions of customer experience in customer relationship expansion and, to capture and define the hidden customer relationship expansion states via hidden Markov modeling”*.

4.2 MOTIVATION

Alongside with the increasingly evolving competitive environment, understanding and managing customer relationship expansion is fundamental to fuel growth (Du et al., 2021). Companies are increasing their investment in customer experience in an exponential manner, with the expectations that these investments will promote relationship growth, which ultimately provide positive financial returns. Indeed, as emphasized by Forbes (2020), by 2027, global investment in customer relationship is expected to reach \$114.4 billion, in effort to expand the relationship with the existing customers. Equally, how to effectively sustain profitable customer relationship expansion has been featured as one of the top research priorities by MSI (2020-2022). While the importance of expanding the established relationships to successfully enhance customer value is well acknowledged (Bolton, Lemon, & Verhoef, 2008; Shamsollahi, Chmielewski-Raimondo, Bell, & Kachouie, 2020), there is significant ambiguity surrounding

this topic, since many times empirical practice ends with unprofitable financial returns (e.g., Du et al., 2021) due to various reasons.

One fundamental reason is that, capturing the process through which customer relationship is expanded is a significant challenge for firms (Luo & Kumar, 2013; Zhang, Watson, Palmatier, & Dant, 2016), demanding them to consider the *multifaceted* nature of customer relationship expansion. That is, to fully capture the customer relationship expansion, it is essential to take into account numerous types of customer relationship expansion behaviors. Prior research, however, tends to pay the major attention on a single type: either choices toward cross-buying or upgraded offerings (i.e., Bolton, Lemon, & Verhoef, 2004, 2008), thereby resulting in a fragmented view on this topic (Zhang et al., 2016).

More complicated is, customers' intention to expand their relationships with the focal firm is dynamic and not directly observable. That is, customer relationship expansion evolves through several phases over time in the *black box* as a result of a set of intrinsic motivational factors (Gupta & Zeithaml, 2006; Zhang & Chuang, 2020). To accurately uncover and identify such *dynamic* and *hidden* phases, firms are not only required to consider the impact of attitudinal measures which gauge the customers' internal perceptions in a long-time range (Luo & Kumar, 2013; McColl-Kennedy, Zaki, Lemon, Urmetzer, & Neely, 2019) but also a sophisticated dynamic modeling approach (Zhang & Chang, 2020).

Customer experience has been increasingly considered as a critical attitudinal variable to capture customers' evolving latent relationship states (McColl-Kennedy et al., 2019), in particular its different dimensions to comprehensively visualize the different rates of the evolution across the customer relationship expansion states. As emphasized by Zhang and Chang (2020), customers who are assigned to a homogeneous segment, their relationships with firms would still evolve at different rates due to different intrinsic motivations. While the roles of customer experience and its dimensions are well recognized, however, they have received

scarce attention (McColl-Kennedy et al., 2019; Sivakumar, Li & Dong, 2014). More specifically, the existing studies have mainly focused on the recently perceived customer experience (i.e., *recency effect*), failing to account for its peak moments which represent the minimum or maximum value of customer experience (i.e., *peak effect*) (Schouten, McAlexander, & Koenig, 2007), its tendency (i.e., *trend effect*) which refers to the upward or downward development of customer experience over time (Palmatier, Houston, Dant, & Grewal, 2013), its fluctuations (i.e., *fluctuation effect*) along the interactions with firms over time (Shamsollahi et al., 2020; Sivakumar et al., 2014).

In addition to the abundant and granular customer-level altitudinal data, as noted above, a rich insight about the *dynamic* and *hidden* process of customer relationship expansion will not be attained without an adequate and advanced dynamic modeling approach (Zhang & Chang, 2020). While the straightforward logic in terms of comparing the results of before and after a certain time period or imputing past behaviors as independent variables in the regression model has been largely utilized to examine customer dynamics, the major limitation of these models is their restrictive account for the *hidden* states which govern customer relationship expansion dynamic (Netzer, Lattin, & Srinivasan, 2008). A representative method that achieves this goal is the hidden Markov model (HMM) approach due to several advantages. First, it enables to infer latent states through the underlying noisy measures - observable customer behaviors and most importantly the transition across these states (MacDonald & Zucchini, 1997). Second, it allows to incorporate intrinsic motivation factors (i.e., customer experience and its dimensions) to view the different rates of transition states while controlling extrinsic motivation factors (i.e., relationship marketing [RM] actions) (Netzer et al., 2008), thereby distinguishing the long-term and short-term effects of different motivational sources (Luo & Kumar, 2013).

In pursuit to fill these identified research gaps in the literature, drawing from the literature in customer relationship management (Bolton et al., 2004, 2008), we comprehensively

identify *customer relationship expansion states* through four observable behaviors: (1) the number of product and/or service categories purchased from the focal firm; (2) the usage level of the initially acquired product/or service category; (3) the decision about the upgraded offering; (4) the adoption toward the innovative product/service category provided by the focal firm. Most importantly, building on the premises of self-determination theory (Deci & Ryan, 1985; Vallerand, 1997), which posits that motivation for pursuing activities are consisted of intrinsic (from the inherent satisfaction and enjoyment) and extrinsic motivation (from the external incentives or attractions), we establish an integrative and conceptual framework in which we explore at which rate the migrations across customer relationship expansion states are induced under the different dimensions of the customer experience in terms of its *recency effect, peak effect, trend effect, and fluctuation effect* while controlling the influence RM actions (i.e., advertising communication, product innovation, and conflict) as external incentives. Using a panel dataset which combines both attitudinal and behavioral information for a sample of 12,946 customers, covering all the firms from the telecom industry in one European country for four core service categories (mobile, broadband, TV, and landline) on a period of 48 months, we empirically test the framework via hidden Markov modeling (HMM) techniques.

This research contributes to the marketing literature in several ways. First, while much of extant research has mainly focused on one single way of customer relationship expansion, our framework provides a holistic approach to the management of a portfolio of customers, indicating that the multifaceted nature of customer relationship expansion requires to contemplate multiple observable customer relationship expansion behaviors. Second, our research reveals the dynamic nature of customer relationship expansion in a detailed manner by identifying four latent states through which customer relationship is expanded: basic state, transition state, transformation state, and active state; each of them is featured with unique and special characteristics in terms of the range of acquired product categories, the usage level, the

choice toward the upgraded offering and the innovative product category. Third, and most importantly, in contrast to the vast majority of extant literature assumes that strategies' relative effectiveness to fuel relationship development is same across states (Palmatier et al., 2013), our framework illustrates that the rate at which the migration from one state to another is not homogeneous, but varies depending on the dimensions of customer experience (i.e., *recency effect*, *peak effect*, *trend effect*, and *fluctuation effect*) and the current state where customers are encountered. It thus sheds lights on how customer experience strategy may be tailored to the specific customer relationship expansion state of the customer. We empirically demonstrate that the most effective customer experience strategies must match the customer relationship expansion state, and accurately improving customer experience dimensions at the right time can effectively boost customer relationship expansion. Lastly, by controlling the influence of relationship marketing actions, (e.g., Zhang et al., 2016), the results confirm with prior research, indicating that not all RM actions will result in positive influence in customer relationship expansion and instead can constitute an inefficient use of resources. Our research framework therefore suggests an alignment between long-term and short-term marketing resource allocation plan in regard to customer experience and RM actions.

4.3 EXTANT PERSPECTIVE ON CUSTOMER EXPANSION

4.3.1 Customer Relationship Expansion in CRM

In the literature of CRM, acquiring new customers – customer acquisition, retaining customers – customer retention, and expanding existing customer relationships – customer expansion, they are all highlighted as critical source to maximize customer value. However, as revealed by Bolton et al. (2004), a close examination of CRM related studies shows that the major attention has primarily focused either on how to acquire, retain customers, or how to

balance resource allocations between them (Blatterg & Deighton, 1996; Reinartz, Thomas, & Kumar, 2005), resulting in a limited attention on customer expansion. Such limitation is especially reflected in the lack of a clear, comprehensive, and coherent definition of customer expansion in the literature. As a consequence, different terms have been used interchangeably to represent customer expansion (i.e., cross-buying, upgrade decision, and others). Drawing on prior research (i.e., Bolton et al., 2004, 2008; Verhoef, Franses, & Hoekstra, 2001), we define customer expansion as the growth in benefits through the development of existing customers via different manners, ranging from usage depth, the number of acquired product categories from the focal firm (i.e., cross-buying), decision toward upgrade offering associated to the main category, usage depth, and adoption of innovative product category provided by the focal firm. Therefore, customer expansion goes beyond customer acquisition and customer retention in means of broadening the customer-firm relationships (Prins & Verhoef, 2007).

Table 4.1 summarizes the literature on customer expansion in marketing. As noted above, there are multiple ways to expand the customer-firm relationships, however previous studies have mainly focused on each of them in an isolated manner. Although Bolton et al. (2004) categorize the customer-firm relationships into relationship length, relationship depth, and relationship breadth to comprehensively illustrate that customer relationship expansion could be achieved in several manners, they are mainly theoretical-oriented. In light of the close relationship between customer expansion and competitive advantage (Kumar, George, & Pancras, 2008; Verhoef et al., 2001), many researchers have explored various drivers and consequences of different customer expansion related behaviors. Interestingly, regardless of how customer relationship is expanded, key drivers identified in these studies can be broadly classified into the following: marketing effort by the firm (i.e., service and brand advertising, promotions, marketing communication instruments) (Bolton et al., 2004; Kumar et al., 2008; Li, Sun, & Montgomery, 2011; Prins & Verhoef, 2007; Risselada, Verhoef, & Bijmolt, 2014;

Schweidel, Bradlow, & Fader, 2011), customers' previous transactions with the focal firm (i.e., transaction volume, exchange characteristics, service usage) (Kamakura, Wedel, De Rosam & Mazzon 2003; Kumar et al., 2008; Lemon & Wangenheim, 2009; Li et al., 2011), customers' attitude towards a firm and its products (customer experience measured in terms of customer satisfaction, service quality and perceived price equity) (Bolton et al., 2004, 2008; Lemon & Wangenheim, 2009; Li, Sun, & Wilcox, 2005; Ngobo 2005; Verhoef et al., 2001), while condition by relationship specific (i.e., relationship duration, partnership fit), socio-demographic characteristics, product characteristics and industry characteristics (Bolton et al., 2004). The importance of both transactional and perceptual information is well recognized in the literature and have been examined under a wide range of contexts, spanning from retailing, financial service, airline service telecom industry, and B2B, thereby suggesting an integration between them. Yet, as revealed in Table 4.1, there are only few studies which have simultaneously taken into account both customer transactions and perceptions, even though the efficiency of these factors in means of stimulating customer expansion is well recognized in the literature (Bolton et al., 2004).

Table 4.1: Literature review about customer relationship expansion

Authors	Context	Dataset			Methodology	Customer expansion related variables	Independent variables	Moderator	Mediator	Dependent variable
		T	P	L						
Bolton et al. (2004)	-				Conceptual	Relationship depth, Relationship breadth	Marketing instruments, Customer perceptions (satisfaction, commitment, price equity)	-	Uncertainty, Competitive intensity, Switching costs, Nature of service experiences	Relationship length, Relationship depth, Relationship breadth
Bolton et al. (2008)	B2B; Computing system support services	✓	✓	✓	Binary logit model	Customer's upgrade decision	Satisfaction, Criticality, Service quality, Price	Satisfaction, Criticality, Price	-	Customer upgrade decision
Kamakura et al. (2003)	Financial industry	✓			Mixed data factor analyzer	Cross-buying intention	Service usage, Transaction volume, Customer demographic related variables	-	-	Cross-buying intention
Kumar et al. (2008)	Retailing	✓		✓	Seemingly unrelated regression (SUR) model	Cross-buying	Exchange characteristics, Firm's marketing efforts, Customer characteristics, Product characteristics	-	Cross-buying, Customer-level outcomes	Increase in CLV
Lemon & Wangenheim (2009)	Airline service	✓	✓	✓	Generalized method of moments (GMM)	Cross-buying, Usage depth	Core service usage, duration, satisfaction	Satisfaction, Loyalty, Partnership fit	Cross-buying	Usage depth
Li et al. (2011)	Financial sector	✓		✓	Multinomial probit hidden markov (HMM)	Cross-buying	Financial state, Promotional effect of solicitations, Advertising effect of solicitations, Account transactions, Household characteristics	-	-	Cross-buying
Li et al. (2005)	Banking services	✓	✓		Multivariate probit model	Cross-buying	latent financial maturity, relationship with competitor, satisfaction, switching costs	-	-	Cross-buying sequence

Chapter IV: The dynamic impact of the customer experience on relationship expansion

Mende, Bolton, & Bitner (2013)	Financial services	✓	✓	Ordinary least squares (OLS); Multinomial logistic regression (MLR)	Changes in relationship breadth	Customer attachment anxiety, Customer attachment avoidance, Anxiety, Preference for closeness	Avoidance	-	Preference for closeness, Repurchase intention, Changes in relationship breadth
Ngobo (2005)	A theater company		✓	Nested logit model	Upward migration, Downward migration	Service quality, Customer satisfaction, Relationship-specific variables, Socio-demographic variables	-	-	Relationship maintaining and migration intentions
Prins & Verhoef (2007)	Mobile e-service	✓	✓	Hazard model	New service adoption	Direct marketing communication, Mass marketing communication, Competitive mass marketing communication, Relationship characteristics, Customer characteristics	-	-	Adoption timing
Prins, Verhoef, & Franses (2009)	Telecom service	✓	✓	A linear regression, a random-effects tobit specification	New service adoption, New service usage level	Adoption timing, Relationship age, Category usage	-	Time since adoption	Adoption timing on new service, Usage level of new service
Risselada et al. (2014)	Smartphones	✓	✓	Fractional polynomial hazard model	New service adoption	Social influence, Direct marketing stock, Relational characteristic (Usage)	-	-	Adoption timing
Schweidel et al. (2011)	Telecom industry	✓	✓	Multinomial logit hidden markov (HMM)	Service portfolios	Promotional offering, Portfolio inertia, Service stickiness	-	-	Service portfolio choice
Verhoef et al. (2001)	Insurance company	✓	✓	Ordered probit model	Cross-buying	Customer satisfaction (focal firm and competitor), payment equity (focal firm and competitor)	Relationship duration	-	Cross-buying

Note: T, P, and L in the dataset column represent transactional, perceptual, and longitudinal, respectively

4.3.2 Dynamic Nature of Customer Relationship Expansion

One fundamental principle in marketing literature is that customer preferences and behaviors are changing continuously (Zhang & Chang, 2020). The dynamic nature of customer relationship development, including customer relationship expansion (Dwyer, Schurr, & Oh 1987; Fournier, 1998), is widely acknowledged in the literature (i.e., Palmatier et al., 2013; Shamsollahi et al., 2020). However, limited insights on the dynamic nature of customer relationship expansion have been generated in the marketing literature. The difficulty with capturing such dynamics is that in most marketing data sets the number of observations or time periods observed is relatively small, and the nature and structure of dynamics is often latent (Zhang & Chang, 2020). Indeed, Table 4.1 indicates that many studies related to customer relationship expansion have relied on cross-sectional dataset to investigate customer expansion without considering its dynamic nature. Among the few ones which have collected longitudinal dataset, they simply computed customer transactions in the previous periods with the firm to illustrate the dynamic pattern of customer expansion. As a result, a fragmented view while inferring the process of customer expansion, which is consisted of a set of latent, dynamic, multifaceted customer relationship states (Zhang et al., 2016).

Table 4.2 is elaborated to summarize the studies on the dynamic feature of customer relationship development, which can be categorized into two types. For the ones which capture such dynamic feature via a variable, as Table 2 shows, many studies still assume that customer relationship moves through the developmental cycle with several stages (i.e., exploration, build-up, maturity, and decline) (Cambra, Melero, & Sese, 2018; Jap & Ganesan, 2000) at the same rate or simply base on a static snapshot of the relationship-age as an indicator of customer relationship development (Verhoef et al., 2002), thereby ignoring the hidden nature and temporal heterogeneity of customer relationship expansion. Moreover, these studies place the major attention from a general perspective to describe customer relationship development from

the initial approach to a final dissolution stage (Hollmann, Jarvis, & Bitner, 2015), placing scarce attention on customer relationship expansion.

For the ones which capture such dynamic feature via a modeling technique, although the understanding has been improved by recognizing that the process of customer relationship expansion is in the *black box* - being neither directly observable nor temporally homogenous by illustrating the dynamic nature of customer relationship expansion via hidden Markov modeling strategy. However, these studies have mainly relied on transactional data with one unique dimension of customer relationship expansion (e.g., usage level, customer expenditures, subscribed product portfolios) to infer the hidden customer relationship expansion states (e.g., Chang & Zhang, 2016; Luo & Kumar, 2013; Schweidel, Bradlow, & Fader, 2011; Zhang, Netzer, & Ansari, 2014). To our knowledge, there are no studies which have looked specifically at customer relationship expansion from a dynamic perspective. To accurately uncover hidden customer states, firms are required to consider customer perceptions (i.e., customer experience) and various transactional behaviors related to relationship expansion (i.e., the range of purchased product category) in a simultaneous manner.

Table 4.2: Literature review about customer relationship dynamic

Dynamic Captured by Variables											
Study	Context	Data	Method	Perceptual measure	Transactional measure	Number of relationship states	Relationship related variable	Antecedent	Moderator	Mediator	Outcomes
Jap & Ganesan (2000)	B2B	Survey about 1457 retailer customers	A liner regression model		✓	4 states: Relationship phase (Exploration, build-up, maturity, and decline)	age cohort	Transaction-specific investments (TSIs) of retailer and supplier; Relational norms; Explicit contracts	Relationship phase	commitment to the relationship	Evaluation of supplier's performance; Conflict level; Relationship satisfaction
Verhoef et al. (2002)	Insurance sector	Survey about 2300 customers	Regression analysis (OLS) and Poisson regression analysis		✓	-	Relationship age	Trust; Affective commitment; Calculative commitment; Satisfaction; Payment equity	Relationship age	-	Customer referrals and number of services purchased
Cambra et al. (2018)	Financial sector	2000 valid responses from a survey	A partial least squares (PLS) structural equations analysis		✓	4 states: Relationship stage (Exploration, build-up, maturity, and decline)	The relationship stage that customers classified by themselves	Relationship quality (Trust, Commitment, and Satisfaction)	-	-	Customer value co-creation
Dynamic Captured by Modeling											
Study	Context	Data	Relationship states			Key components of HMM					
			Perceptual measure	Transactional measure	Number and denomination	Emission probability	Transaction probability (Covariates)	Initial distribution (Covariates)			

Chapter IV: The dynamic impact of the customer experience on relationship expansion

Ascarza & Hardie (2013)	Telecommunication	Monthly usage level and quarterly renewal decision during four years, for 1173 members.	Heterogeneous hidden Markov	✓	3 states; Commitment (low, medium, and high)	Usage level; Renewal decision	Covariates: -	-	-
Kumar, Sriram, Luo, & Chintagunta (2011)	B2B; High-technology market	240 firms from July 1999 to June 2004	Trivariate Tobit hidden Markov	✓	3 states; low, medium and high	Customer expenditures	Covariates: time length since the last purchase, buyer-specific characteristics, and marketing dollars	-	-
Li et al. (2011)	Financial sector	A sample of 4000 households for 15 financial product groups during a total of 27 months from November 2003 to January 2006.	Multinomial probit hidden Markov	✓	3 states; Financial state (low, medium, and high)	A household purchase decision across J categories	Covariates: Instantaneous promotional effects of solicitations, account transactions, and household characteristics	Past purchase, educational role of solicitations, cumulative effect of solicitations, and household characteristics	Total amount of financial product categories and household assets
Schweidel et al. (2011)	Telecommunication	Monthly subscription information about 3393 customers for January 2002 through May 2004 across 10 types of	Multinomial logit hidden Markov	✓	4 states; Active 1, 2, 3 (full-size, mid-size, and economy), and end state	The portfolio that a customer subscribes to at time t	Covariates: Promotion, subscription to service k at time t-1	Promotion	-

		portfolios of products.								
Luo & Kumar (2013)	B2B; High-technology market	Transactional information about 250 firms from 1999 to 2004	Bivariate Tobit hidden Markov model	✓		3 states; low, medium and high	The quantity of purchase in each category	Covariates: buyer- and category-specific characteristics ,and marketing contacts	Marketing contacts and previous purchase	-
Zhang et al. (2016)	B2B	A six-year longitudinal data set of 552 firms via six consecutive annual surveys and objective financial measures	Multivariate hidden Markov	✓	✓	4 states; Damaged, transitional, and communal	Customers response to the levels of trust, commitment, dependence, and relational norm.	-	A large set of relationship marketing (RM)	-
Present study	Telecom industry	12,946 customers, all operating firms in the industry during 48 months	Multivariate hidden Markov	✓	✓	4 states; Basic, transition, transformation, and active	Usage level, the number of product categories, upgrade offering acceptance, and innovative product adoption	Covariates: RM actions, firm-, market- and customer demographic-characteristics	Recency effect, peak effect, trend effect, and fluctuation effect of customer experience	-

4.4 PROPOSED CONCEPTUAL FRAMEWORK

As noted above, the marketing literature (Dwyer et al., 1987; Fournier, 1998; Palmatier et al., 2013) suggests that customer relationship expansion is not static, but dynamically evolving through several discrete states (Li et al., 2011; Zhang & Chang, 2020). Such transition process, as emphasized by Zhang et al. (2016), develops in response to a set of factors involved in the interactions between customers and firms. This is supported by self-determination theory (Deci & Ryan, 1985; Vallerand, 1997), which posits that motivation for pursuing changes are consisted of intrinsic motivation (the ones originating from the self and internal desire) and extrinsic motivation factors (originating from external demands).

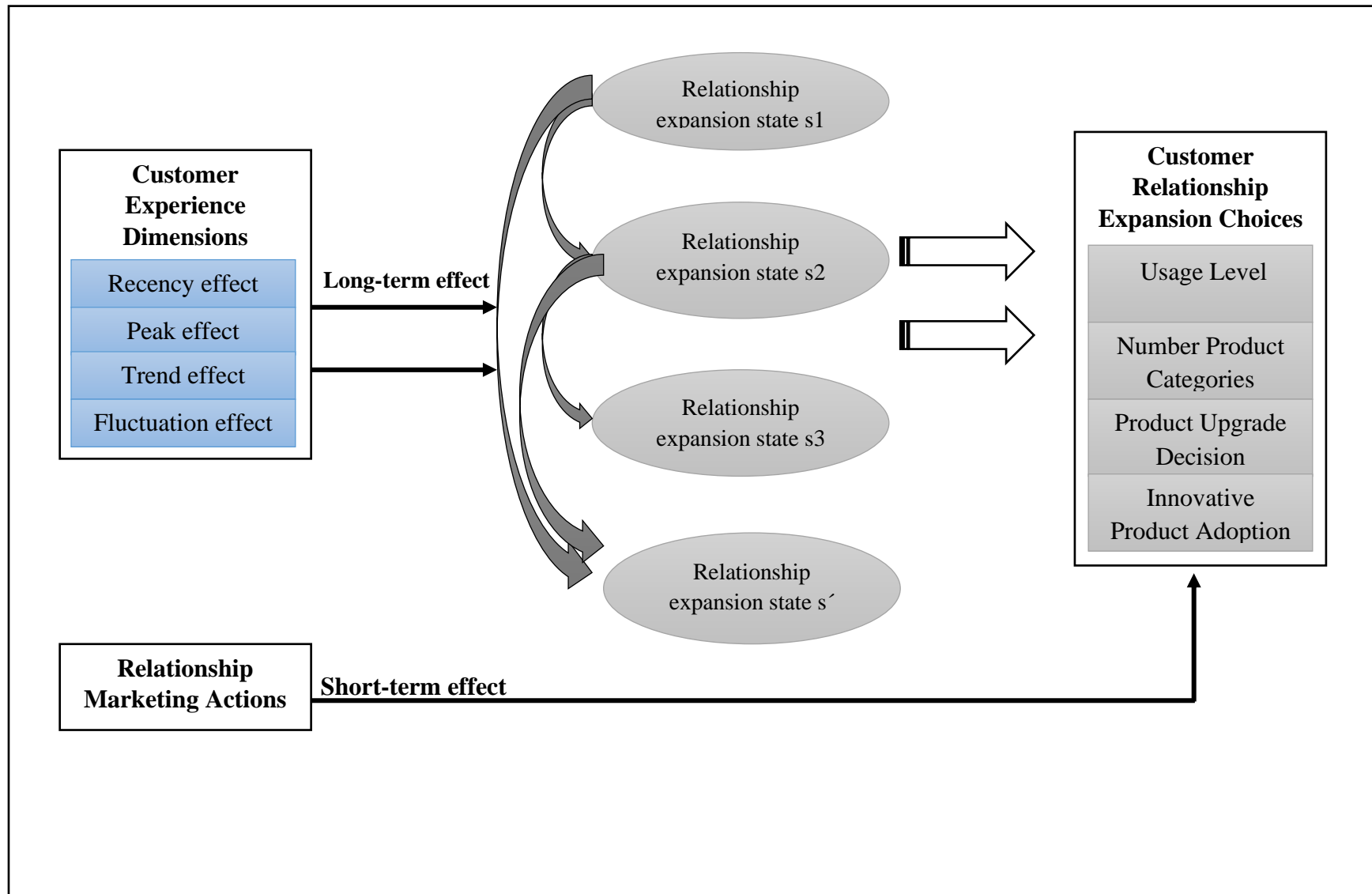
Stimulated by intrinsic resources of motivation, individuals tend to perform a task (e.g., expanding the relationship with firms) because it is interesting and enjoyable. Such intrinsic motivation usually arisen from internal perceptions of satisfactory experiences and well-being outcomes, consequently leading to persistent influence in customers. In the context of customer-firm relationships, customers who are intrinsically motivated due to the satisfactory customer experience, they are encouraged by themselves to expand the relationship with the firm in a step further, thus resulting in a long-term impact on the transition across customer relationship expansion states. Most importantly, the transition rate (i.e., magnitude of rate) from one lower state to another higher state is not homogenous but varies (Palmatier et al., 2013). Customer experience as key intrinsic motivation resources, their essential role in affecting customer relationship expansion is not only reflected in the recently encountered experience with the firm – *recency effect* – (Verhoef, Antonides, & De Hoog, 2004), but also at which rate customer relationship expansion is stimulated by the most extraordinary experiences – *peak effect* – (Schouten et al., 2007), its tendency of evolution – *trend effect* – (Palmatier et al., 2013), and fluctuations or changes along the interactions between customers and firms – *fluctuation effect* – (Shamsollahi et al., 2020). We thus propose that the migration across captured customer

relationship expansion states is not only affected by customer experience but varies at different rates given the different dimensions of customer experience.

