

Antecedents of Customer Perceived Brand Innovativeness in Online Brand Communities

by

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Abstract

A brand's capability to innovate is one of the most critical sources of creating its own competitive advantages. Many brands recognized the more advanced uses of their online brand communities, through involving their customers in the innovation process, and focusing on measuring the customer perception of brand innovativeness, which provides a significant indicator of their brand's level of innovativeness compared to other brands. Customer perceived brand innovativeness (CPBI), as a new and broader conceptualization and as a key competitive advantage of many companies, depends on the amount of information available about the brand's new features and products. Online brand communities, which include brand communities via social media such as Facebook, YouTube, and Twitter, provide a new way of doing business, a novel means of collaboration with customers, and an enormous volume and variety of information that can create new possibilities for innovation. Online brand communities have become a major source of customer perceived innovativeness by providing information about brands' new products and features, which make customers more likely to perceive the brand as being innovative compared to others. This thesis will assist marketing managers in understanding how customers perceive their brand as being innovative considering their use, engagement, and perceived value of online brand communities.

The research adopts a post-positivist philosophy through conducting an exploratory sequential mixed methods research design, including two stages of data collection and analysis. In the first stage, an exploratory study is conducted to refine the initial conceptual framework that has been developed based on the literature review, to transform the research propositions into research hypotheses, to refine the research population and the questionnaire scale items. By conducting 20 personal semi-structured interviews, with customers engaged with any social media brand community in the UK, thematic analysis is used to analyse the data of the

exploratory study. In the second stage, a quantitative approach is used to test the updated conceptual framework developed based on the findings from the first stage. By conducting an online survey with 830 respondents consisting of customers engaged with mobile phone online brand communities (e.g. Samsung online brand communities on Facebook, YouTube, and Twitter), structural equation modelling (SEM) via Amos is used to assess the reliability and validity of the measurement model and to test the research hypotheses of the structural model.

Findings of the current study reveal that customer use of online brand communities has the strongest direct effect on customer perceived brand innovativeness, followed by customer perceived value of online brand communities, whilst customer engagement with online brand communities has no direct effect on customer perceived brand innovativeness and has only an indirect effect on customer perceived brand innovativeness through the full mediating role of customer perceived value. Additionally, whilst customer engagement has a significant direct effect on customer perceived value, customer use has no effect unless there is a mediating role of customer engagement. The findings also expose that customer use has a strong positive effect on customer engagement. Considering the moderating effect of customer innovativeness, the results demonstrate that highly innovative customers (high vs. low innovative customers) have a stronger effect on the relationship between customer engagement and customer perceived value.

Keywords: social media/online brand communities; customer perceived brand innovativeness; customer innovativeness; customer use of online brand communities, customer engagement with online brand communities, customer perceived value of online brand communities.

Declaration

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Gloucestershire and is original except where indicated by specific reference in the text. No part of the thesis has been submitted as part of any other academic award. The thesis has not been presented to any other education institution in the United Kingdom or overseas.

Any views expressed in the thesis are those of the author and in no way represent those of the University.

Signed: Karam Abdelhameed

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List of Abbreviations

AVE	Average Variance Extracted
BOS	Bristol Online Survey
CE	Customer Engagement with Online Brand Communities
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CI	Customer Innovativeness
CMIN	Chi Square test
CMIN/DF	Normed Chi-square to the degree of freedom ratio
COBRA	Customer Online Brand-Related Activities
CPBI	Customer Perceived Brand Innovativeness
CR	Composite Reliability
CUOBC	Customer Use of Online Brand Communities
DV	Dependent Variables
EFA	Exploratory Factor Analysis
IV	Independent Variables
MI	Modification Indices
ML	Maximum Likelihood
MSV	Maximum Shared Variance
OBC	Online Brand Communities
QUAL	Qualitative Research
QUANT	Quantitative Research
RMR	Root Mean Square Residual
RMSEA	Root Mean Square Error of Approximation
ROC	Return on Customers
ROI	Return on Investment
ROO	Return on Objectives
SEM	Structural Equation Modelling
SEM-PA	Structural Equation Modelling Path Analysis
TLI	Tucker Lewis Index
UDE	User-Defined Estimands

Chapter 1: Introduction

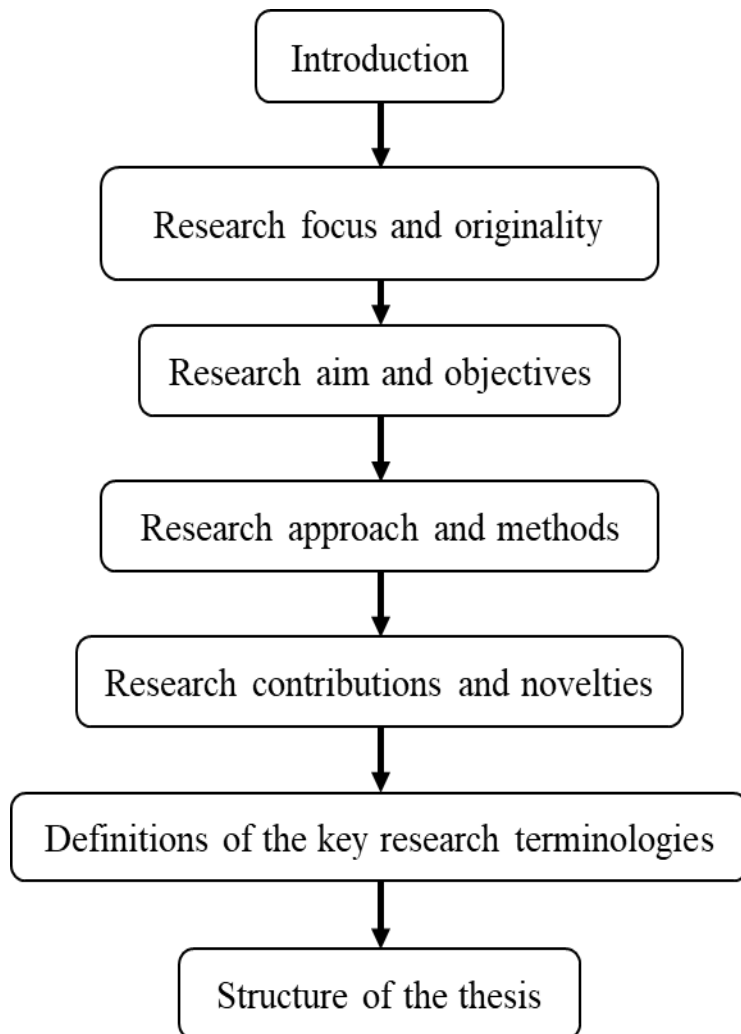
1.1 Introduction

Most leading brands are investing a significant proportion of their resources (e.g. money, effort, and time) into building their own online brand communities (see Table 1.1 for definition), which have become a critical source of information for customers about the brand, and provide a more reliable source of information for customers than the brand itself (Ha, 2018; Shen, Li, Sun, & Zhou, 2018). Many previous studies in online brand communities focused on studying innovation in online communities from two different perspectives (organization and customer perspective), and with different constructs of innovation, specifically customer perceived product innovativeness, which is defined as the relative difference between new and previous offerings, and only reflects customers' rational drivers (Raasch & Janzik, 2011; Sanayel et al., 2013). No studies in online brand communities have been found that consider customer perceived brand innovativeness, which provides a broader conceptualization of innovativeness and reflects both customers' rational drivers and non-rational drivers (Shams et al., 2015). Furthermore, customer perceived brand innovativeness, which has become a key competitive advantage in many markets, depends on the information available about the brand's new products and features which can be used as an indicator of a brand's level of innovativeness compared to other brands (Sanayel et al., 2013; Shams et al., 2015). Online brand communities, which include brand communities via social media such as Facebook, YouTube, and Twitter, provide a huge volume of information (Wang et al., 2016) that can be used to create, and improve, customers' brand innovativeness perceptions.

However, to the best of the researcher's knowledge, this study is the first to explore the role of online brand communities in affecting the customer perception of brand innovativeness.

Furthermore, this research contributes to marketing practice by assisting marketing managers to improve customer perception of brand innovativeness and to understand how customers perceive their brand as being innovative, through considering their use, engagement, and perceived value of online brand communities. This chapter describes the research focus and originality, and research aim and purposes; then it explains the research approach and methods, before presenting the research contributions and novelties; and finally, it introduces the definitions of the key terminologies and the structure of the thesis. Figure 1.1 provides a structure of this chapter.

Figure 1.1 Structure of chapter one – introduction



1.2 Research focus and originality

Most of the literature researching online brand communities (e.g. Janzik & Raasch, 2011; Sanayel, Shahin, & Taherfar, 2013; Nguyen, Yu, Melewar, & Chen, 2015; Wang, Hsiao, Yang, & Hajli, 2016) focused on studying innovation in online communities from two different perspectives (organization and customer perspective), and with different constructs of innovation (product innovation, open innovation, co-innovation, social innovation, and social media brand innovation). More explicitly, a number of the previous studies focused on traditional trends in studying innovation in online communities from an organizational perspective, such as open innovation, which refers to the knowledge of seeing and doing things differently (Jalonen, 2015).

Additionally, other studies focused on new trends in studying innovation in online communities from an organizational perspective, such as co-innovation, which represents a phase of the innovation process resulting from the ongoing interaction between the different partners of an organization; for example, the collaboration between the organization and its suppliers or customers to introduce new products (Wang et al., 2016). Social innovation, defined as a novel set of activities, is performed by different parties in the online community through measuring the social practices in online communities to identify to what degree using social media can foster and support social innovation that reflects the public interest and the common good (Charalabidis, Loukis & Androutsopoulou, 2014). Moreover, social media brand innovation is also studied from the organizational perspective, which refers to social media branding strategies that change current markets, create new practices, and represent new things, and is defined as "...innovation arising from social media branding that results in fundamental changes to existing practices and markets or in their replacement" (Nguyen et al., 2015, p. 12).

Moreover, most previous studies on online brand communities focused on studying product innovation from customer and organizational perspectives (John, 2014; Idota, Minetaki, & Bunno, 2011). Specifically, some of these studies researched innovation from the customer perspective focusing on customer perceived product innovativeness, defined as the relative difference between new and previous offerings, and only reflects customers' rational drivers (Janzik & Raasch, 2011; Sanayel et al., 2013). Whereas innovation is defined as "...an idea, practice, or object that is perceived as new by an individual or other unit of adoption" (Rogers, 1995, p. 11); innovativeness refers to the degree of newness of an innovation (Garcia & Calantone, 2002). However, some previous studies (e.g. Chen, 2010; Boisvert, 2012; Sanayel et al., 2013; Shams, Brown, & Alpert, 2015) started comparing two main conceptualizations within the literature, 'customer perceived product innovativeness' and 'customer perceived brand innovativeness', and confirmed that customer perceived product innovativeness, which is commonly used in the literature, has the following characteristics: firstly, it reflects only the rational drivers of the customer (focuses only on the customer perception of the products' features, functions, technology); secondly, it leads to customer uncertainty due to the lack of information about all products in the market, which means customers are not capable of comparing all the products to identify the more innovative products.

By contrast, according to the researcher's knowledge, no studies of online brand communities have been found that consider customer perceived brand innovativeness, which creates a more complete picture of innovation by introducing a broader conceptualization of innovativeness and reflects both customers' rational drivers (e.g. features, technology, and offerings of the brand's products) and non-rational drivers (e.g. feeling happy and excited to own a known brand) (Shams et al., 2015). Customer perceived brand innovativeness also refers to "...customers' perception of a brand's tendency toward new ideas, novelty, experimentation, and creative processes" (Ouellet,

2006, p. 312). Additionally, Shams et al. (2015, p. 1594) referred to customer perceived brand innovativeness as "...consumers' perception of a brand's track record of product innovations, degree of creativity, and potential for continued innovative activity in the future in a given market". Importantly, customer perceived brand innovativeness provides a signal of the brand's position in the market because it provides customers with more information to rank brands from higher to lower in terms of innovativeness (Shams et al., 2015).

Online brand communities, which include brand communities via social media such as Facebook, YouTube, Instagram, and Twitter, provide information that can be used to create and improve customers' brand innovativeness perceptions (Wang et al., 2016). Thus, online brand communities have become a major source of customer perception of innovativeness by providing information about new products and features (Wang et al., 2016), which allows customers to perceive a brand as being innovative compared to others. Additionally, a company's success may depend on the customer perceptions of brand innovativeness rather than the attributes of the innovations themselves, as demonstrated by Shams, Brown, and Alpert (2017). Therefore, to the best of the researcher's knowledge, this study provides a first attempt to explore the role of online brand communities in affecting customer perception of brand innovativeness.

In terms of the previous studies' research setting, much of the literature (e.g. Barone & Jewell, 2014; Shams et al., 2015) researching brand innovativeness has been focused on technology products, particularly in the mobile phones sector, which offers variation in innovativeness, has several well-established brands available, and has personal relevance for customers. Likewise, findings of a national survey revealed that the technology product industry is one of the most innovative industries in the UK (Hooker & Achur, 2016).

Marketing practitioners and researchers have given much attention to defining and measuring social media marketing performance from different perspectives, including customer and organizational perspectives (Hosford, 2011; Andzulis, Panagopoulos, & Rapp, 2012; Wendlandt 2012). However, there is a clear argument among previous studies around how to measure marketing performance as an outcome via social media/online brand communities. The literature has identified two main groups to measure social media marketing performance (failure to success), including: first, financial measures that depend on using quantitative methods and reflect only short-term measurements of social media marketing performance, such as return on investment (ROI); second, behavioural measures that reflect the long-term effects of social media marketing performance, such as customer engagement and customer perceived value (Hoffman & Fodor, 2010; Andzulis et al., 2012; Leung, 2012). However, due to the difficulties of measuring financial outcomes, which reflect only short-term measures (Mangiuc, 2009; Dorflinger, 2011), this study focuses on behavioural measures that reflect customers' behavioural attitudes as members or users of these online brand communities and refer to the key determinants of online brand communities.

Literature identifies three common constructs as main determinants of online brand communities: customer use of online brand communities (e.g. Kamboj & Rahman, 2016; Laroche et al., 2012; Tsai & Men, 2012), customer engagement with online brand communities (e.g. Zhang et al., 2016), and customer perceived value of online brand communities (e.g. Vries & Carlson, 2014). In distinguishing customer use and engagement, some literature (e.g. Schivinski, et al., 2016; Shao, 2009) refers to customer use as a subset of customer engagement. It does so by dividing customers' online activities into the following engagement levels: using/consuming, contributing, and creating; whilst other studies (e.g. Laroche et al., 2012; Men & Tsai, 2013; Kamboj & Rahman,

2016) differentiated between customer use and engagement by dividing customer's online activities into passive activities (customer use) and active participation activities (customer engagement). The current research adopts the second perspective, differentiating between customer use of online brand communities and customer engagement with online brand communities based on the nature of these activities, which can be classified into active and passive activities (Laroche et al., 2012; Kamboj & Rahman, 2016). Thus, customer use of online brand communities reflects the consumption of these communities' content and includes several passive activities (e.g. following online brand communities and reading/watching brand posts), which are related to passive customer types (often termed 'lurkers' or 'free riders') who do not contribute to online brand communities. Customer engagement with online brand communities reflects both customer contribution (e.g. liking, commenting, and sharing brand posts) and creation (e.g. creating/producing new brand posts through uploading content such as videos or pictures), and it is related to active members who are motivated to participate in online brand communities (Kamboj & Rahman, 2016). Furthermore, many previous studies (e.g. Chen & Lin, 2015; Zhang et al., 2016) referred to customer perceived value of online brand communities as a key outcome of customer use and engaging with online brand communities. However, to the best of the researcher's knowledge, this study is the first to identify the different influences of customer use of online brand communities and customer engagement with online brand communities on customer perceived value of online brand communities. In addition, this research aims to examine the direct influence of customer use of online brand communities (as passive activities) on customer engagement with online brand communities (as active participation activities).

Previous studies (e.g. Ho & Wu, 2011; Hur, Yoo, & Chung, 2012; Sanayel et al., 2013; Shams et al., 2017) confirm the significant moderating effect of customer innovativeness (which refers to

the tendency to buy new products more often and more quickly than other people [Midgley & Dowling, 1978]) in providing greater understanding of the relationships between different constructs. This study seeks to investigate the moderating role of customer innovativeness to show the effects of customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities on customer perceived brand innovativeness. Thus, classifying customers based on their innovativeness traits (customer innovativeness) into highly innovative customers (who are novelty seeking, opinion leaders, risk takers, and independent customers) and low innovative customers (Dobre et al., 2009) will provide more understanding of these relationships (Shams et al., 2017). Accordingly, highly innovative customers have more knowledge about the new products they are interested in. Therefore, their perception of its innovativeness might be higher; consequently, they may need to spend less time/effort to perceive their brand as being an innovative one compared to other brands in the market (Shams et al., 2015, 2017).

1.3 Research aim and objectives

To the best of the researcher's knowledge, this study is the first to explore the role of online brand communities in affecting the customer perception of brand innovativeness. Thus, this research aims to investigate how customer perceived brand innovativeness is affected by three key antecedents in online brand communities: customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities. Based on the findings of the literature review (see Chapter 2), and the current research aim, this study seeks to achieve the following research objectives:

- 1- To explore and investigate how customer perceived brand innovativeness is affected by customer use of online brand communities, customer engagement with online brand

communities, and customer perceived value of online brand communities.

- 2- To identify the different influence of customer use of online brand communities and customer engagement with online brand communities on customer perceived value of online brand communities; in addition, to examining the influence of customer use of online brand communities on customer engagement with online brand communities.
- 3- To investigate the extent to which customer innovativeness moderates the effects of customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities on customer perceived brand innovativeness.

1.4 Research approach and methods

The current research attempts to uncover relationships between the proposed research constructs. Thus, it requires a more exploratory approach to the nature of these relationships before testing them. This research adopts an exploratory sequential mixed methods research design (Creswell, 2014), which includes two stages of data collection. Firstly, the exploratory study approach aims to explore how customer perceived brand innovativeness is affected by three antecedents in the context of online brand communities: customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities. The exploratory study is conducted with 20 participants by using personal semi-structured interviews (each interview taking 45 minutes on average) with customers who engage with any social media brand community in the UK. The number of the interviews was adjusted in relation to data saturation. The interview questions were developed based on the research problem and literature review. The interviews are audio recorded, transcribed (full text transcription, for example see Appendix A), and then subjected to thematic analysis (Malhotra, Birks, & Wills,

2012; Creswell, 2014); subsequently, the findings are developed and the initial conceptual framework based on the literature review is updated.

Secondly, a quantitative approach is used to test the updated conceptual framework that has been developed based on the exploratory study findings. The target population of the quantitative study includes customers in the UK (residents in the UK) who engage with mobile phone online brand communities via social media (e.g. Samsung or iPhone online brand communities on Facebook, YouTube, and Twitter) and comprise female and male participants aged 18 and over. The questionnaire scale items were developed based on the literature review and the findings from the exploratory study, using a five-point Likert-scale type, which is the most common scale in literature (e.g. Puriwat et al., 2014; Vivek et al., 2014; Amaro, Duarte, & Henriques, 2016; Shi et al., 2016). The questionnaire is pre-tested first through three main stages: first stage is content validity with two academic experts in marketing; second stage is face validity with five respondents; last stage is a pilot study with 40 respondents. An online survey is conducted by using panel customers on the Prolific website (<https://prolific.ac/>), where customers are hired to answer online surveys in return for some agreed compensation (Malhotra et al., 2012).

The sample size of the main study is 830 respondents, approximately 16 respondents to each item (16:1) or 830 respondents to 52 items (Hulin et al., 2001; Malhotra et al., 2012). Structural Equation Modelling (SEM) via Amos is used (Hair, Black, Babin, & Anderson, 2010), which included: testing the measurement model through confirmatory factor analysis (CFA) to assess the convergent and discriminant validity, then testing the structural model through using path analysis, which is suitable for a conceptual model that includes mediating variables (indirect effect) in one direction (Byrne, 2010; Hair et al., 2010).

1.5 Research contributions and novelties

Following the research objectives, this thesis advances several contributions to the academic literature on online brand communities and brand innovativeness. Firstly, to the best of the researcher's knowledge, this study is one of the first attempts to empirically explore and investigate how customer perceived brand innovativeness is affected by three key antecedents in the context of online brand communities: customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities. Although many previous studies in the innovation field have confirmed the importance of customer perceived brand innovativeness compared to customer perceived product innovativeness (e.g. Ouellet, 2006; Sanayel et al., 2013; Shams et al., 2015); many online communities' studies focused on customer perceived product innovativeness (e.g. Janzik & Raasch, 2011; Sanayel et al., 2013), whilst no studies of online communities have been found that consider customer perceived brand innovativeness. Therefore, this study is one of the first to consider customer perceived brand innovativeness in online brand communities through the identification of the key antecedents of customer perceived brand innovativeness in online brand communities.

Secondly, the current study also adds to the growing literature on customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities. Specifically, to the best of the researcher's knowledge, this study is the first to differentiate between customer use of online brand communities and customer engagement with online brand communities regarding their influences on customer perceived value of online brand communities. Some prior studies have referred to customer use as a sub-activity of customer engagement and classified customer behavioural engagement into three main levels of engagement, which are using/consuming, contributing, and creating. Recently, a few

studies (e.g. Laroche et al., 2012; Tsai & Men, 2012; Men & Tsai, 2013; Kamboj & Rahman, 2016) have started to differentiate between customer use and customer engagement based on the nature of customers' online activities, by referring to customer use as a passive activity and customer engagement as an active participation activity. The current study focuses on differentiating between customer use and customer engagement to identify the different influence of customer use (as passive online activities) and customer engagement (as active online participation activities) on customer perceived value of online brand communities.

Lastly, this study is the first to investigate the extent to which customer innovativeness (low vs. highly innovative customers) moderates the effects of customer use, customer engagement, and customer perceived value of online brand communities on customer perceived brand innovativeness. Many of the previous studies (e.g. Ho & Wu, 2011; Hur et al., 2012; Sanayel et al., 2013; Shams et al., 2017) have examined the moderating effect of customer innovativeness, in providing more understanding of the relationships between different constructs. Customers' innovativeness traits might affect their perception of brand innovativeness (Sanayel et al., 2013; Shams et al., 2017). Accordingly, this study provides a first attempt to investigate the moderating effect of customer innovativeness on the stated relationships between the research constructs, which might provide more insights of the key antecedents of customer perceived brand innovativeness in the context of online brand communities.

Furthermore, this thesis contributes to marketing practice by assisting marketing managers to improve customer perception of brand innovativeness and to understand how customers perceive their brand as being innovative, through considering their use, engagement, and perceived value of online brand communities. Additionally, it helps marketing managers to differentiate between

passive customers (customer use) and active customers (customer engagement), regarding their role in improving customer perceived value of online brand communities.

1.6 Definitions of the key research terminologies

This section presents the key terminologies that have been discussed in this thesis, including the key terms, the main constructs, and the sub-constructs of the current study. The definitions of the research terms are presented in Table 1.1.

Table 1.1 Definitions of research terminologies

Concept/Construct	Definition
Brand communities	A specialized, non-geographical community, based on a structured set of social relations among admirers of the brand (Muniz and O’Guinn, 2001).
Online brand communities	A grouping of individuals sharing a mutual interest in a brand, using electronic mediation to overcome real-life space and time limitations (Dessart, Veloutsou, & Morgan-Thomas, 2015). Additionally, it is a specialized, non-geographically bound community, based upon social relationships among admirers of a brand in cyberspace (Jang et al., 2008).
Customer use of online brand communities	Represents a minimum level of online brand-related activeness that reflects the consumption of these communities’ content, and includes a number of passive activities (e.g. following online brand communities and reading/watching brand posts) (Adopted from Muntinga, Moorman, & Smit, 2011).
Customer behavioural engagement	Individual participation and promotion behaviour in online brand communities (Zheng, Hefei, Kong, & Liang, 2015); including two main customer’s online activities: customer contribution (liking, commentong, and sharing brand’s posts) and customer creation (creating brand related posts on online brand communities, such as uploading pictures or videos) (Tsai & Men, 2012; Amaro et al., 2016).

Customer engagement with online brand communities	Customers' active participation and interaction reflect their cognitive, emotional, social, and behavioural engagement with online brand communities (Adapted from Madupu, 2006; Hollebeek et al., 2014).
Conscious participation	Customers' intentional participation in activities, having some cognition with the activities (Vivek, 2009; Zhang et al., 2016).
Enthusiasm participation	Customers participation with intense excitement or passion, such as having passion about online brand communities and spending more time on online brand communities (Zhang et al., 2016)
Social interaction participation	The communication and interaction of opinions, ideas, and feelings among customers, enterprises, and others (Vivek, 2009; Zhang et al., 2016).
Customer perceived value of online brand communities	The benefits that members can gain from social media brand communities compared to what the social media brand communities can provide, which reflect mutual benefits between the brand communities and the communities' members (Chan, Zheng, Cheung, Lee, & Lee, 2014).
Functional value	Gaining useful information about the brand via online brand communities (Shi et al., 2016)
Emotional value	The affective response of the customer that occurs during the consumption experience, such as those within online brand communities (Carlson et al., 2015).
Social value	Customers' social interaction experiences with the brand and with the other customers in online brand communities (Shi et al., 2016)
Customer perceived brand innovativeness	A customers' perception of a brand's tendency toward new ideas, novelty, experimentation, and creative processes (Ouellet, 2006).
Customer innovativeness	Customer's tendency to buy new products more often and more quickly than other people (Midgley & Dowling, 1978)

1.7 Structure of the thesis

The thesis is divided into seven chapters and is structured as follows: immediately after the introductory chapter, chapter two addresses the theoretical bases of the current research and provides a review of literature relevant to online brand communities and customer perceived brand innovativeness. This chapter discusses two mainstreams of literature in relation to the stated research objectives. The first part of the chapter discusses the nature of online brand communities and includes three main sections: customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities. The second part of the chapter discusses different conceptualizations of innovation, in addition to identifying the nature and definition of customer perceived brand innovativeness. This part of the chapter focuses on providing an overview of the key antecedents of customer perceived brand innovativeness in the context of online brand communities. This chapter ends with discussing the current research gap and objectives, in addition to presenting the initial conceptual framework.

Chapter three discusses the methodology of the current research, beginning with an overview of the research philosophy, then presents the overall research design followed by separate discussions on the design and methodology of the exploratory study and the quantitative study. This chapter ends with a discussion on research ethics. Chapter four presents the results of the exploratory study. It describes the findings and the key discussion points of the exploratory study, which include an overview of the objectives and methods and the key themes of the exploratory study, while the final section introduces the development of the conceptual framework. Chapter five provides the results of the quantitative study. It addresses the descriptive and statistical analysis of the data and presents the results of the hypothesis testing through the following two main stages: testing the

measurement model using CFA and then testing the structural model by conducting SEM-Path Analysis.