Conversely, extrinsic sources of motivation derive from external demand, linking to lower psychological vitality and need satisfaction. Logically, extrinsic sources of motivation might even be perceived as external pressure, thus leading to lower performance in comparison to intrinsic sources of motivation. Such extrinsic incentives include the effort devoted by firms in advertising communication, product innovation, and conflict, which are regarded as RM actions in the literature of customer relationship marketing (e.g., Palmatier et al., 2013). We thus argue that investment devoted in RM actions (i.e., advertising communication, product innovation, and conflict) extrinsic incentives by firms to build stronger relationships, they are likely to exert short-term effect on customer relationship expansion.

To test the proposed relationships, we applied multivariate Hidden Markov Models (HMMs) to infer customer relationship expansion states, customer migrations across states, the long-term effect of customer experience for inducing migrations while controlling the short-term effect of RM actions. An HMM describes the transition process among a finite set of latent states (i.e., customer relationship expansion states) which are invisible but can be inferred through a set of observable behaviors (Netzer et al., 2008). It is therefore considered useful for investigating customer-firm relationships in a dynamic setting by inferring a set of hidden relationship states, uncovering the migration patterns across these states, as well as identifying the drivers responsible for the correspondent migrations (Luo & Kumar, 2013; Netzer et al., 2008). Figure 4.1 is elaborated for the graphical representation of the proposed HMM.

Figure 4.1: Conceptual framework



4.5 CUSTOMER RELATIONSHIP EXPANSION HIDDEN MARKOV MODEL

To extract the customer relationship expansion states in a comprehensive manner, drawing from the literature in customer relationship management (Bolton et al., 2004, 2008), we capture the evolution of *customer relationship expansion states* through various key observed customer behaviors: the usage level of the initially acquired product or service category; the number of product and/or service categories purchased from the focal firm; the decision about the upgraded offering; the adoption toward the innovative product/service category provided by the focal firm. These state variables provide rich information about the standpoints of how customer-firm relationships can be expanded. While these state variables are the same insofar all pertain to relationship expansion. However, there are some fundamental differences in terms of reflecting the depth and breadth of the customer-firm relationships (Bolton et al., 2004).

The vector of customer relationship expansion state variables for customer i at time t is $Y_{it} = (us_{it}, nu_{it}, up_{it}, in_{it})$, where us_{it} , nu_{it} , up_{it} , and in_{it} represent the usage level of the main category, the number of acquired product or service category from the focal firm, the upgraded offering associated with the main category, and the innovative product category adopted from the focal firm, respectively. The latent customer relationship expansion state at time t for customer i , $\{Y_{it} = y_{i1}, \dots, Y_{ij} = y_{ij}\}$, is consisted of three components: (1) the initial state distribution which indicates the probability that customers are encountered in a certain state in the first period of our dataset; (2) the transition matrix which denotes the probability of a customer migrating from one customer relationship expansion state to another, over period, and most importantly the long-term effects exerted by different dimension of customer experience which affect the rate of migration across customer relationship expansion states; and finally, (3) the emission probability which controlled the short-term effect of RM actions as well as the influence from firm characteristics, market characteristics, and customer characteristics.

4.5.1 Initial State Distribution

As displayed in Equation (1), let s denote a latent relationship state and π_{is} be the probability that customer i is in state s in the first period of our data set, where the sum of π_{is} is equal to one (MacDonald & Zucchini, 1997).

$$\Pr (S_{it} = s_{it}) = \pi_{is}, \text{ where } s_{it} \in \{1, 2, \dots, K\} \quad (1)$$

4.5.2 Long-term Effect of Customer Experience

We model the transition between customer relationship expansion states as a Markov process. Equation (2) shows the HMM transition matrix which denotes the probability a customer migrates from one state to another, over period, where $q_{itss'} = P(S_{it}=s' | S_{it-1}=s)$ is the conditional probability that customer i moves from state s at time $t-1$ to state s' at time t , and where $0 \leq q_{itss'} \leq 1 \forall s, s'$, and $\sum_{s'} q_{itss'} = 1$. Each one of the matrix elements in Equation (2) represents a probability of transition:

$$\Omega_{i,t-1 \text{ to } t} = \begin{array}{c} \text{State at } t-1 \\ \begin{array}{c} 1 \\ 2 \\ \vdots \\ S \end{array} \end{array} \begin{array}{c} \text{State at } t \\ \begin{array}{cccccc} 1 & 2 & 3 & \dots & S-1 & S \\ q_{it11} & q_{it12} & q_{it13} & \dots & q_{it1S-1} & q_{it1S} \\ q_{it21} & q_{it22} & q_{it23} & \dots & q_{it2S-1} & q_{it2S} \\ \vdots & \vdots & \vdots & \dots & \vdots & \vdots \\ q_{itS1} & q_{itS2} & q_{itS3} & \dots & q_{itSS-1} & q_{itSS} \end{array} \end{array} \quad (2)$$

As supported by self-determination theory, customers' propensity for transition is mainly driven by intrinsic motivation resources, namely different dimensions of customer experience. Therefore, as demonstrated in Equations (3.1) – (3.5), these transition probabilities

are affected by the *recency effect*, *peak effect*, *trend effect*, and *fluctuation effect* of customer experience at time $t-1$, using a set of logit specifications:

$$Q_{itss} = \frac{\exp(\varphi_{ss}'X_{it})}{1 + \exp(\varphi_{ss}'X_{it})} \quad (3.1)$$

$$Q_{itss} = \frac{\exp(\gamma_{ss}'X_{it}^H + \eta_{ss}'X_{it}^L)}{1 + \exp(\gamma_{ss}'X_{it}^H + \eta_{ss}'X_{it}^L)} \quad (3.2)$$

$$Q_{itss} = \frac{\exp(\delta_{ss}'X_{it}^{TI} + \chi_{ss}'X_{it}^{TD})}{1 + \exp(\delta_{ss}'X_{it}^{TI} + \chi_{ss}'X_{it}^{TD})} \quad (3.3)$$

$$Q_{itss} = \frac{\exp(\lambda_{ss}'X_{it}^{FF})}{1 + \exp(\lambda_{ss}'X_{it}^{FF})} \quad (3.4)$$

$$Q_{itss} = \frac{\exp(\omega_{ss}'X_{it}^{FU})}{1 + \exp(\omega_{ss}'X_{it}^{FU})} \quad (3.5)$$

Recency effect. The variable X_{it} in Equation (3.1) is the recently acquired customer experience by customer i at time t . Delivering favorable customer experience has been widely acknowledged as an essential strategic lever for firms to advance the development of customer relationship (Witell et al., 2020). McColl-Kennedy et al. (2019) specifically highlight that customer experience which represent customers' inner affective situation provides valuable information for firms to capture customers' intention in regard to their relationship with the focal firm.

Peak effect. In Equation (3.2), X_{it}^H and X_{it}^L represent high and low level of customer experience, respectively. By definition, peak experiences are referred as the moments in which individuals go through a high level of intensity of perception, depth of feeling or sense of

profound significance, thereby being widely acknowledged in the marketing literature as an essential strategic lever for firms to advance the development of customer relationship (Kranzbühler, Kleijnen, Morgan, & Teerling, 2018; McColl-Kennedy et al., 2019; Witell et al., 2020). As emphasized by Schouten et al. (2007), peak experiences are regarded as meaningful, powerful, and potentially transformational events in means of affecting customers in different ways, including customer's relationship with the firm. Such influence caused by peak experiences are usually enduring, leading to deep tracks in the mentality of customers. As a result, stimulated by extraordinary favorable (unfavorable) experiences, customers are more likely to migrate to a more developed (undeveloped) customer relationship expansion state.

Trend effect. The increasing and decreasing trends of customer experience are denoted as X^{TI}_{it} and X^{TD}_{it} in Equation (3.3), correspondingly. Trend effect as one of the key dimensions of customer experience is expected to exert significant influence in customer relationship expansion. Prior research specifically emphasize that individuals tend to project the future and make decisions based on the trend extrapolation (Johnson, Tellis, & MacInnis, 2005). Such process is usually proceeded as an unconscious and heuristic, driving customers to be more sensitive towards supported evidences and reject contrary information (Palmatier et al., 2013). Given an increasing trend of customer experience, customers will view the subsequent experiences more favorably, thus showing a more positive attitude to expand the established relationship with the focal firm. In contrast, if customers perceive that the customer experience is decaying, they will behave in ways that hinder relationship expansion.

Fluctuation effect. Fluctuations of customer experiences capture the variations in the trajectory of customer experience across time. Substantial evidence from the literature of judgement and decision-making demonstrate that the perceived fluctuations can be coded favorably or unfavorably (Sivakumar et al., 2014), which subsequently affect the evolution of relationship between customers and firms. We distinguish fluctuations into favorable

fluctuations and unfavorable fluctuations, which are accordingly denoted as X^{FF} in Equation (3.4) as well as X^{FU} in Equation (3.5). Palmatier and coauthors (2013) specifically highlight that the evolution of exchange relationships between customers and firms are more linked to the change than the perceived experience in its absolute value, since individuals are more sensitive to fluctuations. More specifically, the way of how customers assess the fluctuation of customer experience varies depending on the situated level of customer experience (Sivakumar et al., 2014). For customers who regularly receive delightful customer experiences, they tend to visualize fluctuations in a more positive manner. In contrast, fluctuations are most likely to be viewed as negative phenomenon when customers encounter frequently experience failures.

In addition to long-term influence exerted by different dimensions of customer experience, we argue that such process is not homogenous but varies depending on the currently encountered state and the specific dimension of customer experience. We thus expect different transition rates in the migration from one lower customer relationship expansion state to a higher one. Indeed, Zhang and Chang (2020) specifically highlight that once customers are assigned to a homogenous segment, their needs continue to progress at different rates due to different stimulations, thereby developing different preferences.

4.5.3 Short-term Effect of RM Actions in Emission Probability

It has been widely assumed in marketing literature that firms' efforts dedicated in RM actions effectively build stronger relationships with customers (Palmatier et al., 2013). As noted above, self-determination theory claims that extrinsic resources of motivation, such as the marketing efforts dedicated by firms. Customers, who are exposed to RM actions, are more likely to be convinced to expand the relationship with the firm. Unlike the influence of customer experience which promotes psychology attachment and exert a long-term influence. Being

pressure from external partner, short-term influences from RM actions in promoting customer relationship expansion are expected. Drawing from previous studies (Zhang et al., 2016), we mainly focus on three different types of RM actions: advertising communication, product innovation, and conflict.

In regard to advertising communication, prior research clearly indicates that advertising communication informs the attributes, characteristics, and economic values of firm's offerings (Polo, Sese, & Verhoef, 2011). As a result, customers will have more chance to get to know other product or service categories provided by the firm and promote the relationship expansion possibilities. About product innovation, as emphasized by Zhang et al. (2016), to satisfy the customers' needs toward other product or service categories, firms should also be capable to provide sufficient choices. Thus, high investment dedicated in product innovation will facilitate the avenue through which customers further extend the established relationships. Finally, for conflict, we expect negative influence in customer relationship behaviors, since occurrence of conflict decreases the confidence and or willingness of customers in the long-term orientation with the firm in an exchange relationship (Zhang et al., 2016).

Similar to the specification of Luo and Kumar (2013), we can express the latent utility that customer i derives from the correspondent relationship expansion behaviors at time t in state s in Equation (4), where ad_{it} , pr_{it} , cl_{it} , and cf_{it} represents the RM actions – advertising communication, product innovation, conflict length, and conflict frequency, respectively. At the same time, c_{it} includes the firm-, market- and customer demographic- characteristics as the set of control variables.

$$Pr (y_{i1}, y_{i2}, \dots, y_{iT} | S_{it} = s, f_{it}, m_{it}, c_{it},) = \frac{\exp (\alpha_0 + \theta_s + \beta_1 ad_{it} + \beta_2 pr_{it} + \beta_3 cl_{it} + \beta_4 cf_{it} + \beta_5 c_{it})}{1 + \exp (\alpha_0 + \theta_s + \beta_1 ad_{it} + \beta_2 pr_{it} + \beta_3 cl_{it} + \beta_4 cf_{it} + \beta_5 c_{it})} \quad (4)$$

4.5.4 Key parameters and Estimation Algorithm

In this study, we are interested in the parameters $\varphi_{ss'}$, $\gamma_{ss'}$, $\eta_{ss'}$, $\delta_{ss'}$, $\chi_{ss'}$, $\lambda_{ss'}$, and $\omega_{ss'}$ which gauge the long-term effects of different dimensions of customer experience. Such long-term influence is reflected in the migration rate from one lower customer relationship expansion state to a higher one; where the situated state s and the correspondent dimension of customer experience are given. Among them, $\varphi_{ss'}$ measure how recently gained customer experience promote the migration across customer relationship expansion states. The parameters $\gamma_{ss'}$ and $\eta_{ss'}$ capture the high and low level of customer experience as the peak moments to stimulate the transitions among the customer relationship expansion states. In the same vein, $\delta_{ss'}$ and $\chi_{ss'}$ correspond to the effect of increasing and decreasing trend of customer experience. The parameters $\lambda_{ss'}$ and $\omega_{ss'}$ represent the effects of positive and negative fluctuations on the migration across customer relationship expansion states.

We are also interested in π_{is} which measure the probability which customers reach to the customer relationship expansion state s at the initial period. Finally, the parameters β_1 - β_5 which capture the short-term influence of RM actions (i.e., advertising communication, product innovation, conflict length, and conflict frequency) in different customer relationship expansion behaviors are also under our attention.

To estimate the proposed HMM model, we followed the widely applied Expectation Maximization (EM) algorithm, which is also acknowledged as Baum-Welch forward-backward algorithm (Baum, 1972; Baum, Petrie, Soules, & Weiss, 1970; Welch, 2003). The EM algorithm iteratively estimates the parameters of both the transition matrix and emission probabilities using the observation data, until convergence is achieved or the specified maximum number of iterations is reached. It is found in most cases that the EM algorithm has

the advantage of reliable global convergence, low cost per iteration, economy of storage, and ease of programming (Baum et al., 1970).

4.6 DATA DESCRIPTION

A leading marketing consulting company provided the data for this study. The dataset consists of 12,946 customers from the telecom industry in a European country, during a total of 48 months from January 2013 to December 2016. All the key telecommunication service categories are covered, ranging from mobile, broadband, landline to TV. Apart from the seven most competitive firms in the industry, the rest of the existing firms are also included. This dataset contains monthly individual customer-level transactional and perceptual information, firm-level, as well as market-level information.

To comprehensively capture customer relationship expansion, we tracked a large variety of transactions between customers and firms in a monthly manner over 48 months period. Such transactions include the number of product and/or service categories purchased from the focal firm; the usage level of the initially acquired product or service category; the decision about the upgraded offering; the adoption toward the innovative product/service category provided by the focal firm.

The dataset was collected through four consecutive annual surveys administered to customers across all the existing firms in mobile service category via the Net Promoter Score (NPS) proposed by Reichheld (2003). In this way, we may ensure an accurate representation of the selected market. As noted by Lemon and Verhoef (2016), the NPS is considered as an adequate measurement for customer experience (De Haan, Verhoef, & Wiesel, 2015) and has been used in telecom industry for years. The average response rates across the four interactions in the mobile category were 28.17%. Following Kamakura and Wedel (2000), we based on

mean replacement, which is considered as a commonly applied and well-performing method to deal with missing data. In particular, we imputed the mean value of customer experience of each firm to replace the missing value of the correspondent firm. Accordingly, we created a dummy variable that indicates if the customer took part in the survey, which in our model captures potential deviations in behavior by customers who did not respond to the survey. Such customer perceptual information is further integrated with the information related to firms' marketing efforts, which are consisted of the investment in advertising, product innovation, and conflict resolution.

With the aim of testing the proposed conceptual model in a rigorous manner, we further gathered information toward a set of control variables through multiple resources. Among them, it includes customer demographic characteristics (gender, age, household number, working status, and social class), provided by the leading consulting company; data relating to firm characteristics (market shares and advertising expenditures), obtained from the annual official report of the telecommunication sector in the corresponding market; information about context characteristics (acquisitions, new entrants, iPhone release dates, and social media mentions), acquired from news websites and Google Trends. Table 4.3 presents a summary of the variables included in our modeling framework and the corresponding descriptive statistics for each variable.

Table 4.3: Descriptive statistics (N=310,962)

Variables		Description	Time Unit	Mean	SD
Dependent variable	<i>Usage level</i>	The level of usage is monthly measured via the amount of mobile credit consumed by customer <i>i</i> at time <i>t</i> . It is categorized into five categories for monthly bill: (1) below €2.5 into 0, (2) below and equal to €8 into 1; (3) below and equal to €25.5 into 3, (4) below and equal to €55.5 into 4, and (5) below and equal to €125.5 into 4.	Monthly	.8843	1.0400
	<i>Number of product categories</i>	Monthly measured number of product categories purchased by customer <i>i</i> from the focal firm at time <i>t</i> , namely mobile service category, broadband service category, landline service category, and TV service category.	Monthly	2.0924	1.1199
	<i>Upgraded offering decision</i>	Monthly measured dummy variable: 1 = customer <i>i</i> acquires the upgraded offering of the main product category from the focal firm at time <i>t</i> ; 0 = otherwise.	Monthly	.0254	.1573
	<i>Innovative product category adoption</i>	Monthly measured dummy variable: customer <i>i</i> acquires the innovative product category from the focal firm at time <i>t</i> ; 0 = otherwise.	Monthly	.2471	.4313
Dimensions of customer experience	<i>Recency effect</i>	Recent customer experience that customer <i>i</i> perceives from the focal firm <i>m</i> in mobile service category. It is measured through NPS via a survey in December of each year (0 = very unlikely, 10 = very likely).	Yearly	7.6778	1.9215
	<i>Peak effect</i>	High peak in customer experience is measured by a dummy variable: 1 = NPS scored by customer <i>i</i> at time <i>t</i> for mobile service category is higher than 8; 0 = otherwise.	Yearly	.0646	.2459
		Low peak in customer experience is measured by a dummy variable: 1 = NPS scored by customer <i>i</i> at time <i>t</i> for mobile service category is lower than 7; 0 = otherwise.	Yearly	.5449	.4980
	<i>Trend effect</i>	The tendency of increasing in customer experience is obtained by calculating the difference between the current NPS (at time <i>t</i>) and the previous NPS (at time <i>t-1</i>); positive values represent an increasing trend, and zero for others.	Yearly	.0142	.2203
		The tendency of decreasing in customer experience is obtained by calculating the difference between the current NPS (at time <i>t</i>) and the previous NPS (at time <i>t-1</i>); negative values represent a decreasing trend, and zero for others.	Yearly	-.0064	.1289
<i>Fluctuation effect</i>	The fluctuation effect is calculated based on the standard deviation divided by the mean. The positive fluctuation is situated in the level of customer experience scored by customer <i>i</i> at time <i>t</i> which is higher than the average level of customer experience. The negative fluctuation is situated in the level of customer experience scored by customer <i>i</i> at time <i>t</i> which is lower than the average level of customer experience.	Yearly	.0075	.0505	
RM actions	<i>Advertising communication (Log)</i>	Investment in advertising communication from firm <i>m</i> at time <i>t</i> and transformed into a logarithm.	Quarterly	4.9883	1.8913
	<i>Product innovation (Log)</i>	Investment in product innovation from firm <i>m</i> at time <i>t</i> and transformed into a logarithm.	Quarterly	7.7584	2.9846
	<i>Conflict frequency</i>	The frequency of complaint in mobile service of main operators.	Quarterly	.8748	.6563
	<i>Conflict length</i>	The average of timing to resolve problems in mobile service of main operators.	Quarterly	11.5431	13.3725
Control variables	<i>Age</i>	Age (in years) of customer <i>i</i> at time <i>t</i> .	Yearly	45.6508	16.5412
	<i>Social class (High)</i>	If the customer belongs to the high level of social class (yes 1; no 0).	Yearly	.1922	.3940
	<i>Social class (Low)</i>	If the customer belongs to the low level of social class (yes 1; no 0).	Yearly	.2066	.4048
	<i>Gender</i>	Dummy variable: 1 = female; 0 = male.	Yearly	.6436	.4789
	<i>Household size</i>	The number of family members of customer <i>i</i> at time <i>t</i> .	Yearly	3.0464	1.1983
	<i>Market share</i>	Percentage of total revenues that firm <i>m</i> accounts over the whole market at time <i>t</i> .	Quarterly	.1428	.1368
	<i>Social media mention</i>	The frequency that firm <i>m</i> is mentioned through associated keywords in social media channels at time <i>t</i> .	Monthly	48.5509	17.9663
	<i>Acquisition</i>	Dummy variable: 1 = a firm in the telecom market has been acquired by another firm; 0 = otherwise.	Monthly	.0427	.2023
	<i>iPhone release</i>	Dummy variable: 1 = a new iPhone is released in the telecom market at time <i>t</i> .	Monthly	.1040	.3053
<i>New entrants</i>	Dummy variable: 1 = there are new firms entering the telecom market at time <i>t</i> ; 0 = otherwise.	Monthly	.0420	.2005	

4.7 FINDINGS

4.7.1 Number of States and Model Comparisons

Considering that we have no prior knowledge about the exact number of expansion relationship states, we estimated a set of HMM models. More specifically, Model A-C are proceeded by considering the recency effect of customer experience as the key variable for the transition matrix from two to four customer relationship expansion states, while the emission probabilities and the initial distribution remained same as the above estimated models.

Enabled by the set of estimated models, we compare the model fit statistics for our proposed baseline model with the alternative specifications. In pursuit of such aim in a comprehensive manner, in addition to the Log-likelihood ratio (LL), the traditional Bayesian information criterion (BIC) (Schwarz, 1978), Akaike's information criterion (AIC) (Akaike, 1974), we further focus on the consistent AIC (CAIC) (Bozdogan, 1987), as well as Akaike's information criterion with a per parameter penalty factor of three rather than the traditional value of value (AIC3) (Bozdogan, 1994). As reported in Table 4.4, the model with four-state HMM (Model C) is the one which fits the dataset better than other alternatives.

Table 4.4: Fit statistics for different states solutions in HMM model (N=310,962)

Criterion/Models	Model A	Model B	Model C	Model D	Model E
LL	-747054.9578	-603453.8446	-530716.5930	-671952.7060	-553516.4656
BIC	1494810.5878	1207731.4524	1062417.9143	1344691.3009	1107904.0371
AIC	1494257.9157	1207081.6892	1061641.1859	1344071.4119	1107216.9312
AIC3	1494331.9157	1207168.6892	1061745.1859	1344154.4119	1107308.9312
CAIC	1494884.5878	1207818.4524	1062521.9143	1344774.3009	1107996.0371
SABIC	1494575.4232	1207454.9751	1062087.4128	1344427.5353	1107611.6703

Note: LL refers to Log-likelihood ratio

To assess the contribution of the latent customer relationship expansion states, the long-term effects of customer experience, and the short-term of RM actions, we further performed two additional alternative specifications. The variables imputed in Model D - the latent growth curve model, are the same set of variables used in Model C, except without taking into account the dynamic transition across customer relationship expansion states. Instead, the major focus is on the static customer relationship expansion clusters. The latent growth curve analysis is especially appropriate for an initial examination for determining whether sample relationships (i.e., customer relationship expansion) follow a common developmental path by testing the latent growth constructs (e.g., the number of acquired product categories, the usage level, and others) that emerge from longitudinal data (Palmatier et al., 2013). Lastly, Model E in which no variable was computed in the transition matrix was developed. The results in table 4 further confirm that Model C is the one with the best performance.

We computed variance inflation factor (VIF) scores to assess the presence of multicollinearity. In the most extended model, the maximum VIF score was below the recommended cutoff of 10. Therefore, multicollinearity should not severely affect our regression results according to Hair et al. (1998). Additionally, Table 4.5 shows the correlations between the key variables, which do not signal multicollinearity.

Table 4.5: Correlation matrix (N=310,962)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Usage level	1																	
Number of product categories	-.0173*	1																
Upgraded offering decision	.0064*	-.0080*	1															
Innovative product adoption	.0394*	.2507*	.0017	1														
Customer experience	.0315*	-.0296*	-.0450*	.0373*	1													
Advertising communication (Log)	.0362*	-.2589*	-.0003	-.0637*	.0356*	1												
Product innovation (Log)	.0159*	.0157*	-.0025	-.0130*	-.0113*	.5733*	1											
Conflict frequency	.0201*	-.2205*	.0014	-.0281*	.0381*	.5432*	.4412*	1										
Conflict length	-.0201*	.1133*	-.0061*	-.0010	-.0362*	.2713*	.3268*	-.0530*	1									
Age	.0339*	.0608*	-.0245*	.0034	-.1168*	-.0326*	.0434*	-.0111*	.0807*	1								
Social class (High)	.0444*	.1131*	.0067*	.1718*	.0141*	-.0340*	-.0131*	-.0350*	.0161*	.0474*	1							
Social class (Low)	-.0795*	-.1464*	-.0130*	-.1385*	-.0477*	.0437*	.0230*	.0383*	.0115*	.0785*	-.2488*	1						
Household size	-.0315*	.0289*	.0163*	.0523*	.0478*	-.0034	-.0151*	-.0005	-.0289*	-.3230*	.1575*	-.2598*	1					
Market share	-.001	-.0005	-.0016	.0006	.0009	-.0009	.0000	.0021	.0024	.0003	-.0002	-.0010	.0012	1				
Social media mention	.0154*	.1272*	.0067*	.0505*	-.0438*	.3021*	.3507*	.0639*	.4763*	.0578*	.0339*	-.0239*	-.0002	-.0003	1			
Acquisition	.0030	-.0427*	-.0013	.0063*	.0108*	-.0523*	-.1360*	-.0976*	-.1019*	-.0240*	-.0011	.0002	.0024	-.0029	-.1410*	1		
iPhone release	-.0158*	.0205*	-.0028	.0075*	.0048	-.0433*	-.0285*	-.0287*	-.0618*	.0083*	-.0036*	.0060*	-.0057*	.0024	-.0458*	.0748*	1	
New entrants	-.0115*	.0244*	.0122*	.0081*	-.0007	-.0079*	-.0228*	.0176*	-.0676*	.0043*	-.0037*	.0063*	-.0041*	-.0212*	-.0469*	-.0103*	.2625*	1

Note: Significance level: * $p < .05$

4.7.2 Identification of Customer Relationship Expansion States and Profiles

To comprehensively define the characteristics of each of the customer relationship expansion state, Figures 4.2A-B are elaborated based on the emission probabilities obtained from the five estimated models (i.e., recency effect, peak effect, trend effect, positive fluctuation, and negative fluctuation). As illustrated in Figure 4.2A-B, customers in the basic state usually acquire one product category (mean=1.060), with low level of usage depth (mean=.500). Additionally, customers in such state are also less likely to accept the upgraded product offering (mean=.023) as well as the innovative product category (mean=.063). Moving from the basic state to the transition state, the customer relationship is mainly expanded by deepening the usage level (mean=.880) while customers exhibit a same level of the acquired product categories (mean=1.070), the acquisition of upgraded offerings, and innovative product category as customers in the basic state. The transformation state exhibits a significant increase in the number of acquired product categories (mean=2.890). It means that customers in this state tend to have three product categories from the focal firm. Most importantly, they are also more likely to adopt innovative product category provided by the focal firm (mean=.604). In regard to the usage depth (mean=.900) and the likelihood to accept the upgraded offering (mean=.026), they are also slightly higher in comparison to the transition state. Finally, the active state, as illustrated by its definition, customers actively expand their relationships with the focal firm by acquiring all the available product categories offered by the focal firm (mean= 3.700) meanwhile increasing the usage level of the main product category (mean= 1.200). Although the chance that customers would accept the upgraded offering is still slightly low, the possibility is still higher than customers in other customer relationship expansion states. Most importantly, customers in active show a very positive attitude toward the adoption of innovative product category (mean=.997).

About the distribution of four relationship expansion states, based on the estimated initial state distributions, the average of each state across the five estimated models (i.e., recency effect, peak effect, trend effect, positive fluctuation, and negative fluctuation) has been calculated. Figure 4.3 shows that the basic state represents the largest proportion of relationship expansion states, which is 36.14%. Moving from basic state to transition state which covers approximately 32.87% across all states. The transformation state which covers 19.35% of the total sample. Lastly, the active state which covers 11.64% of the sample.

Figure 4.2A: Customer relationship expansion states identification

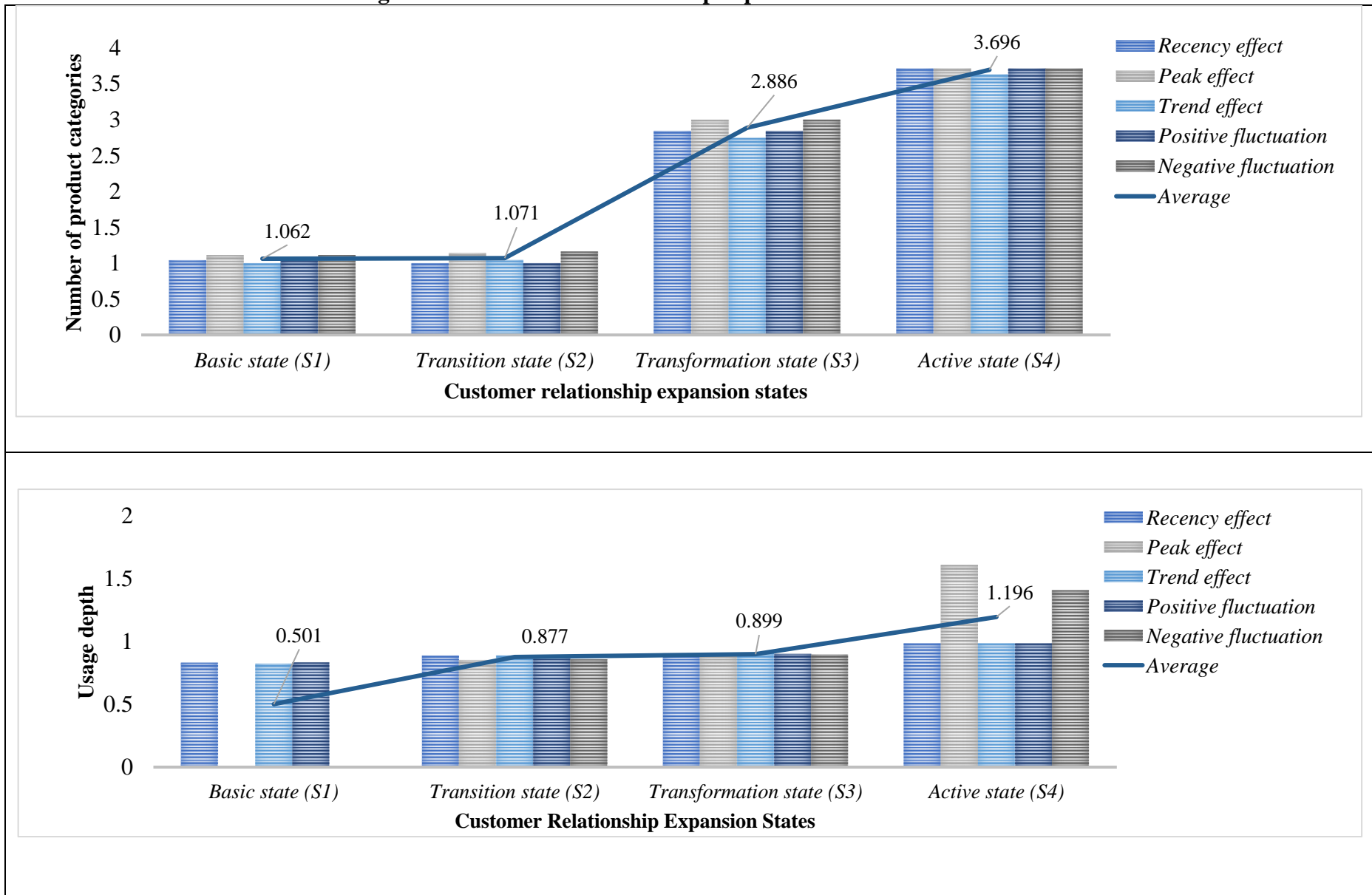


Figure 4.2B: Customer relationship expansion states identification

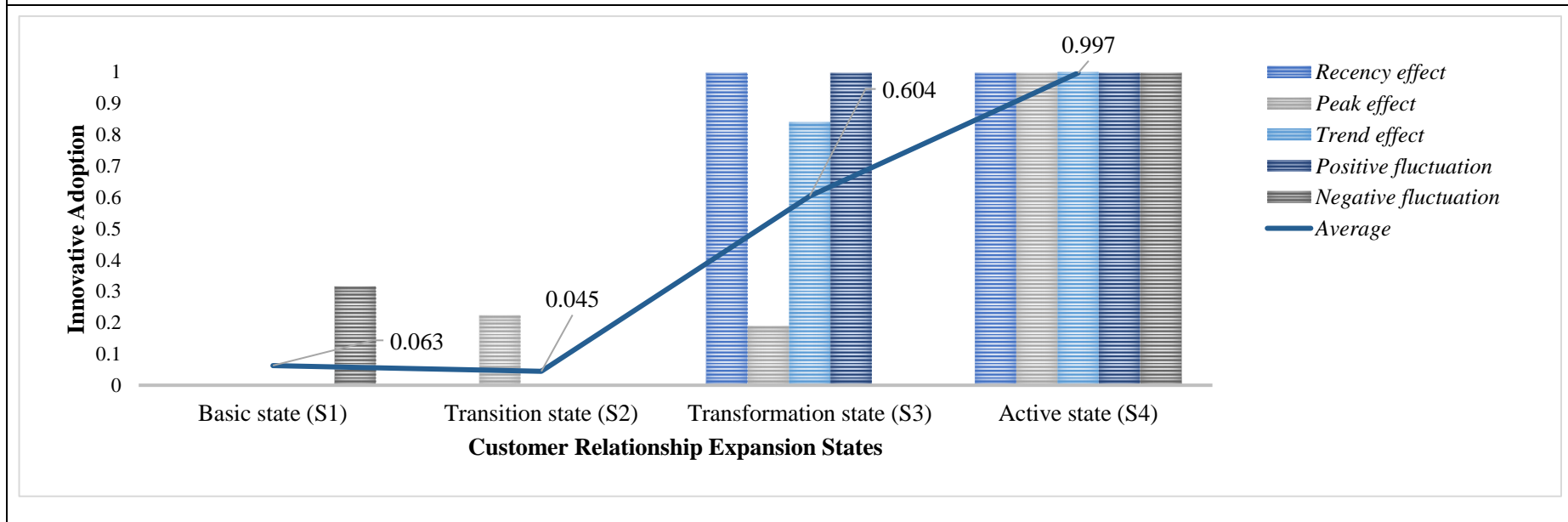
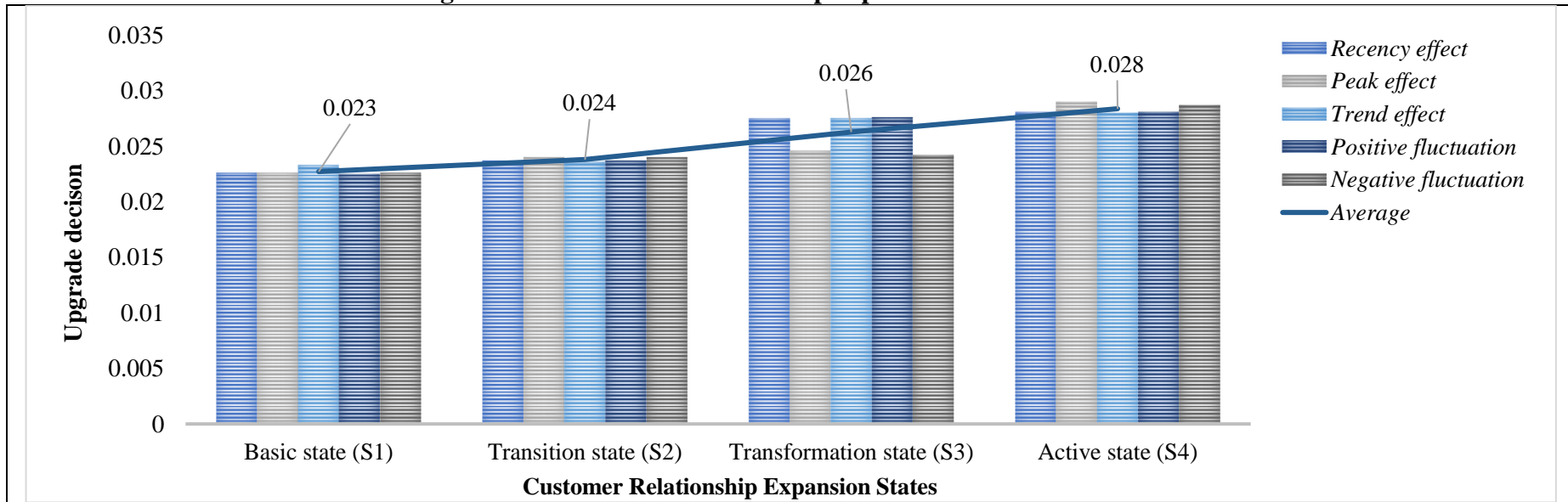
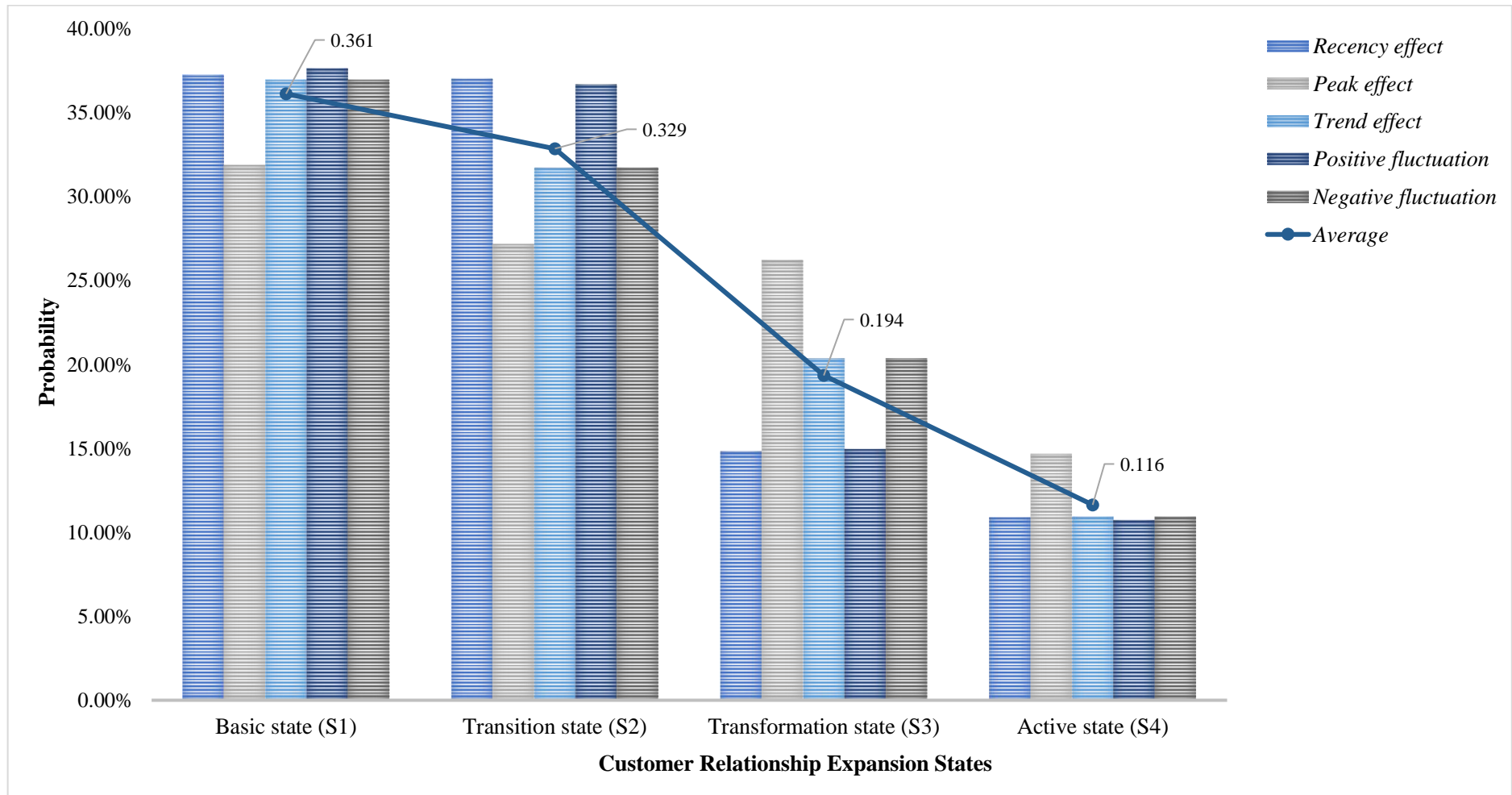


Figure 4.3: Customer relationship expansion states distributions



4.7.3 Long-term Effect of Customer Experience Dimensions

The interesting feature of our estimated model is the ability to investigate the time-varying covariates on the transitions between the states, that is, the long-term effects of customer experience dimensions. We present the parameter estimation results of the transition probability Equations (3.1) - (3.5) in Table 4.6. Recall that we had imposed the restriction that customers who are in higher customer relationship expansion state have a higher propensity to expand the currently established relationship with the focal firm in a step further. When a customer moves to a higher customer relationship expansion state, it is associated with a significant increase in the transition value. The point of our interest here is the extent to which such a move is feasible and sustainable in the long term and what the roles are played by the different dimensions of customer experience in inducing such transitions.

As revealed in Table 4.6, stimulated by the recency effect of customer experience, there is a very small chance that customer in a lower relationship expansion state will move to a higher relationship expansion state. Among the transition probabilities, the recently perceived favorable customer experience only significantly promotes the transition from transition state to active state ($\phi_{24} = .0962$, $p < .10$), while its influence in the rest of transition cases is not significant ($\phi_{12} = .0216$, $p > .10$; $\phi_{13} = -.0001$, $p > .10$; $\phi_{14} = .2057$, $p > .10$; $\phi_{23} = .0734$, $p > .10$). About the peak effect of customer experience, the results demonstrate that peak customer experience significantly affect the transition across customer relationship expansion states. More specifically, regardless of the current customer relationship state, customers who encounter extraordinary experiences are encouraged to directly move to the highest customer relationship expansion state – active state ($\gamma_{14} = .2653$, $p < .05$; $\gamma_{24} = .5274$, $p < .01$; $\gamma_{34} = .5573$, $p < .05$) instead of transition state or transformation state ($\gamma_{12} = -.0155$, $p > .10$; $\gamma_{13} = .2837$, $p > .10$; $\gamma_{23} = .2455$, $p < .10$). In a similar vein, in the situation where negative peak experiences

are delivered to customers, customers are less likely to move to higher relationship expansion states ($\eta_{12} = .0226, p >.10$; $\eta_{13} = -.1799, p >.10$; $\eta_{14} = -.1925, p <.05$; $\eta_{23} = -.4124, p <.01$; $\eta_{24} = .1406, p >.10$; $\eta_{34} = -.1548, p >.10$). About the trend effect of customer experience, in contrast to our expectations, neither the positive trend ($\delta_{12} = -10.7810, p >.10$; $\delta_{13} = -.4704, p >.10$; $\delta_{14} = -.8717, p >.10$; $\delta_{23} = -.1005, p >.10$; $\delta_{24} = .1159, p >.10$; $\delta_{34} = .3338, p >.10$) nor the negative trend ($\chi_{12} = -.0425, p >.1$; $\chi_{13} = .5115, p >.10$; $\chi_{14} = .3883, p >.10$; $\chi_{23} = .8746, p >.10$; $\chi_{24} = -.2961, p >.10$; $\chi_{34} = .0064, p >.10$) exerts significant influence across the transitions of customer relationship expansion states. Finally, in line with our expectation, fluctuation effect has an important influence in the transition across customer relationship expansion states. In particular, for customers who frequently receive delightful experiences from the focal firm, the fluctuation within customer experience might be viewed as firms' dedicated efforts in delivering better experiences by customers, thereby yielding positive effects on customer relationship expansion states transitions ($\lambda_{12} = .8664, p <.05$; $\lambda_{13} = 1.0086, p <.01$; $\lambda_{14} = .8828, p >.10$; $\lambda_{23} = 1.5617, p <.10$; $\lambda_{24} = .5012, p <.10$; $\lambda_{34} = -.6085, p <.10$). However, for customers who regularly experience failures, fluctuations across accumulated customer experience with the focal firm might lead to customers to have less confidence in firms' ability to provide satisfactory experiences, thus decreasing the transition from the lower customer relationship expansion state to the higher ones ($\omega_{12} = -.7072, p <.01$; $\omega_{13} = -1.1419, p <.01$; $\omega_{14} = -.6952, p <.01$; $\omega_{23} = -.2369, p >.10$; $\omega_{24} = -.2175, p >.10$; $\omega_{34} = .2082, p >.10$).

Table 4.6: Transition probability parameter estimation results (N=310,962)

Model 1	From state [t-1] to state [t]		CX Recency Effect		
	Basic state (S1)		-		
	Transition state (S2)	.0216	-		
	Transformation state (S3)	-.0001	.0734	-	
	Active state (S4)	.2057	.0962*	.0123	-
	From state [t-1] to state [t]		Intercept		
	Basic state (S1)		-		
	Transition state (S2)	-5.0206***	-		
Transformation state (S3)	-4.9360***	-7.4360***	-		
Active state (S4)	-9.1723***	-6.3722***	-5.3431***	-	
Model 2	From state [t-1] to state [t]		CX Positive Peak		
	Basic state (S1)		-		
	Transition state (S2)	-.0155	-		
	Transformation state (S3)	.2837	.2455	-	
	Active state (S4)	.2653**	.5274***	.5573**	-
	From state [t-1] to state [t]		CX Negative Peak		
	Basic state (S1)		-		
	Transition state (S2)	.0226	-		
	Transformation state (S3)	-.1799	-.4124***	-	
	Active state (S4)	-.1925**	.1406	-.1548	-
	From state [t-1] to state [t]		Intercept		
	Basic state (S1)		-		
Transition state (S2)	-5.3369***	-			
Transformation state (S3)	-5.5356***	-5.3149***	-		
Active state (S4)	-4.6942***	-5.3046***	-5.6277***	-	
Model 3	From state [t-1] to state [t]		CX Positive Trend		
	Basic state (S1)		-		
	Transition state (S2)	-10.7810	-		
	Transformation state (S3)	-.4704	-.1005	-	
	Active state (S4)	-.8717	.1159	.3338	-
	From state [t-1] to state [t]		CX Negative Trend		
	Basic state (S1)		-		
	Transition state (S2)	-.0425	-		
	Transformation state (S3)	.5115	.8746	-	
	Active state (S4)	.3883	-.2961	.0064	-
	From state [t-1] to state [t]		Intercept		
	Basic state (S1)		-		
Transition state (S2)	-4.1293***	-			
Transformation state (S3)	-5.7764***	-4.8204***	-		
Active state (S4)	-5.4840***	-7.5181***	-5.5347***	-	
Model 4	From state [t-1] to state [t]		CX Positive Fluctuation		
	Basic state (S1)		-		
	Transition state (S2)	.8664**	-		
	Transformation state (S3)	1.0086***	1.5617*	-	
	Active state (S4)	.8828	.5012	-.6085	-
	From state [t-1] to state [t]		Intercept		
	Basic state (S1)		-		
	Transition state (S2)	-4.9096***	-		
Transformation state (S3)	-4.9465***	-6.8813***	-		
Active state (S4)	-7.6205***	-5.6503***	-5.3590***	-	
Model 5	From state [t-1] to state [t]		CX Negative Fluctuation		
	Basic state (S1)		-		
	Transition state (S2)	-.7072***	-		
	Transformation state (S3)	-1.1419***	-.2369	-	
	Active state (S4)	-.6952***	-.2175	.2082	-
	From state [t-1] to state [t]		Intercept		
	Basic state (S1)		-		
	Transition state (S2)	-4.3957***	-		
Transformation state (S3)	-5.3324***	-5.7071***	-		
Active state (S4)	-4.9863***	-4.7768***	-7.2548***	-	

4.7.4 Short-term Effect of RM Actions

As noted above, there are several ways to expand the established relationships between customers and firms, including deepening the usage level, increasing the number of product categories, upgrading the product category of the focal firm, and adopting the innovative product category of the focal firm. As each of the customer relationship expansion choices has their own characteristic, as revealed in Table 4.7, customer's reaction toward the RM actions as extrinsic sources of motivation to promote each of the customer relationship expansion cases is different.

Firms' investment in advertising communication has a positive and significant influence in encouraging customers to use more the currently acquired product category ($\beta_{ad}^{M1nu} = .0216$, $p < .01$; $\beta_{ad}^{M2nu} = .0072$, $p < .01$; $\beta_{ad}^{M3nu} = .0217$, $p < .01$; $\beta_{ad}^{M4nu} = .0244$, $p < .01$; $\beta_{ad}^{M5nu} = .0129$, $p < .01$), as well as the adoption toward the innovative product category ($\beta_{ad}^{M1in} = .0915$, $p > .10$; $\beta_{ad}^{M2in} = .0512$, $p < .01$; $\beta_{ad}^{M3in} = .2738$, $p < .01$; $\beta_{ad}^{M4in} = .1171$, $p < .05$; $\beta_{ad}^{M5in} = .0618$, $p < .01$). However, frequent exposure to advertising communication result in negative customer reactions in acquiring other product categories offered by the focal firm ($\beta_{ad}^{M1us} = -.1695$, $p < .01$; $\beta_{ad}^{M2us} = -.2905$, $p < .01$; $\beta_{ad}^{M3us} = -.2182$, $p < .01$; $\beta_{ad}^{M4us} = -.1831$, $p < .01$; $\beta_{ad}^{M5us} = -.3179$, $p < .01$), including the upgraded offering ($\beta_{ad}^{M1up} = -.0213$, $p < .05$; $\beta_{ad}^{M2up} = -.0203$, $p < .05$; $\beta_{ad}^{M3up} = -.0201$, $p < .05$; $\beta_{ad}^{M4up} = -.0235$, $p < .01$; $\beta_{ad}^{M5up} = -.0220$, $p < .05$).

In regard to the influence from firms' investment in product innovation, in general customers are more likely to cultivate the customer-firm relationships via different manners. Such influences have been captured across the different customer relationship expansion behaviors, spanning from the increase in usage level ($\beta_{pr}^{M1us} = .0015$, $p < .10$; $\beta_{pr}^{M2us} = .0162$, $p < .01$; $\beta_{pr}^{M3us} = .0015$, $p < .01$; $\beta_{pr}^{M4us} = .0025$, $p < .01$; $\beta_{pr}^{M5us} = .0102$, $p < .01$), the growth in the number of product categories ($\beta_{pr}^{M1nu} = .0266$, $p < .01$; $\beta_{pr}^{M2nu} = .1362$, $p < .01$; $\beta_{pr}^{M3nu} = .0236$,

$p < .01$; $\beta_{pr}^{M4nu} = .0210$, $p < .01$; $\beta_{pr}^{M5nu} = .1165$, $p < .01$), as well as the adoption of innovative product category ($\beta_{pr}^{M1in} = -.0185$, $p > .10$; $\beta_{pr}^{M2in} = .0234$, $p < .01$; $\beta_{pr}^{M3in} = .0019$, $p > .10$; $\beta_{pr}^{M4in} = -.0102$, $p > .1$; $\beta_{pr}^{M5in} = .0518$, $p < .01$). Though, such influence is not significant in the linkage between product innovation and customers' decisions toward upgraded product category ($\beta_{pr}^{M1up} = -.0004$, $p > .10$; $\beta_{pr}^{M2up} = -.0007$, $p > .10$; $\beta_{pr}^{M3up} = -.0004$, $p > .10$; $\beta_{pr}^{M4up} = -.0009$, $p > .1$; $\beta_{pr}^{M5up} = -.0014$, $p > .10$).

About the impacts of conflict, as noted previously, we distinguished into conflict length and conflict frequency. On the one hand, the longer time to resolve the conflict leads customers to have less confidence in the long-term orientation of the firm or less willingness to invest in fueling the growth of the relationship between customers and firms. Indeed, the results demonstrate that the conflict length undermines the different customer relationship expansion decisions, including usage depth ($\beta_{cl}^{M1us} = -.0031$, $p < .01$; $\beta_{cl}^{M2us} = -.0027$, $p < .01$; $\beta_{cl}^{M3us} = -.0031$, $p < .01$; $\beta_{cl}^{M4us} = -.0034$, $p < .01$; $\beta_{cl}^{M5us} = -.0025$, $p < .01$), the number of acquired product categories from the focal firm ($\beta_{cl}^{M1nu} = -.0017$, $p < .01$; $\beta_{cl}^{M2nu} = -.0188$, $p < .01$; $\beta_{cl}^{M3nu} = -.0040$, $p < .01$; $\beta_{cl}^{M4nu} = -.0026$, $p < .01$; $\beta_{cl}^{M5nu} = -.0208$, $p < .01$), upgrade decision ($\beta_{cl}^{M1up} = -.0037$, $p < .01$; $\beta_{cl}^{M2up} = -.0038$, $p < .01$; $\beta_{cl}^{M3up} = -.0037$, $p < .01$; $\beta_{cl}^{M4up} = -.0035$, $p < .01$; $\beta_{cl}^{M5up} = -.0036$, $p < .01$), and innovative product adoption ($\beta_{cl}^{M1in} = -.0546$, $p < .01$; $\beta_{cl}^{M2in} = -.0043$, $p < .01$; $\beta_{cl}^{M3in} = -.0156$, $p < .01$; $\beta_{cl}^{M4in} = -.0556$, $p < .01$; $\beta_{cl}^{M5in} = -.0029$, $p < .01$). On the other hand, no consistent patterns are captured in the linkage between conflict frequency and different customer relationship expansion behaviors. In addition to its negative impact on usage depth ($\beta_{cf}^{M1us} = -.0142$, $p < .01$; $\beta_{cf}^{M2us} = -.0280$, $p < .01$; $\beta_{cf}^{M3us} = -.0144$, $p < .01$; $\beta_{cf}^{M4us} = -.0200$, $p < .01$; $\beta_{cf}^{M5us} = -.0079$, $p < .05$), and the number of acquired product categories from the focal firm across the different models ($\beta_{cf}^{M1nu} = -.278$, $p < .01$; $\beta_{cf}^{M2nu} = -.3007$, $p < .01$; $\beta_{cf}^{M3nu} = -.2397$, $p < .01$; $\beta_{cf}^{M4nu} = -.2132$, $p < .01$; $\beta_{cf}^{M5nu} = -.2085$, $p < .01$), we also observe that firms with high conflict frequency, their customers are more likely to adopt the innovative product category launched by the focal firm (β_{cf}^{M1in}

=.2087, $p > .10$; $\beta_{cf}^{M2in} = .0825$, $p < .10$; $\beta_{cf}^{M3in} = .1156$, $p < .01$; $\beta_{cf}^{M4in} = .1344$, $p > .10$; $\beta_{cf}^{M5in} = .0817$, $p < .01$) as well as the upgraded product category ($\beta_{cf}^{M1up} = .0072$, $p > .10$; $\beta_{cf}^{M2up} = .01400$, $p > .10$; $\beta_{cf}^{M3up} = .0070$, $p > .10$; $\beta_{cf}^{M4up} = .0116$, $p > .10$; $\beta_{cf}^{M5up} = .0168$, $p > .10$), even though the influence in the latter is insignificant. One possible explanation is that customers and firms have more chance to communicate with each other through during the frequent complaints, thereby leading the firm to get to know better customers' preferences and needs. As a result, firms will also have more opportunities to succeed in offering the innovative product category to customers.