Chapter six critically discusses the findings of the current research with respect to the literature review. The chapter analyses how the quantitative findings relate to the findings of the exploratory study and the findings of previous studies. It is divided into two main sections: discussion of the key findings and additional findings. Chapter seven presents the research contributions, beginning with an overview of the main research findings, followed by the theoretical contributions and the managerial implications. Finally, it concludes by describing the limitations and suggested future research direction of the current research.

Chapter 2: Literature Review

2.1 Introduction

The unprecedented growth of social media platforms such as Facebook, LinkedIn, YouTube, and Twitter have changed the way business communicates and interacts with customers, and changed the interactions between customers in the form of sharing opinions, information, comments and attitudes about the business products and services (Campbell & Anitsal, 2013). The huge number of social media users worldwide and the reality that using social media has become one of the main daily activities of customers, has made social media a major part of companies' marketing campaign (Assaf, Abgrab, & Saouli, 2012; Leung, 2012).

In the retail industry, social media allows retail brands to communicate with customers at a relatively low cost and high level of efficiency that cannot be achieved through traditional communication; therefore, to be differentiated from competitors, brands require a well-developed communication strategy, which depends on using online brand communities via social media (Kiralova & Pavlicecka, 2015). Social media also includes forums, ratings, reviews, social networking sites, micro-blogging sites, pod-casts and video-casts and photo sharing sites (Kiralova & Pavlicecka, 2015). Therefore, marketing managers should not ignore the significant role of their online brand communities and the effect of their social media marketing efforts via online brand communities on improving their marketing performance (Kiralova & Pavlicecka, 2015). The Retail industry is known as one of the most dependent on these new social media channels and technological communication tools (Shih, 2011; Kiralova & Pavlicecka, 2015).

Traditional marketing mediums seem obsolete in the dynamic media environment available today; through the traditional media forms, organizations can send their messages to many people, often without receiving any reactions or feedback (Alameddine, 2013). However, social media marketing is different to traditional media marketing as it allows customers to interact in real time, not just with the brand, but also with a community of individuals. Social media marketing via online brand communities can provide interactive, innovative, and dynamic communication with the brand and among customers themselves (Wendlandt, 2012; Alameddine, 2013; Deepa & Deshmukh, 2013). Based on the online presence through social media marketing via online brand communities, many brands have focused on determining if their marketing efforts allocated to social media marketing are successful (Wendlandt, 2012). Thus, many marketing managers have begun to measure effectiveness in terms of success or failure. Consequently, marketing managers looking to calculate the effectiveness of their social media marketing efforts need to find the correct objectives to drive the metrics of social media marketing via online brand communities (Wendlandt, 2012).

Considering the radical changes of globalization and competition, the business environment has changed dramatically during the last few decades. Innovativeness has become a key factor in achievement, competences, and is regarded as the one of the most valuable assets of an organization (Sanayel et al., 2013). Nowadays, the majority of organizations interested in improving their competencies through introducing new products, technologies, and a high response rate to the changes of the customers' demands and preferences, are looking for innovativeness in order to survive and compete in the contemporary business market (Sanayel et al., 2013). Innovation is considered necessary for any company looking to deal with the fierce competition in the marketplace, globalization, and the rapid development of advanced technology.

Moreover, innovation plays an indispensable role in the development of an innovative brand and helps marketing managers in their branding efforts (Tajeddini & Trueman, 2008).

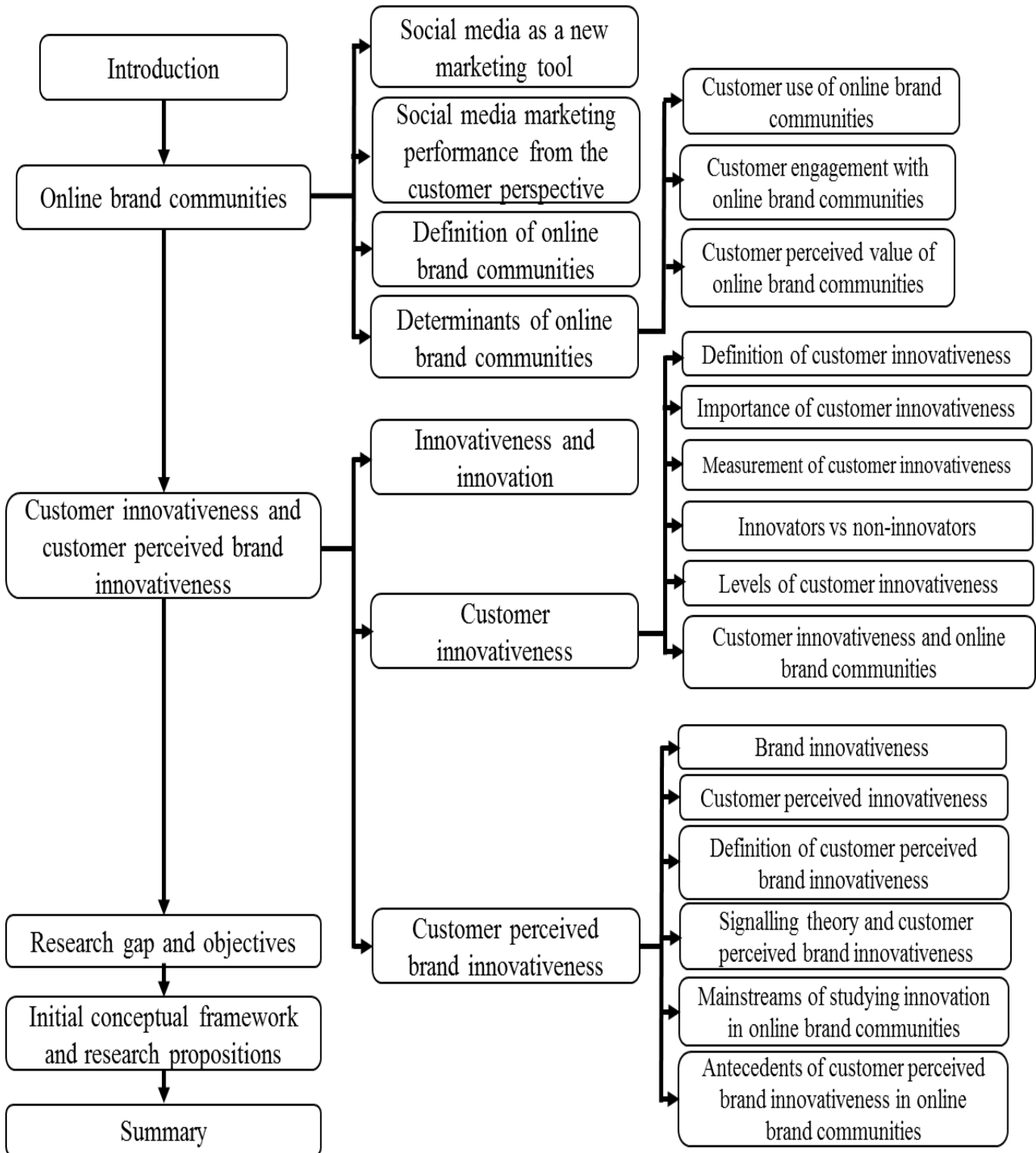
In general, innovativeness is a critical factor of success which relates to introducing rapid development in products or introducing new products to help customers create their own values. Therefore, innovation can improve the products quality and enhance the enterprise image, which ends with improving the customer perception of innovation (Wu & Ho, 2014). However, introducing a new product is not a risk-free strategy; therefore, the pursuit of innovation is not enough to understand the influencing factors on adopting new services or products (Ouellet, 2006). Customer interactions in social media communities can help marketing managers to create and develop their own circles of innovation. It is important to understand customers' behaviour and traits on social media communities to achieve a deeper understanding of the role of customer participation in the online innovation process (Wang et al., 2016). Analysing and measuring customer tendency to change and independency of making innovative decisions are the most critical factors in measuring customer perceived innovativeness (Goswami & Chandra, 2013). Customers not only categorize products as new or not, but also evaluate the degree of innovation or what is called innovativeness (Lowe & Alpert, 2015).

In view of the above, social media facilitates the dynamic interactions within online brand communities, making it possible for customers to interact with their brand and with other customers (Hajli et al., 2016). In addition, online brand communities as an important marketing tool can overcome the limitations of time and space, and develop potential value for both brands and customers (Bao, 2017). Social media online brand communities, as a subset of online brand communities, provide a new way of doing business, providing a novel means of collaboration with customers, which provides a massive volume and variety of information that can create new

possibilities for innovation (Jalonen, 2015). On the one hand, many brands have recognized the more advanced uses of their social media brand communities, including customer's involvement in the innovation process and gaining customers' feedback on their products and offers (Fuller, 2007). On the other hand, the brand's capabilities to innovate is one of the most critical sources of competitive advantage, which strongly influences how innovative the brand and company are (Jalonen, 2015). Accordingly, this study aims to explore and investigate the key antecedents of customer perceived brand innovativeness in the context of online brand communities.

The literature and the theoretical background presented in this chapter is divided into five main sections as presented in Figure 2.1. The first section provides a review of the relevant literature on social media brand communities as a subset of online brand communities, including three main constructs as determinants of online brand communities: customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities. The second section introduces the relevant literature of innovativeness, customer innovativeness, brand innovativeness, customer perceived innovativeness, and customer perceived brand innovativeness. Additionally, this section provides a review of the three common antecedents of customer perceived brand innovativeness in the context of online brand communities. The third section discusses the research gap identified based on the literature review to derive the research questions. The fourth section presents the initial conceptual framework for this study. Finally, this chapter ends with a summary of the literature review. Figure 2.1 presents the structure of this chapter.

Figure 2.1 Structure of chapter two-literature review



2.2 Online brand communities

This section of the thesis presents the literature review on different issues related to online brand communities, including: social media as a new marketing tool, social media marketing performance from the customer perspective, definition of online brand communities, and ends with a detailed discussion of the key determinants of online brand communities.

2.2.1 Social media as a new marketing tool

There are different perspectives on defining social media. Social media can be defined as internet-based applications that are used to facilitate the creation and sharing of information, opinions, and interactions (Littlewood & Bick, 2015; Zolkepli & Kamarulzaman, 2015). Additionally, Mohammadian and Mohammadreza (2012) defined social media as those activities, practices and behaviours of individuals, and online communities, for sharing information and knowledge through social media sites. Gulbahar and Yildirim (2015) referred to social media as internet-oriented applications, which post customer generated content that can be described as media impressions shaped by customers' experiences with easy sharing between other customers, which are archived on the social media channels. Moreover, Evans (2012) referred to social media as the use of web-based and mobile technologies to turn communication into an interactive dialogue. Accordingly, a working definition of social media should include the following elements: firstly, it provides group of internet-based applications that build on the foundations of Web-based; secondly, it offers an array of platforms allowing people to interact, create, share, and exchange information; thirdly, it provides an online tool that allows users to interact; finally, it enables the customer to contribute and create on the internet through shared comments, blogs, images, and videos. Additionally, social media platforms provide a new marketing tool, which create networking, communication and interactive exchange among online users (Pannunzio, 2008).

There are a number of characteristics that differentiate social media interactions from other types of social communication: social media enables multi group communication, including one-to-many or many-to-many; social media content is created by customers; social media is highly accessible (everyone), highly scalable (everyone + everywhere), and real time interactions (everyone + everywhere + every time); moreover, it is entirely public and transparent (Smith, Wollan, & Zhou, 2011). Additionally, Mohammadian and Mohammadreza (2012) and Leung (2012) referred to different types of social media: first type is social networks sites which allow people to build personal web pages, such as Facebook; second one is blogs, which include online journals with entries appearing with the most recent update, for example blogger; third type is wikis such as Wikipedia; fourth type of social media is podcasts, which includes audio and video files, for example iTunes; fifth type is known as content communities such as Flickr and YouTube; last type of social media is micro blogs, which are social media with a limited amount of content such as Twitter.

By comparing the most popular social media in the retail industry, Friedrichsen and Meuhl-Benninghaus (2013) found that Facebook, Twitter, and YouTube are the most commonly used social media, as presented below:

Firstly, Facebook is a social networking site that allows members to connect and communicate with their friends. Facebook also enables the testing of attitudes and opinions of online customers and promotes the company's services or products (Chanthinok et al., 2015). Facebook is the largest global social networking site in terms of the number of users and time spent on the site (Shih, 2011). Most businesses engage with their customers via Facebook through the use of applications, sharing updates, special offers, videos, photos and events (Shih, 2011). Otherwise, Facebook is most applicable to business-to-customer, especially big brand-to-

customers. Strict privacy policies create limited access to people's data, but the companies can use their own Facebook to engage with customers (Shih, 2011). Facebook is the most effective social networking site because it has introduced several features, which include creating a trusted environment, building real relationship and keeping the customer engaged on a continual base (Ramsunder, 2011; Shih, 2011; Chanthinok et al., 2015). Companies in the retail industry can post videos or pictures of the store facilities, staff, and offers. To give potential and existing customers a better idea about what their product is like and what to expect, and what they are going to gain from buying the products (Hackworth & Kunz, 2011).

Secondly, Twitter is a form of micro blogging with limited volumes of content; however, a company can provide enough information in the form of interactive additions to promote its products or services. Users can follow other users they are interested in, receiving updates from them. A tweet has a maximum length of 140 characters (the new trial version of Twitter is 280 characters) and unlike Facebook, most messages on Twitter are public and searchable. Businesses engage with customer via Twitter through Twitter streams, which include sharing updates, special offers, discounts, and answering customer questions. Twitter is suited to news and media companies or brand-to-customer updates (Ramsunder, 2011; Shih, 2011; Doran, 2013; Chanthinok et al., 2015). Accordingly, Twitter may be more effective for timely and immediate condition updates, but it is not the appropriate social platforms for long, heavy content information (Hackworth & Kunz, 2011).

Thirdly, YouTube is a video sharing site that allows firms to share content, make video content, and have followers (Ramsunder, 2011; Chanthinok et al., 2015). Unlike other social media, it relies heavily on uploading pictures, which may be more valuable than a thousand words, or videos that must be more valuable than a million. YouTube visitors watch over 13 billion videos monthly.

Customers can introduce recommendations and subscribe to the company, therefore, companies have an opportunity to improve their product, and improve customer engagement based on their feedback (Hackworth & Kunz, 2011).

Furthermore, there is a clear argument between the previous studies in identifying a specific definition of social media marketing, which could be related to using social media as a marketing tool or using it as a new marketing approach. However, a social media marketing definition should include the following elements: firstly, a group of marketing activities through using social media technology (including social networking, online communities, blogs, wikis etc.); secondly, a philosophy and business strategy designed to engage customers in a co-conversation that is mutually beneficial; thirdly, a process to empower individuals to promote their products or services (Chanthinok et al., 2015). The argument between the previous studies to identify a common definition of social media marketing is presented in Table 2.1.

Table 2.1 Social media marketing definitions

Author (s)	Definitions
Dahnil et al. (2014, p.120)	“Social media marketing is related to “using the social media platforms and its related technologies and features to help achieve marketing objectives in conjunction with other marketing communication tools”.
Leung (2012, p.13)	“Social media marketing is an umbrella term for using social networks, online communities, and any internet forms for marketing purposes”.
Gunelius (2011, p.10)	Social media marketing as "any form of direct or indirect marketing that is used to build awareness, recognition, recall, and action for a brand, business, product, person, or other entity and is carried out using the tools of the social Web, such as blogging, micro blogging, social networking, social bookmarking, and content sharing".

Evans (2010, p. 231)	“A philosophy and a business strategy, supported by a technology platform, business rules, workflow, processes and social characteristics, designed to engage the customer in a collaborative conversation in order to provide mutually beneficial value in a trusted and transparent business environment. It is the company's response to the customer's ownership of the conversation”.
Weinberg (2009, p. 3)	“The process that empowers individuals to promote their websites, products, or services through online social channels and tap into a much larger community that may not have been available via traditional channels”.

With regards to the on-going debate among academics and practitioners about the extent to which social media marketing application is important, it is noted that there are clear differences between such studies. Despite some studies doubting the importance of social media marketing, the majority of literature confirms its importance and there is a growing trend toward increasing the importance of social media marketing via online brand communities, especially during the last few years (Assaf et al., 2012; Doran, 2013). Therefore, many studies agree that social media marketing via online brand communities has become an integral part of marketing strategy. There is a need to integrate social media marketing with traditional media marketing in order to reach both traditional and modern media customers. Moreover, achieving marketing effectiveness has become more dependent on using social media marketing via online brand communities as an integrated part of marketing campaign (Kunz et al., 2011; Assaf et al., 2012; Doran, 2013).

Svatosova (2013) confirmed that the characteristics of modern marketing, which depend on social media marketing, are quite different from those of traditional media marketing. However, without the effective use of social media marketing via online brand communities it will be difficult to achieve marketing effectiveness within a global context. Similarly, Alkhas (2011) referred to social media marketing as an effective tool in terms of cost reduction compared with traditional

media marketing, and this represents a positive indicator for investing in social media and stressing the need for a complementary balance between traditional media marketing and social media marketing. Moreover, Michaelidou, Siamagka, and Christodoulides (2011) stated that the most important implication for using social media marketing is to attract new customers, and the most significant obstacle is the absence of specific measurements that can be used to measure its marketing effectiveness. There is a clear indication that marketing managers intend to increase the size of their social media marketing budgets in the future, in addition to consuming more time and effort in the future in order to improve their social media marketing capabilities.

There are number of benefits from applying social media marketing via online brand communities as an integrated part of a marketing strategy. Friedrichsen and Meuhl-Benninghaus (2013) confirmed that the most significant objectives of using social media marketing are related to building brand recognition, improving online reputation, listening actively to their customers, building brand affinity, increasing sales, improving customer services, and learning from the new medium. Moreover, Bakeman and Hanson (2012) and Jarvinen, Tollinen, Karjaluo, and Jayawardhena (2012) indicated that the application of social media marketing exists predominantly amongst large companies, while small and medium sized companies are slower in applying social media marketing. They found that social media is not appropriately used due to the lack of human resources, knowledge, and experience in relation to maximize the advantages or benefits of this new form of marketing. Therefore, these companies need to update their capabilities.

Additionally, most previous studies have considered that identifying social media marketing objectives is a method to measure the effectiveness of social media marketing via online brand communities. Mohammadian and Mohammadreza (2012) asserted that there are different objectives for using social media marketing, which can be used to measure the effectiveness of

social media marketing via online brand communities, including: build long-term relationships with their customers; increase brand recognition and awareness; share information and adjust negative perceptions; motivate their customers by providing different promotion programs. Many marketing managers believe that social media should be used as a major part of the organization's marketing strategy. Especially since most marketing managers agree that overall marketing costs decrease rapidly with applying social media marketing, therefore most practitioners tend to increase their time and money in applying social media marketing (Wendlandt, 2012).

Social media marketing has made customers more complicated and helped customers to develop their personal way of searching, evaluating, and buying products. It provides a strategic opportunity for marketing managers through the increased opportunities to involve the customer in the development of products. Therefore, marketing managers become open to the idea of building continuous collaboration with customers in creating and developing new products; this process is known as co-creation (Constantinides, 2014). Although social media marketing has not replaced traditional marketing, it has become one of the most important elements of marketing strategy. It has become very important both for customers (as a method to interact) and for marketing managers (as part of their marketing plan). Leung (2012) and Patino and Pitta (2012) observed that social media marketing provides lots of benefits, some of these include: firstly, from the company perspective: creating more opportunities for new business models; making the sales process faster, more accurate, more efficient; interacting with customers in addition to building and sustaining long term relationships with their customers; enabling word-of-mouth communication. Secondly, from the customer perspective: increasing brand awareness through increasing brand visibility; increasing customer engagement; encouraging the acceptance of brand value; differentiating a brand compared to others; improving the perceived brand quality;

providing ongoing values to customers through providing updated information; sharing customers' experiences and opinions; providing unbiased approaches to take advice from experts; sharing information with customers have similar interests.

On the other hand, there are several challenges in applying social media marketing, which relate to measuring the effectiveness of social media marketing. This can be classified into financial measures, such as return on investment (ROI), or nonfinancial measures such as behavioural measures (Leung, 2012). As a result, many organizations are considering their respective investments in social media marketing do not provide the expected returns, because they do not have enough experience in applying social media marketing. They are building higher expectations without knowing the right way to measure the impact on marketing performance, which relates to identifying their success or failure in applying social media marketing campaigns (Wendlandt, 2012). Finally, social media marketing via online brand communities can provide tools for using social media channels to promote the brand and, it contributes to the transfer of customers into marketers, where the customers, through the use of social media brand communities, can like, comment, and share information about the brand via social media brand communities. The customer can create either positive or negative pressure on the brand and its products (Akar & Topcu, 2011).

2.2.2 Social media marketing performance from the customer perspective

Marketing performance has always been used as a significant indicator of marketing success. However, there is controversy between previous studies around identifying the method that can be used to define and measure marketing performance as an outcome of social media marketing and which can be classified into financial or nonfinancial measures. Therefore, identifying the way to measure marketing performance is the most critical issue in defining marketing performance

(Chanthinok et al., 2015). However, social media also creates effective marketing tools, which provide any company with an effective communication to interact with their customers and improve the company's competences (Babac, 2011). Furthermore, cost utilization effectiveness is one of the most important factors in measuring the effectiveness of social media marketing, which refers to minimizing the marketing cost associated with applying social media marketing. Firms can reduce the costs of their marketing activities with their customers. Despite this most companies struggle to move from traditional media marketing towards the more cost-effective expenditures of social media marketing via online brand communities (Chanthinok et al., 2015).

Increasing social media marketing effectiveness via online brand communities is required to make companies consistent with their customers' need to use social media communities. Therefore, the effectiveness of social media marketing can be achieved through aligning marketing managers' efforts with their targeted customers' needs and expectations. However, understanding customers' needs or expectations of using social media communities and their perception of the company's efforts via online brand communities represent key factors in developing an effective social media marketing strategy (Zhu & Chen, 2015). Therefore, most researchers in the field of social media marketing focus on correlating social media measurement with social media objectives. Consequently, most previous studies propose that social media platforms are different from traditional media marketing tools and that the most important thing is to identify the method that firms should use in order to measure their success in implementing or applying a social media marketing program in respect to their customers (Littlewood & Bick, 2015).

Identifying the way to measure the success of the marketing efforts via online brand communities is the next step to applying social media marketing. Thus, defining clear metrics to measure company's performance via online brand communities is essential to identify the degree to which

a marketing campaign is effective (Andzulis et al., 2012). The emergence of social media communities has created great opportunities and challenges for achieving marketing campaigns effectiveness. Marketing managers have included social media marketing within their integrated marketing communications, which contributes to improving the effectiveness of their marketing programmes. Measuring the effectiveness of social media marketing has become one of the most important challenges facing marketing managers in business today, especially in the absence of specific metrics. On the other hand, in light of the variations between traditional and social media marketing a new set of metrics is required (Leung, 2012).

Many previous studies (e.g. Hoffman & Fodor, 2010; Andzulis et al., 2012; Leung, 2012) stated that more than half of marketing managers see that measuring the effectiveness of social media marketing is a major obstacle in the application of social media marketing. They also found that most of the marketing managers do not measure the effectiveness of social media marketing because it is so difficult to do so. Recently, many business organizations have focused on determining which methods are best suited to managing their online presence; if they succeed in recognizing their online presence via Facebook, Instagram, Twitter, LinkedIn, and YouTube, such business organizations need to search for a mechanism to measure their social media marketing performance (Hoffman & Fodor, 2010; Andzulis et al., 2012).

There are many difficulties in measuring the ROI in social media marketing. Therefore, many companies might limit their investment in social media marketing until they feel able to obtain measurements of their investment. Presently, most companies measure the effectiveness of their social media marketing performance via online brand communities through using one or more of the following methods: firstly, financial impact: through measuring the ROI; secondly, commitment metrics: the percentage of customers committed, based on their actions; thirdly,

customer behaviour metrics: following up the changes in the customer's behaviour (Moreno et al., 2016). Additionally, many previous studies have agreed that measuring the effectiveness of social media marketing must include the reactions and responses of the customers as one of the most important variables. Also, studies have unanimously agreed that measuring the effectiveness of social media marketing is more complicated than traditional marketing, due to the human interaction element, which is a part of the ongoing interaction between community members and with the brand (Leung, 2012).

Significant challenges facing business organizations ability to measure the effectiveness of their social media marketing performance. Therefore, to have a better understanding of the way to measure social media marketing performance, there are two main trends: the first reflects the fact that there are specific steps to achieving the effective application of social media marketing via online brand communities. Hensel and Dis (2010) suggested that the effective application of social media marketing requires going through the following phases: identifying the customer, determining the measurements of marketing effectiveness, developing a strategy that takes into account all stakeholders, and considering transparency. The second trend focuses on the metrics used to measure the effectiveness of social media marketing. On this issue, previous studies agree that traditional metrics are not suitable for measuring effectiveness, which relates to using innovative tools regarding the continuous interaction with customers that are not only monodirectional communication in addition to the different environment of social media marketing compared to that of the traditional media marketing (Wendlandt, 2012; Barger & Labrecque, 2013). Therefore, marketing managers have developed different metrics to measure their effectiveness of social media marketing, both financial and non-financial metrics, with the aim of converting non-financial metrics into financial metrics (Hoffman & Fodor, 2010; Andzulis

et al., 2012; Leung, 2012). Friedrichsen and Meuhl-Benninghaus (2013) classified the effectiveness of using social media marketing into three groups: ROI in social media marketing; return on customer (ROC), quantified in terms of greater user affinity for the brand; return on objectives (ROO), defined in advance as the number of followers, responses, tweets, etc. and found that the highest level is ROO followed by ROC then ROI. The most important objective is to improve visibility via social media.

Moreover, Barger and Labrecque (2013) identified three traditional metrics to evaluate the performance of the integrated marketing communications: firstly, directional measures (comprising cognition, knowledge, communication, preference, conviction, and purchase); secondly, behavioural measures (rely on acts carried out by the customer as a response to a marketing campaign); thirdly, financial measures (dependent on the yield (ROI) of marketing communications). Social media marketing includes the three traditional metrics detailed above, but differs in the method of measurement, which can be classified under behavioural measures and financial measures only, and the directional measures are merged with the behavioural measures due to the possibility of considering perception, preference and conviction as indicators reflecting the behaviour of potential customers about the products offered by the company and its brand (Wendlandt, 2012; Barger & Labrecque, 2013).