Table 4.7: Emission probability parameter estimation results (N=310,962)

<i>Models</i>	Mode 1 - CX Recency Effect				Mode 2 - CX Peak Effect				Mode 3 - CX Trend Effect			
	States											
<i>Dependent variables</i>	<i>Usage depth</i>	<i>Number of products</i>	<i>Upgrade</i>	<i>Innovative adoption</i>	<i>Usage depth</i>	<i>Number of products</i>	<i>Upgrade</i>	<i>Innovative adoption</i>	<i>Usage depth</i>	<i>Number of products</i>	<i>Upgrade</i>	<i>Innovative adoption</i>
Basic state (S1)	-.0663***	-3.8061***	-.0664***	-8.7980***	-.8948***	-4.6430***	-.0354*	-8.0837***	-.0056**	-14.5721***	-.0720***	-14.3547***
Transition state (S2)	.0035	-13.8286***	-.0779***	-8.8785***	-1.6414***	-11.8930***	-.1486***	-.3281***	-.0736***	-5.4727***	-.0917***	-7.6292***
Transformation state (S3)	.0135***	17.6644***	.1114***	8.9097***	3.4676***	11.5746***	-.0213	.1110	.0090**	17.3421***	.0708***	76.8780
Active state (S4)	.0763***	7.6419***	.0999***	8.7668***	.9314***	18.8247***	.0919***	7.6446***	.0770***	8.2427***	.0905***	142.9610
RM Actions												
Advertising communication (Log)	.0216***	-.1695***	-.0213**	.0915	.0072***	-.2905***	-.0203**	.0512***	.0217***	-.2182***	-.0201**	.2738***
Product innovation (Log)	.0015*	.0266***	-.0004	-.0185	.0162***	.1362***	-.0007	.0234***	.0015**	.0236***	-.0004	.0019
Conflict frequency	-.0142***	-.2478***	.0072	.2087	-.0280***	-.3007***	.014	.0825*	-.0144***	-.2397***	.0070	.1156***
Conflict length	-.0031***	-.0017***	-.0037***	-.0546***	-.0027***	-.0188***	-.0038***	-.0043***	-.0031***	-.0040***	-.0037***	-.0156***
Control variables												
Age	.0018***	-.0270***	-.0084***	-.0191***	.0022***	.0257***	-.0089***	-.0033***	.0018***	-.0189***	-.0084***	.0012
Social class (Low)	-.2244***	-1.2170***	-.1632***	-.2355	-.1626***	.4935***	-.1573***	-.7847***	-.2378***	-3.3199***	-.1655***	-6.8038***
Social class (High)	.0677***	.3680***	.0812***	.1716	.0528***	-.2289***	.0824***	.9166***	.0672***	.3324***	.0771***	.0826
Gender	.0071*	-.1377***	.0453*	.0678	-.0153***	.1027***	.0413*	-.1833***	.0074**	-.1160***	.0468*	-.1321***
Household size	-.0433***	.1663***	.0312***	.1545**	-.0298***	-.1031***	.0348***	.0663***	-.0435***	.1493***	.0313***	-.0465***
Market share	-.0072	-.0059	-.0624	-1.0140**	-.0005	-.0021	-.0618	.0203	-.0072	-.0024	-.0624	-.1070
Social media mention	.0011***	.0046***	.0052***	.0720***	.0031***	.0200***	.0052***	-.0031***	.0011***	.0140***	.0051***	.0376***
Acquisitions	.0159*	.0910**	-.0218	1.1225*	.0009	.0707**	-.0205	.0041	.0159*	.1413***	-.0239	.1092
iPhone release	-.0431***	.0635***	-.1223***	1.1390**	-.0522***	.0496**	-.1222***	.0487**	-.0432***	.0626**	-.1226***	.0648
New entrants	-.0417***	.1878***	.3996***	1.5903**	-.0319***	.3409***	.3991***	-.0300	-.0419***	.2037***	.3983***	.1366*
Intercept												
1	1.6851***	-	-	-	4.1520***	-	-	-	1.6882***	-	-	-
1	.5874***	-.4641	-	-	2.3038***	-1.9788***	-	-	.5892***	.6147***	-	-
1	.8581***	5.3351***	-	-	1.1032***	5.9968***	-	-	.8583***	6.6004***	-	-
1	-.3909***	5.0750***	1.7481***	2.5434***	-1.7499***	7.6247***	1.7547***	.9692***	-.3925***	4.0563***	1.7455***	1.1927***
1	-2.7397***	-9.9460***	-1.7481***	-2.5434***	-5.8091***	-11.6428***	-1.7547***	-.9692***	-2.7433***	-11.2714***	-1.7455***	-1.1927***
Fit Statistics												
Log-likelihood ratio	-530716.5930				-542588.8738				-534608.2917			
BIC	1062417.9143				1086276.0985				1070314.9343			

Note: Significance levels: * $p < .1$; ** $p < .05$; *** $p < .01$

Table 4.7: Emission probability parameter estimation results (N=310,962)

<i>Models</i>	Mode 4 - CX Positive Fluctuations				Mode 5 - CX Negative Fluctuations			
	States							
Dependent variables	<i>Usage depth</i>	<i>Number of products</i>	<i>Upgrade</i>	<i>Innovative adoption</i>	<i>Usage depth</i>	<i>Number of products</i>	<i>Upgrade</i>	<i>Innovative adoption</i>
Basic state (S1)	-.0651***	-3.7672***	-.0672***	-8.7783***	-1.3310***	-11.9945***	-.1449***	-2.6513***
Transition state (S2)	-.0010	-13.7514***	-.0802***	-8.8066***	-8.173***	-4.6728***	-.0288	-6.3235***
Transformation state (S3)	.0094**	17.6237***	.1141***	8.8816***	3.0061***	11.5238***	-.0292	5.8104***
Active state (S4)	.0755***	7.6394***	.1010***	8.7033***	.8578***	18.8455***	.0869***	9.4826***
	RM Actions							
Advertising communication (Log)	.0244***	-.1831***	-.0235***	.1171**	.0129***	-.3179***	-.0220**	.0618***
Product innovation (Log)	.0025***	.0210***	-.0009	-.0102	.0102***	.1165***	-.0014	.0518***
Conflict frequency	-.0200***	-.2132***	.0116	-.1344	-.0079**	-.2085***	.0168	.0817***
Conflict length	-.0034***	-.0026***	-.0035***	-.0556***	-.0025***	-.0208***	-.0036***	-.0029***
	Control variables							
Age	<i>.0017***</i>	<i>-.0272***</i>	<i>-.0084***</i>	<i>-.0184***</i>	<i>.0032***</i>	<i>.0250***</i>	<i>-.0088***</i>	<i>-.0048***</i>
Social class (Low)	<i>-.2183***</i>	<i>-1.2189***</i>	<i>-.1617***</i>	<i>-.2476</i>	<i>-.1297***</i>	<i>.4691***</i>	<i>-.1534***</i>	<i>-.6273***</i>
Social class (High)	<i>.0662***</i>	<i>.3753***</i>	<i>.0796***</i>	<i>.1853</i>	<i>.0095*</i>	<i>-.2010***</i>	<i>.0754**</i>	<i>.8635***</i>
Gender	<i>.0091**</i>	<i>-.1383***</i>	<i>.0448*</i>	<i>.0472</i>	<i>0.0041</i>	<i>.1003***</i>	<i>.0420*</i>	<i>-.2609***</i>
Household size	<i>-.0425***</i>	<i>.1688***</i>	<i>.0311***</i>	<i>.1541**</i>	<i>-.0350***</i>	<i>-.1059***</i>	<i>.0343***</i>	<i>.1200***</i>
Market share	<i>-.0065</i>	<i>-.0073</i>	<i>-.0584</i>	<i>-1.0327**</i>	<i>-.0088</i>	<i>-.0193</i>	<i>-.0585</i>	<i>.0195</i>
Social media mention	<i>.0011***</i>	<i>.0046***</i>	<i>.0052***</i>	<i>.0717***</i>	<i>.0025***</i>	<i>.0198***</i>	<i>.0052***</i>	<i>-.0012**</i>
Acquisitions	<i>0.0137</i>	<i>.1286***</i>	<i>-.0001</i>	<i>1.0715*</i>	<i>.0126</i>	<i>.1337***</i>	<i>.0016</i>	<i>-.0157</i>
iPhone release	<i>-.0443***</i>	<i>.0660***</i>	<i>-.1228***</i>	<i>1.1327**</i>	<i>-.0513***</i>	<i>.0575**</i>	<i>-.1231***</i>	<i>.0713***</i>
New entrants	<i>-.0449***</i>	<i>.1915***</i>	<i>.4104***</i>	<i>1.5303**</i>	<i>-.0366***</i>	<i>.3455***</i>	<i>.4097***</i>	<i>.0182</i>
	Intercept							
1	<i>1.7165***</i>	-	-	-	<i>3.8944***</i>	-	-	-
1	<i>.5948***</i>	<i>-.6315**</i>	-	-	<i>2.0157***</i>	<i>-2.4121***</i>	-	-
1	<i>.8565***</i>	<i>5.2761***</i>	-	-	<i>1.0100***</i>	<i>5.8960***</i>	-	-
1	<i>-.4048***</i>	<i>5.1306***</i>	<i>1.7429***</i>	<i>2.5831***</i>	<i>-1.5868***</i>	<i>7.7885***</i>	<i>1.7558***</i>	<i>2.1115***</i>
1	<i>-2.7631***</i>	<i>-9.7751***</i>	<i>-1.7429***</i>	<i>-2.5831***</i>	<i>-5.3333***</i>	<i>-11.2724***</i>	<i>-1.7558***</i>	<i>-2.1115***</i>
	Fit Statistics							
Log-likelihood ratio	<i>-525003.6952</i>				<i>-538223.1418</i>			
BIC	<i>1050991.3933</i>				<i>1077430.2865</i>			

Note: Significance levels: * $p < .1$; ** $p < .05$; *** $p < .01$

4.8 IMPLICATIONS

This research captures the dynamic customer relationship expansion states using theory-rich relationship expansion variables (i.e., the usage level of the main product category, the number of acquired product or service categories from the focal firm, the acceptance of the upgraded offering, and the adopting of the innovative product/service category launched by the focal firm). Most importantly, this study reveals the different roles displayed by the different dimensions (i.e., recency effect, peak effect, trend effect, and fluctuation effect) of customer experience in the customer level as the intrinsic motivation to induce the positive transitions between customer relationship expansion states. Depending on the customer relationship expansion state where customers are encountered, the impact of each of dimensions of customer experience varies. In addition, while prior research (e.g., Zhang et al., 2016) suggests the positive influence of RM actions in terms of enhancing the relationship between customers and firms, our results demonstrate the trade-off effect of RM actions across different customer relationship expansion behaviors. That is, the same RM action (e.g., advertising investment) might significantly increase the usage level of the currently acquired product category meanwhile decrease the likelihood that customers acquire other product or service product categories offered by the focal firm. This framework allows us to build on extant theory and managerial practice.

4.8.1 Theoretical Implications

This study advances the literature of customer relationship expansion in three ways. First, despite the merit of previous studies in advancing knowledge about customer relationship development, different customer relationship expansion behaviors are mainly investigated in a separate manner (see Table 4.1), thus generating a fragmented view of this topic. Extending

prior research in customer relationship expansion (e.g., Bolton et al., 2004; 2008), we base on various customer relationship expansion behaviors (e.g., cross-buying, upgraded offering) which enable us to identify and define the latent and multifaceted customer relationship expansion states: basic state, transition state, transformation state, and active state. Each state shapes the different ways that customers may expand the relationship with firms at different times, thus parsimoniously reflecting the relationship development in a more accurate and vivid manner. Customers in basic state are less interested in developing the relationship with the focal firm in a step further, they therefore are prone to maintain the number of acquired product categories, the usage level of the main category. In transition state, where customers are internally encountering transitional changes, the increase in terms of expanding the established relationship with the firm is slightly exhibited in the augmented usage level of the main product category. Different from the previous two states, customers in transformation state show a significant improvement in the demand of other product categories provided by the focal firm, especially the innovative product category. From transformation state to active state, customers are prepared to maximally expand the relationship with firms.

Second, customer relationship expansion is dynamic in nature, which evolves alongside with the intrinsic and extrinsic motivational resources. Based on the self-determination theory, we establish an integrative conceptual framework in which we consider the long-term effect of different dimensions of customer experience (i.e., recency effect, peak effect, trend effect, and fluctuation effect) as the intrinsic motivations for inducing the migration path across the customer relationship expansion states while controlling the short-term effect of various RM actions as the extrinsic motivations for promoting customer relationship expansion behaviors. Enabled by the proposed conceptual framework, our research improves the understanding of customer relationship expansion by providing a comprehensive set of factors to be taken into

account. This also allows us to address the recent calls to improve the understanding of customer dynamics (Zhang & Chang, 2020).

Third and most importantly, our research shed lights on addressing two relevant yet unanswered research questions: *when* is the right time to improve the correct dimension of customer experience to stimulate the desired customer relationship expansion state and *how* RM actions should be combined in an optimal manner to promote the right customer relationship expansion behaviors, though in short time. More specifically, our research framework and results indicate it is not sufficient to deliver positive experiences to customers to expand the customer-firm relationships. The rate of migration across customer relationship expansion are state specific and most importantly can be fueled differently alongside the different dimensions of customer experience as the strategic levers. In addition, one effective RM actions for one customer relationship expansion behavior, such as increasing customer adoption toward innovative product category, might not be effective or even cause detrimental effect in another one.

4.8.2 Managerial Implications

Achieving customer relationship expansion is essential for many firms in order to enhance customer value and to increase profitability. This is especially important in today's increasingly competitive environment where customers are exposed to a diversity of product offerings from multiple firms. To be succeed in expanding customer relationship, however, it requires a proper understanding of *how* customer relationship expansion patterns are evolved over time, *what* the customer profiles are in each of the correspondent relationship expansion state, and *what* the key determinants are to stimulate such growth. By addressing these three managerial questions, firms can identify the accurate customer relationship expansion state at

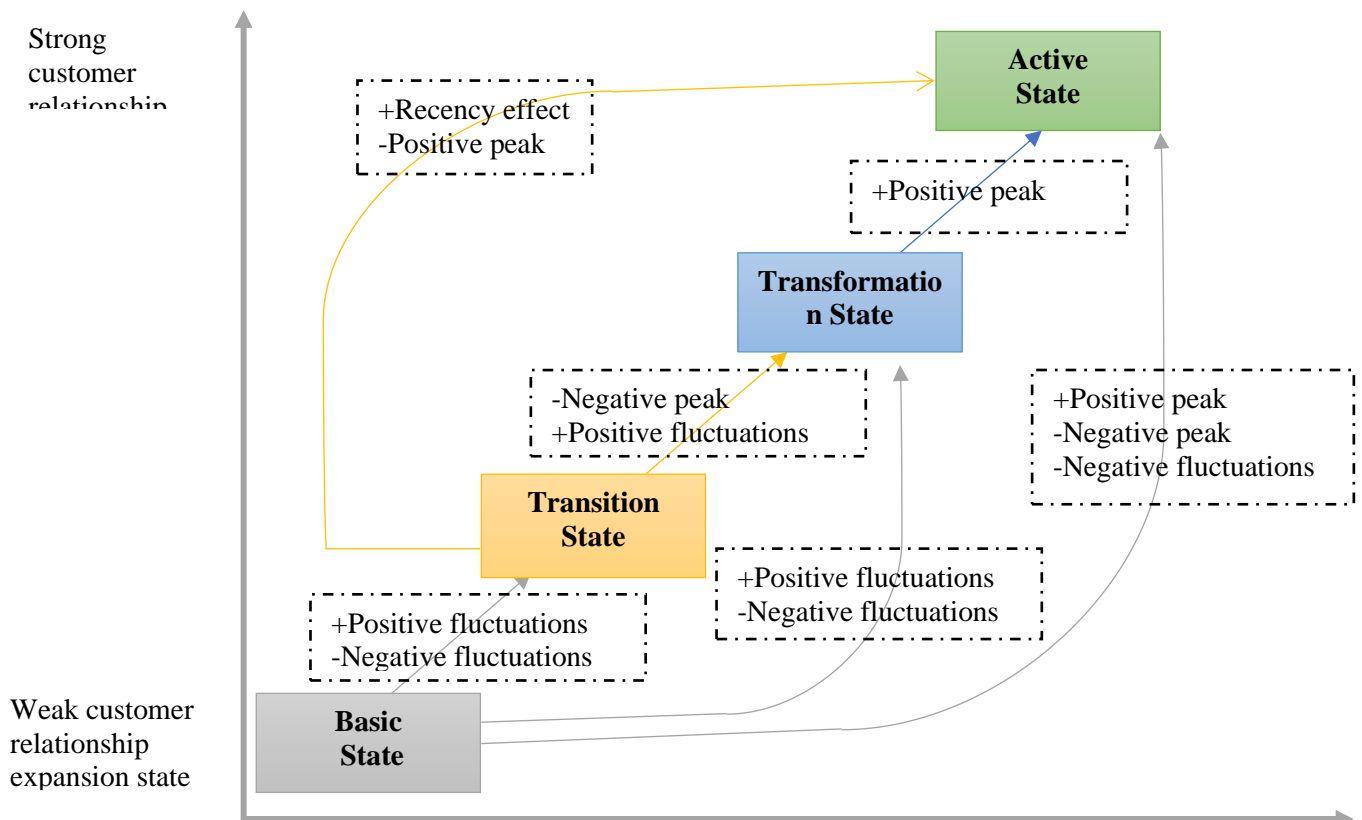
the right time and deploy the right strategic levers to effectively improve customer relationship expansion.

Our study results show the multiple facets of customer relationship expansion, suggesting that customer relationship could be expanded via multiple manners. To obtain a comprehensive view about customer relationship expansion, firms should gather a large set of information, ranging from the number of acquired product categories, the usage level of the main product category, the choice toward the upgraded offerings as well as the innovative product category. Collecting such information is therefore especially critical, firms may infer and define each of the customer relationship expansion states in a more accurate manner. Governed by different relationship expansion states, customers' demand for relationship expansion also varies. Frameworks which fail to include one of these critical constructs thus may fail to identify or distinguish a basic state from an active state across a portfolio of customers (e.g., Zhang et al., 2016), thereby leading to a mistaken sight toward customers' subsequent demand for relationship expansion.

Most importantly, firms should realize that customer relationship expansion state is not formulated in a static manner, but progressed following a determined sequence as a result of intrinsic motivational resources – different customer experience dimensions (i.e., recency effect, peak effect, trend effect, and fluctuation effect). At the basic state of customer relationship expansion, customers are driven by trial and buy in small quantities. After the repeated interactions with firms and positive experiences delivered by firms, customers are more open to expand the initially established relationships. Ignoring the temporal aspects of customer relationship expansion will result in misevaluation of customers and misallocation of marketing actions, which consequently lead to devastating managerial implications. Through the HMM modeling, firms may even capture the detailed process through which customer relationship is expanded, that is, the migration across relationship expansion states. To

effectively promote the trajectory of customer relationship expansion states toward a positive direction, managers should deploy relevant effort in the right customer experience dimension given the states. For example, as revealed in the findings, if the customer is situated in the basic state of relationship expansion, delivering positive experiences to customers to promote customer relationship state in a step further is not sufficient. If the major aim is to reach the transition state, firms should pay more attention on the fluctuations of customer experience. If firms aim to achieve a sharp progress, namely moving to active state, the major attention should be placed on the peak experiences. To facilitate the visualization of the different influence exerted by the different dimensions of customer experience in inducing the transition from one customer relationship expansion state to another, Figure 4.4 is elaborated.

Figure 4.4: Overview of customer experience dimensions as strategic levers for migrations across states



Note: the box with dashed lines contained the customer experience dimensions which exert significant influence in the migration between the correspondent customer relationship expansion states

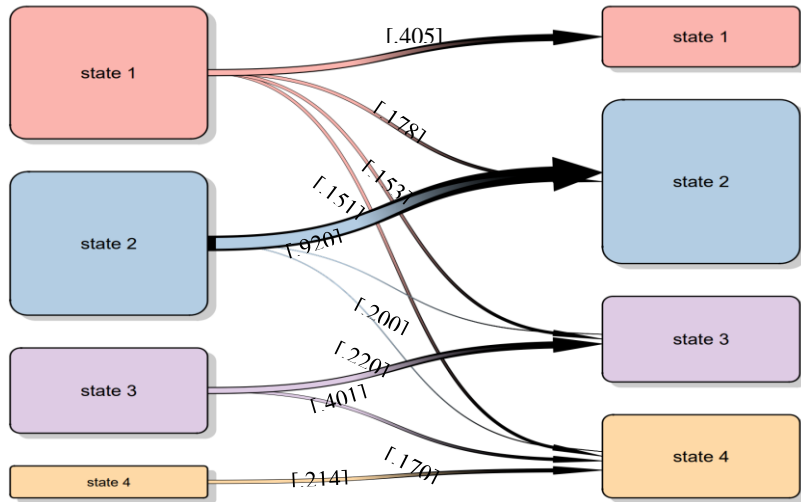
To vividly illustrate the process through which relationship is expanded over time, we carried out a simulation analysis. We first simulated data that mimicked six different profiles of subjects whose demands toward customer relationship expansion (i.e., usage level, the number of product categories, acceptance of upgraded offering, and the adoption of innovative product category) increase accordingly. Each of the subject is simulated for 48 months, thereby generating 288 observations. Second, based on the estimated transition matrix and emission probabilities estimated in the peak effect model, we use the scales of customer experience (from 0 to 10), we stimulated the transition matrix across customer relationship expansion states (similar to Equation [3.2]), using 1000 iterations in the Markov Chain Monte Carlo (MCMC) algorithm with a burn-in of 200⁶. To be managerially substantive, the graphical approach was followed (De Haan, Kannan, Verhoef, & Wiesel, 2018). In particular, Figure 4.5 is elaborated to demonstrate how customer relationship expansion might be promoted depending on the customer relationship expansion state where customers are encountered and most importantly the different levels of customer experience. As indicated in panel A-B of Figure 5, although both customers in panel A and B are situated in the lower-level customer relationship expansion state (basic state and transition state), receiving extremely positive customer experience encourage customers to move to higher-level customer relationship expansion state (transformation state) (.401 in panel A versus .928 in panel B). In contrast, *ceteris paribus*, given extremely negative customer experience, the major transitions across states are occurred between basic state and transition state. Similar patterns have been captured in the panel C-D of Figure 4.5, where customers are already situated in the high-level customer relationship expansion states at the beginning (transformation state and active state), however, the difference is situated in that for customers who receive extremely favorable experience, they are more

⁶ The simulations are developed through the R package: mHMMbayes

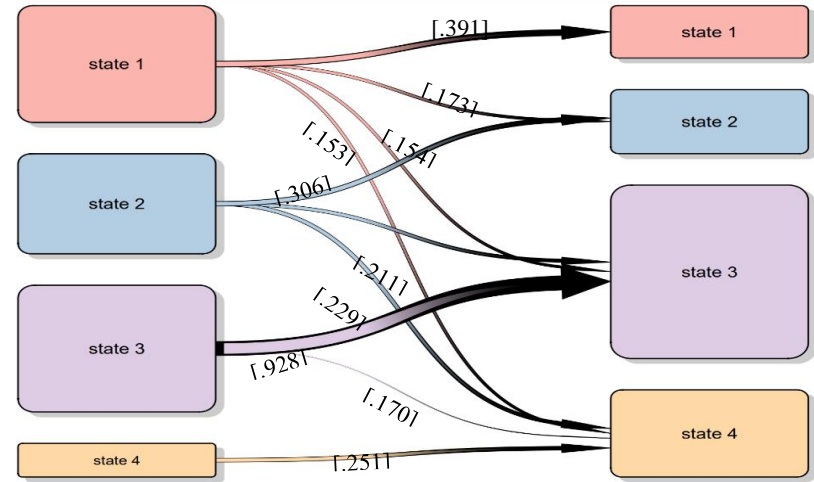
likely to move to the active state (.401 in panel C versus .934 in panel D). Following the same logic, business managers acknowledge that each of dimensions of customer experience play a different role. Firms should segment their customers depending on the identified customer relationship expansion state. In this way, firms are able to optimally dedicate efforts and resources to encourage different dimensions of customer experience, thereby enabling them to focus on the desired relationship expansion state and stimulate the subsequent migration process.

In addition to deploy relevant customer experience strategies given the customer relationship expansion state, firm managers should also take into account the roles of RM actions (i.e., advertising communication, product innovation, conflict frequency, and conflict length), aiming to align the long-term customer experience strategy with the short-term RM actions in an optimal manner. More specifically, considering the different nature of customer relationship expansion behaviors, the same RM action might lead to a positive impact on one customer relationship expansion behavior, but an opposite impact on another one. For instance, as revealed in the estimation results, advertising investment may deepen the usage level of the main product category and the adoption toward the innovative product category, however such investment may decrease the likelihood that customers expand the range of product categories with the focal firm and/or accept the upgraded offering.