In addition to behavioural and financial measures, there are further measures such as those measures that are directly related to social media marketing. Barger and Labrecque (2013) state that the time taken between receipt of any inquiry and the company's reply is not included in the three traditional metrics. Considering what has already been stated, the measurements of social media marketing effectiveness can be classified into behavioural and financial measures, plus

measures associated with social media marketing. Moreover, the following literature review will address the controversy between the previous studies around the identification of these measures.

Previous studies have disagreed about the possibility of measuring the returns on investment of social media marketing via social media communities. Mangiuc (2009) observed that it is difficult or perhaps even impossible to measure the ROI of social media marketing due to the equations and the numerous complex models used in measurement. By contrast, many of the previous studies (e.g. Mangiuc, 2009; Hoffman & Fodor, 2010; Gilfoil & Jobs, 2012; Pooja, et al., 2012; Wendlandt, 2012) have referred to the possibility of measuring the returns on investment, with some conditions, if ROI can be defined and accurately measured in a specific manner. Based on their point of view, it is equally important to ignore the traditional method of measuring and focus on comparing the returns on investment that have been achieved for the company in the short-term with the returns on investment that have been achieved for customers and which reflect customer life value. Furthermore, Wendlandt (2012) confirmed that companies that have more than 3-years' experience in using social media marketing have a greater ability to measure its ROI.

To conclude, ROI metrics are mainly associated with financial metrics in addition to non-financial metrics that can be converted into financial metrics and can be expressed in the form of cash. Therefore, ROI is a short-term metric and it is not the only measure of the effectiveness of social media marketing or to justify the company's success in the application of social media marketing via online brand communities. Therefore, consideration about the other measures that reflect marketing effectiveness in the long term must be addressed. However, due to the clear difficulties to measure ROI of social media marketing, this study focuses on the behavioural measures only, those which reflect long-term performance. Behavioural metrics reflect the behavioural attitude of the customer. This study focuses on identifying the most common behavioural determinants in

online brand communities, which measure the customer perception of social media marketing performance of the brand via their social media communities. Social media/online brand communities are new means to conduct companies' social media marketing campaign, which reflects the company efforts via social media. Therefore, the following sections will provide more understanding of online brand communities, including definitions of online brand communities and the main determinants of online brand communities that can be used as indicator of the online brand communities' success from the customer perspective.

2.2.3 Definition of online brand communities

Brand communities create a new means of engagement between brands and customers. Customers have a chance to interact with other customers and with the brand, while brands can use it to engage with their customers through influencing customers' perceptions of the brand. Accordingly, brand communities provide an important platform for customer engagement with the brand (Gummerus, 2012). The concept of brand community refers to a "specialized, non-geographical community, based on structured set of social relations among admirers of the brand" (Muniz and O'Guinn, 2001 p.412). Historically, brand communities started at the beginning with offline communities and one of the common examples is the Harley Davidson community (Cova and Pace, 2006). With the emergence of the internet, many brands created virtual brand communities, this started with discussion forums via web sites; recently, with the penetration of social media platforms, brands have realized the importance of using social media in marketing and initiated their own social media brand communities, becoming an integrated part of their marketing campaign (Chauhan, 2013). However, brand community refers to "a collective of people with a shared interest in a specific brand, creating a subculture around the brand with its own value, myths, hierarchy, rituals and vocabulary" (Cova and Pace, 2006, p.1089).

Originally, social media brand communities started as online brand communities, which refer to communities on the Web. With the emergence of social media platforms in the business environment, social media marketing has become an integrated part of the marketing activities and strategies. Nowadays, online brand communities attract a large proportion of customers and many companies create their own online brand communities (Gummerus, 2012); such as Samsung mobile phone social media communities, which include more than 42 million followers via their Facebook Samsung community. Moreover, online brand communities, from the organizational perspective, provide the following benefits: communication with customers and receiving feedback about their products, build long-term relationship with customers, create a link between the current and potential customers, and facilitate the development of customers' brand commitment and loyalty (Chan, 2014). However, online brand communities engagement depends on ongoing interaction between communities' members, participating in common activities, and a common interest in supporting and enhancing their social media/online brand communities (Algesheimer et al., 2005).

Moreover, there are number of characteristics that differentiate online brand communities from any other brand communities, which: firstly, provide a social presence through visual and physical contact between the customers and the brand; secondly, reduce customer uncertainty around the brands' features and products through increasing the transparency rate via their online brand communities by sharing information (negative or positive) with other members and with the brand; thirdly, provide customers' self-disclosure, which reflects the customers freedom in selecting the method of managing their social interactions via online brand communities (including liking, commenting, sharing, and creating posts), without controls or interruptions of their behaviours (Gummerus, 2012).

2.2.4 Determinants of online brand communities

The current study identifies customer use of online brand communities and customer engagement with online brand communities, in addition to customer perceived value of online brand communities as key determinants of online brand communities, which describe the major behaviours emerging from online brand communities and can be used to measure brands' success or failure via online brand communities. Table 2.2 presents the main determinants of online brand communities that are commonly used in literature.

Table 2.2 Main determinants of online brand communities in literature

Literature of online brand communities	Customer use of online brand communities	Customer engagement with online brand communities	Customer perceived value of online brand communities	Key differences in literature
Muntinga et al. (2011)	√	√		Referred to three main customers' online brand-related activities (COBRAs), which include: consuming (following, reading, viewing content of online brand communities); contributing (rating brand's products and commenting); creating (uploading brand related pictures, videos, and audio).
Wu et al. (2015)	√	√		Identified four different types of customer online brand activities, including: content consumption (reading or viewing the content); content contribution (contribute new information to help others); in addition to the participators who also can be highly involved through community collaboration and community leadership.
Shao (2009)	√	√		Identified three customer online brand-related activities: consuming (called consumer or lurkers, who are consuming content just for information and entertainment but they do not participate or contribute to the brand communities); participating (who are interacting with other members for social interaction and development of communities); producing (self-expression and self-actualization).

Schivinski et al. (2016)	√	√		Identified levels of customer engagement through using the dimensions established by Muntinga et al. (2011) of customer online brand-related activities. Accordingly, three levels of customer engagement have been identified to reflect the three dimensions of (Ibid), which are consuming, contributing, and creating. According, this study referred to customer using/consuming as an initial stage of customer engagement.
Tsai and Men (2012) and Men and Tsai (2013)	√	√		Differentiated between customer use and customer engagement. Referred to customer use (who are following, liking pages of online brand communities, viewing, reading content of the brand communities) accordingly, the customer usage is related to using online brand communities to participate in one way communication to consume the content of the communities, without any participation or engagement with the communities. Alternatively, customer engagement with online brand communities includes contributing to the brand communities through liking, commenting, and sharing posts, in addition to creating content via online brand communities through uploading brand-related pictures, audio, and video.
Brusilovskiy (2016)	√	√		Referred to customer use of online brand communities through the frequency, intensity, and longevity of using online brand communities, In addition to the how and why they are using it and referred to customer engagement as a customer participation to the brand communities and measured it using the customer's number of participations.

Gummerus (2012)		√	√	Identified customer behavioural engagement (using/consuming is a part of the behavioural engagement) as consuming, contributing, and creating content on the brand communities, including: the frequency of brand communities visits, reading content, liking, and commenting.
Zheng et al. (2015)		√	√	Customer engagement identified as customer participations in online brand communities including contribution and creation. Customer perceived value described as perceived benefits of online brand communities.
Dessart (2015)		√	√	Classified customer engagement into three dimensions: affective, cognitive, and behavioural engagement. Referred to customer behavioural engagement as customer participation through sharing, learning, and endorsing.
Reitz (2012)		√	√	Identified three dimensions of customer engagement, which are cognitive, affective, and behavioural engagement. Referred to customer behavioural engagement as participation including contributing and creating content.
Zhang et al. (2016)		√	√	Identified three dimensions of customer engagement with online brand communities, including: conscious participation, enthusiasm, and social interaction. Referred to customer perceived value as a multidimensional conceptualization, which includes three dimensions: functional, social, and hedonic.
Madupu (2006)		√	√	Referred to customer engagement as customer participation with online brand communities through commenting, sharing, and creating posts on the brand communities. Additionally, this study identified four dimensions of customer perceived value, including: functional, psychological, social, and hedonic value.

Kamboj (2016)	√	√	√	Referred to two types of customers participations of online brand communities: active and passive participations. Actively involved members (posters) are motivated to participate in online brand communities though their engagement, doing various activities, such as spreading information, posting messages, and assessing other members. Otherwise, passive members (lurkers or free riders) are only consuming the content of the brand communities instead of contributing to the activities of the communities. Furthermore, this study referred to customer perceived value as perceived benefits and costs of online brand communities.
Wang (2013)		√	√	Referred to customer engagement as customer participation with online brand communities. Customer perceived value has been measured using four dimensions: cognitive value, social- integrative value, personal-integrative value, and affective value.
Amaro et al. (2016)	√	√	√	Referred to customer use as consuming (inactive engaged customers). Customer engagement is related to the active customers who participate in the brand communities through contributing and/or creating content. Referred to customer perceived value as perceived enjoyment.
Vries and Carlson (2014)	√	√	√	Referred to customer use as usage intensity, and customer engagement as customer participation to the brand communities (active members) through liking, commenting, and sharing content. Classified customer perceived value into four main dimensions: functional, hedonic, social, and co-creation value.

As shown in Table 2.2, many of the prior studies (e.g. Shao, 2009; Muntinga et al., 2011; Schivinski et al., 2016) focused on customer online brand-related activities (COBRA), including consuming, contributing, and creating content, as key determinants of online brand communities, which have been used to measure brand's success or failure of their social media marketing efforts via online brand communities. Otherwise, a very few studies (e.g. Wu et al., 2015) classified these customers' online activities into four activities, including: community consumption, community contribution, community collaboration, and community leadership. However, considering the literature on online brand communities, the mainstream of the literature referred to three key customer online brand related activities. Muntinga et al. (2011) developed a COBRA typology, standing for consumers' online brand related activities (including consuming, contributing, and creating content on online brand communities). They used unstructured interviewing to explore the key motivations for brand-related social media uses that influence different COBRA-levels. The results revealed that the consuming COBRA type is driven by three motives, including: information, entertainment, and remuneration. Additionally, the contributing COBRA type is driven by personal identity, integration and social interaction, and entertainment. Moreover, the creating COBRA type is driven by personal identity, integration and social interaction, empowerment, and entertainment. Similarly, Shao (2009) presented an analytical theoretical framework for explaining the appeal of User-Generated Media (UGM) such as YouTube, MySpace, and Wikipedia. The findings revealed that customers consume content to fulfil their information, entertainment, and mood management needs; they participate through interacting with the content and with other customers to enhance their social connections; they also produce their own content to achieve self-expression.

Some literature referred to the three key activities of COBRA as three key levels of customer engagement. For example, Schivinski et al. (2016) developed a scale to measure consumers' engagement with brand related social media content based on the model of consumer online brand-related activities (COBRAs) of Muntinga et al. (2011). Schivinski et al. (2016) used a qualitative technique to generate a new instrument that measures the three levels of consumer engagement, including consumption, contribution, and creation of brand-related social media content. Moreover, a quantitative study was conducted by Schivinski et al. (2016) using a survey to test and validate the new scale/instrument. The findings also revealed that consuming content (reading and watching brand posts) has a significant effect on contributing to the content (liking, commenting, and sharing brand content) and that contributing to content has a strong influence on creating content (uploading new content, such as uploading images or videos on the brand communities). Moreover, the findings showed a significant full mediating effect of contributing to content on the relationship between consuming content and creating content.

Otherwise, some previous studies (e.g. Tsai & Men, 2012; Amaro, 2016; Kamboj, 2016) classified the three key activities of COBRA, regarding the nature of these activities, into passive and active online brand related activities. Firstly, they referred to customer use/consumption of online brand communities (lurkers or observers) as passive customer online brand-related activities, such as following/joining social media of the brand, reading or viewing content, without any interaction with the brand communities. Secondly, they referred to customer engagement with online brand communities as active participation activities (active participants or posters) in online brand communities, including contributing (through liking, commenting, and sharing content) and creating content (through uploading picture or video to create new content) on the brand communities. For illustration, Tsai and Men (2012) aimed to explore the motivations and

antecedents that drive customer engagement with online brand communities, based on the COBRA model of Muntinga et al. (2011). Through using an online survey, the results revealed that there is a clear difference between consumption activities as passive activities and contribution activities as active participation activities, in addition to referring to functional value and entertainment value as key outcomes of customer use of social media brand communities. Regarding the influence of the key motivations on customer consumption and contribution, the findings revealed that two of the key motivations, which are users' social media dependency and community identification, have larger effect on customer contribution than consumption, and that users' para-social interaction as one of the key motivations has a larger effect on customer consumption than contribution. Moreover, regarding this differentiation between consumption and contribution, customers' age and daily time spent on social media have significant influence on contribution activities and have no significant influence on consumption activities. Additionally, Brusilovskiy (2016) distinguished between customer use and customer engagement (referred to customer engagement as customer participation), and examined the effect of customer use of social media brand communities on customer community participation. Brusilovskiy (2016) study results showed a significant influence of usage frequency, intensity, and longevity on customer community participation.

In this context, many previous studies referred to the significant role of customer perceived value as a major behaviour emerging from online brand communities and correlated it to customer use and customer engagement of online brand communities (Kamboj, 2016; Amaro et al., 2016; Vries and Carlson, 2014). Some of the previous studies examined customer perceived value of online brand communities as an antecedent of customer use and customer engagement of online brand communities (e.g. Vries and Carlson, 2014; Dessart et al., 2015; Zheng et al., 2015; Kamboj,

2016). Kamboj (2016) discriminated between passive customers and active customers, considering customer perceived benefits as an antecedent of active participants. Kamboj (2016) differentiated between two types of members of online brand communities: active members, who are motivated to participate in online brand communities through their engagement; and passive members, who only reap the benefits of online brand communities and are known as “lurkers” or “free riders”. The findings revealed that customer perceived benefits have a positive influence on active customer participation in online brand communities. In the same vein, Vries and Carlson (2014) examined the drivers and brand performance implications of customer engagement with online brand communities. Their findings revealed that whilst there is a positive significant influence of functional value and hedonic value on usage intensity, social value and co-creation value have no significant influence on usage intensity. Additionally, usage intensity has a positive influence on customer engagement with online brand communities. Moreover, whilst social value and co-creation value have no significant effect on usage intensity, they have significant effect on customer engagement.

Other studies referred to customer perceived value as an outcome of customer use and customer engagement of online brand communities (e.g. Amaro, 2016; Gummerus, 2016; Zhang, 2016). Amaro et al. (2016) differentiated between customer use as passive activities (consuming the content of online brand communities) and customer engagement as active participation activities (including contribution and creation to the content of online brand communities). The results showed the positive impact of consumption (i.e. the extent to which individuals use social media for brand related information through reading reviews and searching for brand related information) and creation (i.e. the participation in brand related social media by writing reviews as contribution and posting photos as creation) on perceived enjoyment (i.e. the extent to which using social media

of the brand is perceived to be entertaining and fun). Furthermore, Gummerus (2012) examined the influence of customer engagement behaviours on perceived relationship benefits and relationship outcomes. Through an online survey, the findings revealed significant influence of customer engagement behaviours on all of the perceived values of online brand communities (including social, entertainment and economic benefits). Zhang et al. (2016) examined the direct influence of customer engagement with online brand communities on customer perceived value of online brand communities. Through identifying three main dimensions of customer engagement (conscious participation, enthusiasm, and social interaction), and three main dimensions of customer perceived value (functional, hedonic, and social value), the quantitative findings revealed that all of the three dimensions of customer engagement have a positive impact on all of the three dimensions of customer perceived value, except the relationship between social interaction and functional value, and the relationship between social interaction and social value.

To conclude, the majority of the previous studies on online brand communities (e.g. Laroche et al., 2012; Tsai & Men, 2012; Amaro, 2016; Kamboj & Rahman, 2016) distinguished between customer use of online brand communities (as passive activities) and customer engagement with online brand communities (as active participation activities), and referred to them as key activities of customers' online brand-related activities (COBRA). Additionally, they (e.g. Amaro, 2016; Gummerus, 2016; Zhang, 2016) confirmed the significant role of customer perceived value of online brand communities as a major behaviour emerging from online brand communities, and as a key outcome of customer use and customer engagement of online brand communities. However, considering the nature of customer online brand-related activities, which can be divided into active and passive activities, the current study differentiates between customer use (passive participation activities) and customer engagement (active participation activities), and refers to them as key

determinants of online brand communities. Additionally, regarding the significant role of customer perceived value as a major behaviour emerging from online brand communities and as a key outcome of customer use and customer engagement, the current study also focuses on customer perceived value as a key determinant of online brand communities. Accordingly, this study focuses on customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities, as core determinants of online brand communities that describe the majority of the behaviour within online brand communities. The following section will provide more discussion of these key determinants of online brand communities, as presented below:

2.2.4.1 Customer use of online brand communities

Many previous studies on online brand communities have classified customers' online brand-related activities (COBRA) into three main activities: these are consumption (lurking or observing online brand communities); contribution (liking, commenting, and sharing brand posts); and creation (uploading picture via online brand communities) (Muntinga et al., 2011; Schivinski, et al., 2016; Shao, 2009). Customer use of online brand communities refers to the consumption of the content of online brand communities: when the customers see images or videos and read posts about the brand via online brand communities, they are consuming brand related social media (Tsai & Men, 2012; Amaro, 2016). Customer engagement with online brand communities includes liking, commenting, and sharing brand related posts, where the customer is moving from an observer to a content contributor (Schivinski, et al., 2016). Most customers consume more than they contribute to an online brand communities, for example as Nielsen (2009) indicated, more than half of the active members via social media/online communities are following their brands rather than liking and/or commenting and/or sharing their brand's posts. Additionally, as

Schivinski, et al. (2016) indicated not all engaged customers create content within the online brand communities.

Bolton, et al. (2013) classified customers' online activities into six main categories; contributing, sharing, consuming, searching, participating, and playing, in addition to the frequency and duration of using online brand communities as the main indicators of the usage intensity of online brand communities. Moreover, Brusilovskiy et al. (2016) considered the relationship between using social media brand communities and the individual community participation in order to identify to which degree using social media communities which reflects the frequency, intensity, and longevity of social media use, is associated with these individuals' community participation or engagement; and the results revealed that using social media brand communities is positively associated with community participation on online brand communities. Likewise, Blake (2007) referred to the significant role of identifying a range of their customers visits on their social media platforms; therefore, the key question is how often do customers visit social media brand communities (regularly or rarely) to collect and know more information about the new offers and products, which might help in making a purchase decision.

Furthermore, Tsai and Men (2012) focused on the three activities of customer online brand-related activities, they differentiated between customer use and customer engagement by classifying these customer's online activities into two main categories, which are: firstly, consuming online brand communities' contents by using the content of online brand communities through watching and reading brand posts; secondly, participating to their online brand communities by contributing and creating content on their online brand communities through liking, commenting, sharing, and creating posts. Similarly, a recent study by Amaro et al. (2016), differentiated between customer use and customer engagement by classifying customers' online brand-related activities into two

main groups, which are consumption and creation, and the study results showed the positive impact of consumption (i.e. the extent to which individuals use social media for brand related information through reading reviews and searching for brand related information) and creation (i.e. the participation in brand related social media by writing reviews as contribution and posting photos as creation) on perceived enjoyment (i.e. the extent to which using social media of the brand is perceived to be entertaining and fun) and social media involvement (i.e. the overall interest in travel-related social media). Additionally, Amaro et al. (2016) found that based on these two main customers' online activities (consumption and creation), there are five groups of customers which are: inactive customers (22% of the travellers hardly use social media for travel purposes); occasional consumption (22% of travellers occasionally use social media for travel purposes); occasional creation (20% percent of the travellers create content); consuming and hardly creating (21% of the travellers use social media very often and creating content sometimes); and fully engaged customers (15% of the travellers consuming and creating social media posts regularly). The main finding of this study showed that fully engaged social media customers, occasional customers and creators are perceiving a higher level of enjoyment when using social media communities for traveling purposes and are more involved with social media.

Moreover, a few studies (e.g. Tsai & Men, 2012; Amaro, 2016) examined the direct relationship between customer use online brand communities as passive online brand-related activities and customer perceived value of online brand communities. Amaro (2016) confirmed the positive relationship between customer use of online brand communities and the emotional value (perceived enjoyment value) and added that higher levels of consumption and engagement (participation and creation) reflected higher levels of enjoyment (emotional value); this indicates that social media communities consumption and participation are not only correlated to gaining

more information (functional value) but also related to having hedonic benefits (emotional value) of being a member of their social media/online brand communities. Likewise, Tsai and Men (2012) indicated that customers use online brand communities to search for discounts or information about brands as well as to exchange information with other members (Functional Value) or to have fun and seek leisure (Emotional Value); therefore, they are motivated by utilitarian reasons, rather than gaining more social support or voicing their opinions (Social Value). However, exploring the relationship between customer use of online brand communities and customer perceived value of online brand communities still presents a gap in literature and requires more research to explore and identify this relationship.

To conclude, this research focuses only on customer use of online brand communities, which reflects the consumption of social media, and customer behavioural engagement with online brand communities, which reflects community participation including contribution (liking, commenting, and sharing brand related posts) and creation (uploading pictures, audio, and video), as part of customers' online brand-related activities. However, based on Amaro et al. (2016), creating content is a part of the customer participation and reflects higher levels of engagement with online brand communities. Moreover, customer use of online brand communities refers to consuming online brand community content through following or joining the page of the brand on social media platforms (such as liking the Facebook page of Samsung brand communities, which mean following the brand via online brand communities), viewing images or videos, and reading post related to the brand via online brand communities. Whilst, customer behavioural engagement means liking, commenting, and sharing brand posts. However, this study is not only focused on differentiating between customer use and customer engagement, but also it focuses on exploring

and identifying the different influence of customer use and customer engagement on customer perceived value of online brand communities.

2.2.4.2 Customer engagement with online brand communities

2.2.4.2.1 Definition of customer engagement with online brand communities

Customer engagement is information sharing and credibility building by delivering unique content through the various social media platforms, which can lead to an increase in the number of users added to a company's circle of influence (Alameddine, 2013). Customer engagement depends on making the customer feel like a major part of the organization. However, it is not enough for any company to have traditional communication tools such as call centres or instant messages to give feedback to their customers, customers need personalized and interactive communication with personalized services. Nowadays, social media communication tools have shown to be the most effective communication method and building customer engagement with online brand communities requires achieving the following: personalization through making the customer feel special; exclusivity through providing the engaged customers with exclusive offers; use social media to increase customer engagement (Moreno et al., 2016).

Despite the importance of using social media in building customer engagement, our understanding of customer engagement with social media brand communities is limited and needs further research, which can help to shed light on the special nature of social media in the retail industry. Many of the previous studies (e.g. Hoffman & Fodor, 2010; Cox, 2012; Alameddine, 2013; Barger & Labrecque, 2013) referred to customer engagement as one of the most important behavioural metrics available to measure effectiveness of social media marketing from the customer perspective. Thus, social media marketing mainly contributes to the improvement of customer engagement with online brand communities. Kumar and Mirchandani (2012) found that one of the

most significant results of applying a social media marketing campaign is through an increase in their customer's engagement patterns.

Before defining customer engagement with social media brand communities, it is very important to differentiate between customer engagement with a brand, customer engagement with brand communities, customer engagement with social media, and customer engagement with social media/online brand communities. Firstly, customer brand engagement refers to "...a consumer's positive valence brand-related cognitive, emotional, and behavioural activity during or related to focal consumer/brand interactions" (Hollebeek et al., 2014, p 154). Secondly, customer brand community engagement refers to "...the positive influence of identifying with the brand community through the customer's intrinsic motivation to interact\cooperate with community members" (Algesheimer et al., 2005, p 21). Thirdly, customer social media communities engagement refers to "...the level of customer's physical, cognitive, and emotional presence in connections with a particular online social platform" (Cheung et al., 2011, p 3). Fourthly, customer engagement with online brand communities refers to "...a customer's active participation in brand related events and his\her interactions with other members of online brand communities (Madupu, 2006, p 31). Finally, customer engagement with social media brand communities, as previously stated that the combination of social media and brand community leads to a concept called social media brand communities, which is a subset of online brand communities, the main differences between both of them are their platforms and the core platform of social media is Web 2.0 plus. Accordingly, this research refers to social media brand communities as online brand communities and defines customer engagement with social media/online brand communities as customers' active participation and interaction reflect their cognitive, emotional, social, and behavioural activities in their online brand communities.

So far, based on the researcher's knowledge, customer engagement with online brand communities seems to be undergoing a shift, which is related to the dynamic nature of social media, which is not only changing the engagement but changes the source of engagement (Geissinger & laurell, 2016). The increased importance of online brand communities created a need to attract customers to be more engaged with their online brand communities in the form of more liking, commenting, and sharing brand posts. However, not all customer are engaged in the same way, sometimes lurking is more important than commenting, which mean that via social media brand communities, there are different patterns of customers behaviours or activities (Gummerus, 2012). Additionally, Geissinger and Laurell (2016) revealed that the degree of engagement with online brand communities varies between the different forms of social media: customers use micro blogs more frequently, followed by blogs and social media platforms and customer are more engaged with micro blogs because of the low entry barriers compared other platforms. Furthermore, Muniz and O'Guinn (2001) confirmed that customer engagement in the online context can take different forms, commenting, blogging, and customer ratings. Additionally, customer engagement in social media could differ from one social media platform to another based on the features of each platform, for example in Facebook, customer engagement can be measured through the number of likes and comments. In terms of virtual brand communities, customer engagement depends on individuals' engagement with specific brands, which differs based on the context and the level of intensity of engagement (Geissinger & laurell, 2016).

Additionally, many previous studies have tried to identify the key motives behind customer engagement in online brand communities. Hennig-Thurau, Gwinner, Walsh, and Gremler (2004) identified five motivational categories of customer participation in online brand communities, which are: focus related utilities such as concern of other customers; consumption utility such as

post-purchase advice; approval utility such as self-enhancement; moderate-related utility such as problem solving; and homeostasis utility such as expressing positive feeling. Moreover, Sun et al. (2006) proposed a model to explore customer participation in online brand communities and found that innovativeness, internet usage, and internet social connection are significant factors in customer engagement in online brand communities.

2.2.4.2.2 Dimensions of customer engagement with online brand communities

A great number of studies in online brand communities referred to customer engagement with online brand communities as a multidimensional conceptualization. Dessart et al. (2015) identified three main dimensions of customer engagement with online brand communities, which are: affective, cognitive, and behavioural. Gummerus et al. (2012) contended that customer engagement with online brand communities includes three main dimensions, which are affective (includes enthusiasm and enjoyment), cognitive (includes attention and absorption), and behavioural (includes sharing, learning, and endorsing). Moreover, Cheung et al. (2011) classified customer engagement with online brand communities into three dimensions, which are: Vigour, dedication, and absorption. A recent study concluded that customer engagement with online brand communities is a multidimensional construct and consists of five dimensions: Identification, enthusiasm, attention, absorption, and interaction (Harrigan et al., 2017). This study adapted the proposed dimensions of customer engagement with online brand communities proposed by Zhang et al. (2016), which include three main dimensions: conscious participation, enthusiasm, social interaction, in addition to customer behavioural engagement. Most researchers confirmed that customer behavioural engagement remains strong indicator of customer engagement with online brand communities (Gummerus et al., 2012; Vries & Carlson, 2014; Dessart et al., 2015; Harrigan et al., 2017). Thus, this study focuses on four dimensions (conscious participation, enthusiasm,

social interaction participation, and customer behavioural engagement) that reflect the common three dimensions in literature (affective, cognitive, and behavioural) with the addition of social interaction developed by Zhang et al. (2016).

The first dimension of customer engagement with online brand communities is conscious participation, which reflects the customers' intentional participation in the activities of online brand communities; therefore, customers have some cognitive interaction with the engagement activities. However, Zheng et al. (2015) referred to conscious participation as cognitive activities of customers to be engaged with the community. Moreover, Dessart et al. (2015, p 35) defined conscious participations as "...a set of enduring and active mental states that a customer experiences with respect to a focal object of his/her engagement". Secondly, enthusiasm as a part of the emotional orientation of the customer, refers to the degree of excitement and interest that a customer has in the brand community, which reflects the customers' participation with intense excitement or passion (Dessart et al., 2015; Zheng et al., 2015; Harrigan et al., 2017). Thirdly, social interaction, a very few studies in online brand communities engagement are used social interaction as a key indicator of customer engagement with online brand communities, but based on the research study of Zheng et al. (2015), social interactions is a key indicator of customer engagement with online brand communities, which refers to "the communication and interaction of opinions, ideas, and feelings among customers\members of social media brand community" (Zheng et al., 2015, p 4). Finally, customer behavioural engagement is one of the dimensions of customer engagement with online brand communities, which refers to the behavioural manifestations toward an engagement focus, beyond purchase, which results from motivational drivers (Dessart et al., 2015), and reflects the customer behavioural intentions to be more engaged with online brand communities in the future through more liking, commenting, sharing, and

creating brand posts (Vries & Carlson, 2014). Most of the researchers confirmed that customer behavioural engagement remains a strong indicator of customer engagement with online brand communities (Vries & Carlson, 2014; Dessart et al., 2015; Harrigan et al., 2017).

To conclude, customer engagement is a multidimensional conceptualization, which includes sub-dimensions, which are conscious participation, enthusiasm participation, social interaction, and customer behavioural engagement. Customer behavioural engagement in online brand communities reflects both customer contribution (e.g. liking, commenting, and sharing brand posts) and creation (e.g. uploading picture or video on online brand communities), and it is related to active members who are motivated to participate in online brand communities (Kamboj & Rahman, 2016).

2.2.4.3 Customer perceived value of online brand communities

The backbone of all marketing decisions is customer perceived value. Studying customer perceived value still complex and needs more attention from the researchers (Chang & Wang, 2011). Many of the previous studies depend on comparing the perceived benefit with the cost experienced when using the products. While, customer value might be classified into functional, social, epistemic, and emotional value (Dovaliene, Masiulyte, & Piligrimiene, 2015), and is related to the equity theory, which compares the benefits that customers receive and the costs that customers incur to use the products. However, customer perceived value can be defined as the customer's overall assessments of the utility of a product depending on his/her own perception of what are the benefits and what are the sacrifices (Chang & Wang, 2011). The term perceived value of online brand communities includes three main categories: firstly, perceived value related to what customers gain and sacrifice of their online brand communities, secondly, perceived value

linked to the use of online brand communities, and thirdly, perceived value as subjective perception rather than objective one (Chen & Hu, 2010).

Customer perceived value is defined as the customer's overall assessment of the product utility based on what is received and what is given (Dodds, Monroe, & Grewal, 1991). Moreover, customer perceived value of online brand communities refers to the benefits that members can gain from online brand communities compared to what online brand communities can provide, which reflect mutual benefits between the brand communities and the communities' members (Chan et al. 2014). Furthermore, from an organizational perspective, a number of the previous studies confirm the importance of customer perceived value as a significant outcome of using social media brand communities. Andzulis, et al. (2012) referred to customer perceived value as one of the most important metrics to measure the success or failure in conducting a brand's social media marketing campaign. Yang et al. (2014) examined the impact of customer perceived value on customers interaction behaviour via social media to identify the different kinds of value that the customers can perceive from social media and found that customer behaviours via social media has a positive effect on customer perceived value. Chen and Lin (2015) studied the impact of customer experience from using social media on customer perceived value and found that customer experience from using social media positively influences customer perceived value. Otherwise, in terms of the relationship between customer perceived value and customer use of social media/online brand communities (from the customer perspective), there are a very few researchers who focused on studying the influence of customer use of online brand communities on customer perceived value (e.g. Tsai & Men, 2012; Amaro et al., 2016).

Few researchers have studied customer perceived value as an antecedent of customer engagement. Shi et al. (2016) studied the relationship between customer perceived value and customer intention

to engage in continued interaction with online brand communities and identified multidimensional conceptualization of customer perceived value, which are functional value, emotional value, and social value. The results of Shi et al.'s (2016) study revealed that all dimensions of customer perceived value have a positive impact on customer engagement with social media brand communities. Otherwise, most researchers studied customer perceived value as a consequence of customer engagement with online brand communities such as Zhang et al. (2016) who examined the impact of customer engagement with online brand communities on customer perceived value of online brand communities. Zhang et al. (2016) identified three main dimensions of customer engagement (conscious participation, enthusiasm, and social interaction), and identified three main dimensions of customer perceived value (functional, hedonic, and social value) and found that all of the three dimensions of customer engagement have a positive impact on all of the three dimensions of customer perceived value except the relationship between social interaction and functional value, and the relationship between social interaction and social value. Additionally, Gummerus et al. (2012) studied customer perceived benefits (that has been classified into three dimensions: social, entertainment, and economic perceived benefits) as the outcome of customer engagement with online brand communities and found that customer engagement largely influenced the three perceived benefits of online brand communities.

Many previous studies (e.g. Kim and Ko, 2012; Carlson et al., 2015; Shi et al., 2016; Zhang et al., 2016) identified three main dimensions of customer perceived value of online brand community: functional, emotional, and social value. They referred to functional perceived value as a key determinant to measure customer-perceived value. Functional value defined as customer's gaining useful information about the brand via online brand communities (Shi et al., 2016). Moreover, many of the previous studies (e.g. Sheth et al., 1991; Sweeney and Soutar, 2001; Yang et al., 2014; Chen

& Lin, 2015; Shi et al., 2016; Zhang et al., 2016) referred to social value as an important determinant to measure customer perceived value. Social value has been defined as customers' social interaction experiences with the brand and with the other customers in online brand communities (Shi et al., 2016). However, social value is related to the degree to which online brand communities connect customers with other members of the community (Chen & Lin, 2015). Meanwhile, many previous studies (e.g. Sheth et al., 1991; Sweeney & Soutar, 2001; Yang et al., 2014; Carlson et al., 2015; Chen & Lin, 2015; Shi et al., 2016; Zhang et al., 2016) ascertained that emotional value is a significant determinant in measuring customer perceived value, and defined it as customer's affective response that occurs during the consumption experience, such as those within online brand communities (Carlson et al., 2015). However, emotional value is related to the degree to which using online brand communities' releases customers' affections towards brand community; it also refers to the fun and the enjoyment the customer experiences when engaging with online brand community (Carlson et al., 2015; Chen & Lin, 2015; Shi et al., 2016).

To conclude, customer perceived value of online brand communities is a multidimensional conceptualization, includes three main dimensions: functional value, social value, and emotional value. It is one of the key determinants of online brand communities and represent a key outcome of customer use of online brand communities and customer engagement with online brand communities. Accordingly, the current study focuses on three main determinants of online brand communities (customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities). The following section of this chapter provides discussion of the related-literature of customer perceived brand innovativeness and customer innovativeness.

2.3 Customer innovativeness and customer perceived brand innovativeness

This section of the thesis starts by presenting the differences between innovativeness and innovation, followed by a review of current thinking about customer innovativeness, and ends with discussing related issues around customer perceived brand innovativeness.

2.3.1 Innovativeness and innovation

Literature has differentiated between innovation and innovativeness. Innovation has been defined as an idea, practices, or object that is perceived as new by an individual or other unit (Rogers 1995). Innovativeness can be defined as the readiness to adopt particular innovations (Rogers & Shoemaker, 1971). Innovation is a process to create new products, services, procedures, and new methods to create value. Innovation is not only related to technology but it has a positive influence on the company's growth; for example, innovation might be related to introducing new products, new services, new methods, new market developments, new supply resources, and/or new organizational methods (Wu & Ho, 2014).

Based on reviewing the literature in the field of marketing innovation, there are two main issues related to the innovation process. The first issue is the relationship between innovation and invention, there is no way to transfer invention into innovation without processing it into marketing or production activities and pushing it into the marketplace. Therefore, the innovation process is always dependent on adoption and diffusion processes which is linked to the market introduction of that invention to the end-user (Chen, 2010). There are different types of innovativeness, which correspond to different definitions. Previous studies from the organization perspective define innovativeness as new products, new production methods, new markets, new sources for supply, and new ways to manage business. Therefore, whilst organization innovativeness refers to the

organizational tendency towards innovation, customer innovativeness refers to the customers' tendency towards newness and novelty (Sanayel et al., 2013).

Innovativeness can be demonstrated as a way of newness seeking that encourages the individual to look for new information (Goswami & Chandra, 2013). Rogers and Shoemaker (1971) defined innovativeness as the degree to which an individual is earlier than other members in adopting an innovation in his/her community. Midgley and Dowling (1978) referred to innovativeness as the degree to which an individual makes his/her innovative decisions independently of the communicated experience of others. Innovativeness as a concept is related to the new product adoption process which is reflected on the individual level of adopting new products and ideas and take innovative decision independently of the experiences related to other individual (Aldas-Manzano et al., 2009). There are five perceived characteristics which influence the adoption of innovation: time before adoption, the degree of observing the results of innovation adoption, the degree of complexity of innovation, the degree of consistent innovation process between the innovation and the post experiences, the degree of benefits which reflects that its better than the last one (Rogers, 2003).

In a marketing context, innovativeness reflects three different key streams: firstly, customer innovativeness or the customer's tendency to buy new products; secondly, firm innovativeness or the firm's capabilities to develop and launch new products; thirdly, product innovativeness which reflects the product relevant level of newness over a wide range of changes of the product innovations or refers to the degree of newness of a product (Chen, 2010; Goswami & Chandra, 2013). Otherwise, innovativeness is frequently used to measure the degree of newness of innovation and is used to measure the degree of discontinuity in marketing factors. Furthermore, there are two levels to explore any innovation issue: the macro-perspective of innovativeness

which refers to the firm capabilities to create a paradigm shift in science or academic research and a micro-perspective, innovativeness related to the capability of an innovation to affect a firm's existing resources, knowledge, capabilities, and strategy (Chen, 2010).

2.3.2 Customer innovativeness

2.3.2.1 Definition of customer innovativeness

Previous studies have researched customer innovativeness at the beginning as an innate or general innovativeness; it was more abstract level than realized or domain specific innovation. However, based on reviewing the previous studies, there is no specific definition of customer innovativeness.

Table 2.3 introduces the different definitions of customer innovativeness.

Table 2.3 Definitions of customer innovativeness in literature

Author	Definition
Rogers and Shoemaker (1971, p. 27)	"The degree to which an individual is relatively earlier in adopting new ideas than the average member of their social system".
Midgley and Dowling (1978)	The tendency to buy new products more often and more quickly than other people.
Cotte and Wood (2004)	The tendency to willingly embrace changes and try new things.
Steenkamp and Hofstede (1999, p. 56)	"The predisposition to buy new and different products and brands rather than remain with previous choices and consumption patterns".
Roehrich (2004, p. 672)	"The perspective of consumption of newness and to buy new product more often and quickly than other people".
Goldsmith and Hofacker (1991, p. 207)	"The tendency to learn about and adopt innovations within a specific domain of interest".

As presented in Table 2.3, previous studies have shown different streams in defining customer innovativeness. Despite the agreement between the previous studies on some issues related to the newness and the earlier adoption of new ideas, there are still disagreements about three key issues,

which are social context, independency in innovation decisions, and the risk aversion. While, Manning, Bearden, and Madden (1995) defined customer innovativeness considering two main issues, which are the customer independency in making innovative decision and customer's newness seeking. However, customer independency (the degree of self-direction) has been defined as to what degree an individual is independent from others in his/her social system in making his/her own innovative decisions. Customer novelty or newness refers to the degree of seeking out new product information (Chen, 2014). Otherwise, customer innovativeness is attitudinal and behavioural in nature, which relates to the newness attraction and how quickly a customer is willing to adopt the new products or services (Ngoc, 2009).

There are four forces related to customer innovativeness, which are stimulation needs, novelty or newness seeking, independency in innovative decisions, and uniqueness needs (Goswami & Chandra, 2013). The most important implication of customer innovativeness is that customer can transfer the new information that related to new product or services to potential customers (Xie, 2008). However, there are several researchers who have started studying customer innovativeness is a way to measure the diffusion of innovation. Therefore, customer innovativeness is not related to the early purchase of new products but it is related to the willingness to be attracted to the new products or to be very close to the new products (Maden & Koker, 2013).

Customer innovativeness refers to the degree to which an individual is the first in adopting an innovation and buy new products more often and more quickly than others (Jaiyeoba & Opeda, 2013). While, novelty seeking is related to an innate/general innovativeness, which makes the customers looking for information about the new products, services, ideas. Thus, searching for

newness or novelty is related to two different aspects of searching for new information and changing the current brand to find different alternatives (Dobre et al., 2009).

In conclusion, there are two main approaches to defining customer innovativeness: firstly, behavioural approach: customer innovativeness relates to the degree to which an individual is adopting a new idea before other people, or the tendency towards newness, and social system. Secondly, personal traits approach: customer innovativeness refers to the degree to which the individual adopts the new products depending on him/herself, which includes independency of innovativeness decision, and risk aversion. Thus, it is related to the innovator traits and characteristics (Chao, Reid, & Mavondo, 2012; Sanayel et al., 2013).

2.3.2.2 Importance of customer innovativeness

Customers with a high level of innovativeness are characterized by a high tendency to change their own concepts and ideas into new one; an ability to direct the others to adopt new ideas or concepts; they are capable of helping others to solve their problems and making innovative decisions; they are quicker in their adoption to the new thoughts and concepts; they have enough information about the new products and provide other customers with information of the new services or products; finally, their opinion is always accepted by other customers and always influence their attitudes toward the new products (Ho & Wu, 2011). Customer innovativeness is a key indicator of the innovation success, which introduces the innovation to the community or the social system (Maden & Koker, 2013). However, customer innovativeness can not only provide economical value, but it can spread innovativeness to other parties beyond the discoverers and provide different types of value. The innovation process is repetitive and continuous; innovation adoption predominantly depends on the customer characteristics (Chen, 2010).

Most of the customers try new ideas or products depending on their personal past experiences over the course of their consumption (Ho & Wu, 2011; Sanayel et al., 2013). Therefore, customer innovativeness can help marketing managers to identify how quickly customers are going to adopt new products. The early adopters help marketing managers to understand and direct their efforts to reach the later adopters (Xie, 2008; Chaoet al., 2012; Sanayel et al., 2013). Customer innovativeness can accelerate transfer of the adoption process to potential customers. However, customer innovativeness applies to both manufactured product markets and service markets and the nature of the marketplace can be improved through taking the innovative characteristics of the customers into consideration (Xie, 2008).

2.3.2.3 Measurement of customer innovativeness

Considering the accepted assumption that highly innovative customers exhibit more readiness to adopt new ideas or products of offers earlier than other customers, the main challenge in studying customer innovativeness is to conceptualize and measure customer innovativeness itself. Many researchers have tried to measure customer innovativeness using multi-group analysis by classifying customers into two groups; highly innovative customers and low innovative customers (Madupu, 2006; Truong, 2013). Additionally, Morton, Anable, and Nelson (2016) referred to customer innovativeness as an adoptive and innate innovativeness, by examining the impact of customer preferences (psychological and sociological factors) on customer innovativeness. However, the results revealed that the more specific measurements of innovation, which relate to the tendency of the individual customer to be innovative, has a stronger link and is more useful than the more general measurements of innovation. Additionally, Chen (2014) observed that customer innovativeness has a positive effect on customer intention results from the tendency of novelty seeking. Truong (2013) has confirmed the positive relationship between customer

innovativeness and attitude toward innovation, which includes three different dimensions: perceived novelty, perceived value, and perceived risk. Perceived novelty is a strong determinant of innovation attitude due to it being a critical attribute of innovation. Despite the significant role of customer perceived risk and value, it might be varied from one customer to another based on their cultural preferences.

Despite using innovativeness as an indicator for introducing new products or services, innovativeness is not always related to creating something new but also must offer significant improvements to customers, which relates to the benefits of the innovativeness that can be translated into purchase intentions. Therefore, innovation must provide a relative advantage and personal relevance (Lowe & Alpert, 2015). Moreover, Goswami and Chandra (2013) investigated the relationship between customer innovativeness and the mobile technology adoption and the results revealed that there are two main groups of customer innovativeness - low innovative customers and highly innovative customers. Low innovative customers have a higher tendency to comply with the variables which include usage friendly, social influence, support of the brand, and learning readiness. Therefore, social influence and newness attraction have the most significant influences as dimensions of customer innovativeness.

Customer innovativeness represents the degree to which the customer tendency is directed toward novelty-seeking and risk taking (Chen, 2014). Much literature has referred to customer innovativeness as a multidimensional conceptualization of innovativeness, which includes four main dimensions: buying new products, novelty seeking, independence, and the need for uniqueness. However, there is a need to identify the main dimensions of customer innovativeness (Sanayel et al., 2013). Despite many of the previous researchers establishing a strong correlation between innovativeness and the customers' personal characteristics, they contend that

innovativeness is mainly correlated with customers' behaviours for example novelty seeking, information seeking, and change seeking (Dobre et al., 2009).

Previous researchers have argued that there is a weak relationship between innovativeness and time of adoption, which measures the innovativeness because it has ignored the social dynamic nature of the innovation diffusion process. Therefore, according to their point of view innovativeness refers to the degree of independency of the innovative decision (Ribeiro, Prado, Mantovani, Souza, & Korelo, 2008). Additionally, Ngoc (2009) studied the impact of self-direction value and stimulation value on customer innovativeness, which has found on the one hand to have a positive relationship between self-direction and customer innovativeness and on the other hand, there is a negative relationship between stimulated values and customer innovativeness. Moreover, Hur et al. (2012) studied the moderating role of customer innovativeness on the relationship between consumption value (functional value, social value, emotional value, conditional value, and epistemic value) and purchase intentions. The results revealed that customer innovativeness has a significant moderating effect on the relationship between emotional value and purchase intentions. Maden and Koker (2013) described the key factors which may have effected customer innovativeness, and the results showed significant effect of the three independent variables, which are: self-identity, self-esteem, and hedonic consumption) on customer innovativeness.

Importantly, there are several researchers who examined the moderating role of customer innovativeness to provide more understanding of different construct relationships. For example, Shams, Brown, and Alpert (2017) examined the moderating effect of customer innovativeness on the relationship between customer perceived brand innovativeness and brand credibility and the relationship between customer perceived brand innovativeness and customer purchase intention.

The results showed non-significant moderating effects for both. However, the non-significant moderating effect of customer innovativeness on brand innovativeness-brand credibility was stronger for the less innovative customers than for highly innovative customers. Additionally, the non-significant moderating effect of customer innovativeness on brand innovativeness-purchase intention was slightly stronger for less innovative customers than for highly innovative customers. Hur et al. (2012) contended the significant moderating effect of customer innovativeness on the relationship between emotional value and purchase intention. Ho and Wu (2011) confirmed that customer innovativeness has a moderating effect on the relationship between new product attributes and adoption intention. Thus, the moderating role of customer innovativeness can provide better understanding of different constructs relationships. However, the current study follows the same stream of the previous studies by focusing on the moderating role of customer innovativeness in the effects of customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities on customer perceived brand innovativeness.

2.3.2.4 Innovators vs non-innovators

Many previous studies discriminated between innovator (highly innovative customers) and non-innovators (low innovative customers). Innovators are the first customers to buy new products, thus they are more interested in gaining information about the new products and features, and they have more knowledge in the product area. Therefore, they would like to talk to other customers about the new product in their area of knowledge (Ngoc, 2009). Innovators are earlier adopters and more likely to be opinion leaders, additionally, the messages that they transmit to other customers may create a strong influence on the adoption process of non-innovators, which reflects the strong role of the effective word-of-mouth communication between customers (Aldas-

Manzano et al., 2009). However, many researchers agreed that innovators, as the people who adopt or capture innovations for the first time, have the following features: opinion leaders, risk takers, internally oriented or independent, prefer informal sources of information, newness and novelty attraction, and they generally have higher levels of income and education (Dobre et al., 2009).

Some researchers tried to study the relationship between customer characteristics especially the demographic variables and customer innovativeness. Tellis, Yin, and Bell (2009) studied the effect of customers' demographic characteristics on innovativeness and studied the effect of customer innovativeness on customer adoption of innovation. The results revealed that most demographic variables – age, income, mobility, education, and gender were key predictors of customer innovativeness, except the family size, this was found not to be significant. Additionally, Noh, Runyan, and Mosier (2014) studied the relationship between young innovators and customer attitudes. The result reveals that young innovators have a stronger effect on customer attitude than non-innovators. Innovators with high incomes have a higher tendency towards buy new products, to reflect their personality, and self-identity. Furthermore, Lao (2014) studied the relationship between customer innovativeness and customer behaviour. This study found that customer innovativeness has a significant influence on customer behaviour though classifying them into customer attitudes, subjective norms, and perceived behaviour norms.

Also, Dobre et al. (2009) described the nature of innovativeness and studied the correlation between innovator characteristics and innovativeness. The results revealed that there is a strong correlation between personality traits, private or public nature, and certain culture values with customer innovativeness. Additionally, Park, Yu, and Zhou (2010) investigated whether customer's innate innovativeness is correlated with their shopping styles, to explore the impact of two different types of innovativeness, sensory innovators and cognitive innovators, on customer

shopping style. This research found that sensory and cognitive attributes can lead to different shopping styles; cognitive innovators slope towards a shopping style such as quality and price awareness. While, sensory innovators slope towards shopping styles such as brand consciousness, recreation orientation, rushing shopping, and brand loyalty shopping.

In the same context, Aldas-Manzano et al. (2009) studied the impact of customer innovativeness on improving internet e-banking adoption and reducing customer perceived risk. The results revealed that customer innovativeness is a key construct to improve e-banking adoption and plays an effective role in reducing customer risk perception. Innovators provide the company feedback earlier and they are supporters who will influence other buyers. Additionally, most non-inventors depend on innovators who might have enough knowledge to provide information about the new services and products. However, marketing managers need to do more than just identify the innovators; they should focus their marketing efforts toward this more innovative segment. Correspondingly, Fort-Rioche and Ackermann (2013) confirmed that customer innovativeness has a positive effect on customer attitude toward product design. This has been tested for both domain specific innovators (for example specialists of the category of products studied) and more global innovators (for example customers with high degree of novelty). The innovators play a central role in the first stage of adoption of innovation and there are depicted as customers searching for increasing levels of innovativeness to provide the same level of newness. Accordingly, measuring customer innovativeness through using multi-group analysis by classifying customers' innovative characteristics into highly and low innovative customers is an important measurement, especially to measure the moderating effect of customer innovativeness.

2.3.2.5 Levels of customer innovativeness

Previous studies have classified and conceptualized customer innovativeness into two primary ways general innovativeness, which relates to personal traits, and domain specific innovativeness, which relates to narrowly defined domain or products specific categories (Jaiyeoba & Opeda, 2013). There are three main views on customer innovativeness, which are action of adoption, innate or global innovativeness, and domain specific innovativeness (Ngoc, 2009). Additionally, Hirschman (1980) used innate innovativeness and novelty seeking as synonyms and defined novelty seeking as an individual desire to seek out new things.

2.3.2.5.1 Innate innovativeness

Innate or general innovativeness can be defined as the willingness to buy new products and brands rather than staying with the same one. Innate innovativeness is the most general level of innovativeness (Goldsmith & Foxall, 2003; Goswami & Chandra, 2013). Midgley and Dowling (1978) defined innate innovativeness as the degree to which an individual is receptive to new ideas and takes innovative decision independently of the experiences of other people. Many previous studies have used two main approaches to measure innovativeness: general or innate innovativeness, and specific domain. While, general innovativeness reflects openness domain specific innovativeness is related to more specific areas.

On the other hand, Lassar, Manolis, and Lassar (2005) have found that there is a positive relationship between internet related innovativeness and online adoption, while there was a surprising result that general innovativeness is negatively related to online service adoption. Most prior studies measured innate innovativeness to identify the innovative characteristics of the customers. Thus, innovativeness is related to general personality characteristics of innovativeness (Lassar et al., 2005). Some of the previous studies measured customer innovativeness as general

customer innovativeness, which includes domain specific innovativeness and innate innovativeness in order to describe the customers who are trying to learn or trying to own the newest products (Ngoc, 2009).

2.3.2.5.2 Domain specific innovativeness

Domain specific innovativeness describes customers innovativeness as customers' characteristics related to their knowledge of specific field and may be related to the customer demographic variables (e.g. age and gender) which will vary depending on the filed category (Maden & Koker, 2013). Blake et al. (2007) studied the impact of domain specific innovativeness and perceived innovation newness on different aspects of online shopping. The results showed that perceived innovation newness is positively related to online shopping. Accordingly, domain specific innovativeness has defined as readiness to try new products or services perceived to be new. Therefore, it is positively associated with purchase or use of new products in a wide range of classes for example wine, internet usage for information and entertainment, and vacation travel.

2.3.2.6 Customer innovativeness and online brand communities

The innovation paradigm transferred from closed innovation, to open innovation, and then to co-innovation. Co-innovation relates to value creation of customers, and here the customer is viewed as a co-creator of innovation of specific area, for example introducing new idea about a new product or development of current product. Therefore, innovation opportunities are generated depending on the customer interaction, customer involvement, and requirements. The most important factors of the co-innovation platforms are providing new customer value and new customer base (Lee, Olson, & Trimi, 2012).