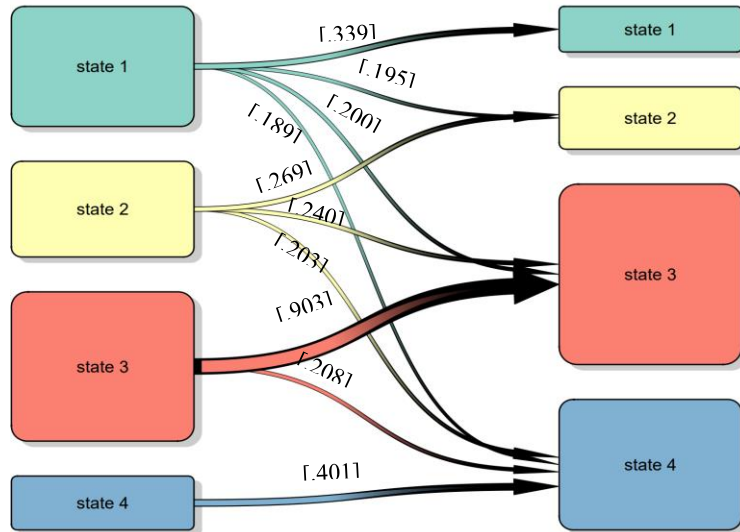
Figure 4.5: Customer relationship expansion states migrations simulations



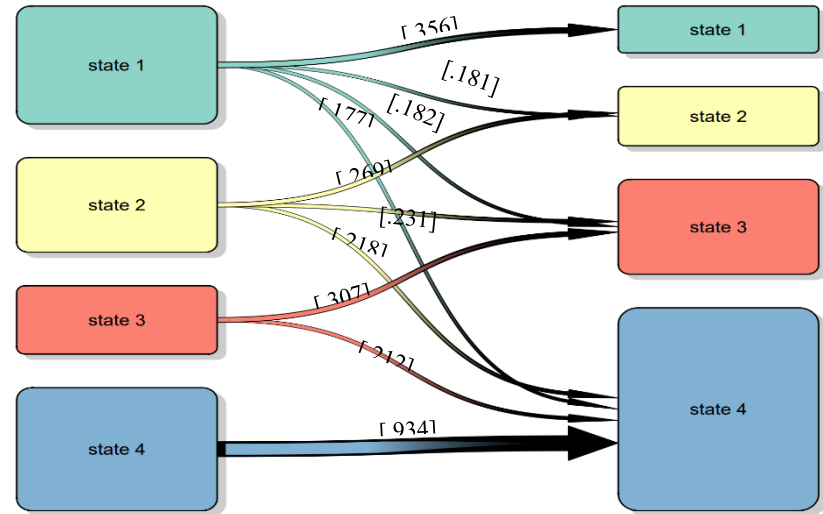
A: Low customer expansion state under low level of customer experience



B: Low customer expansion state under high level of customer experience



C: High customer expansion state under low level of customer experience



D: High customer expansion state under high level of customer experience

Note: state 1, state 2, state 3, and state 4 represent basic state, transition state, transformation state, and active state, respectively.

4.9 LIMITATIONS AND FUTURE RESEARCH

We note some limitations of our research and suggest avenues for future investigation. We focus exclusively on the telecommunication industry. A study replicating our research in different contexts would be valuable in terms of extrapolating our findings to other arenas. In addition, we have employed one single metric – NPS to gauge customer experience. While adequacy the NPS as the measurement of customer experience is well recognized in the conceptual studies (e.g., Lemon & Verhoef, 2016) and its superior predictive power is well demonstrated in the empirical studies (e.g., De Haan et al., 2015), we still consider that it is necessary to consider other customer experience metrics.

About the proposed framework, grounded on the extant research (e.g., Bolton et al., 2004; 2008), we examined four key customer relationship expansion state variables to identify and define the hidden customer relationship expansion states, but other state variables might capture additional facets and result in more nuanced states. Moreover, we mainly focused on the positive migration direction across customer relationship expansion states (from a lower state to a higher one). Future research may investigate how customer relationship might be damaged from a higher state to a lower state, and the roles of different customer experience dimensions during the migration process. Additionally, we assessed customer relationship expansion via a variety of product categories. Although we control for heterogeneity by taking into account the rich information about customer demographic characteristics and all the operating firms in the industry, the robustness of inherently noisy approaches like HMM could be enhanced further with a broader sample of relationships from firms in different industries.

Enabled by the collection of four years of longitudinal dataset on customer relationship expansion constructs, we empirically captured the roles of its different dimensions alongside the process of customer relationship expansion in a dynamic manner. We acknowledge that the

relationship health states may not be exhibiting the full spectrum of the relationship expansion cycle given the fact that we are presenting here a limited four-year interval. As data collection is increasingly facilitated by the advanced technology development and the plethora of channels, further research with wider in scope and longer as in period of time across multiple firms might be able to present a more indicative picture of customer relationship expansion dynamics.

Finally, we estimated the proposed model following the EM algorithm. While this approach has its own advantages in means of estimation speed and reliable global convergence, it ignores cross-customer heterogeneity. We thus suggest future studies to empirically examine the proposed model via the Bayesian estimation approach (Luo & Kumar, 2013).

SUMMARY:

Firms are challenged to improve customer relationship expansion due to its multifaceted and hidden nature. To reveal the multifaceted feature, in this chapter we base on a large variety of customer relationship expansion behaviors to identify and define the customer relationship expansion states. To discover the hidden nature, building on self-determination theory, we develop an integrated framework in which we examine *how* and at *what rate* different dimensions of the customer experience (i.e., recency effect, peak effect, trend effect, and fluctuation effect) the intrinsic motivation factors affect customer relationship expansion over time while controlling the influence of extrinsic motivation factors (i.e., relationship marketing [RM] actions).

Using a longitudinal dataset that combines attitudinal and behavioral information for a sample of 12,946 customers, covering all firms in the industry in one European country for four major telecommunication service categories (mobile, broadband, TV, and landline), we applied hidden Markov modeling (HMM) techniques.

The results indicate that customer relationship is expanded dynamically, evolving across four states. Each state has its own special characteristics. Most importantly, the migration from one state to another is promoted at a different rate given the currently encountered state and the correspondent customer experience dimension. This study yields optimal customer relationship expansion strategies for how to improve the right customer experience dimension at the right time to pursue the desired customer relationship expansion. These results contribute to a better theoretical understanding of customers' heterogeneous responses to firm's investment in customer experience and RM actions and offer managerial recommendations to allocate marketing resources across alternative strategies to improve customer relationship expansion.

REFERENCES

- Akaike, H. (1974). A new look at the statistical model identification. *IEEE Transactions on Automatic Control*, 19(6), 716-723.
- Ascarza, E., & Hardie, B. G. (2013). A joint model of usage and churn in contractual settings. *Marketing Science*, 32(4), 570-590.
- Baum, L. E. (1972). An inequality and associated maximization technique in statistical estimation for probabilistic functions of Markov processes. *Inequalities*, 3(1), 1-8.
- Baum, L. E., Petrie, T., Soules, G., & Weiss, N. (1970). A maximization technique occurring in the statistical analysis of probabilistic functions of Markov chains. *The Annals of Mathematical Statistics*, 41(1), 164-171.
- Becker, L., & Jaakkola, E. (2020). Customer experience: Fundamental premises and implications for research. *Journal of the Academy of Marketing Science*, 48(4), 630-648.
- Blatterg, R. C., & Deighton, J. (1996). Manage marketing by the customer equity test. *Harvard Business Review*, 74(4), 136-144.
- Bolton, R. N., Lemon, K. N., & Verhoef, P. C. (2004). The theoretical underpinnings of customer asset management: A framework and propositions for future research. *Journal of the Academy of Marketing Science*, 32(3), 271-292.
- Bolton, R. N., Lemon, K. N., & Verhoef, P. C. (2008). Expanding business-to-business customer relationships: Modeling the customer's upgrade decision. *Journal of Marketing*, 72(1), 46-64.
- Bozdogan, H. (1987). Model selection and Akaike's information criterion (AIC): The general theory and its analytical extensions. *Psychometrika*, 52(3), 345-370.
- Bozdogan, H. (1994). Choosing the number of clusters, subset selection of variables, and outlier detection in the standard mixture-model cluster analysis. In E. Diday, Y. Lechevallier,

- M. Schader, P. Bertrand, & B. Burtschy (Eds.), *New approaches in classification and data analysis* (pp. 169-177). Heidelberg, Berlin: Springer.
- Cambra-Fierro, J., Melero-Polo, I., & Sese, F. J. (2018). Customer value co-creation over the relationship life cycle. *Journal of Service Theory and Practice*, 28(3), 336-355.
- Chang, C. W., & Zhang, J. Z. (2016). The effects of channel experiences and direct marketing on customer retention in multichannel settings. *Journal of Interactive Marketing*, 36, 77-90.
- De Haan, E., Kannan, P. K., Verhoef, P. C., & Wiesel, T. (2018). Device switching in online purchasing: Examining the strategic contingencies. *Journal of Marketing*, 82(5), 1-19.
- De Haan, E., Verhoef, P. C., & Wiesel, T. (2015). The predictive ability of different customer feedback metrics for retention. *International Journal of Research in Marketing*, 32(2), 195-206.
- De Keyser, A., Verleye, K., Lemon, K. N., Keiningham, T. L., & Klaus, P. (2020). Moving the customer experience field forward: Introducing the touchpoints, context, qualities (TCQ) nomenclature. *Journal of Service Research*, 23(4), 433-455.
- Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, 19(2), 109-134.
- Du, R. Y., Netzer, O., Schweidel, D. A., & Mitra, D. (2021). Capturing Marketing Information to Fuel Growth. *Journal of Marketing*, 85(1), 163-183.
- Dwyer, F. R., Schurr, P. H., & Oh, S. (1987). Developing buyer-seller relationships. *Journal of Marketing*, 51(2), 11-27.
- Forbes (2020). *When it comes to customer relationship management, less is almost always more.* Available at <https://www.forbes.com/sites/forbescommunicationscouncil/2020/10/13/when-it->

comes-to-customer-relationship-management-less-is-almost-always-more/?sh=4804e97952b9 (accessed 10 November 2020).

- Fournier, S. (1998). Consumers and their brands: Developing relationship theory in consumer research. *Journal of Consumer Research*, 24(4), 343-373.
- Gupta, S., & Zeithaml, V. (2006). Customer metrics and their impact on financial performance. *Marketing science*, 25(6), 718-739.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate Data Analysis*. Upper Saddle River, NJ: Prentice Hall.
- Hollmann, T., Jarvis, C. B., & Bitner, M. J. (2015). Reaching the breaking point: A dynamic process theory of business-to-business customer defection. *Journal of the Academy of Marketing Science*, 43(2), 257-278.
- Jap, S. D., & Ganesan, S. (2000). Control mechanisms and the relationship life cycle: Implications for safeguarding specific investments and developing commitment. *Journal of Marketing Research*, 37(2), 227-245.
- Johnson, J., Tellis, G. J., & MacInnis, D. J. (2005). Losers, winners, and biased trades. *Journal of Consumer Research*, 32(2), 324-329.
- Kamakura, W. A., & Wedel, M. (2000). Factor analysis and missing data. *Journal of Marketing Research*, 37(4), 490-498.
- Kamakura, W. A., Wedel, M., De Rosa, F., & Mazzon, J. A. (2003). Cross-selling through database marketing: A mixed data factor analyzer for data augmentation and prediction. *International Journal of Research in Marketing*, 20(1), 45-65.
- Kranzbühler, A. M., Kleijnen, M. H., Morgan, R. E., & Teerling, M. (2018). The multilevel nature of customer experience research: An integrative review and research agenda. *International Journal of Management Reviews*, 20(2), 433-456.

- Kumar, V., George, M., & Pancras, J. (2008). Cross-buying in retailing: Drivers and consequences. *Journal of Retailing*, 84(1), 15-27.
- Kumar, V., Sriram, S., Luo, A., & Chintagunta, P. K. (2011). Assessing the effect of marketing investments in a business marketing context. *Marketing Science*, 30(5), 924-940.
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69-96.
- Lemon, K. N., & Wangenheim, F. V. (2009). The reinforcing effects of loyalty program partnerships and core service usage: A longitudinal analysis. *Journal of Service Research*, 11(4), 357-370.
- Li, S., Sun, B., & Montgomery, A. L. (2011). Cross-selling the right product to the right customer at the right time. *Journal of Marketing Research*, 48(4), 683-700.
- Li, S., Sun, B., & Wilcox, R. T. (2005). Cross-selling sequentially ordered products: An application to consumer banking services. *Journal of Marketing Research*, 42(2), 233-239.
- Luo, A., & Kumar, V. (2013). Recovering hidden buyer–seller relationship states to measure the return on marketing investment in business-to-business markets. *Journal of Marketing Research*, 50(1), 143-160.
- MacDonald, I. L., & Zucchini, W. (1997). *Hidden Markov and other models for discrete-valued time series*. London: CRC Press.
- Marketing Science Institute (MSI). (2020). *Research priorities 2020–2022*. Available at https://www.msi.org/wp-content/uploads/2020/06/MSI_RP20-22.pdf (accessed 26 June 2020).
- McColl-Kennedy, J. R., Zaki, M., Lemon, K. N., Urmetzer, F., & Neely, A. (2019). Gaining customer experience insights that matter. *Journal of Service Research*, 22(1), 8-26.

- Mende, M., Bolton, R. N., & Bitner, M. J. (2013). Decoding customer–firm relationships: How attachment styles help explain customers' preferences for closeness, repurchase intentions, and changes in relationship breadth. *Journal of Marketing Research*, 50(1), 125-142.
- Netzer, O., Lattin, J. M., & Srinivasan, V. (2008). A hidden Markov model of customer relationship dynamics. *Marketing Science*, 27(2), 185-204.
- Ngobo, P. V. (2005). Drivers of upward and downward migration: An empirical investigation among theatregoers. *International Journal of Research in Marketing*, 22(2), 183-201.
- Palmatier, R. W., Dant, R. P., Grewal, D., & Evans, K. R. (2006). Factors influencing the effectiveness of relationship marketing: A meta-analysis. *Journal of Marketing*, 70(4), 136-153.
- Palmatier, R. W., Houston, M. B., Dant, R. P., & Grewal, D. (2013). Relationship velocity: Toward a theory of relationship dynamics. *Journal of Marketing*, 77(1), 13-30.
- Polo, Y., Sese, F. J., & Verhoef, P. C. (2011). The effect of pricing and advertising on customer retention in a liberalizing market. *Journal of Interactive Marketing*, 25(4), 201-214.
- Prins, R., & Verhoef, P. C. (2007). Marketing communication drivers of adoption timing of a new e-service among existing customers. *Journal of Marketing*, 71(2), 169-183.
- Prins, R., Verhoef, P. C., & Franses, P. H. (2009). The impact of adoption timing on new service usage and early disadoption. *International Journal of Research in Marketing*, 26(4), 304-313.
- Reichheld, F. F. (2003). The one number you need to grow. *Harvard Business Review*, 81(12), 46-55.
- Reinartz, W., Thomas, J. S., & Kumar, V. (2005). Balancing acquisition and retention resources to maximize customer profitability. *Journal of Marketing*, 69(1), 63-79.

- Risselada, H., Verhoef, P. C., & Bijmolt, T. H. (2014). Dynamic effects of social influence and direct marketing on the adoption of high-technology products. *Journal of Marketing*, 78(2), 52-68.
- Schouten, J. W., McAlexander, J. H., & Koenig, H. F. (2007). Transcendent customer experience and brand community. *Journal of the Academy of Marketing Science*, 35(3), 357-368.
- Schwarz, G. (1978). The Bayesian information criterion. *Annals of Statistics* 6(2), 461-464.
- Schweidel, D. A., Bradlow, E. T., & Fader, P. S. (2011). Portfolio dynamics for customers of a multiservice provider. *Management Science*, 57(3), 471-486.
- Shamsollahi, A., Chmielewski-Raimondo, D. A., Bell, S. J., & Kachouie, R. (2020). Buyer–supplier relationship dynamics: A systematic review. *Journal of the Academy of Marketing Science*, 49, 418-436.
- Sivakumar, K., Li, M., & Dong, B. (2014). Service quality: The impact of frequency, timing, proximity, and sequence of failures and delights. *Journal of Marketing*, 78(1), 41-58.
- Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. *Advances in Experimental Social Psychology*, 29, 271-360.
- Verhoef, P. C., Antonides, G., & De Hoog, A. N. (2004). Service encounters as a sequence of events: The importance of peak experiences. *Journal of Service Research*, 7(1), 53-64.
- Verhoef, P. C., Franses, P. H., & Hoekstra, J. C. (2001). The impact of satisfaction and payment equity on cross-buying: A dynamic model for a multi-service provider. *Journal of Retailing*, 77(3), 359-378.
- Verhoef, P. C., Franses, P. H., & Hoekstra, J. C. (2002). The effect of relational constructs on customer referrals and number of services purchased from a multiservice provider: Does age of relationship matter?. *Journal of the Academy of Marketing Science*, 30(3), 202-216.

- Welch, L. R. (2003). Hidden Markov models and the Baum-Welch algorithm. *IEEE Information Theory Society Newsletter*, 53(4), 10-13.
- Witell, L., Kowalkowski, C., Perks, H., Raddats, C., Schwabe, M., Benedettini, O., & Burton, J. (2020). Characterizing customer experience management in business markets. *Journal of Business Research*, 116, 420-430.
- Zhang, J. Z., & Chang, C. W. (2020). Consumer dynamics: Theories, methods, and emerging directions. *Journal of the Academy of Marketing Science*, 49, 166-196.
- Zhang, J. Z., Netzer, O., & Ansari, A. (2014). Dynamic targeted pricing in B2B relationships. *Marketing Science*, 33(3), 317-337.
- Zhang, J. Z., Watson Iv, G. F., Palmatier, R. W., & Dant, R. P. (2016). Dynamic relationship marketing. *Journal of Marketing*, 80(5), 53-75.

CHAPTER V:

CONCLUSIONS

This doctoral dissertation has been framed in the field of customer experience management. Nowadays, customer experience is increasingly viewed as an essential lever to achieve competitive edge for firms, determining their capacity to ensure present and future success (Becker & Jaakkola, 2020; De Keyser, Verleye, Lemon, Keiningham, & Klaus, 2020; Lemon & Verhoef, 2016). Creating a meaningful customer experience is now a leading management objective for practitioners, sparking more interest in improving a better understanding from a dynamic perspective about the drivers (what firms do, what customers think) and consequences (what customers do, what firms get) of customer experience in the academic field.

As we have commented in the introduction of this doctoral dissertation, as a consequence of the development of digital technology with the emergence of multiple communication channels and smart devices which facilitates the interaction between customers and other actors anywhere and anytime, managing customer experience is exponentially becoming a complicated task. Given such situation, companies have become aware of this new situation, thereby emphasizing the need to implement an innovative customer experience business model by taking into account both factors under and out their control in order to deliver a favorable, solid, and consistent experience to their customers (Gonçalves, Patrício, Teixeira, & Wuenderlich, 2020; Witell et al., 2020) Thus, in this doctoral dissertation, we have paid special attention to customer experience, aiming to provide a comprehensive picture about its drivers and consequences and their evolution over time.

Taking into account all the gaps we have identified in the literature; this doctoral dissertation has answered the research objectives proposed in the introduction. We have analyzed, in the three studies carried out, what factors critically determine the delivery of strong customer experience – drivers, and how such perceived customer experience contribute to creating wealth for firms – consequences. Customer experience is determined by a large variety

of factors, including the ones within and outside of firm's control, ranging from the value of offered product, brand, the developed relationship between customers and firms, as well as the social influence. The perceived customer experience which reflects multiple aspects in the interaction between customers and firms in a holistic manner, combined with other strategies proactively employed by firms can exert significant influence in the generation of wealth for firms, including customer profitability, customer retention across product categories, and relationship expansion across time. Hence, to succeed in the customer experience management, companies should go beyond their own perspective and integrate customers' perspective in order to comprehensively capture how a myriad of factors under and out of firms' control shape the customer experience, thereby accurately identifying the critical determinants of customer experience and properly adjusting customer experience orientation.

Finally, tackling these research objectives are not easy tasks. In pursuit of such objectives, we have combined perceptual information with transactional information about a large sample of customers from multiple firms across different service industries. Moreover, to carry out the empirical analyses, different methodologies have been developed: seemingly unrelated regression (SUR) model, multinomial logit model, hidden Markov modeling (HMM). Each of these methodologies has their own characteristics and is applied depending on the specific proposed objectives. The SUR method (Zellner, 1962), which encompasses a system of equations, where the coefficients are estimated simultaneously. In the second chapter, where we examined the linkages across multiple customer equity drivers, the moderating role of social influence, customer experience quality, and customer profitability, the application of SUR method is thus considered more efficient than the model estimated equation by equation using standard ordinary least squares. About the multinomial logit model, its advantage mainly resides in that it permits the analysis of decisions across more than two choice alternatives and to identify important determinants that affect decision-makers' choice probabilities (Elshiewy,

Guhl, & Boztuğ, 2017). It is therefore considered adequate for the study in the third chapter, where we assessed the behavioral consequence (i.e., customer retention) of customer experience across multiple firms in two service categories (i.e., mobile and broadband service categories). The merits of employing HMM to study consumer dynamics is widely recognized in the literature due to its flexibility and multifaceted (Netzer, Lattin, & Srinivasan, 2008). In this method, researchers can allow response parameters to change over time as customers migrate across the empirically determined latent “states” and identify different drivers of such state migration (Zhang & Chang, 2020). The application of such method is specifically adequate for the analysis in the fourth chapter, where we evaluated the long-term effect of different dimensions of customer experience in customer relationship expansion across time while controlling the short-term influence of RM actions. We have used different software in each study: STATA14, Rstudio and Latent Gold 5.1. The high variety of different tools used for the analyses enables us to obtain more robust general conclusions. Specifically, each study has contributed to the literature as follows:

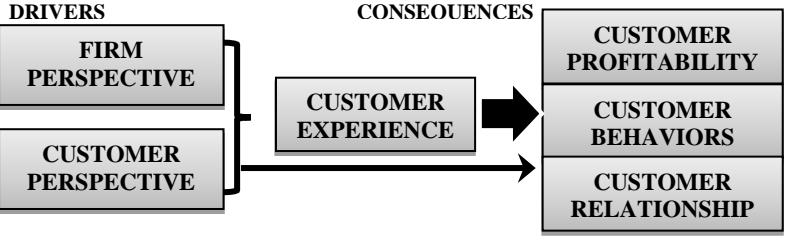

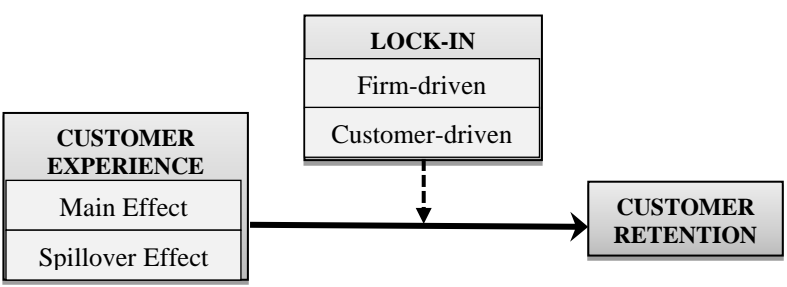
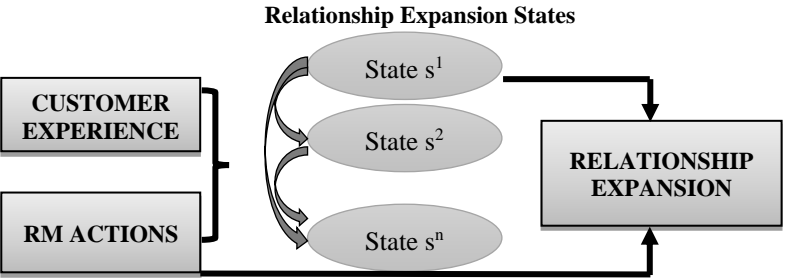
- ***In response to research objective 1:*** *We have advanced the current literature on customer experience simultaneously analyzing the factors under and out of firm’s control as the drivers of customer experience, and their joint financial performance in a multi-service provider context.*

- ***In response to research objective 2:*** *We have investigated the behavioral consequence of different dimensions of customer experience (main effect and spillover effect) given firm actively (firm-driven) and inactively (customer-driven) deployed lock-in mechanisms.*

- ***In response to research objective 3:*** *We have identified and distinguished the long-term and short-term relational consequences of customer experience and relationship marketing actions from a dynamic perspective. To do so, we have analyzed how different patterns of customer experience stimulate the progress of relationship expansion states over time and capture and define the hidden customer relationship expansion states via hidden Markov modeling.*

Table 5.1 summarizes the main implications for theory and practice of this doctoral dissertation. Although each specific chapter includes a broad theoretical and practical discussion, the general implications for theory and practice of this dissertation are detailed in the following sections.

Table 5.1: Implications for theory and practice of this doctoral dissertation

	CONCEPTUAL FRAMEWORK	IMPLICATIONS FOR THEORY AND PRACTICE
DOCTORAL THESIS		<ul style="list-style-type: none"> - To identify the key determinants of customer experience in a comprehensive manner, it is necessary to integrate customer and firm perspective. -The significant impact of customer experience on customer retention turns to be weaker while customers are already locked by firms (i.e., firm-driven lock-in) or themselves (i.e., customer-driven lock-in). - Customer experience and its various dimensions are excellent predictors to capture the hidden customer relationship expansion states.
STUDY 1: Customer equity drivers, social influence, and their impact on the customer experience		<ul style="list-style-type: none"> - Customer equity drivers as the strategic levers deployed by firms potentially influence customer experience perceptions, however such influence varies depending on social influence. -Firms must recognize the importance of factors outside of firms' control in the management of customer experience.
STUDY 2: Winning your customer's heart or mind? Trade-offs between customer experience and lock-in on customer retention		<ul style="list-style-type: none"> - The influence of customer experience in customer retention is not limited in one category but another related one, that is, spillover effect. - Substitutive effect is encountered between customer experience and lock-in mechanisms while customers are locked by firm-driven or customer-driven lock-in. - Complementary effect is captured between customer experience and lock-in mechanisms when customers are simultaneously locked by firm-driven and customer-driven lock-in. - Firms may properly allocating their efforts depending on the profile of customers. Customer experience and customer-driven lock-in may serve as guide for firms to view the profile of customers.
STUDY 3: The dynamic impact of the customer experience on relationship expansion: a hidden Markov modeling approach		<ul style="list-style-type: none"> - Customer experience and its different dimensions significantly promote customer relationship expansion via different patterns (recency effect, peak effect, and fluctuation effect). - The evolution of relationship expansion is promoted across time due to the intrinsic and extrinsic motivation. - Depending on the identified customer relationship expansion state, firms may segment their customers and accordingly design long-term and short-term customer relationship expansion plans.