Social media brand communities built on the principles of co-creation of experiences and thoughts with the brand and with other customers. Therefore, social media platforms are helping marketing managers in increasing the number of customers that the company can engage with and provide a great source of innovation through creating, testing, and refining new product at lower cost. Social media provide virtual environment where the customers can share opinion and idea, learn more from other customers in their social system, and develop relationships with other people. Therefore, customers can receive social benefits from their relationships, in addition to functional benefits through the significant reduction in the costs of searching for information. Sharing the contents and the visual iterations can influence customer behaviour through effecting how they collaborate, interact, and share information, which increases the effectiveness and efficiency of the innovation process (Sawhney, Verona, & Prandelli, 2005; Romero & Molina, 2011). Otherwise, many previous studies in online brand communities have revealed that social media communities can have a significant impact on facilitating innovation (Jussila et al., 2014; Parmentier & Mangematin, 2014).

In the same context, Wang et al. (2016) focused on social antecedents of co-innovation in online brand communities, to examine how social factors, social identity and social comparison, drive customer's contributions in co-innovativeness. The results revealed that social factors are positively related to co-innovation practices in online communities. Otherwise, co-innovativeness has a positive effect on brand performance. The most important motive of the customer tendency to participate in creating new products is the intrinsic innovation interest. Whilst, the most critical factors of using social media platforms for innovation are delightful content, knowledge mutuality, social interactions, providing various motives for participating in innovation activities. Therefore, most of the companies can manage and support their innovation process through understanding

those factors and especially the customer motivations to participate in online brand communities. Moreover, the communication via online communities as a part of the innovation process can take one way, two-way, community, and customer continuous interaction. Therefore, online brand communities provide an effective way and significant opportunity for innovation through the marketing efforts to provide information to customers and collect feedback via online brand communities (Jussila et al., 2012).

2.3.3 Customer perceived brand innovativeness

2.3.3.1 Brand innovativeness

The term ‘brand’ can be applied to a name, term, sign, symbol, or design or combination of all of them, which is intended to identify products or services and differentiate them from competitors (Chen, 2010). Brand innovativeness refers to customers’ perceptions about a brand's tendency to engage in and support new idea, novelty, experimentation, and creative process. Therefore, brand innovativeness relates to transformation of customer perception through the introduction of innovation of new products and services and/or other actions (Ouellet, 2006). Additionally, brand innovativeness is defined as perceived novelty or newness, which affects the customers’ attitudes toward the brand’s product (Boisvert, 2012).

Many previous studies confirmed the significant role of brand innovativeness. For examples, Claudiu-Catalin and Dorian-Laurentiu (2014) studied the positive relationship between customer innovativeness and risk aversion through the identification of customers’ reactions to new products with high degrees of innovativeness, in addition to studying the effect of brand extension on customer innovativeness. Introducing new products is not risk free; some companies have less success than others. However, changing customers’ behaviour to adapt and accept the new products depends on a number of factors; adopter segment, product characteristics, and market

related factors. Brand innovativeness has been studied in connection with brand association and perception and has been identified as one of the factors of the new products adoption. However, the most important factor in studying brand innovativeness is identifying the customer reactions toward their brand innovativeness (Sanayel et al., 2013). Additionally, Xie (2008) examined the impact of customer innovativeness on new brands and brand extensions. The results showed that customer innovativeness appeared to be correlated with the acceptance of the new brands rather than brand extensions. Moreover, Wu and Ho (2014) observed that innovative products have a positive effect on customer value, increase customer brand references, and create more sales opportunities.

Furthermore, Nguyen et al. (2015) referred to social media brand innovativeness as a main determinant in building brand innovativeness and has been defined as the degree of brand innovation gained from social media. Many companies are trying to utilize from their innovation to develop their branding strategy through transferring this innovation into competitive advantage. Therefore, they are using social media branding to continuously innovate and to overcome competition and survive in a radical changing environment. The research results of Nguyen et al. (2015) revealed that social media strategic capacity (proactive or reactive market orientation) and knowledge acquisition have a positive effect on brand innovativeness. Therefore, to be able to improve brand innovativeness, it will be necessary to focus on the benefits of social media brand strategy and the availability of information on social media. Innovation is a process of learning, thus, utilizing knowledge from social media is vital in managing a company's' brand innovativeness. However, social media provides a different set of competition regulations and improve our understanding about brand innovation strategy in social media.

2.3.3.2 Customer perceived innovativeness

Brand innovativeness is a key competitive weapon and a priority for any company. It is related to customer perception of brand innovativeness where brand innovativeness refers to the brand that has been recognized as an innovative brand in the mind-set of the customer, which has a positive influence on company performance and make the company more attractive, competitive, and trustworthy (Sanayel et al., 2013). Brand innovativeness is the degree to which a brand is perceived as innovative by its customers, therefore the subjective assessment of the customers is one of the most important factors in building brand innovativeness. Additionally, building a brand image is an important determinant of building an innovative brand, due to its influence on the customer's behaviour, which include customer purchase intentions and customer actual purchase behaviour (Sanayel et al., 2013).

In the same context, Lowe and Alpert (2015) explored a new conceptualization of customer perceived innovativeness to define, and measure customer perceived innovativeness, in addition to identifying the antecedents and the consequences of customer perceived innovativeness. Therefore, they measured customer perceived innovativeness through three different variables, which are the perceived concept newness, perceived relative advantage, and perceived newness of technology. Additionally, they studied the impact of customer perceived innovativeness on the customer's utilization and hedonic attitude as indicators to the behavioural attitude of the customer. The results revealed that innovativeness is more than just newness, and it refers to the degree the customer perceives the product to be new or different. Therefore, there are two main dimensions of customer perceived innovativeness, perceived newness and perceived benefits. A product might be new but not innovative. Additionally, the results showed that there are positive effects of perceived concept newness, perceived relative advantage, and perceived technology newness, in

addition there is an indirect relationship between customer perceived innovativeness and hedonic/utilitarian attitude.

Studying innovative products attention, originality, uniqueness, and value from the customer perspective are continuously attracting the attention of many researchers. Ribeiro et al. (2008) have conducted qualitative research to study the relationship between innovativeness and perceived characteristics through the customer decision process. The results revealed a positive relationship between innovativeness and the perceived characteristics of innovativeness, which has been studied to explain the relationship and its influence on the customer decision process, in addition to identifying the degree of a customer's acceptance of innovation. Therefore, the related innovative decision process focuses on how the customer select new product or service and how the customer structure the decision process of innovation to identify how different adoption behaviours lead customer to choose their strategy during the purchase process.

In the face of this, introducing new product is always related to risk, ambiguity, and uncertainty for the customers, which might discourage them to adopt the new innovative product in general and specifically online shopping using social media. However, perceived innovative newness creates excitement and interest, which can encourage the adoption of innovation (Blake et al., 2007). There are two main dimensions of perceived innovativeness: the first one is novelty, which is related to the degree of unusual, uniqueness, and differentiating of a product compared with other products. The second dimension is recency that refers to how recently the product has become available. Whatever, the relationship between customer traits and tendency to adopt new products depends on whether the product is new due to the product is being novel or the product is being recently available. It has been noticed that customers are using recency more than novelty

to recognize a product as new, in addition, uncertainty and risk are more consistent with novelty than recency (Blake et al., 2007).

The dominance in recent research on defining, conceptualising and measuring perceived innovativeness from the customer perspective has created difficulties in finding a model to identify the potential antecedents and consequences of customer perceived innovativeness. Developing a model of customer perceived innovativeness requires providing a definition of the conceptualization of customer perceived innovativeness, which leads to a full model of the antecedents and the consequences of customer perceived innovativeness (Rogers, 2003). Despite the importance of customer perceived innovativeness but still there is a clear rareness between the previous studies in this area of research. However, still most of the previous studies provide little attention on the way the customer perceive innovative ideas or things because the majority of the previous studies focus on the innovation attributes that may lead to faster diffusion (Garcia & Calantone, 2002).

However, customer perceived innovativeness can help marketers recognize the different degrees of innovation adoption due to the changing nature of the customer perception, therefore, the customer perception is correlated to the characteristics of innovation (Ribeiro et al., 2008). Customer perceived innovativeness refers to an object that can be perceived as a new thing by customers themselves, and reflects the behavioural patterns related to innovation attributes, adoption risks, and level of change; additionally, it relates to the amount of available information about an object (Chen, 2010). In the same context, Falkenreck and Wagner (2011) studied the impact of customer perceived innovativeness on customer perceived value, customer satisfaction, and customer loyalty. The results revealed that perceived innovativeness has a direct positive impact on perceived value and customer satisfaction and has indirect impact on customer loyalty.

Individual customer behaviour process is the key factor to understand the adoption and the diffusion process of new innovative products. Thus, innovation is understood as new if it is perceived as new by customers, but the degree of newness depends on the deeply understanding of the customer perception which relates to expectations and identifying customers' negative and positive reactions and comments on new products or services. Therefore, a better understanding of the customers' perception of innovativeness may help to interpret and deal with the innovativeness implications which may be customer negative reactions or acceptance. Otherwise, there is a lack of clarity related to whether perceived innovativeness construct is unidimensional or multidimensional and there is a real need to conceptualize perceived innovativeness (Lowe & Alpert, 2015).

Customer perceived innovativeness can be defined as a combination of an overall measure of how the new product or service has been perceived by the customer and the degree to which the new innovative products or services could change the customers' consumption patterns (Lowe & Alpert, 2015). Therefore, measuring customer perceived innovativeness is related to identifying the differences between the new product and the current one, and the main benefits of the new product, in addition to the main influences of the new products on the customer consumption experiences. Previous studies have measured customer perceived innovativeness through asking managers about the customer and adoption obstacles of innovation (Olshavsky & Spreng, 1996; Lowe & Alpert, 2015). However, this study focuses on innovativeness from the customer perspective, which is known as customer perceived innovativeness.

2.3.3.3 Definition of customer perceived brand innovativeness

Brand innovation is different from brand innovativeness, brand innovation refers to examining the different ways a product or services can be conveyed through a name or logo; therefore, brand

innovation can be used as indicator of the brand's level of innovation or the brand's related innovative activities, which is reflected in the brand innovativeness level in the market (Chen, 2010; Shams et al., 2015, 2017). Brand innovativeness depends on the brand itself; customers may perceive a brand as being innovative depending on the available information, which is limited in most cases. Customer perceived brand innovativeness, due to its reliance on perception should be introduced in the form of new products or services or other actions, such as innovative promotion, new business models, and innovative distribution channels. Customer perceived brand innovativeness is defined as "...the customers' perception about a brand tendency to engage in and support new ideas, novelty, experimentation, and innovative process" (Ouellet, 2006, p. 312).

Many previous studies examined brand innovativeness following different streams. Boisvert (2012) studied the impact of perceived brand innovativeness of the service extension on a newly launched services line extension. This study differentiated between innovativeness from the firm and the customer perspectives, and differentiated between product and service innovativeness. Product innovativeness can be defined as the extent to which a new product provides meaningful unique benefits (Boisvert, 2012). Therefore, perceived innovativeness is related to the degree of novelty of the features, functionality and benefits carried by a product. On the other hand, from the perspective of services innovativeness, perceived brand innovativeness of the service extension refers to the extent to which intangible offerings, actions, and reaction are perceived as new by the customer (Boisvert, 2012). The results revealed that perceived brand innovativeness was significantly related with the new services extension. Additionally, Eisingerich and Rubera (2010) found that there is a positive relationship between brand innovativeness from the company's perspective and customer brand commitment.

Furthermore, Chen (2010) studied the impact of brand innovativeness on perceived quality and studied the moderating role of customer innovativeness on the relationship between brand innovativeness from the customer perspective and perceived quality. Additionally, Chen (2010) aimed to test Ouellet's (2006) model of measuring brand innovativeness. Therefore, this research measured brand innovativeness based on two main dimensions, which are the perceived degrees of difference of the brand's marketing mix and the perceived frequency of introducing novel elements into the brand's marketing mix. The results showed that brand innovativeness had a positive impact on perceived quality; additionally, customer innovativeness had a significant moderating effect on the relationship between brand innovativeness and perceived quality, and finally the study revealed that there was not much difference between these two dimensions of brand innovativeness.

Moreover, Sanayel et al. (2013) explored the effects of brand innovativeness on attitude toward the brand, in addition to studying the moderating role of customer innovativeness on the relationship between perceived brand innovativeness and attitude toward the brand. The results revealed that perceived brand innovativeness had a positive influence on attitudes toward the brand. The moderating role of customer innovativeness was confirmed; and the results revealed that innovators had a stronger effect on the relationship between perceived brand innovativeness and attitude toward the brand. Additionally, Wu and Ho (2014) examined the direct impact of perceived innovativeness and brand awareness on perceived quality, and the indirect impact of perceived innovativeness and brand awareness on perceived value through perceived quality, in addition to studying the impact of perceived quality and perceived value on purchase intention. The results showed that customer perceived innovativeness had a direct positive impact on perceived quality and had an indirect positive impact on perceived value. Customer perceived

value had a significant and positive impact on purchase intention. Moreover, customer perceived innovativeness had a higher effect on purchase intention than brand awareness.

Importantly, Shams et al. (2015) developed a new conceptualization of innovativeness called customer perceived brand innovativeness from a theoretical perspective through the development of a measurement model. The results indicated that the proposed model of customer perceived brand innovativeness, which contains ten items, is a valid and reliable scale model to measure customer perceived brand innovativeness. Furthermore, Shams et al. (2017) focused on studying the impact of customer perceived brand innovativeness on brand credibility and on customer purchase intention, in addition to studying the moderating role of customer innovativeness in the effect of brand innovativeness on brand credibility and customer purchase intention. The results revealed that customer perceived brand innovativeness has a strong positive effect on both brand credibility and customer purchase intention. Additionally, customer innovativeness has no significant moderating effect on both the effect of brand innovativeness on brand credibility and the effect of brand innovativeness on customer purchase intention.

To conclude, customer perceived brand innovativeness includes two main concepts, which are brand innovativeness and customer perceived innovativeness (Ouellet, 2006). The previous studies (e.g. Ouellet, 2006; Sanayel et al., 2013; Shams et al., 2015) differentiated between two different perspectives of innovativeness: firstly, from the organization perspective, which includes firm and product innovativeness; secondly, from the customer perspective, which includes customer perceived brand innovativeness. Additionally, the previous studies (e.g. Ouellet, 2006; Shams et al., 2015) differentiated between customer perceived product innovativeness and customer perceived brand innovativeness, and most studies have focused on customer perceived product innovativeness. Customer perceived product innovativeness focuses only on the product features

and the functions or the technological features of the product and reflects only the rational side of the customer. In addition to the previous limitations of customer perceived product innovativeness, most studies have measured product innovativeness for the most recent new products launched in the market, whilst customer perception is isolated from the brand context, which is launched under the parent brand's name (Sanayei, 2013; Shams et al., 2015).

On the other hand, customer perceived brand innovativeness is related to: providing rational and non-rational drivers to create the customer's image of innovativeness; creating a more complete picture of innovation through introducing a broader conceptualization of innovativeness; introducing market brand signals to create the innovativeness image; customers creating their own innovativeness perception depending on their brand knowledge; providing more precise information within and between the product categories. Therefore, as stated customer perceived brand innovativeness refers to the customers' perceptions about the brand's tendency towards new ideas, novelty, experimentation, and creative processes (Ouellet, 2006; Shams et al., 2015).

2.3.3.4 Signalling theory and customer perceived brand innovativeness

Signalling theory from the customer perspective refers to how customers assess communication between two parties, where signals are transmitted to convey information by different means (Alhabeeb, 2007). Customers usually depend on previous experiences of using a brand's products to build their perception and expectation of their potential decisions. More specifically, most commercial markets work under imperfect conditions therefore customers are forced to deal with the lack of information and the condition of information asymmetry (Chen, 2010). Under the condition of uncertainty and with a high degree of ambiguity, customers are meant to evaluate different products or brands and pick one of them, therefore, they use some signals or cues as implications of their choices (Chen, 2010; Shams, 2015, 2017). However, brands can use these

signals as a significant tool to send enough information via online brand communities to influence the potential and actual customers' evaluations of the brand and their products in the market. As Ouellet (2006) demonstrated brand can be considered as a signal used by customers. It is very difficult to provide signals of all products in the market, due to the huge number of products available in the market, additionally, products do not provide a sign of the product quality compared to other products in the market, which will lead to a high degree of uncertainty and indicates that customers will never be able to evaluate every single product in the market or identify the position of most of them in the market (Shams, 2015).

Considering the signalling theory, customer perceived brand innovativeness provides a signal of the brand innovativeness in the market compared to other brands, which make customers more able to find enough information about the different brands in the market to evaluate them and identify the most innovative brand (Chen, 2010; Shams, 2015). Additionally, the current study provides new insights in studying customer perceived brand innovativeness as a signal of the brand position in the market, which is related to online brand communities. Millions of customers rely on online brand communities as their main source of their information about new features or products of their brand, and they practice a number of online activities via online brand communities, which are divided into three main groups (see Table 2.2): customer use of online brand communities (following brand communities, reading posts, and watching videos or pictures), customer engagement with online brand communities (liking, commenting, sharing, creating brand posts), customer perceived value of online brand communities (gaining information as functional value, interacting with other people as social value, feeling happy of being member of this online brand communities as emotional value). Accordingly, online brand communities provide a significant source of information, which makes customers more able to perceive more

information about their brand and establish a stronger signal about how their brand is innovative compared to other brands in the market. Many of the customers are members of multiple online brand communities, which makes them more likely to compare different brands and perceive which is most innovative brand. Signalling theory provides a strong base to understand the role of online brand communities as an essential source of information in supporting customer perception of brand innovativeness, through making them more capable of building their own signals of the different brands in the market and perceive their brand as being innovative compared to other brands in the market.

2.3.3.5 Mainstreams of studying innovation in online brand communities

This section provides more understanding of the mainstreams of studying innovation in online brand communities in the academic studies. In general, these studies have used different perspectives (customer and organisational perspective) and focus on different conceptualisations of innovation (open innovation, co-innovation, social innovation, product innovation, and brand innovation), as presented below.

Several recent studies on online brand communities have focused on studying the traditional trends of innovation, such as open innovation. Jalonon (2015) explored the impact of using social media on open innovation, defined as knowledge of seeing and doing things differently, with social media defined as new ways of being connected. The results revealed that despite the significant role of social media in creating open innovation, it also related to creating new threats. Any organisation looking to be innovative by using social media should consider the different media platforms, which offer new opportunities as well as threats. As Mount and Martinez (2014) argued using social media is innovative and the results of their study revealed that using social media communities positively influenced open innovation. However, social media is utilized for open

innovation at different stages of the innovation process, which remains unexplored in the literature until now.

Many recent studies have focused on the new trends of innovation such as co-innovation, social innovation, product innovation, and brand innovation. Wang et al. (2016) explored the relationships between the social influence of online communities, co-innovation, and brand awareness. The main trend in measuring co-innovation is related to products or services innovation. The results revealed that the social influence of online communities is a key facilitator for developing a series of co-innovation activities, which positively affect brand awareness. Meanwhile, Charalabidis et al. (2014) studied the impact of using social media communities on social innovation by presenting an approach to support social innovation through using multiple social media pathways, including online community social networking, and user social multimedia content. However, social innovation refers to a novel set of activities, performed by different parties in the community. Therefore, social media is a new trend in social practices which constitutes an extension of the classical innovation concept. The results showed that social media directly affects social innovation; however, an important limitation of this study is that it focuses only on the initial stage of social innovation, whereas social media should be used in the different stages of social innovation (Charalabidis et al., 2014).

Most previous studies have focused on studying product innovation in social media communities. Idota, Minetaki, and Bunno (2011) studied the impact of using social media communities on product innovation to analyse empirically how using social media enhances product innovation. The results revealed that all managerial orientations have a positive effect on using social media for innovation. Moreover, social media was found to support marketing managers understanding of the market trends and customer needs of the current products and to promote product innovation.

John (2014) explored the effect of using social media on product innovation, additionally, studying the impact of social media engagement rate on innovation. The results revealed that the rate of Facebook fan pages, such as the number of comments per post/per fan, positively influence product innovation. Thus, using social media marketing improves organizational innovation, Social media can foster product innovation. John's (2014) study provided a conceptual approach that can be used to facilitate the role of using social media in enhancing organisation's innovation. Additionally, this study showed the significant effect of customer engagement on innovation, social media on innovation, the difference between innovators and non-innovators, and the impact of customer Facebook engagement rate on product innovation. Similarly, Piller, Vossen, and Ihl (2011) studied the impact of using social media on customer co-creation of product innovation. The results revealed that social media can make the exchange relations in online communities more collaborative and social, which impact positively on creating new products and services development and facilitating product innovation. Sawhney et al. (2005) studied the effect of using internet platforms on product innovation through customer engagement. The results revealed using internet platform mechanisms can facilitate collaborative innovation at different stages of the product innovation and with different levels of customer engagement. On the other hand, other researchers studied social media as part of online communities. Janzik and Raasch (2011) identified the role of social media as a part of online communities, which supported product innovation through exploring the customer's motives to join their online communities, to innovate, and to publish innovations in their online communities. Those motives were identified based on the customer's lifestyle and situational factors. The results revealed that there are three main motives for customer innovation in online communities, which were: personal need and fun, brand passion, and social motives. However, brand passion and social motives were the most significant

motives for the customer to develop individual products and to publish those products. This research provides a better understanding of innovation in online communities. Additionally, the results revealed that brand plays a critical role in building online communities and in creating innovative products and publishing this innovation.

In the same context, Gangi, Wasko, and Hooker (2010) focused on product innovation through studying the role of creating online communities, where the customer is engaged in value creation through providing product reviews, suggesting ideas, and identifying new sources of innovation. This study identified the main challenges of integrating customer online communities into the organizational innovation process through understanding customers' ideas related to their posts on social media communities, identifying the best ideas, and balancing between the ideas to sustain this online community. The results revealed that online communities positively impacted organizational innovation but there were several challenges to overcome in creating innovative online communities. Accordingly, Gangi et al. (2010) introduced some recommendations to overcome these challenges based on the case study of Dell Company. Moreover, Cheng, Tsai, and Krumwiede (2013) explored the impact of online brand communities on product innovation and referred to online brand communities as one of the most important sources of innovation. The results revealed that creative climate and the capabilities of online brand communities have a direct effect on both the novelty and meaningfulness of new product innovation.

Furthermore, Fuller et al. (2006) studied the impact of online community member's integration on product innovation through defining how to identify and access online communities and how to interact with their members to create innovative products; this study confirmed the significant role of online communities as a source of innovation. The results revealed that the integration between online brand communities' members could create online community-based innovation. In this

context, approximately 80% of the participants affirmed their willingness to support the company's innovation again for new product in the future, which would contribute in providing sustainable innovative products; moreover, lower costs speed up the innovation process, and provide a deeper understanding of customer behaviour. Therefore, online brand communities have become a major source of innovation that can be integrated into new product development, due to most of the community members having a willingness to share their ideas free of cost and without any conditions. Likewise, Janzik (2010) studied the role of online communities in supporting companies in innovation and identified the different motivational factors play a controlling role in online brand communities' innovation. The results referred to online communities as a part of communities' innovation and as a major source for product innovation.

Finally, a few studies have studied the relationship between social media and brand innovation. Nguyen et al. (2015) is a pioneer study in this field, they merged social media and brand innovation into one concept and referred to it as social media brand innovation, which refers to innovation arising from social media branding. Nguyen et al. (2015) studied social media brand innovation from the manager's perspective without taking the customer perspective into consideration. Moreover, this study explored the impact of knowledge acquisition from social media (from the perspective of market orientation and social media strategy) on brand innovation. The results of this study showed that social media strategy has a positive influence on brand innovation; additionally, knowledge acquisition of social media was proven to have a positive impact on brand innovation.

To conclude, most previous studies have focused on studying innovation in online brand communities from different perspectives and in different industries: Firstly, many previous studies have focused on studying innovation in online brand communities from an organizational

perspective, such as Idota et al. (2011) who focused on product innovation in online communities in different industries including electronics, telecommunications, food, and banks; the result of the research revealed that using social media promoted product innovation and showed that social media for product innovation is more important in the services industry than manufacturing. Moreover, Charalabidis et al. (2014) focused on studying social innovation between social media community members of the European parliament and found that using social media brand communities fostered social innovation. Meanwhile, Jalonon (2015) focused on studying open innovation in social media communities in four industries, focusing on computer software, IT services, Internet, and Telecommunications, and found that using social media positively affected organizational innovation. Furthermore, Nguyen et al. (2015) studied social media brand innovation from an organizational perspective in new online technology firms in China and found that social media strategic capacity positively affected the brand innovation in the organization. Additionally, John (2014) stated that there are a number of critical success factors that should be considered for examining the role of using social media in fostering innovation, which related to customer engagement, social media strategy, openness culture, and using an effective method for collaboration.

Secondly, a few studies have focused on studying innovation in online brand communities from the customer perspective, such as Janzik and Raasch (2011), who studied product innovation in mobile phone social media communities and discovered that there were three main motives for customer innovation in online communities; personal need and fun; brand passion; and social motives. Moreover, Fuller et al. (2006) examined the impact of online community members' integration on product innovation in a case study of the Audi company and confirmed that online brand communities' members could create online communities based innovation by providing

incentives for their members to participate in their online brand communities and make their brand's products more innovative.

Based on the previous literature, it can be seen that most previous studies have focused on studying innovation from the organization's perspective, focusing on different conceptualizations of innovation, such as open innovation, social innovation, and co-innovation, product innovation, and even brand innovation from an organizational perspective. Only a few studies have focused on studying innovation in online brand communities from the customer perspective. However, to the best of the researcher's knowledge, the current study provides a first attempt to study brand innovativeness from the customer perspective in online brand communities. Therefore, this study is the first to explore the role of online brand communities in strengthening customer perception of brand innovativeness.

There are tremendous changes in the way interaction between customers and their brands have forced many companies (brands) to seek external sources of innovation. Social media provides a new way of doing business based on a novel way of collaboration, which provides a massive volume and variety of information that can create new possibilities of innovation (Jalonen, 2015). Collaboration with the customer has become a major source of innovation, therefore, to accelerate innovation, companies are trying to use their online brand communities as an effective means to interact with their customers and to provide ongoing communications in different directions. However, there are many challenges in using online brand communities via social media, which can restrict the innovation process; therefore, social media marketing activities should create collaborative methods of innovation in managing their online brand communities (Wang et al. 2016; Sawhney et al., 2005).

Moreover, social media/online brand communities have become an important source for exchanging information and experiences: some of the social media/online brand communities are created and operated by customers themselves (brand communities created by the fans) or created and operated by the company as brand communities that can be used by customers to post images, videos, comments of their ideas about the brand and its products' improvements that can reflect the customer's tendency toward the brand or the product as a part of the online community innovation (Janzik, 2010). Online brand community-based innovation facilitates access to online communities and represents a mean of interaction between the online communities' members in order to create an innovative product or innovative brand (Fuller et al., 2006).

The company's ability to innovate is one of the most critical sources of competitive advantage that has a positive impact on innovative companies and communities in general and with innovation comes progress. Managing online brand communities is not an easy task, involving customers not just providing information about new products or services; it involves not only new possibilities but also new threats to the innovation process (Jalonen, 2015). Thus, online brand communities can be used to provide the customer with new ideas about the products or features by transferring new ideas or recommendations or even maybe their complaints into the innovation process (Idota et al., 2011). However, this study focuses on studying brand innovativeness from the customer perspective in the context of online brand communities. Therefore, the following section of the literature review focuses on providing deep understanding of customer perceived innovation in online brand communities. A comprehensive literature review of previous studies that focused on innovation from the customer perspective in online brand communities, is presented in Table 2.4.

Table 2.4 Mainstreams of studying innovation (customer perspective) in online brand communities

Research study	Research objectives	Research methodology	Research findings	Critical review
Chu and Chan (2009)	This study identifies what promotes members' participation in community-based innovation, in addition to finding the antecedents of innovation success in online community-based innovation.	Following the positivist paradigm, the quantitative study was conducted using standard questionnaire to collect the data from the members in five online communities.	The results of the study showed that prosocial, shared passion, personal gratification, and self-efficacy/identification are key determinants of customer participation in online brand communities and positively affect the innovation success of community-based innovation.	Innovation success of online community-based innovation is affected by customer participation in online brand communities.
Sawhney et al. (2005)	This study is one of the early studies to recognize the significant role of the internet as a platform for co-creation value and innovation. This study seeks to identify the role of customer engagement with internet platforms in supporting product innovation.	A conceptual framework of the role of internet communities as platforms in supporting product innovation was proposed based on the qualitative findings without testing it, following a quantitative approach. Following an interpretivism paradigm, multiple case studies have been conducted during 2003 and early 2004.	The strong sense of belonging to the community make customers more willing to participate in the community, introduce new ideas, which increases product innovativeness. Additionally, the results referred to customer co-creation value as an important source of product collaborative innovation. The traditional perspective of customer engagement plays a passive role in the firm's innovation activities and views value creation and innovation as a firm-centric activity.	Product collaborative innovation is affected by customer participation and engagement

Bugshan (2015)	This study examined the effect of social media (using social media to interact with community's members) on perceived informational support (perceived functional value), and on customer intention to participate in open innovation.	Following positivist paradigm, the quantitative study was conducted through using an online questionnaire for data collection.	The results revealed that online brand communities could support the innovation process. Additionally, the results revealed that: using social media has a positive effect on customer perceived informational support; customer using social media has a positive effect on customer intention to participate in open innovation; customer perceived informational support has a positive effect on customer intentions to participate in open innovation.	Customer intention to participate in open innovation is affected by using social media to interact with community's members and perceived informational support as a part of the perceived functional value.
Fuller et al. (2007)	This study explores the role of online brand communities in the creation of product innovation.	Through following a qualitative approach, this study used observation and interviews to categorize online communities' members and to identify the role of their online activities via online brand communities in creating innovative product.	The findings of the qualitative study classified members into three groups: lurkers (58% of 3605 respondents – through using content analysis), posters (39%), and frequent posters (3%). Members of the communities participate with their product related knowledge and ideas for new products as a part of their engagement with the communities. Accordingly, customer engagement is a key source of product innovation creation. This study recommended applying this research on another physical consumer goods, e.g. mobile phones, cameras. The findings of this study recommended that future research was still required to provide more understanding of how online brand communities improve product innovation.	Product innovation is affected by customer engagement by classifying them into three groups: lurkers, posters, frequent posters.

Kaur (2016)	This study examined customer participation in innovation practiced in social media and social media based brand communities. Additionally, this study focuses on examining the effect of epistemic, social, and emotional value on customer intention to continue using online based brand communities.	Following a positivist paradigm, a quantitative study was conducted through survey.	The results revealed that self-efficacy, hedonic motivation, reciprocal benefit, and social influence are main factors affecting customer intention to continue participating in user-centric service innovation on social media based brand communities. Social and emotional value have a partial effect on customer intention to continue using social media based brand communities. Epistemic value has a positive effect on customer intention to continue using social media brand communities.	Participating in user-centric service innovation on social media based brand communities is affected by hedonic motivation, reciprocal benefit, and social influence - as part of customer perceived value that include functional, social , and emotional value.
Noble, Noble, and Adjei (2012)	This study aims to identify the key antecedents of online brand communities' success from the brand and customer perspective, regarding their role in encouraging the innovative customer to share their innovative ideas via online brand communities.	Following explanatory mixed method approach, this study started from literature and then conducted a series of qualitative and quantitative studies, starting with content and secondary data analysis then followed by in-depth interviews.	The results identified four key antecedents of online brand communities success: 1) Value creation related to the early access to information about the new product and features of the brand. 2) Harvesting refers to the final outcome or the bottom line benefits from online brand communities, such as response to members questions, enhance commitment. 3) Conversion reflects the public interaction with the brand and with other members and it is a source of positive word of mouth and the brand championing. 4) Intervention reflects the way that the brand early react to customers posts or comments on online brand communities, including positive or negative feedback.	This study correlated between innovation and online brand communities success. Online brand communities success is affected by value creation. Additionally, Intervention and conversion that reflect the interaction with the brand and among customers as a part of the customer engagement.

Bugshan (2014)	This study aimed to explore what factors drive co-innovation in online brand communities and based on social capital theory. This study referred to co-innovation as a new paradigm in the field of value co-creation.	Through a case study, a qualitative content analysis was applied on Dell online brand communities.	The results of the content analysis revealed that social interaction with other members of the brand communities will develop their sense of responsibility, which will make them more likely to share knowledge and information, which develops or generates new ideas of the existing products. Additionally, the commitment to the community is one of the main antecedents of co-innovation in online brand communities, through the sense of commitment that makes the customer more likely to share their knowledge and produce new ideas to develop the current product. Finally, interconnectivity between communities' members is a key antecedent of co-innovation. Furthermore, the results showed that once customer joined their online brand communities, they will be able to share their knowledge, information, and ideas, which lead to co-innovation.	Co-innovation is affected by number of factors, which are: 1) Social interaction, which is related to customer social interaction participation as sub-dimension of customer engagement. 2) Interconnectivity and commitment with online brand communities that reflect conscious participation as sub-dimension of customer engagement with online brand communities.
Bao (2017)	Studies the effect of service innovation on customer perceived value of online brand communities, including: functional value, emotional value, cognitive value, social value. In addition to studying the effect of customer perceived value on community satisfaction.	Proposed a conceptual model based on the literature review without conducting an empirical study.	Proposed conceptual framework	Service innovation has a positive effect on customer perceived value, including: functional value, social value, emotional value, and cognitive value of online brand communities.

Yoshida (2009)	This research aims to conceptualize and operationalize service innovativeness from the consumer perspective and study their impact on customer behaviour in online service communities.	Following the post-positivism paradigm, this study started with literature review to identify the main determinants of innovativeness from the customer perspective; after that a qualitative study was conducted – due to the lack of the empirical support, a preliminary qualitative research was required before conducting a quantitative research.	Based on the literature study, the initial conceptual framework was updated and the research hypotheses were developed. Additionally, the findings of the qualitative study revealed that overall innovativeness had a positive impact on customer satisfaction and on behavioural intentions.	Service innovativeness (as an antecedent) had a positive effect on customer behavioural intention.
Ogawa and Pongtanalert (2013)	This study compares the characteristics and motives of innovator customers who are members in online brand communities and innovator customers who are not members in online brand communities.	By following positivist paradigm, the online survey was managed to test the differences between the two groups.	The results revealed that innovator customer who are members in online brand communities are more likely to help one another and produce more information than the innovator customers who are not members in online brand communities.	The differences between the brand communities' innovator members and innovator non-members considering their participation in online brand communities.

As shown in Table 2.4, most of the literature concerning innovation from the customer perspective in online brand communities, focused on different conceptualizations of innovation, including: innovation success of online brand communities, product collaboration innovation, customer intention to participate in open innovation, product innovation, participating in user centric service innovation, co-innovation, and service innovation. However, despite that the majority of the literature studying innovation in online brand communities mainly focusing on the customer perception of product innovation (e.g. Sawhney et al., 2005; Fuller et al., 2007; Bao, 2017), no studies on online brand communities have been found that consider customer perceived brand innovativeness, which represents a broader conceptualization of innovation and provides a better signal of the brand position in the market (Sanayel et al., 2013; Shams et al., 2015).

Furthermore, as demonstrated in Table 2.4, there are three mainstreams of studying innovation in online brand communities. Firstly, much literature (e.g. Sawhney et al., 2005; Fuller et al., 2007; Bugshan, 2014; Noble et al., 2012; Chu and Chan, 2009) has considered customer engagement with online brand communities as a key antecedent of innovation. Fuller et al. (2007) referred to customer engagement as a key antecedent of product innovation through classifying communities' members into three groups: lurkers (as passive members), posters (active members contribute regularly to the community), and frequent posters (active members who contribute frequently to the community). Similarly, Chu and Chan (2009) identified customer participation as a key antecedent of innovation success through proposing four factors to promote members' participation in community-based innovation, which are: prosocial, shared possession, personal gratification, and self-efficacy. In the same context, Sawhney et al. (2005) referred to customer engagement via internet platform brand communities as a key antecedent of product collaborative innovation; in addition to identifying customer co-creation value as an important source of product

collaborative innovation. Bugshan (2014) also identified customer engagement (including: social interaction between communities' members and customer commitment with online brand communities, which persuades members to share their information within the community), as a key antecedent of product co-innovation. Bugshan (2014) confirmed that through joining these online communities, customers share their knowledge, information, and ideas with other members, which leads to more co-innovation. Additionally, Ogawa and Pongtanalert (2013) differentiated between innovative customers who are members and who are not members in online brand communities, considering their participation in online brand communities. The results revealed that members innovative customers participate more frequently in the brand communities than the non-members innovative customers.

Secondly, many previous studies (e.g. Noble et al., 2012; Bugshan, 2015; Kaur, 2016) correlated between customer perceived value of online brand communities and innovation. A very little literature refers to customer perceived value as an outcome of innovation, such as Bao (2017) who proposed a conceptual framework to study the effect of service innovation of online brand communities on customer perceived value, including: functional value, emotional value, cognitive value, and social value. Otherwise, some previous studies have referred to customer perceived value of online brand communities as a key antecedent of innovation, such as Kaur (2016), who referred to customer perceived value (including hedonic motivation, reciprocal benefits, and social value) as a key antecedent of continued participation in user-centric service innovation on social media-based brand communities. Similarly, some previous studies referred to customer engagement and customer perceived value as antecedents of innovation, such as Noble et al. (2012), who referred to customer perceived value (early access to information about the new product and features of the brand) and customer engagement (customers' interaction with the brand

and other members) as key determinants of online brand communities' success, and referred to encouraging creative customer-driven ideas for innovation as a key outcome of these key determinants in online brand communities. Thirdly, a few studies have referred to customer use of online brand communities as an antecedent of innovation, such as Bugshan (2015), who identified customer use of online brand communities (using social media to interact with communities' members) and customer perceived functional value (informational support), as antecedents of customer intention to participate in open innovation.

In view of that, the previous studies researching innovation in online brand communities (see Table 2.4) identified three key antecedents of innovation in online brand communities, which are customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities. This finding is consistent with the findings of the previous studies in the context of online brand communities (see Table 2.2), which identified these three antecedents as the key three determinants of online brand communities (e.g. Gummerus, 2012; Vries and Carlson, 2014; Dessart, 2015; Zheng et al., 2015; Amaro et al., 2016; Kamboj, 2016; Zhang et al., 2016).

Regarding the literature in the context of online brand communities or which is specifically focused on innovation in online brand communities, the current study identifies these three key determinants of online brand communities: customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities, which reflect the success factors of online brand communities, as key antecedents of customer perceived brand innovativeness in online brand communities. The following section will provide more discussion of these three key antecedents of customer perceived brand innovativeness in online brand communities.

2.3.3.6 Antecedents of customer perceived brand innovativeness in online brand communities

Most literature in the context of online brand communities referred to customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities, as key determinants of online brand communities (see Table 2.2), which have been identified as key antecedents of innovation in online brand communities (see Table 2.4). Accordingly, the mainstreams of literature have focused on studying innovation from the customer perspective in online brand communities and highlighted three key antecedents, which are: customer use, engagement, and perceived value of online brand communities.

The idea of the customer as co-creator and as one of the most important sources of knowledge for innovation is linked to cost reduction, as one of the most implications of social media/online brand communities. In this context, some companies have started involving their customers in their innovation process by encouraging them to use their online brand communities (Martini, Massa, & Testa, 2013). However, some companies recognize more advanced uses of their online brand communities such as involving customers in the product innovation activities (including ideas generation, design, process, testing, and launching) and customer services feedback (Fuller, 2007). Thus, social media brand communities have built a new paradigm of communication, which weakens the communication barriers between customers and customer groups, and facilitates this communication among them at low cost; therefore, building a wide communication among and between the different social actors depends on using multiple social media for supporting innovation (Charalabidis et al., 2014). However, most of the literature in online brand communities has identified three main determinants of online brand communities (as presented in Table 2.2), as key antecedents of customer perceived brand innovativeness (as presented in Table 2.4), which are presented below:

Firstly, customer use of online brand communities was presented in previous section in this chapter as one of the key determinants of online brand communities, accordingly it is one of the key antecedents of customer perceived brand innovativeness. The indispensable role of social media brand communities creates a novel communication medium and patterns, which create customer empowerment and provides interactive communication with the brand and among customers. Thus, social media/online brand communities become a major source of innovation and this enables customers to articulate their needs, wants, wishes, and participate by their ideas in the innovation process of the brand (John, 2014). Therefore, online brand communities can be used to identify customer needs, elicit innovative ideas, and create innovative communities on the interactive platforms of social media. Therefore, there are number of studies that confirm the significant role of using social media in supporting innovation from different perspectives and through focusing on different conceptualizations of innovativeness (e.g. Charalabidis et al., 2014; John, 2014; Mount & Martinez, 2014; Jalonen, 2015; Nguyen et al., 2015; Zhang et al., 2015; Arnaboldi & Coget, 2016; Wang et al., 2016). Importantly, a few studies have explored the role of using online brand communities in supporting innovation from the customer perspective, such as Bugshan (2015) who confirmed that customer intention to participate in open innovation is affected by customer use of social media to interact with online communities' members. However, to the best of the researcher's knowledge, this study is the first to explore and examine the effect of customer use of online brand communities on customer perceived brand innovativeness.

Secondly, customer engagement with online brand communities is presented in much of the literature as customer participation in online brand communities (Sawhney et al., 2005; Zhang, Kandampully, & Bilgihan, 2015). Customer engagement and its relationship to innovation has been explored and examined in different communities (offline and online communities) and from

different perspectives. On the one hand, most of the literature on offline communities confirms the relationship between customer engagement and innovation. For example, Eisingerich and Rubera (2010) found that brand innovativeness is positively related to customer brand commitment. Similarly, Cambra-Fierro et al. (2013) suggested a new approach to study customer engagement as non-technical innovation (innovation may be technical or related to non-technical processes such as relationship building and customer portfolio management), and the results revealed that customer engagement as non-technical innovation has a significant influence on service performance. Additionally, Ruengaramrut et al. (2015) highlighted that customer engagement from the organization perspective has a positive influence on service innovation.

On the other hand, most previous studies considered the relationship between customer engagement with online brand communities and innovation from different perspectives and by focusing on different constructs. From the organization perspective, Sawhney et al. (2005) noted that customer engagement with social media brand communities positively influences co-innovation, in addition to the role of customer engagement in enhancing the firms' capabilities to establish collaborative innovation process via online brand communities by creating a virtual customer environment, creating interactive communication and sharing customer knowledge among groups of customers with shared interests. Whilst from the customer perspective, many previous studies (e.g. Sawhney et al., 2005; Fuller et al., 2007; Bugshan, 2014; Noble et al., 2012; Chu and Chan, 2009) confirmed the positive effect of customer engagement with online brand communities on innovation. Chu and Chan (2009) referred to customer participation as a key driver of the innovation success of online brand communities. Additionally, Sawhney et al. (2005) proposed that customer participation as a part of customer engagement positively influences product collaboration innovation. Similarly, Fuller et al. (2007) stated that product innovation is

affected by customer engagement through classifying them into lurkers, posters, and frequent posters. Accordingly, online brand communities can provide platforms to create a positive relationship between customer engagement and customer perceived brand innovativeness. This study therefore focuses on customer engagement with online brand communities as one of the key antecedents of customer perceived brand innovativeness in online brand communities.

Thirdly, little literature has focused on identifying the relationship between customer perceived value and innovation. Instead, most literature has considered perceived value in terms of its relationship to innovation, in different communities (online and offline) and from different perspectives (customer and organization). On the one hand, in offline brand communities, many previous studies confirmed the positive relationship between customer perceived value and innovation. Specifically, Chien (2013) confirmed the positive direct effect of brand innovation on customer perceived value. Additionally, the findings of Wu and Ho (2014) showed that customer perceived innovativeness has positive impacts on customer perceived value; additionally, customer perceived innovativeness positively influences customer value, increases customers brand references, and creates more sales opportunities. Similarly, Falkenreck and Wagner (2011) stated that customer perceived innovativeness has a direct positive influence on customer perceived value. On the other hand, in online brand communities, a few previous studies (e.g. Noble et al., 2012; Bugshan, 2015; Kaur, 2016; Bao, 2017) focused on customer perceived value in relation to innovation in online brand communities. Bao (2017) referred to customer perceived value, including functional, cognitive, social, and emotional value, as a key antecedent of service innovation in online brand communities. Similarly, Bugshan (2015) stated that customer intention to participate in open innovation is affected by customer perceived information support in online brand communities. Likewise, Kaur (2016) referred to customer perceived value, including

functional, emotional, and social value, as a key antecedent of customer participation in user-centric service innovation on social media based brand communities. Accordingly, the previous studies provide enough support to explore customer perceived value of online brand communities as an antecedent of customer perceived brand innovativeness. However, to the best of the researcher's knowledge, this study is the first to explore the effect of customer perceived value of online brand communities on customer perceived brand innovativeness.

To conclude, the literature review identified three key determinants of online brand communities, which reflect the key antecedents of customer perceived brand innovativeness in online brand communities. Furthermore, the literature review provides support to differentiate between customer use of online brand communities and customer engagement with online brand communities considering their influences on customer perceived value of online brand communities. Finally, the findings of the literature review show that customer innovativeness provides more understanding of how customer perceived brand innovativeness is affected by the three antecedents in online brand communities, regarding their innovative characteristics (low vs highly innovative customers). Accordingly, the following sections of this chapter present the key outcomes of the literature review, including the research gap and objectives, after that this chapter introduces the research propositions in relation to their research objectives (see Table 2.6), which will be reflected in the initial conceptual framework (see Figure 2.2).

2.4 Research gap and objectives

Customer perceived innovativeness represents a significant indicator of any firm's success or failure and can be used as an effective indicator of the company's competency (Ribeiro et al., 2008; Urhahn, Spieth, & Killen, 2013; Lowe & Alpert, 2015). Many previous studies of online brand communities (e.g. Janzik & Raasch, 2011; Sanayel et al., 2013; Charalabidis et al., 2014; Jalonen,

2015; Nguyen et al., 2015; Wang et al., 2016) focused on studying innovation in online brand communities from different perspectives (customer and organizational) and by focusing on different conceptualizations of innovativeness. On the one hand, customer perceived product innovativeness, which is commonly used in the literature in relation to online brand communities (e.g. Sawhney et al., 2005; Fuller et al., 2006; Fuller et al., 2007; Janzik & Raasch, 2011), focuses only on customers' rational drivers and provides a signal of uncertainty (signalling theory), due to the difficulties in providing enough information (lack of information) about all products in the market and comparing them to identify the most innovative (Janzik & Raasch, 2011; Sanayel et al., 2013). On the other hand, to the best of the researcher's knowledge, no studies on online brand communities have been found that consider customer perceived brand innovativeness, which provides a broader conceptualization of innovativeness and reflects both customers' rational drivers (e.g. features, technology, and offerings of the brand's products) and non-rational drivers (e.g. feeling happy and excited to own a known brand) (Ouellet, 2006; Shams et al., 2015). Furthermore, customer perceived brand innovativeness, depends on the amount of information available about the brand's new features and products and can be used as an indicator of a brand's level of innovativeness compared to other brands (Shams et al., 2015). Considering signalling theory, customer perceived brand innovativeness provides a signal of the different brands' innovativeness in the market, thus customers can compare between different brands and identify the most innovative brands.

Based on previous sections of the literature review (see Table 2.4), there are three main streams of studying innovation in online brand communities: customer engagement with online brand communities (e.g. Sawhney et al., 2005; Fuller et al., 2007; Bugshan, 2014), customer perceived value of online brand communities (e.g. Noble et al., 2012; Bugshan, 2015; Kaur, 2016), and

customer use of online brand communities (e.g. Bugshan, 2015). These findings are consistent with the findings of the previous studies in the context of online brand communities (see Table 2.2), which referred to these three main streams as key determinants of online brand communities: customer use of online brand communities (e.g. Shao, 2009; Muntinga et al., 2011; Wu et al., 2015; Amaro et al., 2016; Kamboj, 2016; Schivinski et al., 2016); customer engagement with online brand communities (e.g. Shao, 2009; Muntinga et al., 2011; Gummerus, 2012; Wu et al., 2015; Amaro et al., 2016; Kamboj, 2016; Schivinski et al., 2016), and customer perceived value of online brand communities (e.g. Gummerus, 2012; Dessart, 2015; Zheng et al., 2015; Amaro et al., 2016; Kamboj, 2016; Zhang et al., 2016). However, the current study refers to these three main determinants of online brand communities as key antecedents of customer perceived brand innovativeness in online brand communities. To the best of the researcher's knowledge, this study is the first to explore the role of online brand communities in affecting customer perception of brand innovativeness. Thus, the first research objective is:

RO 1: “To explore and investigate how customer perceived brand innovativeness is affected by customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities.”

Furthermore, the current study differentiates between customer use and customer engagement in relation to their influences on customer perceived value of online brand communities. In differentiating customer use and engagement, some previous studies focused on customer online brand communities' activities (e.g. Schivinski, et al., 2016), referring to customer use as a subset of customer engagement. It does so by dividing customers' online activities into the following engagement levels: using/consuming, contributing, and creating; whilst other studies (e.g. Laroche

et al., 2012; Tsai & Men, 2012; Kamboj & Rahman, 2016) differentiated between customer use and engagement by dividing customer's online activities into passive activities (customer use) and active participation activities (customer engagement). The current research adopts the second perspective, differentiating between customer use and engagement based on the nature of customers' online activities, by classifying these activities into passive activities (customer use) and active participation activities (customer engagement). However, customer use of online brand communities reflects the customer consumption of online brand communities through following/joining online brand communities, reading brand related posts, and viewing brand related pictures or video via online brand communities. Customer engagement with online brand communities reflects customers' participation activities via online brand communities, including: liking, commenting, sharing, and creating brand posts (Laroche et al., 2012; Tsai & Men, 2012; Kamboj & Rahman, 2016).

Whilst many previous studies (e.g. Gummerus, 2012; Vivek et al., 2012; Zhang, 2016) demonstrated that customer perceived value is a key outcome of customer engagement, a few studies (e.g. Tsai & Men, 2012; Amaro, 2016) have examined the relationship between customer use of online brand communities and some of the sub-dimensions of customer perceived value of online brand communities. Amaro (2016) referred to customer emotional perceived value of online brand communities (perceived enjoyment value) as an antecedent of customer use. Additionally, Tsai and Men (2012) argued that customers use online brand communities as a platform, through liking and visiting brand's platforms, to gain information about their brand (information value), followed by getting fun and seeking leisure or entertainment of their brand communities (enjoyment value), and then social integration. Moreover, Bugshan (2015) referred to customer use of social media as an antecedent of a customer perceived informational support (information

value). Accordingly, previous studies have argued about the relationship between customer use and customer perceived value, regarding the value that customers can gain from using social media brand communities. However, this study is among a very few to explore customer use of online brand communities as an antecedent of customer perceived value of online brand communities.

There is an argument among previous studies regarding the relationship between customer engagement with online brand communities and customer perceived value of online brand communities. Whilst some studies referred to customer engagement as a consequence of customer perceived value (e.g. Zheng, 2015); other studies stated that customer engagement is an antecedent of customer perceived value. For example, Zhang et al. (2016) confirmed the positive relationship between customer engagement with online brand communities (including conscious participation, enthusiasm, social interaction) and customer perceived value of online brand communities (comprising functional, hedonic, and social values). Moreover, Gummerus (2012) referred to customer behavioural engagement as an antecedent of customer perceived value (including social, entertainment, and economic benefits). Likewise, Vivek et al. (2012) demonstrated that customer engagement could lead to many successful marketing outcomes such as customer perceived value. Accordingly, many previous studies have referred to customer engagement as an antecedent of customer perceived value of online brand communities.

Despite many previous studies focusing on customer engagement as an antecedent of customer perceived value, they disagree on the way to measure or define customer engagement with online brand communities. Some of these studies define customer engagement as participation, others define it as behavioural engagement, and some of them use different dimensions to measure it. However, this study provides more insights into studying customer engagement and customer perceived value, through conducting an exploratory study as an initial stage of the data collection

to define and identify the key dimensions of customer engagement with online brand communities and the key dimensions of customer perceived value of online brand communities. Accordingly, to the best of the researchers' knowledge, this study is the first to differentiate between customer use (passive activities) and customer engagement (active participation activities), regarding their influences on customer perceived value of online brand communities. Thus, the second objective of this study is:

RO 2: "To identify the different influence of customer use of online brand communities and customer engagement with online brand communities on customer perceived value of online brand communities; in addition, to examining the influence of customer use of online brand communities on customer engagement with online brand communities."