5.1 IMPLICATIONS FOR THEORY

The three studies carried out in this doctoral dissertation have important implications for the literature. Integrating the firm's and customer's perspective, the **second chapter** analyzes the impact of firms' investments in three key strategic levers (i.e., value, the brand, and the relationship) on the customer experience (Rust, Lemon, & Zeithaml, 2004), as well as the direct and moderating role played by social influence (Verhoef et al., 2009). In this way, we comprehensively evaluated the contribution of factors within and out of firms' control in improving customer experience and jointly assessed their roles in increasing the level of profitability that customers may provide to the firm. This study has enabled us to confirm that the firm controlled strategic aspects in means of value equity, brand equity, and relationship equity significantly contribute to consolidating a strong customer experience and improving customer profitability. Most importantly, we have provided evidence that the impact of firms' investments in different strategic levers varies depending on the strength of social influence, thus illustrating the importance of factors outside of firms' control in the perception of customer experience and customer profitability. More specifically, for value equity, the role of social influence is especially relevant when the value equity is perceived to be low. For brand equity, its impact turns to be stronger given the situation where high brand equity is perceived (Kirmani, 2009). Moreover, we found that the association between relationship equity and customer experience quality is not affected by the exposed experiences of others. Such evidence contributes to a refinement of our understanding of how social influence affects customer perceptions and behavior. Lastly, by establishing the linkage with customer profitability, this study also contributes to the rich field of the evaluation of financial return from marketing expenditures with a focus on the customer experience quality and its drivers (Lemke, Clark, & Wilson, 2011; Lemon & Verhoef, 2016; Palmer, 2010).

The **third chapter** focuses on the behavioral consequence of different dimensions of customer experience (main effect and spillover effect) and how such influence might vary given different lock-in situations (firm-driven and customer-driven). By integrating the two key theoretical lenses: experiential learning theory (Kolb, 1984) and social exchange theory (Day, 2000), we established a comprehensive conceptual model which enables us to explore the separate and joint effects of customer experience and lock-in strategies. This research therefore allows us to confirm *whether* customer experience and lock-in complement or substitute each other and *when* such effects occur. This research contributes to the marketing literature because it is the first attempt to empirically measure the impact of customer experience and lock-in on customer retention in a simultaneous manner. The results reveal that customer experience does not only affect customer retention in one category but also another related one, that is, the spillover effect. Most importantly, the results confirm that there are important trade-offs between customer experience and lock-in, such that for customers who are locked into the relationship either due to firm-driven lock-in strategies or customer-driven lock-in, investing in improving the customer experience becomes ineffective. However, in the situation where customers are simultaneously locked in by these two types of lock-in methods, dedicating more efforts in customer experience is meaningful to retain customers. Additionally, the two types of lock-in considered lead to enhanced customer retention, although the effectiveness of firm-driven lock-in strategies is reduced when consumers have a higher intrinsic motivation to continue the relationship to avoid incurring the loss of relational benefits (customer-driven lock-in).

The **fourth chapter** goes a step further by analyzing the relational consequences of customer experience from a dynamic perspective. Grounded on self-determination theory, we have designed conceptual model in which we identify the long-term influence of customer experience and the short-term of relationship marketing actions in promoting customer

relationship expansion across time. In particular, to vividly capture how customer relationship is expanded step by step over time, we have examined various patterns of customer experience: recency effect, peak effect, trend effect, and fluctuation effect, thereby enabling us to capture hidden customer relationship expansion states. Moreover, while prior research tends to consider on a single type: either choices toward cross-selling or upgraded offerings (i.e., Bolton, Lemon, & Verhoef, 2004, 2008), thereby resulting in a fragmented view on this topic, our research has comprehensively captured the evolution of customer relationship expansion states through four aspects which reflects relationship breadth and depth. Additionally, we have taken the short-term influence of a set of relationship marketing actions deployed firms (advertising communication, product innovation, and conflict) into account in customer relationship expansion. We have confirmed that customer experience plays a meaningful role in expanding the relationship between customers and firms in a step further via different patterns. Recently gained positive customer experience (recency effect), extraordinary experience (peak effect), and frequently fluctuating experiences (fluctuation effect) all contribute significant influence in encouraging the movement from a lower relationship expansion state to a higher one, except the trend effect. The results of our study further demonstrate that firms' investment in relationship marketing actions might stimulate one aspect of customer relationship expansion (i.e., acquiring more product categories offered by the focal firm) while damaging other ones (i.e., decreasing the usage level of the currently acquired product category). This study has also contributed to the academic literature in several ways. Firstly, there was no prior empirical research that analyzed the customer relationship expansion process, uncovering different hidden customer relationship expansion states. Secondly, no prior research has distinguished the long-term impact of customer experience and short-term impact of relationship marketing actions in customer relationship expansion. The proposed conceptual framework is considered

an important novelty in the literature on customer experience and customer relationship management.

5.2 IMPLICATIONS FOR BUSINESS

This doctoral dissertation has important implications for companies. The **second chapter** suggests that firms can identify the relative impact of each strategic lever and, thus, prioritize their investments in order to promote superior experiences. Considering that both relationship equity and value equity showed a stronger impact on the customer experience compared with brand equity. Thus, if the collaborating firm were to improve the customer experience, investments in the relationship and in the perceived value of its offerings would produce stronger returns in terms of promoting favorable experiences, as compared with investments in brand perceptions. The significant direct and moderating effect of social influence indicate that even the impact of factors that are under the control of the firm (i.e., investments in value, brand, and relationships) is conditioned to the nature of social influence. With the understanding we provide on the moderating role played by social influence in the link between the equity drivers and the customer experience, firms may adapt their marketing investments to each individual customer depending on the characteristics of her social network. Finally, enabled by the connection we make between customer experience quality and customer profitability, firms may quantify the impact of investing in promoting superior experience on performance measures at the individual customer level and, thus, demonstrate the contribution of marketing investments to firm profitability.

The **third chapter** focuses on exploring the separate and joint effects of two central strategies on customer retention: customer experience and lock-in mechanisms. The results of this study allow us to address two issues of managerial interest for marketing practitioners. The

first is to take the firm-level perspective to question how crucial strategies in pursuit of the same goal (i.e., customer retention) should be deployed properly across product categories – more strategies are not always better. The second is to take the customer-level perspective to discuss for whom firms should take their actions. To address the first issue, we performed one more simulation to project customer retention under six lock-in scenarios: (1) no lock-in strategy; (2) a single firm-driven bundle; (3) a single firm-driven binding contract; (4) a customer-driven lock-in; (5) a combination of firm-driven (bundling) and customer-driven lock-in; and (6) a combination of firm-driven (binding contract) and customer-driven lock-in. In this way, we accordingly recommend firm appropriately adjust their investment plan depending on whether their primary orientation is customer experience or lock-in strategies. For the second issue, based on customer experience and customer-driven and lock-in strategies, firms may categorize their customers into “indifferent customers”, “addictive customers”, “devoted customers”, and “rational customers” that can serve to guide managers in properly allocating their efforts depending on the profile of customers.

The **fourth chapter** also offers important implications for business. Prior research shows that customer-firm relationship is dynamic, evolving over time (Palmatier, Houston, Dant, & Grewal, 2013). Following the same logic, supported by self-determination theory, we have confirmed that the dynamic nature of customer relationship expansion. To fully visualize customer relationship expansion, it is not sufficient to base only on the upgraded decisions or cross-buying choices, but on a large variety of aspects, such as the number of purchased product categories, the usage level of the main product category, and others. Most importantly, as revealed in the results, the evolution of relationship expansion affected by intrinsic (i.e., different patterns of customer experience) and extrinsic motivation (i.e., relationship marketing actions deployed by firms). Therefore, firms may infer hidden customer relationship expansion states by observing how the recent experience is delivered to firms, whether customers have

gained extraordinary experiences, and how is the fluctuations of customer experiences over time. Depending on the identified customer relationship expansion state, firms may segment their customers and accordingly design long-term and short-term customer relationship expansion plans. In a long-term, drawing from the identified customer relationship expansion state, firms may optimally dedicate efforts and resources to encourage different dimensions of customer experience, thereby enabling them to focus on the desired relationship expansion state and stimulate the subsequent migration process. In a short-term, firms may adjust their strategies in regard to relationship marketing actions, such as advertising investment, conflict resolution techniques, and product innovation approaches to pursue a certain desired customer relationship expansion behavior.

5.3 LIMITATION AND FUTURE RESEARCH LINES

Although we have indicated the specific limitations and future research lines for each of the three studies that we have carried out in this doctoral dissertation, we now aim to present general limitations and most importantly to propose a research agenda for further research and the emergence of the customer experience orientation which we hope will stimulate research and knowledge development in this area. The agenda for future research is summarized in Table 5.2.

Industry context. In this doctoral dissertation, we have carried out the empirical research in two different service industries, namely financial service industry and telecommunication service industry. While this allows us to visualize the role of customer experience in different service settings, to enhance the generalizability of the findings, future research should evaluate and validate these studies in other types of industries. Indeed, as widely acknowledged in the literature of customer experience (e.g., Becker & Jaakkola, 2020;

Bolton et al., 2018; De Keyser et al., 2020), the extent to how customers perceive the delivered experiences differs depending on the situated context (i.e., service ecosystem, market context) in which their interactions with firms are embedded. Each industry has their own structure, characteristics, and focus. For example, the way of how customer experience is perceived, is largely different in the traditional retailing services in comparison to healthcare services.

The measurement and data collection techniques. We recognize the limitation about the measurement in regard to customer experience. In Chapter Two, we measured customer experience via a cross-sectional survey through multiple items while in Chapter Three and Four, customer experience is measured by a single-item metric (i.e., NPS in mobile service category and a similar five Likert scale in broadband service category) by covering all firms in the industry in a four-year time window (i.e., mobile and broadband service). Although the NPS as the measurement for customer experience is considered adequate and widely applied in practice (De Haan, Verhoef, & Wiesel, 2015; Lemon & Verhoef, 2016), a more sophisticated customer experience metrics should be considered in future studies. Although various studies have dedicated efforts to develop customer experience scales in different contexts, such as branding (e.g., Brakus, Schmitt, & Zarantonello, 2009; Schouten, McAlexander, & Koenig 2007), online (e.g., Novak, Hoffman, & Yung, 2000; Rose, Clark, Samouel, & Hair, 2012), and services (e.g., Imhof & Klaus, 2020; Klaus & Maklan, 2013; Kuppelwieser & Klaus, 2021). Hence, there is still a lack of an all-encompassing measurement tool to capture the customer experience in a holistic and dynamic manner (De Keyser et al., 2020). As indicated by Lemon and Verhoef (2016), such absence of the sound measurement development for customer experience is one of the main reasons which reduces the research on how customer experience can be influenced and on the consequences of customer experience. Therefore, customer experience measurement plays a critical role in advancing the knowledge development in customer experience domain. In addition to develop the scales for measuring customer experience, researchers should also

consider new techniques for data collection rather than relying on the survey research. Enabled by the technology advancement, techniques such as big data and machine learning method, smart technologies and artificial intelligence (AI), text mining, and biometric data should be incorporated in the study of customer experience (De Keyser et al., 2020; Du, Netzer, Schweidel, & Mitra, 2021; Holmlund et al., 2020; Lemon & Verhoef, 2016).

Customer experience dynamic. In Chapter Four, enabled by the longitudinal data, we not only assessed the impact of recently gained customer experience (i.e., recency effect) but also other dynamic patterns of customer experience (i.e., the peak moments of customer experience, the trend of customer experience, and its fluctuation over time) on customer relationship expansion. By doing so, we vividly illustrate the dynamic role of customer experience in the migration process across customer relationship expansion states. To gain rich insights about the dynamic nature of customer experience in a step further, future research may ground the landscape of customer journey which is consisted of multiple touchpoints across pre-purchase stage, purchase stage, and post-purchase stage (Hamilton, Ferraro, Haws, & Mukhopadhyay, 2020). As customers have different needs and preferences at each stage of customer journey, they are likely to evaluate the efforts devoted by firms to improve customer experience in a different way, thereby generating different consequences (Siebert, Gopaldas, Lindridge, & Simões, 2020).

Macro tendency. In this doctoral dissertation, we mainly adopt a micro approach to analyze the drivers and consequences of customer experience by focusing on the aspects closely related to customers and firms. However, customer experience is not formed in an isolated manner but grounded in a broader environment, unavoidably being affected by a large variety of macro tendencies (De Keyser et al., 2020). According to prior research (De Keyser et al., 2020; Lemon & Verhoef, 2016), such macro tendencies are composed of broader externalities, which can be categorized into natural, technological, economic, socio-cultural, political, or

public, or a combination thereof. For example, as technology tendency, Internet of Things (IoT), Augmented Reality (AR), Virtual Reality (VR), Mixed Reality (MR), virtual assistants, chatbots, and robots, which are typically powered by AI, are dramatically transforming the customer experience (Ameen, Tarhini, Reppel, & Anand, 2021; Hoyer, Kroschke, Schmitt, Kraume, & Shankar, 2020), thereby calling for more attention on this topic. Another recent example which demonstrates the potential influence of macro tendency is the COVID-19, which has provoked significant changes in the way of how customers interact with firms and other customers, which ultimately affect customer experience (Berry, Danaher, Aksoy, & Keiningham, 2020). Hence, to further improve the understanding of customer experience, future research should definitely take into macro tendencies in their proposed models.

5.2 Future research agenda

Topics	Research questions
Industry context	<ul style="list-style-type: none"> • How does customer experience differ across industries and contexts? For example, <i>what are the key aspects within and outside firm control that customer value in a service-oriented ecosystem? How about in a no service-oriented ecosystem?</i> • <i>How can organization monitor and measure the influence of industry characteristics in customer experience?</i> • <i>How can firms adapt their business model accordingly following their own industry characteristics?</i> • <i>In what way(s) can firms systematically make use of contextual insights to enhance customer experience?</i>
CX measurement and data collection techniques	<ul style="list-style-type: none"> • <i>How customer experience metrics should be developed in manner to capture the perceived customer experience in a holistic and dynamic manner?</i> • <i>Is it possible for firms to collect real-time information?</i> • <i>How should firms incorporate the advanced technology techniques (e.g., smart technologies and AI) and data analysis methods (e.g., big data analysis and machine learning) in the measurement of customer experience in an appropriate and concise manner?</i>
CX dynamic	<ul style="list-style-type: none"> • <i>What are specific elements that customer value at each stage of customer journey?</i> • <i>What type of touchpoint constellation is best to promote customer experience and how can they be integrated in a best manner alongside customer journey?</i>
Macro tendency	<ul style="list-style-type: none"> • <i>What are the major changes and tendencies in natural (e.g., COVID-19), technological (e.g., AI, IoT), economic (e.g., financial crisis), socio-cultural, political, and public factors and what is their joint impact on customer experience?</i> • <i>To what extent should firms collect and analyze data relating to macro-environmental factor to predict their occurrence and to assess their nature with respect to valence (i.e., harmful vs. beneficial) and strength (i.e., long-term vs. short-term)?</i> • <i>To what extent can firms systematically integrate information across different macro-environmental factors and generate insights to enhance customer experience?</i>

Note: CX means customer experience

REFERENCES

- Ameen, N., Tarhini, A., Reppel, A., & Anand, A. (2021). Customer experiences in the age of artificial intelligence. *Computers in Human Behavior*. Advance online publication. doi: 10.1016/j.chb.2020.106548
- Becker, L., & Jaakkola, E. (2020). Customer experience: Fundamental premises and implications for research. *Journal of the Academy of Marketing Science*, 48(4), 630-648.
- Berry, L. L., Danaher, T. S., Aksoy, L., & Keiningham, T. L. (2020). Service safety in the pandemic age, *Journal of Service Research*, 23(4), 391-395.
- Bolton, R. N., Lemon, K. N., & Verhoef, P. C. (2004). The theoretical underpinnings of customer asset management: A framework and propositions for future research. *Journal of the Academy of Marketing Science*, 32(3), 271-292.
- Bolton, R. N., Lemon, K. N., & Verhoef, P. C. (2008). Expanding business-to-business customer relationships: Modeling the customer's upgrade decision. *Journal of Marketing*, 72(1), 46-64.
- Bolton, R. N., McColl-Kennedy, J. R., Cheung, L., Gallan, A., Orsingher, C., Witell, L., & Zaki, M. (2018). Customer experience challenges: Bringing together digital, physical and social realms. *Journal of Service Management*, 29(5), 776-808.
- Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand experience: What is it? How is it measured? Does it affect loyalty?. *Journal of Marketing*, 73(3), 52-68.
- Day, G. S. (2000). Managing market relationships. *Journal of the Academy of Marketing Science*, 28(1), 24-30.
- De Haan, E., Verhoef, P. C., & Wiesel, T. (2015). The predictive ability of different customer feedback metrics for retention. *International Journal of Research in Marketing*, 32(2), 195-206.

- De Keyser, A., Verleye, K., Lemon, K. N., Keiningham, T. L., & Klaus, P. (2020). Moving the customer experience field forward: Introducing the touchpoints, context, qualities (TCQ) nomenclature. *Journal of Service Research*, 23(4), 433-455.
- Du, R. Y., Netzer, O., Schweidel, D. A., & Mitra, D. (2021). Capturing Marketing Information to Fuel Growth. *Journal of Marketing*, 85(1), 163-183.
- Elshiewy, O., Guhl, D., & Boztuğ, Y. (2017). Multinomial logit models in marketing—from fundamentals to state-of-the-art. *Marketing: ZFP—Journal of Research and Management*, 39(3), 32-49.
- Gonçalves, L., Patrício, L., Teixeira, J. G., & Wuenderlich, N. V. (2020). Understanding the customer experience with smart services. *Journal of Service Management*, 31(4), 723-744.
- Hamilton, R., Ferraro, R., Haws, K. L., & Mukhopadhyay, A. (2021). Traveling with companions: the social customer journey. *Journal of Marketing*, 85(1), 68-92.
- Holmlund, M., Van Vaerenbergh, Y., Ciuchita, R., Ravald, A., Sarantopoulos, P., Ordenes, F. V., & Zaki, M. (2020). Customer experience management in the age of big data analytics: A strategic framework. *Journal of Business Research*, 116, 356-365.
- Hoyer, W. D., Kroschke, M., Schmitt, B., Kraume, K., & Shankar, V. (2020). Transforming the customer experience through new technologies. *Journal of Interactive Marketing*, 51, 57-71.
- Imhof, G., & Klaus, P. (2020). The dawn of traditional CX metrics? Examining satisfaction, EXQ, and WAR. *International Journal of Market Research*, 62(6), 673-688.
- Kirmani, A. (2009). The self and the brand. *Journal of Consumer Psychology*, 19(3), 271-275.
- Klaus, P. P., & Maklan, S. (2013). Towards a better measure of customer experience. *International Journal of Market Research*, 55(2), 227-246.
- Kolb, D. A. (1984). *Experiential Learning*. Englewood Cliffs, NJ: Prentice Hall.

- Kuppelwieser, V. G., & Klaus, P. (2021). Measuring customer experience quality: the EXQ scale revisited. *Journal of Business Research, 126*, 624-633.
- Lemke, F., Clark, M., & Wilson, H. (2011). Customer experience quality: An exploration in business and consumer contexts using repertory grid technique. *Journal of the Academy of Marketing Science, 39*(6), 846-869.
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing, 80*(6), 69-96.
- Netzer, O., Lattin, J. M., & Srinivasan, V. (2008). A hidden Markov model of customer relationship dynamics. *Marketing Science, 27*(2), 185-204.
- Novak, T. P., Hoffman, D. L., & Yung, Y. F. (2000). Measuring the customer experience in online environments: A structural modeling approach. *Marketing Science, 19*(1), 22-42.
- Palmatier, R. W., Houston, M. B., Dant, R. P., & Grewal, D. (2013). Relationship velocity: Toward a theory of relationship dynamics. *Journal of Marketing, 77*(1), 13-30.
- Palmer, A. (2010). Customer experience management: A critical review of an emerging idea. *Journal of Services marketing, 24*(3), 196-208.
- Rose, S., Clark, M., Samouel, P., & Hair, N. (2012). Online customer experience in e-retailing: An empirical model of antecedents and outcomes. *Journal of Retailing, 88*(2), 308-322.
- Rust, R. T., Lemon, K. N., & Zeithaml, V. A. (2004). Return on marketing: Using customer equity to focus marketing strategy. *Journal of Marketing, 68*(1), 109-127.
- Schouten, J. W., McAlexander, J. H., & Koenig, H. F. (2007). Transcendent customer experience and brand community. *Journal of the Academy of Marketing Science, 35*(3), 357-368.
- Siebert, A., Gopaldas, A., Lindridge, A., & Simões, C. (2020). Customer experience journeys: Loyalty loops versus involvement spirals. *Journal of Marketing, 84*(4), 45-66.

- Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of Retailing*, 85(1), 31-41.
- Witell, L., Kowalkowski, C., Perks, H., Raddats, C., Schwabe, M., Benedettini, O., & Burton, J. (2020). Characterizing customer experience management in business markets. *Journal of Business Research*, 116, 420-430.
- Zellner, A. (1962). An efficient method of estimating seemingly unrelated regressions and tests for aggregation bias. *Journal of the American Statistical Association*, 57(298), 348-368.
- Zhang, J. Z., & Chang, C. W. (2020). Consumer dynamics: Theories, methods, and emerging directions. *Journal of the Academy of Marketing Science*, 49, 166-196.

RESUMEN Y CONCLUSIONES

Tras los cinco capítulos que conforman esta tesis doctoral, redactados en inglés, a continuación, se añaden dos secciones en castellano. La primera de ellas es un *Motivación* que muestra los principales objetivos de la tesis doctoral y abarca el contenido de cada uno de los capítulos. La segunda sección es la de las *Conclusiones*, que destaca las principales implicaciones académicas y empresariales de esta tesis doctoral a partir de los resultados obtenidos en cada uno de los estudios realizados.

MOTIVACIÓN:

Impulsados por la rápida evolución en las tecnologías de la información y la comunicación (TIC) y la evolución digital, los clientes pueden interactuar entre sí en cualquier lugar y en cualquier momento a través de una gran variedad de puntos de contacto, que van desde múltiples canales, abundante convergencia de medios, hasta numerosos dispositivos digitales inteligentes (Holmlund et al., 2020; Lemon & Verhoef, 2016). Como consecuencia de ello, los clientes tienen más opciones que nunca, lo que altera fundamentalmente la experiencia de compra y da como resultado un panorama empresarial cada vez más competitivo. Esto deja a las empresas en una situación de alta competitividad, donde se lucha por captar la atención de los clientes con la esperanza de atraerlos ofreciéndoles una experiencia superior.

La experiencia del cliente se ha convertido en un concepto de marketing extremadamente relevante para académicos y profesionales del marketing y se considera un determinante clave del éxito empresarial a largo plazo. Este concepto se entiende como todas aquellas respuestas y reacciones no deliberadas, espontáneas, internas, subjetivas, provocadas por un conjunto de estímulos (Becker & Jaakkola, 2020), incluyendo no solo los que la empresa puede controlar sino también los que están fuera de su ámbito, es decir, los que la empresa no puede controlar dada la naturaleza dinámica del mercado (Lemon & Verhoef, 2016).

La evidencia actual señala que mejorar la experiencia del cliente de manera hábil puede llevar a conseguir enormes ventajas, que incluyen una mayor satisfacción del cliente, una reducción de la rotación, un aumento de las oportunidades de venta cruzada y venta superior, y una mayor satisfacción de los empleados (De Haan, Verhoef, & Wiesel, 2015; McColl-Kennedy, Zaki, Lemon, Urmetzer y Neely, 2019; Witell et al., 2020). Ciertamente, siguiendo a Forbes (2020), observamos que el 86% de los clientes pagarán más por una experiencia excelente. Según lo indicado por Gartner (2019), el 74% de los líderes en experiencia del cliente esperan que los presupuestos de su empresa aumenten en 2020. De manera similar, según el informe realizado recientemente por PwC (2020), el número de empresas que invierten en la experiencia del cliente ha aumentado del 20 al 80%. Dado el perjuicio sin precedentes provocado por el COVID-19, llevar la experiencia del cliente a un nivel de excelencia, nunca había sido tan vital como en estos momentos para una organización (Accenture, 2021; McKinsey & Company, 2020). La experiencia del cliente como estrategia de diferenciación se considera, por tanto, la clave del éxito post-pandémico de una empresa (Forrester, 2020).

Según la encuesta global realizada por Economist Intelligence Unit (2020), los ejecutivos de una organización consideran la experiencia del cliente como la máxima prioridad estratégica para 2025. Aparte de la confirmación que nos proporciona la evidencia empírica, el papel primordial de la experiencia del cliente es ampliamente reconocido en el ámbito académico. La experiencia del cliente ha sido considerada una de las principales prioridades de investigación del Marketing Science Institute (MSI) durante más de 10 años. Específicamente a lo largo del periodo que cubre los años 2010-2022.

De acuerdo con dichas prioridades de investigación MSI (2020), existe una creciente necesidad de un marco integrador que pueda identificar el papel de múltiples factores durante la entrega de la experiencia del cliente, tanto dentro como fuera del control de las empresas. Dichos factores permitirán medir y comunicar el valor de las actividades e inversiones de

marketing, crear y comunicar un valor duradero para el cliente y mantener un crecimiento rentable desde una perspectiva dinámica. Por tanto, según las prioridades de investigación reconocidas por MSI para el período 2020-2022, aún quedan preguntas sin resolver:

- **Preguntas relacionadas con los antecedentes de la experiencia del cliente**
 - *¿Cómo afectará la influencia social a la experiencia del cliente?*
 - *¿Cómo se puede medir el valor del impacto de la influencia social?*
 - *¿Cómo se puede construir una experiencia de cliente integrada?*

- **Preguntas relacionadas con las consecuencias de la experiencia del cliente**
 - *¿Cuál es la mejor manera de captar comportamientos, actitudes y valores?*
 - *¿Las métricas "duras" acabarán con las "blandas"?*

- **Preguntas relacionadas con la perspectiva dinámica**
 - *¿Cómo responder a tiempo ante los cambios internos y externos?*

La presente tesis doctoral tiene como objetivo responder a todas estas preguntas analizando el nuevo panorama empresarial que sugiere la importancia de la experiencia del cliente, los antecedentes y las consecuencias desde una perspectiva dinámica.

Los antecedentes de la experiencia del cliente brindan a las empresas un conocimiento crucial sobre las expectativas que puede generar esa experiencia y acerca de los deseos de los clientes, lo que permite a las empresas identificar los determinantes clave que moldean significativamente las percepciones del cliente hacia su experiencia con la empresa (Verhoef et al., 2009). Esto es muy importante para las empresas, ya que el esfuerzo que éstas dedican a

mejorar la experiencia de sus clientes no siempre es percibido y/o valorado por los propios clientes por igual (Kranzbühler, Kleijnen, Morgan, & Teerling, 2018).

Asimismo, la integración de las consecuencias de la experiencia del cliente permite a las empresas traducir lo que invierten en mejorar dicha experiencia, en oportunidades específicas y resultados de desempeño mejorados (financieros, conductuales y relacionales) (Petersen, Kumar, Polo, & Sese, 2018). Este resultado que puede producirse es especialmente crítico, ya que puede ocurrir que una experiencia de cliente percibida como favorable por los mismos clientes no tenga un impacto positivo en los resultados de la empresa.

La experiencia del cliente no es estática, sino que evoluciona con el tiempo (De Keyser, Lemon, Klaus, & Keiningham, 2015; Lemon & Verhoef, 2016). Tener en cuenta la naturaleza dinámica de la experiencia del cliente permite a la empresa capturar los cambios ocurridos en los clientes y ajustar inmediatamente aquellos factores que se encuentren bajo su control. Esto permitiría garantizar la alineación entre las expectativas de la experiencia del cliente y las ofertas de la empresa (Keiningham et al., 2020). De esta manera, a través de una lente dinámica, establecemos el vínculo entre lo que hacen las empresas, lo que piensan los clientes, lo que hacen los clientes y, finalmente, los resultados que obtienen las compañías (Gupta & Zeithaml, 2006; McColl-Kennedy et al., 2019).

Desde que el concepto experiencia del cliente fue introducido por primera vez por Holbrook y Hirschman (1982), las publicaciones en torno a él han florecido tanto en medios académicos de alto rango como revistas divulgativas orientadas a profesionales. La experiencia del cliente ha sido abordada en una gran variedad de contextos: *retail*, servicio, producto, *branding*, mutichannel, online y tecnológico (Becker & Jaakkola, 2020; Bravo, Martinez, & Pina, 2019; Gao, Fan, Li, & Wang, 2021; Homburg et al., 2017) y estudiados con un enfoque diferente: su conceptualización y naturaleza (De Keyser et al., 2015; Lemon & Verhoef, 2016), sus determinantes (Grewal, Levy, & Kumar, 2009; Verhoef et al., 2009), sus mediciones y el

desarrollo de métodos (Flacandji & Krey, 2020; Holmlund et al., 2020; Kuppelwieser & Klaus, 2021), su estrategia y la gestión del diseño de experiencias (Patrício, Fisk, & Falcão, 2008; Patrício, Fisk, Falcão e Cunha, & Constantine, 2011; Homburg et al., 2017; Keiningham et al., 2020; Witell et al., 2020).

A pesar de la importante contribución de dicho trabajo académico y profesional, existe una falta de comprensión clara, unificada y coherente, sobre lo que ha implicado la experiencia del cliente a lo largo del tiempo (Becker & Jaakkola, 2020; De Keyser et al., 2020; Kranzbühler et al., 2018). Por ejemplo, De Keyser et al. (2020) destacan específicamente que “la experiencia del cliente actualmente está luchando por alcanzar un nivel de madurez que puede y debe esperarse” (p. 434). En una línea similar, Becker y Jaakkola (2020) señalan que “prevalece la confusión sobre el alcance y los límites del constructo de experiencia del cliente, sus antecedentes y sus consecuencias” (p. 630). Como resultado, una visión integral sobre los antecedentes y las consecuencias de la experiencia del cliente, desde una perspectiva dinámica, es obligatoria para mejorar la gestión de la experiencia del cliente, donde los gerentes deben tener una cultura empresarial basada en buscar la mejor experiencia para sus clientes, deben marcar una dirección estratégica clara de cara a diseñar dicha experiencia y deben contar con capacidades suficientes para renovar continuamente la experiencia del cliente, con el objetivo de lograr y mantener el éxito a largo plazo (Homburg, Jozić, & Kuehnl, 2017).

Con respecto a los antecedentes de la experiencia del cliente, la investigación previa se orienta principalmente desde la perspectiva de la empresa, centrándose en los factores y procesos que son predominantemente diseñados y controlados por la empresa, en términos de elementos relacionados con el *marketing mix* (Grewal et al., 2009), la interfaz de servicio y el diseño de la atmósfera (Naylor, Kleiser, Baker, & Yorkston, 2008; Roggeveen, Grewal, & Schweiger, 2020; Verhoef et al., 2009), y el diseño de la marca y la identidad (Brakus, Schmitt, & Zarantonello, 2009).

Dichos factores pueden ser controlados y diseñados por las empresas de manera que contribuyan a mejorar la gestión de la experiencia del cliente (Homburg et al., 2017; Patrício et al., 2008; Patrício et al., 2011). No obstante, existe una falta de categorización estructurada de estos factores que facilitan la identificación y el examen por parte de las empresas.

Más importante aún, hay que reseñar que además de los factores que se sitúan dentro del control de la empresa, existe una amplia gama de factores fuera de su control (por ejemplo, la influencia social), que ejerce una influencia significativa en la percepción de la experiencia del cliente (Lemon & Verhoef, 2016; Lucia-Palacios, Perez-Lopez & Polo-Redondo, 2018; McColl-Kennedy et al., 2019). En este sentido, estudios previos han enfatizado la importancia de combinar la perspectiva de la empresa y la perspectiva del cliente, para explorar los antecedentes potenciales de la experiencia del cliente -como los puntos clave- para convertirlos en oportunidades específicas de la empresa de cara a mejorar la experiencia de sus clientes. Sin embargo, los que integran estas dos perspectivas son principalmente estudios de orientación teórica (es decir, Becker & Jaakkola, 2020; Bolton et al., 2018; De Keyser et al., 2020; Godovykh & Tasci, 2020; Keiningham et al., 2020; Kranzbühler et al., 2018; Lemon & Verhoef 2016; Lipkin, 2016).

Por ello, consideramos de vital importancia prestar especial atención a los factores dentro y fuera del control de la empresa (objetivo de investigación 1 y 2) para analizar su influencia en la percepción de la experiencia del cliente.

Para mejorar la gestión de la experiencia del cliente es fundamental identificar sus consecuencias más importantes. La literatura se ha centrado en las consecuencias perceptivas (ej., satisfacción del cliente, lealtad, reputación, felicidad) (Arnould & Price, 1993; Brakus et al., 2009; Brun, Rajaobelina, Ricard, & Amiot, 2020; Gonçalves, Patrício, Teixeira, & Wuenderlich, 2020; Iglesias, Markovic, & Rialp, 2019; Lucia-Palacios et al., 2018; Morgan - Thomas & Veloutsou, 2013; Schmitt, Brakus, & Zarantonello, 2015) o intenciones de

comportamiento (es decir, intención de compra, boca-a-oido) (ej., Lemke, Clark, & Wilson, 2011; Rose, Clark, Samouel, & Hair, 2012; Rose, Hair, & Clark, 2011), con atención limitada al desempeño financiero (objetivo de investigación 1), comportamientos reales (objetivo de investigación 2) y consecuencias relacionales para las empresas (objetivo de investigación 3).

Más específicamente, los estudios actuales sobre la consecuencia conductual de la experiencia del cliente se desarrollan principalmente en el contexto de una sola categoría de producto (ej., De Haan et al., 2015; McColl-Kennedy et al., 2019), ignorando el hecho de que la percepción de la experiencia podría extenderse a otra categoría (relacionada o no) ofrecida por las empresas (Dong & Chintagunta, 2016; Lemon & Verhoef, 2016) (objetivo de investigación 2a). Además, dada la falta de integración entre la perspectiva de la empresa y la perspectiva del cliente, hay escasas investigaciones que consideran que el impacto de la experiencia del cliente puede variar dependiendo de si la relación la mantienen las empresas o los clientes (objetivo de investigación 2b).

Independientemente de que se analice desde la perspectiva del cliente o de la empresa, para capturar completamente la naturaleza de la experiencia del cliente, la perspectiva dinámica es indispensable. Esta idea viene avalada por investigaciones previas (De Keyser et al., 2015; Kranzbühler et al., 2018; Siebert, Gopaldas, Lindridge, & Simões, 2020),

Por tanto, la experiencia del cliente no es estática, sino que evoluciona con el tiempo y se considera el reflejo de múltiples factores que se producen durante la interacción entre clientes y empresas (es decir, tanto dentro como fuera del control de estas últimas), y determinan fundamentalmente el crecimiento futuro de la relación con el cliente (Becker & Jaakkola, 2020; De Keyser et al., 2015; Lemon & Verhoef, 2016; Zhang & Chang, 2020). Capturar con éxito el vínculo entre la experiencia del cliente y la expansión de la relación con él, permite a las empresas promover el desarrollo de la relación en el momento correcto y a través del motor

estratégico adecuado (Li, Sun, & Montgomery, 2011; Zhang, Watson, Palmatier, & Dant, 2016).

Hasta la fecha, como revela la revisión sistemática de la literatura realizada por De Keyser et al. (2020), la mayoría de las investigaciones sobre la experiencia del cliente se han basado en gran medida en encuestas transversales para la recopilación de datos, lo que destaca la falta de una visión dinámica en los diseños de investigación longitudinal para crear conocimientos, sobre el papel que desempeña la experiencia del cliente en las consecuencias relacionales (objetivo de investigación 3).

El razonamiento subyacente es que capturar tal consecuencia relacional no es una tarea fácil, ya que el proceso no es directamente observable sino oculto (Palmatier, Houston, Dant, & Grewal, 2013) y además involucra varias dimensiones: patrones dinámicos de la experiencia del cliente (Ariely & Carmon, 2000). Lo más complicado es decodificar, ya que un proceso tan dinámico y oculto requiere un enfoque avanzado de modelado (Netzer, Lattin, & Srinivasan, 2008; Zhang & Chang, 2020) (objetivo de investigación 3b).

Analizamos los estudios más relevantes sobre la experiencia del cliente, y observamos que se categorizan desde la perspectiva de la empresa, desde la perspectiva del cliente, y desde una perspectiva dinámica. Esto nos permitirá ilustrar las brechas de investigación identificadas.

En general, se observa una falta de vínculos entre la perspectiva de la empresa y la perspectiva del cliente. Ningún estudio empírico ha capturado simultáneamente las percepciones de la experiencia de los clientes hacia los factores que están bajo y fuera del control de las empresas, de una manera clara, estructurada y sólida, por lo que no han proporcionado una visión completa para ayudar a las empresas a identificar los antecedentes potenciales de la experiencia del cliente (estudio 1), para evaluar adecuadamente la influencia de la experiencia del cliente en los resultados financieros y de comportamiento (estudio 1 y 2),

y para ver cómo dicha influencia afectaría a la expansión de la relación que a su vez evoluciona con el tiempo (estudio 3).

Teniendo en cuenta las prioridades de investigación de MSI y todas las brechas identificadas en la literatura actual sobre la experiencia del cliente, el objetivo principal de esta tesis doctoral es analizar los antecedentes y las consecuencias de la experiencia del cliente mediante la integración de la perspectiva del cliente y de la perspectiva de la empresa de una manera dinámica, y avanzar en el conocimiento de la gestión de la experiencia del cliente.

El objetivo principal se divide, a su vez, en tres objetivos de investigación específicos para contribuir a la teoría y a la práctica. Estos tres objetivos de investigación se desarrollan en tres estudios diferentes.

- ***Objetivo de investigación 1:** Ampliar la literatura actual sobre la experiencia del cliente analizando simultáneamente los factores que están tanto bajo como fuera del control de la empresa, como antecedentes de la experiencia del cliente, y su desempeño financiero conjunto, en un contexto de servicio.*

Para abordar este objetivo de investigación, desarrollamos el **Estudio 1**. Este estudio investiga el impacto de las inversiones de las empresas en tres recursos estratégicos clave (es decir, el valor, la marca y la relación) en la experiencia del cliente, así como el papel directo y moderador que desempeña la influencia social.

Integramos la investigación en la gestión de las relaciones con los clientes (es decir, el marco de equidad del cliente) (Rust, Lemon, & Zeithaml, 2004) y la gestión de la experiencia del cliente (Lemon & Verhoef, 2016; Verhoef et al., 2009) y ofrecemos un marco unificador para comprender los vínculos entre los tres antecedentes de la equidad (es decir, equidad de

valor, equidad de marca, equidad de relación), influencia social, la experiencia del cliente y su impacto final en la rentabilidad.

Disponemos de datos longitudinales de una empresa de servicios financieros entre enero de 2012 y diciembre de 2012 y datos de un cuestionario realizado durante diciembre de 2012 que recogía información subjetiva sobre los clientes. Combinando ambas fuentes de información, finalmente tenemos una muestra efectiva de 1.990 clientes. Se utiliza el software STATA14 para realizar el análisis empírico.

- *Objetivo de investigación 2: investigar la consecuencia conductual de la experiencia del cliente dada una empresa activa (impulsada por la empresa) e inactiva (impulsada por el cliente) implementando mecanismos de bloqueo en un contexto de proveedor de servicios múltiples.*
 - *Objetivo de investigación 2a: analizar cómo la experiencia del cliente influye en la retención de clientes en una categoría y otra relacionada - efecto contagio-.*
 - *Objetivo de investigación 2b: explorar cómo el impacto de la experiencia del cliente en la retención del cliente varía en diferentes estrategias de bloqueo (impulsadas por el cliente e impulsadas por la empresa).*

En aras de abordar tal objetivo, desarrollamos el **Estudio 2**. Este estudio se centra en los efectos separados y conjuntos de la experiencia del cliente y el bloqueo en la retención del cliente. Construir barreras para bloquear a los clientes y mejorar la experiencia del cliente son dos estrategias clave empleadas por las empresas para mejorar la retención de clientes. Aunque persiguen el mismo objetivo, estas estrategias funcionan de manera diferente: la primera se basa

más en un enfoque calculador de coste-beneficio para el intercambio, mientras que la segunda promueve los aspectos afectivos de la relación.

Nos basamos en la teoría del intercambio social para identificar dos tipos diferentes de situaciones de bloqueo, en función de si son impulsadas por la empresa (estrategias explícitas que tienen como objetivo aumentar los costes de poner fin a la relación, por ejemplo, contratos vinculantes) o impulsadas por el cliente (estado motivacional intrínseco de clientes en función de los beneficios relacionales derivados de la relación de intercambio), y examinamos sus efectos (separados y conjuntos) sobre la retención.

Es importante destacar que, sobre la base de la teoría del aprendizaje experiencial, investigamos conjuntamente cómo los diferentes tipos de bloqueo afectan el impacto de una serie de efectos de la experiencia del cliente en la retención del cliente, en términos del efecto principal de la experiencia con el producto/servicio principal (Lemon & Verhoef, 2016) y los posibles efectos indirectos entre categorías (Dong y Chintagunta, 2016; Keller, Geyskens, & Dekimpe, 2020). Al explorar los efectos conjuntos de la experiencia del cliente y las estrategias de bloqueo en la retención, identificamos si se complementan o se sustituyen entre sí y cuándo ocurren estos efectos.

Para probar empíricamente nuestros objetivos de investigación, utilizamos un conjunto de datos de panel único en la industria de las telecomunicaciones para una muestra de 13,761 clientes. Este conjunto de datos cubre todas las empresas del mercado de las telecomunicaciones para dos servicios principales diferentes (móvil y banda ancha) a lo largo de cuatro años de datos (2013-2016).

Gracias al conjunto de datos recopilado, aplicamos técnicas avanzadas – el modelo de multinomial logit. Usamos el software Rstudio para realizar el análisis empírico.

- **Objetivo de investigación 3:** *Identificar las consecuencias relacionales de diferentes dimensiones de la experiencia del cliente desde una perspectiva dinámica.*
 - *Objetivo de investigación 3a: explorar los roles de las diferentes dimensiones de la experiencia del cliente en la expansión de la relación con el cliente.*
 - *Objetivo de investigación 3b: capturar y definir los estados ocultos de expansión de la relación con el cliente a través de modelos de cadenas de Markov.*

Para abordar estos objetivos de investigación, desarrollamos el **Estudio 3**. Partiendo de las premisas de la teoría de la autodeterminación (Deci & Ryan, 1985; Vallerand, 1997), este estudio investiga cómo diferentes dimensiones de la experiencia del cliente (efecto reciente, efecto pico, efecto tendencia, y efecto de fluctuación) y diferentes acciones de marketing relacional (es decir, comunicación publicitaria, innovación de productos y conflicto) impactan la expansión de la relación con el cliente desde una perspectiva dinámica y distingue sus efectos a corto y largo plazo. La teoría de la autodeterminación postula que la motivación para realizar actividades consta de factores intrínsecos (los que se originan en el yo y el deseo de uno) y extrínsecos (que se originan en demandas externas).

Además, para capturar de manera integral la evolución de los estados de expansión de la relación con el cliente, nos basamos en cuatro aspectos: (1) el nivel de uso de la categoría de producto/servicio adquirido inicialmente; (1) el número de categorías de productos y/o servicios adquiridos de la empresa focal; (3) la oferta mejorada; (4) la decisión de adopción hacia la categoría de producto/servicio innovador proporcionada por la firma focal.

Utilizando un conjunto de datos de panel que combina información de actitud y comportamiento para una muestra de 12,946 clientes, que cubre las cuatro categorías principales de servicios (móvil, banda ancha, TV y línea fija) en la industria de las telecomunicaciones en un país europeo durante un período de 48 meses, se aplica empíricamente la técnica HMM. Combinamos Latent Gold 5.1 y el software Rstudio para realizar el análisis empírico.

Teniendo en cuenta todas las lagunas que hemos identificado en la literatura, esta tesis doctoral ha respondido a los objetivos de investigación propuestos en la introducción. Hemos analizado, en los tres estudios realizados, qué factores determinan críticamente la entrega de una experiencia sólida al cliente (antecedentes) y cómo dicha experiencia percibida del cliente contribuye a crear riqueza para las empresas (consecuencias). La experiencia del cliente está determinada por una gran variedad de factores, incluidos los que están dentro y fuera del control de la empresa, que van desde el valor del producto ofrecido, la marca, la relación desarrollada entre los clientes y las empresas, así como la influencia social. La experiencia de la cliente percibida, que refleja múltiples aspectos en la interacción entre clientes y empresas de manera integral, combinada con otras estrategias empleadas de forma proactiva por las empresas, puede ejercer una influencia significativa en la generación de riqueza para las empresas, incluida la rentabilidad del cliente, la retención de clientes en todas las categorías de productos, y expansión de relaciones a lo largo del tiempo. Por lo tanto, para tener éxito en la gestión de la experiencia del cliente, las empresas deben ir más allá de su propia perspectiva e integrar la opinión de los clientes para capturar de manera integral cómo una multitud de factores, que están bajo y fuera del control de las empresas, dan forma a la experiencia del cliente, identificando así con precisión los determinantes críticos de la experiencia del cliente y ajustar adecuadamente la orientación de su experiencia.

Finalmente, abordar estos objetivos de investigación no es tarea fácil. En la búsqueda de tales objetivos, hemos combinado información perceptual con información transaccional sobre una gran muestra de clientes de múltiples firmas en diferentes industrias de servicios. Además, para realizar los análisis empíricos se han desarrollado diferentes metodologías: modelo de regresión aparentemente no relacionada (SUR), modelo de multinomial logit, cadenas de Markov ocultas (HMM).

Cada una de estas metodologías tiene sus propias características y se aplica en función de los objetivos específicos propuestos. El método SUR (Zellner, 1962), engloba un sistema de ecuaciones, donde los coeficientes se estiman simultáneamente. En el segundo capítulo, donde examinamos los vínculos entre múltiples antecedentes de equidad del cliente, el papel moderador de la influencia social, la calidad de la experiencia del cliente y la rentabilidad del cliente, la aplicación del método SUR se considera, por lo tanto, más eficiente que el modelo estimado ecuación por ecuación utilizando los estándares de mínimos cuadrados ordinarios.

Sobre el modelo de multinomial logit, su ventaja reside principalmente en que permite el análisis de decisiones en más de dos alternativas de elección, y nos permite identificar determinantes importantes que afectan a las probabilidades de elección de los tomadores de decisiones (Elshiewy, Guhl, & Boztuğ, 2017). Por lo tanto, se considera adecuado para el estudio desarrollado en el tercer capítulo, donde evaluamos la consecuencia conductual (es decir, la retención de clientes) de la experiencia del cliente en varias empresas y en dos categorías de servicios (es decir, categorías de servicios móviles y de banda ancha). Los méritos de emplear HMM para estudiar la dinámica del consumidor son ampliamente reconocidos en la literatura (Netzer et al., 2008). En este método, los investigadores pueden permitir que los parámetros de respuesta cambien con el tiempo a medida que los clientes migran, a través de los estados latentes determinados empíricamente, e identificar diferentes antecedentes de dicha migración (Zhang & Chang, 2020). La aplicación de dicho método es específicamente adecuada

para el análisis del cuarto capítulo, donde evaluamos el efecto a largo plazo de diferentes dimensiones de la experiencia del cliente, en la expansión de la relación con el mismo a lo largo del tiempo, mientras se controla la influencia a corto plazo de las acciones de RM.

Hemos utilizado softwares diferentes en cada estudio: STATA14, Rstudio y Latent Gold 5.1. La gran variedad de herramientas utilizadas para los análisis nos permite obtener conclusiones generales más sólidas. Específicamente, cada estudio ha contribuido a la literatura de la siguiente manera:

➤ ***En respuesta al objetivo de investigación 1:*** Hemos avanzado en la literatura actual sobre la experiencia del cliente, ya que se han analizado simultáneamente los factores que están bajo y fuera del control de la empresa, como antecedentes de la experiencia del cliente, y su desempeño financiero conjunto en un contexto de proveedores de servicios múltiples.

➤ ***En respuesta al objetivo de investigación 2:*** Hemos investigado la consecuencia conductual de diferentes dimensiones de la experiencia del cliente (efecto principal y efecto contagio) dados los mecanismos de bloqueo implementados de forma activa (impulsada por la empresa) e inactiva (impulsada por el cliente).

➤ ***En respuesta al objetivo de investigación 3:*** Hemos identificado y distinguido las consecuencias relacionales a corto y largo plazo de la experiencia del cliente y las acciones de marketing relacional desde una perspectiva dinámica. Para ello, hemos analizado cómo diferentes patrones de experiencia del cliente estimulan el progreso de los estados de expansión de la relación, a lo largo del tiempo, y capturan y definen los estados de expansión de la relación con el cliente, ocultos a través del modelo de cadenas de Markov.

CONCLUSIONES

La tesis se estructura de cinco capítulos. El Capítulo 1 abarca la motivación de la tesis, presenta las oportunidades de investigación identificadas en la literatura y establece los tres objetivos de investigación principales de la presente Tesis Doctoral. Cada uno de esos tres objetivos se abordará de manera explícita en los capítulos posteriores. Los Capítulos 2, 3 y 4, por tanto, son los encargados de desarrollar el marco teórico, las hipótesis, el análisis empírico y los resultados de cada uno de los tres estudios llevados a cabo para dar respuesta a los tres objetivos de investigación. Finalmente, el Capítulo 5 recoge las principales conclusiones de la tesis, así como las implicaciones que se derivan tanto para el ámbito académico como para la práctica empresarial.

Implicaciones Teóricas

Los tres estudios realizados en esta tesis doctoral tienen importantes implicaciones para la literatura. Integrando la perspectiva de la empresa y del cliente, el segundo capítulo analiza el impacto de las inversiones de las empresas en tres elementos estratégicos clave (es decir, el valor, la marca y la relación) en la experiencia del cliente (Rust, Lemon, & Zeithaml, 2004), así como el papel directo y moderador que juega la influencia social (Verhoef et al., 2009). De esta manera, evaluamos de manera integral la contribución de los factores dentro y fuera del control de las empresas para mejorar la experiencia del cliente y evaluamos conjuntamente sus roles para aumentar el nivel de rentabilidad que los clientes pueden proporcionar a la empresa. Este estudio nos ha permitido constatar que los aspectos estratégicos controlados por la firma en materia de valor patrimonial, valor de marca y equidad de relación, contribuyen significativamente a consolidar una sólida experiencia de cliente y a mejorar la rentabilidad del mismo. Más importante aún, hemos proporcionado evidencia de que el impacto de las

inversiones de las empresas en diferentes factores estratégicos varía según la fuerza de la influencia social, lo que ilustra la importancia de factores fuera del control de las empresas, en la percepción de la experiencia del cliente y la rentabilidad del mismo. Más específicamente, para la equidad de valor, el papel de la influencia social es especialmente relevante cuando se percibe que la equidad de valor es baja. Para el valor de marca, su impacto se vuelve más fuerte dada la situación en la que se percibe un valor de marca alto (Kirmani, 2009). Además, encontramos que la asociación entre la equidad en la relación y la calidad de la experiencia del cliente no se ve afectada por las experiencias expuestas por otros. Dicha evidencia contribuye a refinar nuestra comprensión de cómo la influencia social afecta las percepciones y el comportamiento de los clientes. Por último, al establecer el vínculo con la rentabilidad del cliente, este estudio, también contribuye al campo de la evaluación del rendimiento financiero de los gastos de marketing con un enfoque en la calidad de la experiencia del cliente y sus antecedentes (Lemke, Clark, & Wilson, 2011; Lemon & Verhoef, 2016; Palmer, 2010).

El tercer capítulo se centra en la consecuencia conductual de las diferentes dimensiones de la experiencia del cliente (efecto principal y efecto de contagio) y cómo dicha influencia puede variar dadas las diferentes situaciones de bloqueo (impulsadas por la empresa e impulsadas por el cliente). Al integrar los dos lentes teóricos clave: la teoría del aprendizaje experiencial (Kolb, 1984) y la teoría del intercambio social (Day, 2000), establecimos un modelo conceptual integral que nos permite explorar los efectos separados y conjuntos de la experiencia del cliente y las estrategias de bloqueo. Por lo tanto, esta investigación nos permite confirmar si la experiencia del cliente y el bloqueo se complementan o se sustituyen entre sí y cuándo ocurren tales efectos. Esta investigación contribuye a la literatura de marketing porque es el primer intento de medir empíricamente el impacto de la experiencia del cliente y el bloqueo en la retención de clientes de manera simultánea. Los resultados revelan que la experiencia del cliente no solo afecta la retención de clientes en una categoría sino también en otra relacionada,

es decir, el efecto contagio. Lo más importante es que los resultados confirman que existen importantes compensaciones entre la experiencia del cliente y el bloqueo, de modo que para los clientes que están bloqueados en la relación, ya sea debido a estrategias de bloqueo impulsadas por la empresa o bloqueo impulsado por el propio cliente, invertir en mejorar la experiencia del cliente se vuelve ineficaz. Sin embargo, en la situación en la que los clientes están bloqueados simultáneamente por estos dos tipos de métodos de bloqueo, dedicar más esfuerzos a la experiencia del cliente es significativo para retener a los clientes. Además, los dos tipos de bloqueo considerados conducen a una mayor retención de clientes, aunque la eficacia de las estrategias de bloqueo impulsadas por la empresa se reduce cuando los consumidores tienen una mayor motivación intrínseca para continuar la relación y evitar incurrir en la pérdida de beneficios relacionales (cliente - bloqueo impulsado).