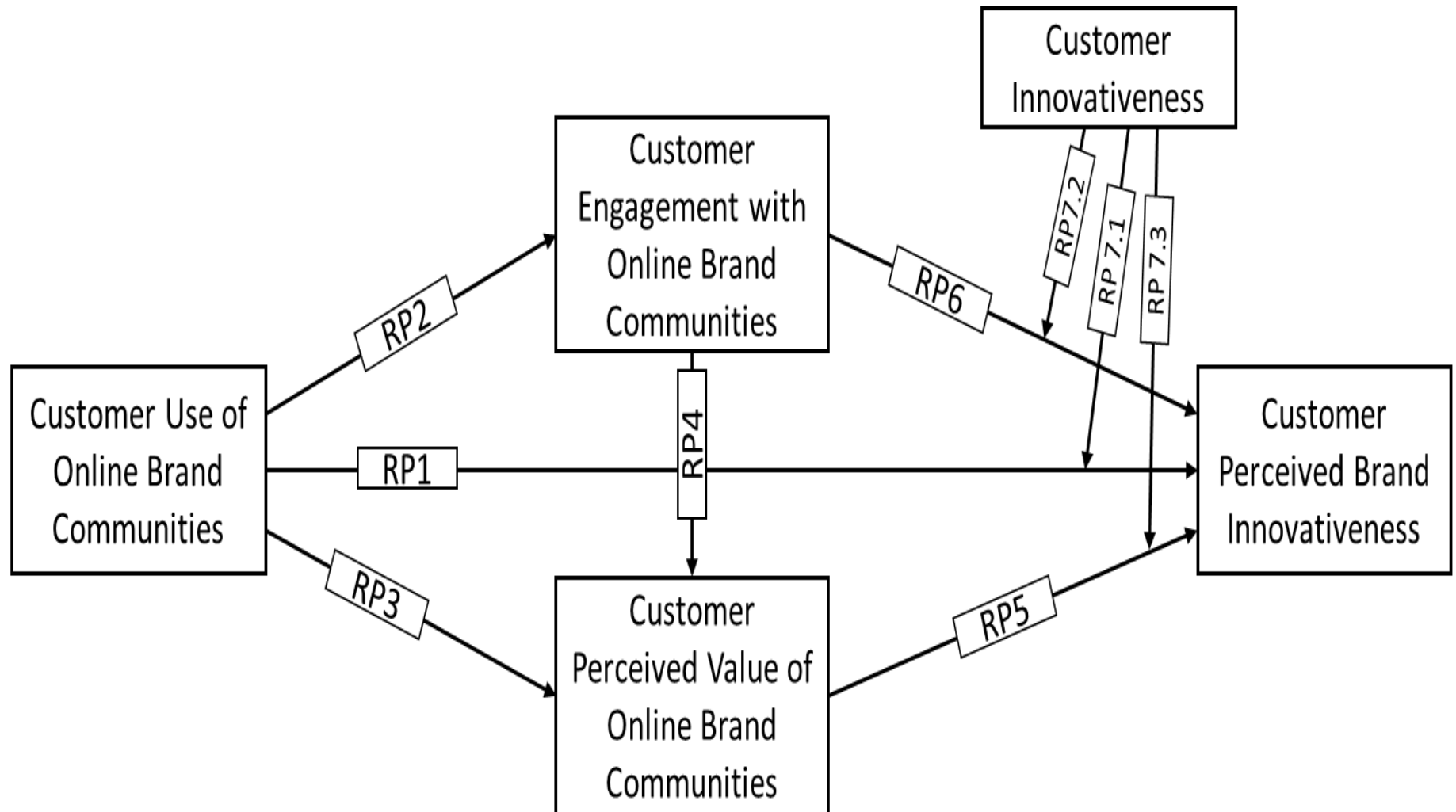
Finally, many previous studies (e.g. Ho & Wu, 2011; Hur et al., 2012; Shams et al., 2017) confirmed the significant moderating effect of customer innovativeness in providing more understanding of the relationships between different constructs. However, classifying customers based on their innovativeness (customer innovativeness) into highly innovative customers (who are novelty seeking, opinion leaders, risk takers, and independent) and low innovative customers (Dobre et al., 2009), will provide more understanding of how customer perceived brand innovativeness is affected by the three antecedents in the context of online brand communities. Therefore, the third research objective of this study is:

RO 3: “To investigate the extent to which customer innovativeness moderates the effects of customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities on customer perceived brand innovativeness.”

2.5 Initial conceptual framework and research propositions

The initial conceptual framework depicts the proposed relationships (see Figure 2.2), which comprise: the influence of customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities on customer perceived brand innovativeness (RP1, RP6, and RP5); in addition to the influence of customer use of online brand communities and customer engagement with online brand communities on customer perceived value of online brand communities (RP3, RP4). Moreover, this initial framework describes the influence of customer use of online brand communities on customer engagement with online brand communities (RP2). Finally, the initial conceptual framework shows the role of customer innovativeness in moderating the effects of customer use of online brand communities, customer engagement with online brand communities, customer perceived value of online brand communities on customer perceived brand innovativeness (RP7.1, RP7.2, and RP7.3).

Figure 2.2 Initial conceptual framework



Considering the current research objectives and the initial conceptual framework, this study proposes the following research propositions as presented in table 2.5.

Table 2.5 Research propositions in relation to research objectives

Research objectives	Research propositions (proposed relationships)
RO 1: “To explore and investigate how customer perceived brand innovativeness is affected by customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities.”	RP1: Customer use of online brand communities will influence customer perceived brand innovativeness.
	RP5: Customer perceived value with online brand communities will influence customer perceived brand innovativeness.
	RP6: Customer engagement with online brand communities will influence customer perceived brand innovativeness.
RO 2: “To identify the different influence of customer use of online brand communities and customer engagement with online brand communities on customer perceived value of online brand communities; in addition, to examining the influence of customer use of online brand communities on customer engagement with online brand communities.”	RP3: Customer use of online brand communities will influence customer perceived value of online brand communities.
	RP4: Customer engagement with online brand communities will influence customer perceived value of online brand communities.
	RP2: Customer use of online brand communities will influence customer engagement with online brand communities.
RO 3: “To investigate the extent to which customer innovativeness moderates the effects of customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities on customer perceived brand innovativeness.”	RP7.1: Customer innovativeness will influence the relationship between customer use of online brand communities and customer perceived brand innovativeness.
	RP7.2: Customer innovativeness will influence the relationship between customer engagement with online brand communities and customer perceived brand innovativeness.

	RP7.3: Customer innovativeness will influence the relationship between customer perceived value of online brand communities and customer perceived brand innovativeness.
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2.6 Summary

This chapter discussed two key streams of the previous studies, which are online brand communities and customer perceived brand innovativeness, and highlighted the current research gap. The literature review revealed that there are three main determinants of online brand communities' success. These can be used as behavioural measures of social media marketing performance. Additionally, the review of existing literature revealed that most studies have considered innovation in online brand communities from different perspectives and through focusing on different conceptualizations of innovativeness. However, to the best of the researchers' knowledge, this study is the first to explore how customer perceived brand innovativeness is affected by three main antecedents in the context of online brand communities: customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities.

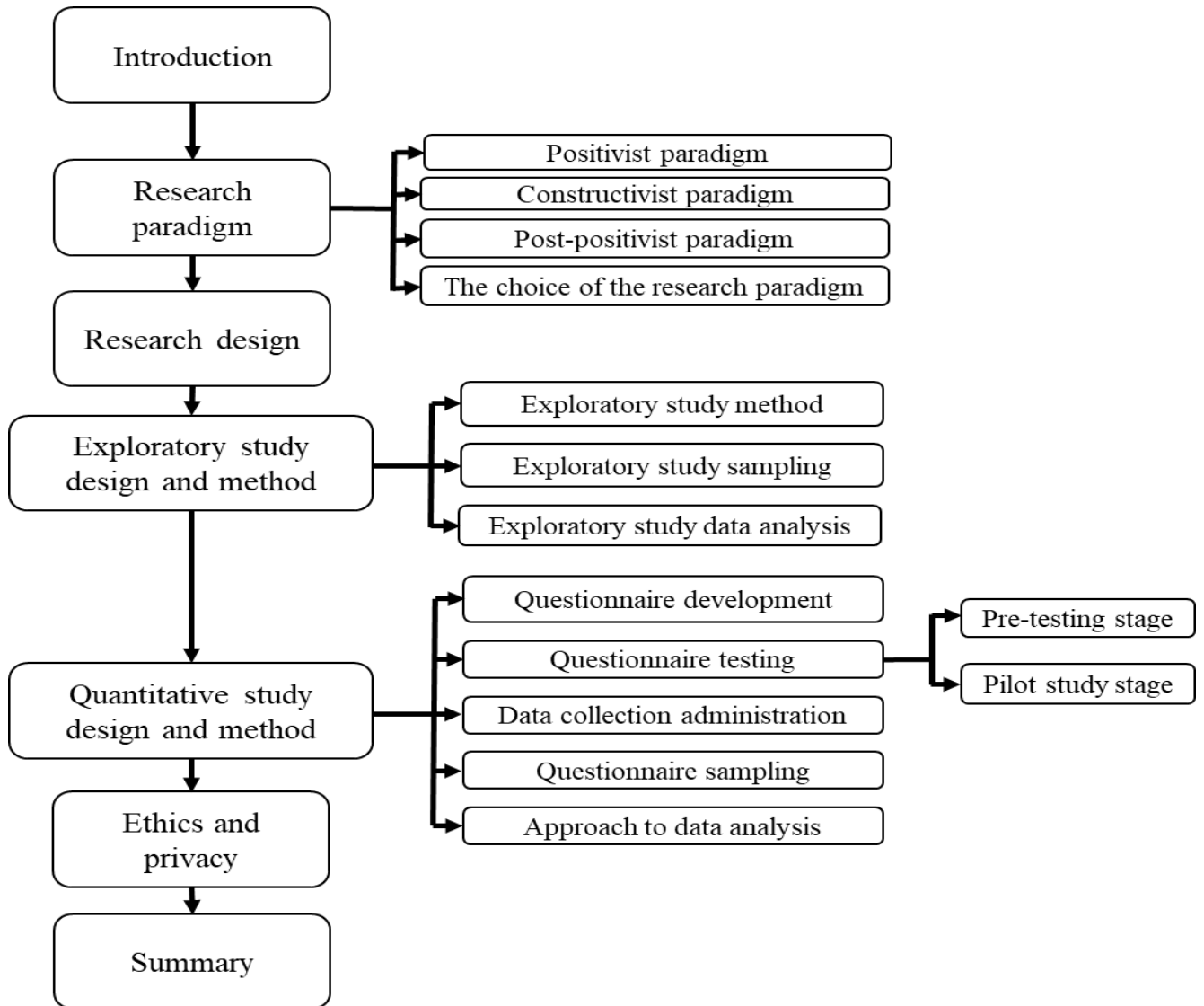
The literature review revealed that there are seven research propositions that will be transformed into research hypotheses based on the findings of the exploratory study (see chapter 4), subsequently, the hypotheses will be tested and supported or rejected based on the quantitative findings (see chapter 5). Additionally, the next chapter of this thesis discusses the research methodology of the current study.

Chapter 3: Research Methodology

3.1 Introduction

This chapter introduces the research design and methodology; it begins with an overview of the research philosophy, which includes the research paradigm and its ontological, epistemological, and methodological principles. The chapter then discusses the mixed methods design: qualitative and quantitative methods, as the adopted approach to this research. The exploratory study phase is addressed in detail including the procedures and data analysis. Following that, the quantitative phase is discussed showing its procedures and data analysis techniques. Finally, the last two sections present the research ethics and a summary of the chapter. Figure 3.1 represents the structure of this chapter.

Figure 3.1 Structure of chapter three – research methodology



3.2 Research paradigm

A research paradigm is “...a set of common beliefs and agreements shared between scientists about how problems should be understood and addressed” (Kuhn, 1962, p. 43). There are different elements to building research paradigms, which include ontology (what is reality), epistemology (how do you know something or how knowledge of reality is created), and methodology (how do you go about collecting knowledge and how is research conducted) (Guba, 1990). Moreover, there

are different theoretical perspectives – including positivist perspective, constructivist perspective, and post-positivist perspective – that influence how the study is conducted, the researcher’s role, and what knowledge comes out of the research. The conduct of each perspective requires a different set of criteria (Crotty, 2003; Guba & Lincoln, 2005). The following subsections discuss the different theoretical perspectives in more detail.

3.2.1 Positivist paradigm

From the Positivist perspective, the ontology is realism (single reality) and reality is assumed to exist and reflect the real world, explaining the social world in terms of laws, and including cause-effect relationship (Moses & Knutsen, 2007). The epistemology of positivism is objectivism and it is assumed facts about the social world can be accurately collected and are true and independent of any individual interpretations of the social world. A positivist methodology is usually deductive, focusing on phenomena prediction and involving testing hypotheses to support or reject a theory (Fox, 2008). The methods used are mainly related to the quantitative approach, using statistics to reveal the research findings and link to relational and/or empirical science through offering assurance that knowledge is clear, accurate, and certain (Fox, 2008). For the positivist and post-positivist, several aspects are very important when conducting any quantitative research. These aspects are the research aim, generating and testing hypotheses, cause and effect, generalizability, adding to existing knowledge, and research validity and reliability (Fox, 2008; Dieronitou, 2014). Moreover, knowledge from a positivist perspective is built up like blocks, adding new knowledge onto old, and through the identification of patterns to determine where new knowledge fits with existing knowledge (Dieronitou, 2014).

3.2.2 Constructivist paradigm

Constructivism is the view that knowledge and all meaning is not discovered but socially constructed out of the world and its objects that already exist (Dieronitou, 2014). The ontology of constructivism is relativism, which means that there are multiple realities (no single reality) constructed by the research actors (Dieronitou, 2014). It thus concerns reality from the perspective of the research participants and there is no real world that is independent of human consciousness (Belk, 2006). The epistemology of constructivism is interpretivist, which means that reality is subjective and depends on how the observer interprets reality; therefore, research findings and knowledge are created from the relationship between the researcher and the subject of the study, and accordingly objective observation is not possible (Belk, 2006). Moreover, the methods used are mainly qualitative, through processes of data collection that can include text messages, interviews, and reflective sessions (Henderson, 2011).

3.2.3 Post-positivist paradigm

Post-positivists reject the central tenets of positivism and accept the complementarity argument for paradigms, following the realisation that scientific methods cannot be applied to all scientific theory (Modell, 2009). Post-positivists accept that there are different interpretations for reality (Henderson, 2011). However, critical realism utilizes the compatibility of worldview theses and supports the view that qualitative and quantitative research can work together to address the limitations of positivism and other paradigms (Dieronitou, 2014). Additionally, the aim of post-positivism is generating an acceptable approximation of reality, which is very close to what is observed (Guest, Namey & Mitchell, 2013). Thus, researchers should identify their own assumptions and carefully analyse and review their findings to minimise the bias of the research.

The ontology of post-positivism is critical of realism, which is similar to positivism in terms of accepting the existence of an objective reality (reality is assumed to exist), but accepting that reality cannot be truly known (Dieronitou, 2014). Access to reality is imperfect due to the complexity of the human being as a researcher; like any human being, the researcher can never be completely objective (Guba, 1990). The epistemology of post-positivism is objectivist, while acknowledging that any research outcome will never be totally certain; here emphasis is on collecting more than one type of data and on building rather than confirming hypotheses (Migirio & Magongi, 2011). The aims of post-positivism are achieved by using qualitative and quantitative methods. Some researchers affirm that post-positivism could be comprised of only one quantitative method, which is called the “paradigm debate”; whilst nowadays, multiple methods may be used in a single study, taking advantage of the representativeness reflected in the contextual nature of the qualitative findings and the generalizability of the quantitative findings (Migiro & Magangi, 2011).

3.2.4 The choice of the research paradigm

The current research adopts a post-positivist philosophy, which criticises the traditional notion of positivism in terms of the absolute truth of knowledge (Phillips & Burbles, 2000) and replaces certainty with probability, objectivity with a level of objectivity (complete objectivity does not exist), and absolute truth with approximate truth (Dwivedi et al., 2009; Modell, 2009). Post-positivism, which assumes the need to objectively report reality, also accepts different interpretations of reality (Henderson, 2011; Guest et al., 2013). This study seeks a high degree of objectivity and tries to reduce subjectivity and bias through carefully review and analysis of the research findings (Pickard, 2013).

Post-positivism represents “an approach to research where large amounts of qualitative data are categorised to produce quantitative data to be analysed using statistical methods” (Dwivedi et al.,

2009, p. 55). The main reason for adopting a post-positivism paradigm is that the current study aims to uncover relationships between the proposed research constructs. Thus, it requires a more exploratory approach to the nature of these relationships before testing them; this directs the research towards the post-positivist paradigm, which includes both qualitative and quantitative inquiry (Shannon-Baker, 2016). Post-positivism addresses the shortcomings of quantitative methods and encourages the use of mixed methods to explore the depth of the research problem (Guba, 1990). This is suitable for the research gap under investigation, which requires both qualitative and quantitative study; therefore, this study is conducted through an exploratory sequential mixed methods design, starting with a qualitative exploration followed by a quantitative study (Henderson, 2011; Creswell, 2014).

3.3 Research design

As discussed above, a qualitative method is often used when a study adopts a constructivist paradigm, whilst a quantitative method is often used when a study adopts a positivist paradigm (Creswell, 2014). Both methods can be used complementarily, which is known as methods triangulation (Denzain, 1978; Neuman, 2003). Moreover, Creswell (2006) identified four main mixed methods design types (see Table 3.1), which includes triangulation design, embedded design, explanatory design, and exploratory design. There are different requirements and mechanisms that need to be applied to each design regarding their mixed methods nature, including a different combination of qualitative (QUAL) and quantitative (QUANT) methods.

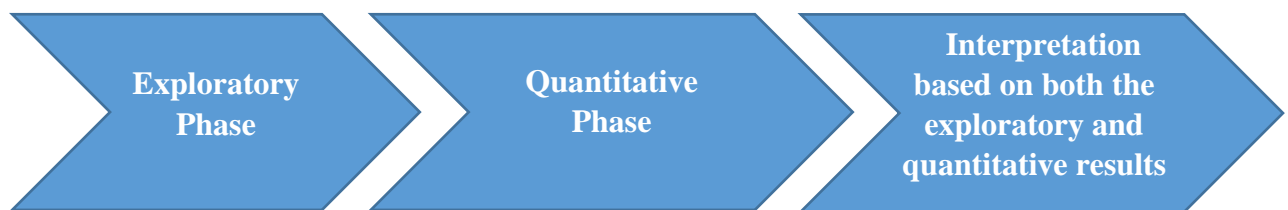
Table 3.1 Types of mixed methods design

Design type	Definition	Procedures
Triangulation design	This design is a well-known approach to mixed methods, which obtains different but complementary data on the same topic to provide best understanding of the research problem. This design is used when a researcher wants to compare and contrast quantitative statistical results with qualitative findings.	QUANT and QUAL methods are usually equal, conducted at the same time (concurrent), and the data sets usually merge during the analysis or the interpretation.
Embedded design	This design, which is a mixed methods design, depends on using one data set to support the second data set, thus a single data set is not enough to answer the research questions, which includes different types of questions that require different types of data. This design is useful when a researcher needs to embed a qualitative component within a quantitative design	QUANT and QUAL are usually unequal, following concurrent or sequential timing procedures, and the data is managed through embedding one type of data within a larger design, which uses the other type of data.
Explanatory sequential design	It is a sequential two-phase mixed methods design – qualitative data is used to support or help to explain initial quantitative results.	Usually more QUANT, sequential design starts with QUANT followed by QUAL, and depends on connecting the data between the two phases.
Exploratory sequential design	It is a sequential two phase mixed methods design – the results of the first design (always qualitative exploration method) can help develop or inform the second method (always quantitative methods). This design is needed for several reasons: theory development and measurement development. Additionally, exploratory study results are used to make decisions about quantitative research questions, sampling, and data collection in phase two.	Exploratory sequential design starts with QUAL followed by QUANT, and connects the data between the two phases.

Source: adapted from Creswell (2006, pp. 58-88)

Considering the post-positivist paradigm, which requires a more exploratory approach to uncover the relationships between the proposed research constructs before testing them (Guba, 1990; Dwivedi et al., 2009), this research adopts an exploratory sequential mixed methods research design, which includes two phases of data collection: firstly an exploratory study data collection and analysis, followed by quantitative data collection and analysis. Figure 3.2 reveals the process of this mixed methods design as it is applied in this research.

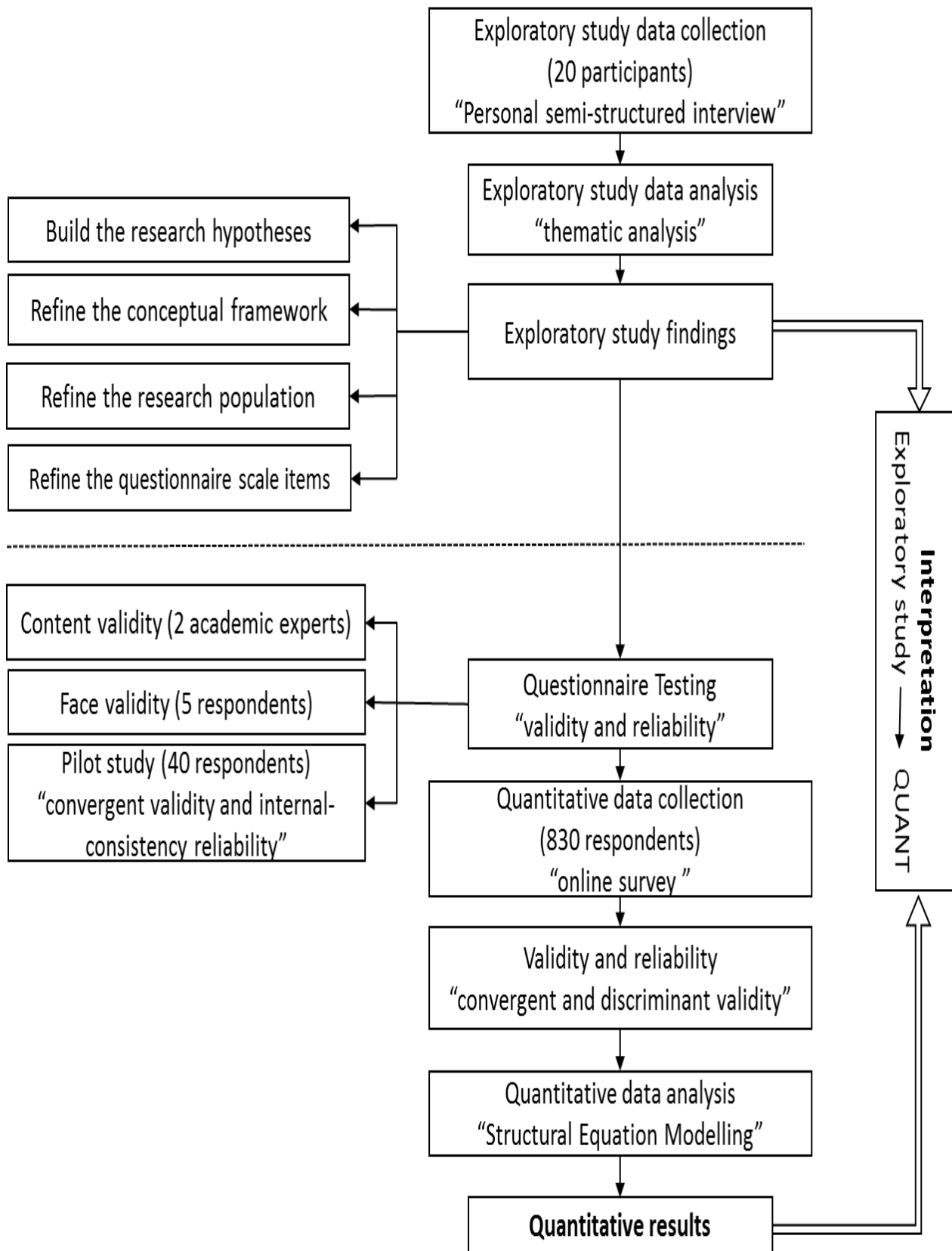
Figure 3.2 Exploratory sequential mixed methods design



Source: adapted from Creswell (2014)

The mixed methods research design is presented in Figure 3.2. The current study begins with qualitative explorations, as demonstrated by Creswell (2006; 2014), for several reasons: primarily, to refine the conceptual model and build current research hypotheses (by transforming the current research propositions); additionally, to refine the research population for the quantitative study as a second stage of the sequential mixed methods design; finally, to refine measurements (the questionnaire scale items) for the quantitative study; regarding the context of the research constructs, measures found in the literature may or may not be good measures of these constructs; thus, it is important to clarify the construct measures based on the exploratory study findings (Creswell, 2014). Figure 3.3 represents the sequential exploratory mixed methods design of the current study.

Figure 3.3 Exploratory sequential mixed methods design of the current study



Source: adapted based on the current study

As shown in Figure 3.3, there are two phases of the current study; the first phase is an exploratory study conducted through 20 personal semi-structured interviews and the data is analysed using thematic analysis. The findings of this exploratory study achieve the following: firstly, the initial conceptual framework is updated and the research hypotheses are built by transforming the research propositions; secondly, questionnaire measurements are picked up from previous studies and then refined; thirdly, the research population is refined through focusing on mobile phone online brand communities rather than a broader investigation of all online brand communities featuring different categories of products and brands. Consequently, during the second phase (the quantitative study), the measurement scale items are tested through pre-testing to assess content and face validity, and by conducting a pilot study to assess the internal consistency and the convergent validity of the scale measurements. Accordingly, the data collection is conducted through an online survey to 830 respondents consisting of customers engaged with any mobile phone online brand communities. By using structural equation modelling (SEM), the data set is analysed, and the proposed hypotheses tested. Finally, the interpretation of the current study findings is managed through the merger of both the exploratory study findings and the quantitative study findings, and the results of the quantitative study are used to support the findings of the exploratory study.

3.4 Exploratory study design and method

The qualitative approach aims to explore how customer perceived brand innovativeness is affected by three antecedents in online brand communities: customer use of online brand communities; customer engagement with online brand communities; and customer perceived value of online brand communities. Additionally, the exploratory study aims to uncover the relationships between customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities as key determinants of online brand communities (see Tables 2.3 and 2.5). The exploratory study also

aims to identify the key dimensions of both customer engagement with online brand communities and customer perceived value of online brand communities. This section of the methodology chapter describes the exploratory study method, exploratory study sampling, and exploratory study data analysis.