El cuarto capítulo va un paso más allá al analizar las consecuencias relacionales de la experiencia del cliente desde una perspectiva dinámica. Basados en la teoría de la autodeterminación, hemos diseñado un modelo conceptual en el que identificamos la influencia a largo plazo de la experiencia del cliente y el corto plazo de las acciones de marketing relacional para promover la expansión de la relación con el cliente a lo largo del tiempo. En particular, para capturar cómo la relación con el cliente se expande paso a paso a lo largo del tiempo, hemos examinado varios patrones de experiencia del cliente: efecto reciente, efecto pico, efecto de tendencia y efecto de fluctuación, lo que nos permite capturar estados ocultos de expansión de la relación con el cliente. Además, mientras que la investigación anterior tiende a considerar un solo tipo: opciones hacia la venta cruzada u ofertas mejoradas (es decir, Bolton, Lemon, & Verhoef, 2004, 2008), lo que da como resultado una visión fragmentada sobre este tema, nuestra investigación ha capturado la evolución de los estados de expansión de la relación con el cliente, a través de cuatro aspectos que reflejan la amplitud y profundidad de la relación. Además, hemos tenido en cuenta la influencia a corto plazo de un conjunto de acciones de

marketing relacional desplegadas por las empresas (comunicación publicitaria, innovación de productos y conflicto) en la expansión de la relación con el cliente. Hemos confirmado que la experiencia del cliente juega un papel significativo en la expansión de la relación entre clientes y empresas en un paso más a través de diferentes patrones. La experiencia positiva de la cliente obtenida recientemente (efecto reciente), la experiencia extraordinaria (efecto pico) y las experiencias frecuentemente fluctuantes (efecto fluctuación) contribuyen de manera significativa a alentar el movimiento de un estado de expansión de relación más bajo a uno más alto, excepto el efecto de tendencia. Los resultados de nuestro estudio demuestran además que la inversión de las empresas en acciones de marketing relacional podría estimular un aspecto de la expansión de la relación con el cliente (es decir, adquirir más categorías de productos ofrecidas por la empresa focal) mientras daña otros (es decir, disminuir el nivel de uso de la actual categoría de producto adquirida). Este estudio también ha contribuido a la literatura académica de varias formas. En primer lugar, no hubo una investigación empírica previa que analizara el proceso de expansión de la relación con el cliente, descubriendo diferentes estados ocultos de expansión de la relación con el cliente. En segundo lugar, ninguna investigación previa ha distinguido el impacto a largo plazo de la experiencia del cliente y el impacto a corto plazo de las acciones de marketing relacional en la expansión de la relación con el cliente. El marco conceptual propuesto se considera una novedad importante en la literatura sobre la experiencia del cliente y la gestión de la relación con el cliente.

Implicaciones para la Práctica

Esta tesis doctoral tiene importantes implicaciones para las empresas. El segundo capítulo sugiere que las empresas pueden identificar el impacto relativo de cada motor estratégico y, así, priorizar sus inversiones para promover experiencias superiores. Todo ello

considerando que tanto la equidad de la relación como la equidad de valor mostraron un impacto más fuerte, en la experiencia del cliente, en comparación con la equidad de marca. Así, si la empresa colaboradora mejorara la experiencia del cliente, las inversiones en la relación y en el valor percibido de sus ofertas, producirían retornos más fuertes en términos de promover experiencias favorables, en comparación con las inversiones en percepciones de marca. El significativo efecto directo y moderador de la influencia social indica que incluso el impacto de los factores que están bajo el control de la empresa (es decir, inversiones en valor, marca y relaciones) está condicionado a la naturaleza de la influencia social. Con el entendimiento que brindamos sobre el papel moderador que juega la influencia social en el vínculo entre los antecedentes de la equidad y la experiencia del cliente, las empresas pueden adaptar sus inversiones de marketing a cada cliente individual en función de las características de su red social. Finalmente, gracias a la conexión que establecemos entre la calidad de la experiencia del cliente y la rentabilidad del cliente, las empresas pueden cuantificar el impacto de invertir en la promoción de una experiencia superior en las medidas de desempeño a nivel de cliente individual y, por lo tanto, demostrar la contribución de las inversiones de marketing a la rentabilidad de la empresa.

El tercer capítulo se centra en explorar los efectos separados y conjuntos de dos estrategias centrales en la retención de clientes: la experiencia del cliente y los mecanismos de bloqueo. Los resultados de este estudio nos permiten abordar dos temas de interés gerencial para los profesionales del marketing. La primera estrategia es adoptar la perspectiva a nivel de empresa para cuestionar cómo las estrategias cruciales en la búsqueda del mismo objetivo (es decir, la retención de clientes) deben implementarse correctamente en todas las categorías de productos; más estrategias no siempre son mejores. El segundo es adoptar la perspectiva del nivel del cliente para discutir para quién las empresas deben tomar sus acciones. Para abordar el primer problema, realizamos una simulación más para proyectar la retención de clientes en

seis escenarios de bloqueo: (1) sin estrategia de bloqueo; (2) un solo paquete impulsado por la empresa; (3) un único contrato vinculante impulsado por la empresa; (4) un bloqueo impulsado por el cliente; (5) una combinación de bloqueo impulsado por la empresa (paquete) e impulsado por el cliente; y (6) una combinación entre el contrato vinculante y el bloqueo impulsado por el cliente. De esta manera, recomendamos a las empresas que ajusten adecuadamente su plan de inversión dependiendo de si su orientación principal es la experiencia del cliente o estrategias de bloqueo. Para el segundo número, basado en la experiencia del cliente y las estrategias de bloqueo e impulsadas por el cliente, las empresas pueden clasificar a sus clientes en "clientes indiferentes", "clientes adictivos", "clientes devotos" y "clientes racionales" que pueden servir para guiar gerentes en la adecuada asignación de sus esfuerzos en función del perfil de los clientes. El cuarto capítulo también ofrece importantes implicaciones para los negocios. Investigaciones anteriores muestran que la relación cliente-empresa es dinámica y evoluciona con el tiempo (Palmatier et al., 2013).

Siguiendo la misma lógica, respaldada por la teoría de la autodeterminación, hemos confirmado que la naturaleza dinámica de la relación con el cliente se expande. Para visualizar completamente la expansión de la relación con el cliente, no es suficiente basarse solo en las decisiones actualizadas o las opciones de compra cruzada, sino en una gran variedad de aspectos, como el número de categorías de productos comprados, el nivel de uso de la categoría de producto principal, y otros. Lo más importante, como se revela en los resultados, es la evolución de la expansión de las relaciones afectada por la motivación intrínseca (es decir, diferentes patrones de experiencia del cliente) y extrínseca (es decir, las acciones de marketing relacional implementadas por las empresas). Por lo tanto, las empresas pueden inferir estados ocultos de expansión de la relación con el cliente observando cómo se entrega la experiencia reciente a las empresas, si los clientes han adquirido experiencias extraordinarias, y cómo son las fluctuaciones de las experiencias de los clientes a lo largo del tiempo. Dependiendo del

estado de expansión de la relación con el cliente identificado, las empresas pueden segmentar a sus clientes y, en consecuencia, diseñar planes de expansión de la relación con el cliente a corto y largo plazo. A largo plazo, a partir del estado de expansión de la relación con el cliente identificado, las empresas pueden dedicar de manera óptima esfuerzos y recursos para fomentar diferentes dimensiones de la experiencia del cliente, lo que les permite centrarse en el estado de expansión de la relación deseado y estimular el proceso de migración posterior. A corto plazo, las empresas pueden ajustar sus estrategias con respecto a las acciones de marketing relacional, como la inversión publicitaria, las técnicas de resolución de conflictos y los enfoques de innovación de productos, para perseguir un cierto comportamiento deseado de expansión de la relación con el cliente.

Limitaciones de la Tesis y Futuras Líneas de Investigación

Si bien hemos señalado las limitaciones específicas y las líneas de investigación futuras para cada uno de los tres estudios que hemos realizado en esta tesis doctoral, ahora pretendemos presentar las limitaciones generales y lo más importante proponer una agenda de investigación para futuras investigaciones y el surgimiento de una “orientación a la experiencia del cliente” que esperamos estimule la investigación y el desarrollo de conocimientos en esta área.

En esta tesis doctoral, hemos llevado a cabo la investigación empírica en dos industrias de servicios diferentes, la industria de servicios financieros y la industria de servicios de telecomunicaciones. Si bien esto nos permite visualizar el papel de la experiencia del cliente en diferentes entornos de servicio, para mejorar la generalización de los hallazgos, la investigación futura debe evaluar y validar estos estudios en otros tipos de industrias. De hecho, como se reconoce ampliamente en la literatura sobre la experiencia del cliente (p. Ej., Becker & Jaakkola, 2020; Bolton et al., 2018; De Keyser et al., 2020), el grado en que los clientes perciben

las experiencias entregadas difiere según el lugar o contexto (es decir, ecosistema de servicios, contexto de mercado) en el que se integran sus interacciones con las empresas. Cada industria tiene su propia estructura, características y enfoque. Por ejemplo, la forma en que se percibe la experiencia del cliente es muy diferente en los servicios minoristas tradicionales en comparación con los servicios de salud.

Otra limitación tiene que ver con las técnicas de medición y recolección de datos. Reconocemos la limitación sobre la medición con respecto a la experiencia del cliente. En el capítulo dos, medimos la experiencia del cliente a través de una encuesta transversal con múltiples elementos, mientras que en el capítulo tres y cuatro, la experiencia del cliente se mide mediante una métrica de un solo elemento (es decir, NPS en la categoría de servicio móvil y una escala similar de Likert de cinco puntos en banda ancha categoría de servicio) al cubrir todas las empresas de la industria en una ventana de tiempo de cuatro años (es decir, servicio móvil y de banda ancha).

Aunque el NPS como medida de la experiencia del cliente se considera adecuado y se aplica ampliamente en la práctica (De Haan et al., 2015; Lemon & Verhoef, 2016), se deben considerar métricas de experiencia del cliente más sofisticadas en estudios futuros. Aunque varios estudios han dedicado esfuerzos para desarrollar escalas de experiencia del cliente en diferentes contextos, como en el contexto marca (p. Ej., Brakus et al., 2009; Schouten, McAlexander, & Koenig 2007), en el contexto online (p. Ej., Novak, Hoffman, & Yung, 2000; Rose et al., 2012) y en los servicios (p. Ej., Imhof & Klaus, 2020; Klaus & Maklan, 2013; Kuppelwieser & Klaus, 2021).

Sin embargo, todavía falta una herramienta de medición que lo abarque todo para capturar la experiencia del cliente de una manera holística y dinámica (De Keyser et al., 2020). Como indican Lemon y Verhoef (2016), tal ausencia del desarrollo de la medición del sonido para la experiencia del cliente es una de las principales razones que reduce la investigación

sobre cómo se puede influir en la experiencia del cliente y sobre las consecuencias de la experiencia del cliente. Por lo tanto, la medición de la experiencia del cliente juega un papel fundamental en el avance del desarrollo del conocimiento en el dominio de la experiencia del cliente. Además de desarrollar las escalas para medir la experiencia del cliente, los investigadores también deben considerar nuevas técnicas para la recopilación de datos en lugar de depender de la investigación de la encuesta. Habilitado por el avance de la tecnología, técnicas como *big data* y método de aprendizaje automático, tecnologías inteligentes e inteligencia artificial (IA), minería de texto y datos biométricos deben incorporarse en el estudio de la experiencia del cliente (De Keyser et al., 2020; Du, Netzer, Schweidel, & Mitra, 2021; Holmlund et al., 2020; Lemon & Verhoef, 2016).

Además, en el capítulo cuatro, gracias a disponer de datos longitudinales, no solo evaluamos el impacto de la experiencia obtenida recientemente percibida por el cliente (es decir, el efecto de actualidad) sino también otros patrones dinámicos de la experiencia del cliente (es decir, los momentos pico de la experiencia del cliente, la tendencia de la experiencia del cliente y su fluctuación a lo largo del tiempo) en la expansión de la relación con el cliente. Al hacerlo, ilustramos intensamente el papel dinámico de la experiencia del cliente en el proceso de migración en los estados de expansión de la relación con el cliente. Para obtener información valiosa sobre la naturaleza dinámica de la experiencia del cliente en un paso más allá, la investigación futura puede fundamentar el panorama del recorrido del cliente, que consta de múltiples puntos de contacto en la etapa previa a la compra, la etapa de compra y la etapa posterior a la compra (Hamilton, Ferraro, Haws, & Mukhopadhyay, 2020). Dado que los clientes tienen diferentes necesidades y preferencias en cada etapa del recorrido del cliente, es probable que evalúen los esfuerzos dedicados por las empresas para mejorar la experiencia del cliente de una manera diferente, generando así diferentes consecuencias (Siebert et al., 2020).

Por último, en esta tesis doctoral adoptamos principalmente un enfoque micro para analizar los antecedentes y las consecuencias de la experiencia del cliente centrándonos en los aspectos estrechamente relacionados con los clientes y las empresas. Sin embargo, la experiencia del cliente no se forma de manera aislada, sino que se basa en un entorno más amplio, siendo inevitablemente afectada por una gran variedad de macro tendencias (De Keyser et al., 2020).

Según investigaciones anteriores (De Keyser et al., 2020; Lemon & Verhoef, 2016), estas macro tendencias se componen de externalidades más amplias, que pueden clasificarse en naturales, tecnológicas, económicas, socioculturales, políticas o públicas, o una combinación de las mismas. Por ejemplo, como tendencia tecnológica, el Internet de las cosas (IoT), la realidad aumentada (AR), la realidad virtual (VR), la realidad mixta (MR), los asistentes virtuales, los *chatbots* y los robots, que generalmente funcionan con inteligencia artificial, están transformando drásticamente la experiencia del cliente (Ameen, Tarhini, Reppel, & Anand, 2021; Hoyer, Kroschke, Schmitt, Kraume, & Shankar, 2020), lo que exige más atención sobre este tema.

Otro ejemplo reciente que demuestra la influencia potencial de la tendencia macro es el COVID-19, que ha provocado cambios significativos en la forma en que los clientes interactúan con las empresas y con otros clientes, lo que finalmente afecta a su experiencia (Berry, Danaher, Aksoy, & Keiningham, 2020).

Por lo tanto, para mejorar aún más la comprensión de la experiencia del cliente, la investigación futura definitivamente debería tener en cuenta las tendencias macro en los modelos propuestos.

REFERENCIAS

- Accenture (2021). *Government experience in 2021: Agile and effective*. Available at <https://www.accenture.com/us-en/blogs/voices-public-service/government-experience-in-2021-agile-and-effective> (accessed 2 February 2021).
- Ariely, D., & Carmon, Z. (2000). Gestalt characteristics of experiences: The defining features of summarized events. *Journal of Behavioral Decision Making*, 13(2), 191-201.
- Arnould, E. J., & Price, L. L. (1993). River magic: Extraordinary experience and the extended service encounter. *Journal of Consumer Research*, 20(1), 24-45.
- Becker, L., & Jaakkola, E. (2020). Customer experience: Fundamental premises and implications for research. *Journal of the Academy of Marketing Science*, 48(4), 630-648.
- Bolton, R. N., Lemon, K. N., & Verhoef, P. C. (2004). The theoretical underpinnings of customer asset management: A framework and propositions for future research. *Journal of the Academy of Marketing Science*, 32(3), 271-292.
- Bolton, R. N., Lemon, K. N., & Verhoef, P. C. (2008). Expanding business-to-business customer relationships: Modeling the customer's upgrade decision. *Journal of Marketing*, 72(1), 46-64.
- Bolton, R. N., McColl-Kennedy, J. R., Cheung, L., Gallan, A., Orsingher, C., Witell, L., & Zaki, M. (2018). Customer experience challenges: Bringing together digital, physical and social realms. *Journal of Service Management*, 29(5), 776-808.
- Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand experience: What is it? How is it measured? Does it affect loyalty?. *Journal of Marketing*, 73(3), 52-68.
- Bravo, R., Martinez, E., & Pina, J. M. (2019). Effects of service experience on customer responses to a hotel chain. *International Journal of Contemporary Hospitality Management*, 31(1), 389-405.

- Brun, I., Rajaobelina, L., Ricard, L., & Amiot, T. (2020). Examining the influence of the social dimension of customer experience on trust towards travel agencies: The role of experiential predisposition in a multichannel context. *Tourism Management Perspectives*. Advance online publication. doi: 10.1016/j.tmp.2020.100668.
- Day, G. S. (2000). Managing market relationships. *Journal of the Academy of Marketing Science*, 28(1), 24-30.
- De Haan, E., Verhoef, P. C., & Wiesel, T. (2015). The predictive ability of different customer feedback metrics for retention. *International Journal of Research in Marketing*, 32(2), 195-206.
- De Keyser, A., Lemon, K. N., Klaus, P., & Keiningham, T. L. (2015). A framework for understanding and managing the customer experience. *Marketing Science Institute Working Paper Series*, 85(1), 15-121.
- De Keyser, A., Verleye, K., Lemon, K. N., Keiningham, T. L., & Klaus, P. (2020). Moving the customer experience field forward: Introducing the touchpoints, context, qualities (TCQ) nomenclature. *Journal of Service Research*, 23(4), 433-455.
- Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, 19(2), 109-134.
- Dong, X., & Chintagunta, P. K. (2016). Satisfaction spillovers across categories. *Marketing Science*, 35(2), 275-283.
- Du, R. Y., Netzer, O., Schweidel, D. A., & Mitra, D. (2021). Capturing Marketing Information to Fuel Growth. *Journal of Marketing*, 85(1), 163-183.
- Economist Intelligence Unit (2020). *Customer experience: learning from online personal finance conversations*. Available at <https://eiuperspectives.economist.com/financial-services/customer-experience-learning-online-personal-finance-conversations> (accessed 12 December 2021).

- Elshiewy, O., Guhl, D., & Boztuğ, Y. (2017). Multinomial logit models in marketing—from fundamentals to state-of-the-art. *Marketing: ZFP—Journal of Research and Management*, 39(3), 32-49.
- Flacandji, M., & Krey, N. (2020). Remembering shopping experiences: The shopping experience memory scale. *Journal of Business Research*, 107, 279-289.
- Forbes (2020). *4 actionable customer experience statistics for 2020*. Available at <https://www.forbes.com/sites/danielnewman/2020/06/23/4-actionable-customer-experience-statistics-for-2020/?sh=331baa041a84> (accessed 10 August 2020).
- Forrester (2020). *Forrester identifies five pandemic-induced trends that will change business and technology over the next decade*. Available at <https://go.forrester.com/press-newsroom/forrester-identifies-five-pandemic-induced-trends-that-will-change-business-and-technology-over-the-next-decade/> (accessed 1 August 2020).
- Gao, W., Fan, H., Li, W., & Wang, H. (2021). Crafting the customer experience in omnichannel contexts: The role of channel integration. *Journal of Business Research*, 126, 12-22.
- Gartner (2019). *2019 customer experience management study*. Available at <https://www.gartner.com/en/marketing/research/2019-customer-experience-management-study> (accessed 6 January 2020).
- Godovykh, M., & Tasci, A. D. (2020). Customer experience in tourism: A review of definitions, components, and measurements. *Tourism Management Perspectives*. Advance online publication. doi: 10.1016/j.tmp.2020.100694.
- Gonçalves, L., Patrício, L., Teixeira, J. G., & Wuenderlich, N. V. (2020). Understanding the customer experience with smart services. *Journal of Service Management*, 31(4), 723-744.
- Grewal, D., Levy, M., & Kumar, V. (2009). Customer experience management in retailing: An organizing framework. *Journal of Retailing*, 85(1), 1-14.

- Gupta, S., & Zeithaml, V. (2006). Customer metrics and their impact on financial performance. *Marketing Science*, 25(6), 718-739.
- Hamilton, R., Ferraro, R., Haws, K. L., & Mukhopadhyay, A. (2021). Traveling with companions: the social customer journey. *Journal of Marketing*, 85(1), 68-92.
- Holbrook, M. B., & Hirschman, E. C. (1982). The experiential aspects of consumption: Consumer fantasies, feelings, and fun. *Journal of Consumer Research*, 9(2), 132-140.
- Holmlund, M., Van Vaerenbergh, Y., Ciuchita, R., Ravald, A., Sarantopoulos, P., Ordenes, F. V., & Zaki, M. (2020). Customer experience management in the age of big data analytics: A strategic framework. *Journal of Business Research*, 116, 356-365.
- Homburg, C., Jozić, D., & Kuehnl, C. (2017). Customer experience management: Toward implementing an evolving marketing concept. *Journal of the Academy of Marketing Science*, 45(3), 377-401.
- Hoyer, W. D., Kroschke, M., Schmitt, B., Kraume, K., & Shankar, V. (2020). Transforming the customer experience through new technologies. *Journal of Interactive Marketing*, 51, 57-71.
- Iglesias, O., Markovic, S., & Rialp, J. (2019). How does sensory brand experience influence brand equity? Considering the roles of customer satisfaction, customer affective commitment, and employee empathy. *Journal of Business Research*, 96, 343-354.
- Imhof, G., & Klaus, P. (2020). The dawn of traditional CX metrics? Examining satisfaction, EXQ, and WAR. *International Journal of Market Research*, 62(6), 673-688.
- Keiningham, T., Aksoy, L., Bruce, H. L., Cadet, F., Clennell, N., Hodgkinson, I. R., & Kearney, T. (2020). Customer experience driven business model innovation. *Journal of Business Research*, 116, 431-440.

- Keller, K. O., Geyskens, I., & Dekimpe, M. G. (2020). Opening the umbrella: The effects of rebranding multiple category-specific private-label brands to one umbrella brand. *Journal of Marketing Research*, 57(4), 677-694.
- Kirmani, A. (2009). The self and the brand. *Journal of Consumer Psychology*, 19(3), 271-275.
- Kolb, D. A. (1984). *Experiential Learning*. Englewood Cliffs, NJ: Prentice Hall.
- Klaus, P. P., & Maklan, S. (2013). Towards a better measure of customer experience. *International Journal of Market Research*, 55(2), 227-246.
- Kolb, D. A. (1984). *Experiential Learning*. Englewood Cliffs, NJ: Prentice Hall.
- Kranzbühler, A. M., Kleijnen, M. H., Morgan, R. E., & Teerling, M. (2018). The multilevel nature of customer experience research: An integrative review and research agenda. *International Journal of Management Reviews*, 20(2), 433-456.
- Kuppelwieser, V. G., & Klaus, P. (2021). Measuring customer experience quality: the EXQ scale revisited. *Journal of Business Research*, 126, 624-633.
- Lemke, F., Clark, M., & Wilson, H. (2011). Customer experience quality: An exploration in business and consumer contexts using repertory grid technique. *Journal of the Academy of Marketing Science*, 39(6), 846-869.
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69-96.
- Li, S., Sun, B., & Montgomery, A. L. (2011). Cross-selling the right product to the right customer at the right time. *Journal of Marketing Research*, 48(4), 683-700.
- Lipkin, M. (2016). Customer experience formation in today's service landscape. *Journal of Service Management*, 27(5), 678-703.
- Lucia-Palacios, L., Pérez-López, R., & Polo-Redondo, Y. (2018). Can social support alleviate stress while shopping in crowded retail environments?. *Journal of Business Research*, 90, 141-150.

- Marketing Science Institute (MSI). (2020). *Research priorities 2020–2022*. Available at https://www.msi.org/wp-content/uploads/2020/06/MSI_RP20-22.pdf (accessed 26 June 2020).
- McColl-Kennedy, J. R., Zaki, M., Lemon, K. N., Urmetzer, F., & Neely, A. (2019). Gaining customer experience insights that matter. *Journal of Service Research*, 22(1), 8-26.
- McKinsey & Company (2020). *Adapting customer experience in the time of coronavirus*. Available at <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/adapting-customer-experience-in-the-time-of-coronavirus> (accessed 20 July 2020).
- Morgan-Thomas, A., & Veloutsou, C. (2013). Beyond technology acceptance: Brand relationships and online brand experience. *Journal of Business Research*, 66(1), 21-27.
- Naylor, G., Kleiser, S. B., Baker, J., & Yorkston, E. (2008). Using transformational appeals to enhance the retail experience. *Journal of Retailing*, 84(1), 49-57.
- Netzer, O., Lattin, J. M., & Srinivasan, V. (2008). A hidden Markov model of customer relationship dynamics. *Marketing Science*, 27(2), 185-204.
- Palmatier, R. W., Houston, M. B., Dant, R. P., & Grewal, D. (2013). Relationship velocity: Toward a theory of relationship dynamics. *Journal of Marketing*, 77(1), 13-30.
- Palmer, A. (2010). Customer experience management: A critical review of an emerging idea. *Journal of Services Marketing*, 24(3), 196-208.
- Patrício, L., Fisk, R. P., & Falcão e Cunha, J. (2008). Designing multi-interface service experiences: The service experience blueprint. *Journal of Service Research*, 10(4), 318-334.
- Patrício, L., Fisk, R. P., Falcão e Cunha, J., & Constantine, L. (2011). Multilevel service design: From customer value constellation to service experience blueprinting. *Journal of Service Research*, 14(2), 180-200.

- Petersen, J. A., Kumar, V., Polo, Y., & Sese, F. J. (2018). Unlocking the power of marketing: Understanding the links between customer mindset metrics, behavior, and profitability. *Journal of the Academy of Marketing Science*, 46(5), 813-836.
- Puccinelli, N. M., Goodstein, R. C., Grewal, D., Price, R., Raghurir, P., & Stewart, D. (2009). Customer experience management in retailing: Understanding the buying process. *Journal of Retailing*, 85(1), 15-30.
- PwC (2020). *Experience is everything. Get it right.* Available at <https://www.pwc.com/us/en/services/consulting/library/consumer-intelligence-series/future-of-customer-experience.html> (accessed 10 December 2020).
- Roggeveen, A. L., Grewal, D., & Schweiger, E. B. (2020). The DAST framework for retail atmospherics: The impact of in-and out-of-store retail journey touchpoints on the customer experience. *Journal of Retailing*, 96(1), 128-137.
- Rose, S., Clark, M., Samouel, P., & Hair, N. (2012). Online customer experience in e-retailing: An empirical model of antecedents and outcomes. *Journal of Retailing*, 88(2), 308-322.
- Rose, S., Hair, N., & Clark, M. (2011). Online customer experience: A review of the business-to-consumer online purchase context. *International Journal of Management Reviews*, 13(1), 24-39.
- Rust, R. T., Lemon, K. N., & Zeithaml, V. A. (2004). Return on marketing: Using customer equity to focus marketing strategy. *Journal of Marketing*, 68(1), 109-127.
- Schmitt, B., Brakus, J. J., & Zarantonello, L. (2015). From experiential psychology to consumer experience. *Journal of Consumer Psychology*, 25(1), 166-171.
- Schouten, J. W., McAlexander, J. H., & Koenig, H. F. (2007). Transcendent customer experience and brand community. *Journal of the Academy of Marketing Science*, 35(3), 357-368.

- Siebert, A., Gopaldas, A., Lindridge, A., & Simões, C. (2020). Customer experience journeys: Loyalty loops versus involvement spirals. *Journal of Marketing*, 84(4), 45-66.
- Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. *Advances in Experimental Social Psychology*, 29, 271-360.
- Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of Retailing*, 85(1), 31-41.
- Witell, L., Kowalkowski, C., Perks, H., Raddats, C., Schwabe, M., Benedettini, O., & Burton, J. (2020). Characterizing customer experience management in business markets. *Journal of Business Research*, 116, 420-430.
- Zellner, A. (1962). An efficient method of estimating seemingly unrelated regressions and tests for aggregation bias. *Journal of the American Statistical Association*, 57(298), 348-368.
- Zhang, J. Z., & Chang, C. W. (2020). Consumer dynamics: Theories, methods, and emerging directions. *Journal of the Academy of Marketing Science*, 49, 166-196.
- Zhang, J. Z., Watson Iv, G. F., Palmatier, R. W., & Dant, R. P. (2016). Dynamic relationship marketing. *Journal of Marketing*, 80(5), 53-75.