3.4.1 Exploratory study method

The personal face-to-face semi-structured interviews are employed for data collection. Adopting semi-structured interviews is consistent with the traditions of post-positivist researchers, through offering more flexibility to select the next question based on the flow of the discussion, in addition to adding follow up questions and asking for more clarification by providing examples of the participants' real experiences (Mitchell & Jolley, 2010; Pasternak, 2017). At the beginning of the interview the participants are advised about the purpose of the research, and that each interview should approximately one hour (the length of the interview was identified based on a pilot interview as being the most appropriate length of time for eliciting the data). All interviews are managed face to face through hosting the participants in the researcher's office at the University of Gloucestershire or visiting them in any convenient place (usually their own home). Once the participants agreed to take part in the research, they are informed that they need to sign the consent form in order to start the interview (see Appendix A). Regarding the structure of the interviews, the participants are free to talk about one or more of their online brand communities (any brand category or sector) that they engage with through liking posts and/or writing comments and/or sharing posts and/or creating posts on online brand communities via social media. Accordingly, the participants are members of different online brand communities and in different sectors (e.g. fashion, electronic, groceries, etc.) via various social media platforms (e.g. Facebook, Twitter, Instagram, etc.). The sample includes participants from different groups of age, annual income, level of education, and

includes both males and females (see Appendix A). As a result, 20 personal semi-structured interviews are conducted, and the average length of the interviews was 40-60 minutes.

The interview questions are developed based on the current research gap and the literature review. The interview protocol follows several themes and questions, in addition to some follow-up questions based on the flow of the conversation and including the following components: a heading (date, place, and participant); standard procedures from one interview to another; and spaces between questions to write some notes (Bryman, 2011; Creswell, 2014). In terms of research ethics, the participants signed the consent form and the interviews were recorded (audio recording), transcribed (full text transcription, 30 pages using font 12 and single line spacing, for example see Appendix A), and then analysed using thematic analysis. Accordingly, the initial theoretical framework (see Figure 2.2) has been developed into an updated conceptual framework (see Figure 4.2) based on the findings of the exploratory study.

The initial conceptual framework, developed based on the literature review, is used to develop the structure of the interview guide (see Appendix A). The interview guide is divided into six sections. The first section includes general questions about the type of social media the participants use to follow their brand. The second section is related to customer use of online brand communities and customer engagement with online brand communities. The third section discusses the key antecedents of customer perceived brand innovativeness in the context of online brand communities. The fourth section discusses customer use and customer engagement as antecedents of customer perceived value of online brand communities. The fifth section of the interview guide relates to the innovative customers' characteristics (customer innovativeness, including low and highly innovative customers). Finally, the last section is all about the demographics of the participants.

Moreover, this research follows several methods to ensure the validity of the exploratory study findings. First, the exploratory study phase is followed by quantitative data collection to confirm or reject the research hypotheses that are developed based on the exploratory study findings (Creswell, 2014). Second, a strategy of voluntary and knowledgeable participants is used to ensure that the exploratory study phase includes recruiting participants likely to be able to answer the research questions, and the participants are assured that there is no pressure to take part in the research and that they can withdraw from the study at any time during the interview (Bryman, 2011; Malhotra et al., 2012). Third, the approach to managing the interviews is flexible since the exact questions are not treated as final, thus, asking alternative or additional questions is managed based on the flow of the interview discussion (Bryman, 2011; Creswell, 2014; Pasternak, 2017).

3.4.2 Exploratory study sampling

The exploratory study is conducted with 20 participants by using personal semi-structured interviews to collect the data from customers engaged with any online brand community in the UK. The data collection continues until data saturation is reached, where no new information or insights are being explored in the new interviews (Creswell, 2014). The sample of the exploratory study phase is a combination of purposive (the participants are knowledgeable about the research topic, and able to answer the research question) and snowball sampling (whereby the researcher asked each participant to recommend other potential participants) to insure that the participants are eligible to take part in the exploratory study (Bryman, 2011; Pasternak, 2017). The purposive sampling method means that each participant has to satisfy the following two criteria: being engaged with any online brand community through liking posts, writing comments, sharing brand posts, and creating posts on social media brand communities; and secondly, being aged 18 years or over is based on the requirements of University of Gloucestershire ethics.

3.4.3 Exploratory study data analysis

Regarding the post-positivism approach, the exploratory study dataset is managed and analysed through thematic analysis, as a type of the exploratory study analysis method (Bryman, 2011; Creswell, 2014). Thematic analysis is more flexible compared to other exploratory study methods (Braun & Clarke, 2006), and is a widely adopted method within the post-positivism paradigm (Guba & Lincoln, 1994). As demonstrated by Creswell (2014), the exploratory study data is coded using deductive and inductive codes. Firstly, deductive codes are applied to match the proposed relationships in the initial theoretical framework (see Figure 2.2) and the common dimensions of customer engagement and customer perceived value, identified in the literature, with the actual data of the exploratory study findings (see Appendix A). For example, the key dimensions of customer perceived value, which are commonly used in literature (including functional, emotional, and social value), are matched with the actual data of the exploratory study findings. Secondly, inductive codes are used to develop the new themes that may provide new insights from the findings. Furthermore, considering the anonymity of the participants, this research used codes instead of the participants' names (the codes started with PC followed by a number from 20 to 40).

The updated theoretical framework is developed based on the findings of the exploratory study. Specifically, three additional relationships are included in the initial theoretical framework, including: first, the indirect effect of customer use of online brand communities on customer perceived brand innovativeness through the mediating role of customer perceived value and customer engagement with online brand communities. Second, the indirect effect of customer engagement with online brand communities on customer perceived brand innovativeness through the mediating role of customer perceived value of online brand communities. The third additional relationship is related to the indirect effect of customer use of online brand

communities on customer perceived value of online brand communities through the mediating role of customer engagement with online brand communities (see Figure 4.2).

To conclude, the findings of the thematic analysis show a number of themes and sub-themes emerge, which are then compared to those in the initial theoretical framework (see Figure 2.2). Accordingly, this initial framework is then changed into an updated conceptual model (see Figure 4.2) and the research propositions are transferred into research hypotheses for the quantitative study.

3.5 Quantitative study design and method

Regarding the updated conceptual model and the research hypotheses developed based on the findings of the exploratory study, this section of the methodology chapter outlines the procedures concerning the questionnaire design and the collection of the quantitative data. This section starts with the questionnaire development, followed by questionnaire testing; the section then presents the procedures of the data collection and the quantitative sampling method. The last part of this section introduces an approach to data analysis.

3.5.1 Questionnaire development

The questionnaire reflects the updated conceptual framework, which is amended based on the exploratory study findings. The final updated conceptual framework includes 12 constructs divided into five main constructs (customer use of online brand communities, customer engagement with online brand communities, customer perceived value of online brand communities, customer perceived brand innovativeness, and customer innovativeness). It also includes seven sub-constructs (four sub-constructs of customer engagement: customer behavioural engagement, conscious participation, enthusiasm participation, and social participation, in addition to three sub-constructs of customer perceived value: functional, emotional, social value). The literature review and the exploratory study findings helped to

identify the relevant definitions for each construct and its sub-constructs. However, all the questionnaire scale items are derived from existing literature and adopted in terms of the exploratory study findings and the definitions of the research constructs, through searching for the most relevant scale items of each construct in the published academic papers in the field (see Appendix B). In terms of the construct validity requirements, the number of scale items of each construct is decided by using four items, at least, in each to achieve a high level of construct validity (Maydeu-Olivares & McArdle, 2003; Malhotra, 2012). Furthermore, most of the scale items are measured by using a five-point Likert-scale, which is the most common scale in literature (see Table 3.2), in addition to some general questions about the usage and the frequency of use of online brand communities and some questions about the demographics of the participants. Table 3.2 provides justification for the content of the questionnaire based on the literature review and in line with the exploratory study findings.

As presented in Appendix B, all the measurement items are derived from previous studies and adopted in terms of the exploratory study findings and the definition of each construct. Accordingly, the questionnaire includes 52 scale items, which are divided based on the research constructs.

Table 3.2 Scale items of the research constructs

Research main constructs	Research sub-constructs	Source
Customer use of online brand communities (includes five items).		(Schivinski et al., 2016)
Customer engagement with online brand communities (Includes 16 items to measure the four sub-constructs of customer engagement).	Conscious participation (Includes 4 items)	(Vivek et al., 2015; Zhang et al., 2016; Harrigan et al., 2017).
	Enthusiasm (Includes 4 items)	(Vivek et al., 2015; Zhang et al., 2016; Harrigan et al., 2017).
	Social interaction (Includes 4 items)	(Baldus et al., 2015; Vivek et al., 2015; Poorrezaei, 2016; Zhang et al., 2016).
	Customer behavioural engagement (Includes 4 items)	(Gummerus et al., 2012; Tsai & Men, 2012; Sjoqvist, 2015).
Customer perceived value of online brand communities (Includes 12 items to measure the three sub-constructs of customer perceived value).	Functional value (Includes 4 items)	(Vries & Carlson, 2014; Chen & Lin, 2015; Zhang et al., 2016).
	Social value (includes 4 items)	(Kuo & Feng, 2013; Zhang et al., 2016; Jahn & Kunz, 2017)
	Emotional value (Includes 4 items)	(Vries & Carlson, 2014; Chen & Lin, 2015; Jahn & Kunz, 2017).
Customer perceived brand innovativeness (Includes 10 items).		(Shams et al., 2015).
Customer innovativeness (Includes 9 items).		(Goldsmith & Hofacker, 1991).

3.5.2 Questionnaire testing

The scale items within the questionnaire are adopted based on the literature review and in line with the exploratory study findings. The initial online form of the survey is designed and managed by using the Bristol Online Survey (BOS) website, and the content was further developed based on results from pre-testing and piloting the questionnaire. The questionnaire is tested through following two main stages: firstly, the questionnaire pre-testing to assess face

and content validity; secondly, the piloting to assess the convergent validity and the internal consistency (the reliability of the scale items).

3.5.2.1 Pre-testing stage

The quantitative approach is used to test the updated conceptual model (see Figure 4.2), which is amended based on the exploratory study findings. The pre-testing stage of the questionnaire is conducted to assess content validity and face validity of the measurement scale of the questionnaire.

Firstly, as demonstrated by Creswell (2014) and Malhotra et al. (2012), content validity is assessed by reviewing the questionnaire with two academic experts, who are specialists in marketing and mixed methods at the University of Gloucestershire, to test to what degree the items of the scale cover the main characteristics of the concept being measured, in addition to a number of meetings with English experts in the Student Achievement Team at the University of Gloucestershire. It included English language experts to check spelling, wording, grammar, and the clarity of the questions of the online survey. The results of the test showed some minor issues with the question wording of some of the questions, in addition to some issues related to the sequence of the questions, which were identified and subsequently rephrased.

Secondly, as demonstrated by Hardestya and Bearden (2004) the overall measure cannot be valid if the scale items are not face valid (which is necessary but not sufficient to provide valid scale items). Accordingly, the face validity is important and is assessed by discussing the wording and the sequence of the questions and the procedures of the online survey with a small group of participants, including five participants of the customers who engage with mobile phone online brand communities via social media. Using the researcher's laptop to open the link of the survey, the researcher asked them for their feedback on the online survey regarding their understanding of the questions (wording and clarity), the online survey instructions, and

finally the structure of online survey. The participants were chosen from the same target group as the main study participants. The results of the test showed a few minor issues related to the wording of some questions, which were consequently rephrased.

3.5.2.2 Pilot study stage

Pearson product-moment correlation is used to test the convergent validity, as this is one of the most common validity measurements which is used to measure the correspondence between scale items of each variable and which is suitable for parametric data (Sekaran, 2003). Moreover, Schmidt and Hollensen (2006) defined convergent validity as the ability of the scale to correlate with other scales that purport to measure the same concept. Accordingly, if the results from different scales that claim to measure the same construct are highly correlated then convergent validity is established.

According to Schmidt and Hollensen (2006), the strong Pearson correlation coefficient must be ≥ 0.5 . Additionally, Cronbach's Alpha is used to test the reliability or the internal consistency between the items for each construct; an Alpha score of 0.60 or less indicates that the items measure different characteristics, therefore, it is recommended to be > 0.6 (Schmidt & Hollensen, 2006; Malhotra, Birks & Wills, 2012). Additionally, Cronbach and Shavelson (2004) confirmed that there are some rules to describe Cronbach's alpha: > 0.9 is excellent, 0.8 to 0.9 is good, 0.7 to 0.8 is acceptable, 0.6 to 0.7 is questionable, and 0.5 to 0.6 is poor and < 0.5 is unacceptable. In conducting the pilot study, the online survey starts with a screening question to limit the participation to the population. The participants, in order to be qualified to take part in the survey, have to be engaged with any social media mobile phone brand community. Participants who answer negatively are screened out from the survey, whilst participants who answer positively to this question have a chance to move on to the next section of the online survey.

However, the research methodology literature suggests that the pilot study should include samples of 10 to 30 participants (Isaac & Michael, 1995; Johanson & Brooks, 2010). Therefore, due to the requirement of providing a large enough sample to test the online questionnaire, the pilot study of the online survey is conducted by selecting a convenience sample of 40 participants among customers resident in the UK. They are engaged with any social media mobile phone brand communities through liking and/or commenting and/or sharing and/or creating brand posts. Table 3.3 discloses the results of the convergent validity and the reliability of internal consistency through using Pearson Correlation and Cronbach's Alpha.

Table 3.3 Results of reliability and validity of the piloting

Variables/Items	Validity "Pearson Correlation"	Reliability "Cronbach's Alpha"
Customer using online brand communities		0.725
I follow (Join/become a fan of) social media communities related to my mobile brand.	0.592	
I read posts related to my mobile brand on social media communities.	0.720	
I watch pictures/videos related to my mobile brand on social media communities.	0.681	
I read fan page(s) related to my mobile brand on social media communities.	0.741	
I follow my mobile brand on social media communities.	0.775	
Customer engagement with online brand communities		0.857
(1) Conscious participation		0.759
Anything related to my brand's communities grabs my attention.	0.713	
I like to learn more about my brand's communities.	0.754	
I pay a lot of attention to anything about my brand's communities.	0.790	
I keep up with things related to my brand's communities.	0.808	
(2) Enthusiasm		0.813
I am heavily into my brand's communities.	0.775	
I am passionate about my brand's communities.	0.854	
I feel excited about my brand's communities.	0.806	
I am enthusiastic about my brand's communities.	0.776	
(3) Social interaction		0.720
I love participating in my brand's communities with other members.	0.734	
I enjoy taking part in my brand's communities when I share my opinion with other members.	0.844	

Participation with other members in my brand's communities is fun for me.	0.732	
It is important for me to participate with other members in my brand's communities who share the same opinion.	0.648	
(4) Customer behavioural engagement		0.759
How often do you 'Like' posts?	0.731	
How often do you Write comments?	0.758	
How often do you Share brand posts with your friends?	0.789	
How often do you Post photos or videos?	0.774	
Customer perceived value of online brand communities		0.823
(1) Functional value		0.756
My brand's communities offer me information about various product options or offerings for my mobile brand.	0.735	
The information (content) offered on my brand's communities makes me feel confident about my mobile brand.	0.770	
The information (content) offered on my brand's communities is helpful for me.	0.861	
The information (content) offered on my brand's communities is practical for me.	0.704	
(2) Social value		0.841
I can make friends with people sharing common interests with me in my brand's communities.	0.878	
My brand's communities help strengthen my connections with other members.	0.864	
I can expand my social network through my brand's communities.	0.870	
I can interact with people like me on my brand's communities.	0.667	
(3) Emotional value		0.770
Getting information from my brand's communities gives me pleasure.	0.839	
Getting information from my brand's communities makes me feel good.	0.823	
Getting information from my brand's communities has given me a sense of self-achievement.	0.746	
Getting information from my brand's communities has boosted my self-confidence.	0.696	
Customer perceived brand innovativeness		0.780
With regard to mobile phones, my mobile brand is dynamic.	0.479	
My mobile phone brand sets itself apart from the rest when it comes to mobile phones.	0.598	
My mobile phone brand is a cutting-edge mobile brand.	0.699	
My mobile phone brand makes me feel excited.	0.491	
My mobile phone brand launches new phones and creates market trends all the time.	0.715	
My mobile phone brand is an innovative brand when it comes to mobile phones.	0.584	

My mobile phone brand makes new mobile phones with superior design.	0.688	
With regard to mobile phones, my phone brand constantly generates new ideas.	0.568	
My mobile phone brand has changed the market with its mobile phones.	0.592	
My mobile phone brand is a new product leader in the mobile phone market.	0.533	
Customer innovativeness		0.745
In general, I am the first in my circle of friends to know about new products.	0.814	
I know about new products before other people do.	0.814	
I like to try new products.	0.586	
Compared to my friends, I own few new products.	non-significant correlation at 0.001 level or even at 0.005 level	
If a friend has a new product, I would ask them about it.	0.559	
If I heard that a new version of my own product was available, I would be interested enough to buy it.	0.622	
I like to buy products that have new ideas.	0.701	
In general, I am among the first in my circle of friends to buy new products when they appear.	0.731	
I will not buy a new product if I have not tried it.	Non-significant correlation at 0.001 level but it is significant at 0.005.	

As illustrated in Table 3.3, the coefficients of the Pearson correlation results of the pilot study show that all scale items are significantly correlated (< 0.001) and very close to 0.5 (0.479 to 0.878), except for two items of customer innovativeness (these two items are: “Compared to my friends, I own few new products” and “I will not buy a new product if I have not tried it”), which provide an indicator that the constructs’ scale items are highly correlated and reflect the assessment of the convergent validity. Additionally, most of the coefficients of Cronbach’s Alpha are greater than 0.7 (0.725-0.857), which represents a high degree of internal consistency between the constructs’ items and provides indication that there is a high degree of reliability in each scale item of the questionnaire scale items.

To conclude, the results of the reliability and validity assessment indicate that two items should be excluded from the assessment of customer innovativeness. However, the researcher decided to keep them, until running the final stage of the data collection and reviewing the factor loadings of each item (the factor loadings of the confirmatory factor analysis) to provide more validation for excluding them, especially because the correlation of one of these items was still significant but at a lower level (> 0.005).

3.5.3 Data collection administration

The final questionnaire structure and content are established based on the reliability and validity assessment and the results of the questionnaire testing. The online survey includes four broad sections, starting with: introduction and general questions about social media mobile phone brand communities. The second section includes more detailed questions (including questions about customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities). The third section is related to customer perceived brand innovativeness, which reflects how customers perceive their mobile phone brand as being an innovative brand compared to other brands. The last part of the questionnaire includes general questions about the participants' characteristics, including questions designed to test customer innovativeness and the demographics of the participants (See Appendix C).

The online survey is designed and managed through using Bristol Online Survey (BOS), which provides online software to design and manage online surveys, starting with building the survey then launching it and finishing the process by downloading the final data file. The data is collected using panel customers on the Prolific website (<https://prolific.ac/>), where customers are hired to answer surveys in return for some agreed compensation. Panel data is defined as “a sample of participants who have agreed to provide general or specific information at set

intervals over an extended period” (Malhotra et al., 2017, p. 77). Panel customers are a pool of individuals who have agreed to be available for surveys of a wide range of topics in different fields. Online customer panel data is widely used in marketing research, this growth of using panels is as a response to challenges of adopting probability samples that require many conditions. In addition, it is a response to the difficulties of adopting any other non-probability sample (e.g. convenience sample), which is related to non-response or refusal to take part in the survey (Malhotra et al., 2017). In general, using customer panel data provides several advantages, such as providing: relatively large amounts of data that can be collected as panels’ members are usually compensated for their participation, and more accurate data and estimates, in addition to providing real and quick feedback; therefore, it is possible to receive your first responses in minutes (Malhotra et al., 2012; 2017). Moreover, specifically compared to other online survey websites, such as Survey Monkey or Qualtrics, using the Prolific’s panel customer data provides a number of advantages: firstly, it provides a direct contact with the participants through using their Prolific ID; secondly, tracking participants’ IP ensures that there is no fraud in their answers and that they were not using more than one ID to answer the survey; thirdly, adding attention check(s) to the questionnaire to ensure that the participants pay enough attention to answering the survey; finally, most of the participants use social media (based on the website of the Prolific company, social media is the main source for recruiting and hiring their participants).

The participants at the Prolific company are compensated 80p for completing the survey within seven minutes, on average. To ensure that the respondents are qualified to participate in the survey, there are different stages to ensure that they were within the required target group. The first stage is before the invitation to the survey, three filtering questions are used on the Prolific website, which are: first, do you engage with any mobile brand community via social media through liking and/or commenting and/or sharing and/or creating brand posts? Second, are you

18 years old or above? Third, are you a UK resident? If the respondents pass these three questions on the Prolific website, then they are eligible to take part in this online survey and to be selected within the main sample of the study.

The second stage comes during the invitation; the respondents are instructed about the research aim in the form of a statement of the research purpose and conditions. Additionally, despite adopting a non-probability sample, there are a number of procedures that have to be managed during the data collection to provide more validation of the sample selection: the participants are selected randomly from the customer panel data of the Prolific website and they are selected at different random times of the data collection (over three months). The third stage is conducted after finishing the survey, to apply different criteria to check the completed questionnaires: first, time to finish the survey; second, adding two extra questions as attention check questions to ensure that the respondents pay enough attention to honestly answer the survey questions; third, checking the frequency of the participants IP and ID to avoid any data fraud; finally, checking any contradictions of the respondent answers over the different sections of the online survey. Moreover, the Prolific company scores of the respondents (it is a score provided by the Prolific company that represents the past participation of each respondent) were also checked and were above 96% for all the participating respondents.

The Prolific company gives the researcher a chance to review and check the submitted work before approving their participation to ensure that the requirements are met and the quality is satisfactory. Accordingly, the researcher has the choice to accept or reject some respondents' participations based on the above stated criteria. Therefore, 178 respondents had to be excluded due to the above stated criteria; accordingly, the total number of accepted responses was 830. Most of the deleted cases had one or more of different problems. For example, some respondents did not read the questions carefully, they failed to answer the two attention checks;

in addition, some respondents were not engaged with any mobile phone brand communities via social media because they misunderstood the purpose of the survey; additionally, some respondents were not clear enough in their answers, or there were clear contradictions between their answers.

3.5.4 Questionnaire sampling

The targeted population of the current study includes members of the official mobile phone online brand communities and non-official mobile phone online brand communities (commercial or fan pages of brand communities) via social media, including different social media platforms and blogs, such as Facebook, Twitter, YouTube, Instagram, and others. On the one hand, the current study focuses on the context of social media brand communities as a subset of online brand communities, which provide an important marketing tool to overcome the time and space boundaries in traditional media marketing (Bao, 2017). Additionally, online brand communities create an innovative way to attract a large proportion of customers and many brands have created their own online brand communities (Gummerus, 2012), such as Samsung's mobile phone Facebook community (over 42 million followers). Moreover, online brand communities provide an ongoing interaction with the customers (24 hours a day/7 days a week) and receive feedback from the customers reflecting their post-purchase experience with their products (Chan, 2014). Furthermore, online brand communities build long-term relationships and facilitate the development of customer engagement (Chan, 2014), in addition to provide a large volume and variety of information that can create new possibilities for innovation (Jalonen, 2015).

The current study focuses more specifically on mobile phone online brand communities as the setting of the current study for several reasons. First, regarding the exploratory findings from phase one, customers are engaged most with the online brand communities of technological

products and specifically with mobile phone online brand communities. Second, much literature (e.g. Barone & Jewell, 2014; Shams et al., 2015) researching brand innovativeness in the offline context was conducted in the setting of technological products - particularly in the mobile phones sector - which offers variation in innovativeness, has several well-established brands available, and has personal relevance for customers. Third, findings of a national survey revealed that the technological products industry is one of the most innovative industries in the UK (Hooker & Achur, 2016).

The main study sample comprises female and male participants aged 18 years or above among the residents of the UK, including customers who engage with one or more of the online mobile phone brand communities via social media. Additionally, the sample of the study is a non-probability sample due to the following two reasons: firstly, the difficulties of identifying the exact number of the mobile phone brand communities' members via different social media platforms. Secondly, the pilot study showed a number of challenges in the data collection, related to the difficulties of getting access to the members of the online mobile phone brand communities through official or even non-official online mobile phone brand communities. This study adopts a non-probability/convenience sample through panel data from the Prolific website as an effective way for data collection compared to the other convenience sample techniques (e.g. snowball technique) that requires more time and effort (Malhotra, 2012).

Moreover, a non-probability sample does not provide enough representativeness of the whole population; however, it is suitable in situations where it is difficult to provide enough data about the population or when lacking a reliable sample frame (Malhotra, 2012). Additionally, a non-probability convenience sample simplifies data collection, leading to cost savings, and greater accessibility (Malhotra, 2012). However, there are number of advantages and disadvantages that should be considered when using a convenience sample; therefore,

recruiting online participants might be the most appropriate method, especially through using panel customers. According to the Prolific website, the panel customers of the Prolific company comprise about 100,000 participants, most of them in the UK. Most of the participants at the Prolific website use social media and have received a higher education, including undergraduate or postgraduate degrees.

Sample size is identified based on the ratio of samples to variables or subjects to items, which reflects the number of respondents of the sample to the number of questionnaire items. There are different rules in identifying this ratio. For example, Osborne and Costello (2004) stated that there is a wide range of ratios of subject to items (3:1, 6:1, 10:1, 15:1, and 20:1) and contended that confirmatory factor analysis is a larger sampling technique and a larger sample size is always better. Thus, it is recommended to provide a sample ratio higher than 10:1. Furthermore, Hulin et al. (2001) confirmed that overfitting depends on the number of respondents to the items, which is proposed to be 15:1 to provide an acceptable ratio. Similarly, Malhotra et al. (2012) stated that using larger samples – over 15 respondents for each parameter estimated in the model - would be enough to minimize the deviation problems from normality. Hence, the current study adopts the rule 15:1 (each item has at least 15 respondents). As a result, the sample size of the main study was 830, representing approximately 16 respondents to each item (16:1) or 830 respondents to 52 items ($830 \text{ respondents} / 52 \text{ questionnaire items} = 15.961$).

3.5.5 Approach to data analysis

In line with the exploratory sequential mixed methods design of the current study, the quantitative study starts with the quantitative data collection followed by data analysis to test the research hypotheses. The data collected from the respondents are downloaded first from Bristol Online Survey (BOS) and then prepared in SPSS. The data is reviewed and categorised

based on the research variables. The data input is screened and checked for errors using several methods: firstly, case screening is performed, including: checking missing data in rows (there was no missing data due to following the procedures of the online survey that required answering all survey questions); in addition to checking unengaged responses (there were 178 unengaged respondents, who failed to answer the attention checks). furthermore, a multivariate outliers test was performed using the Mahalanobis distance test to identify the outliers on continuous variables and the test showed that only 0.84% of all of the observations had a probability value of Mahalanobis distance < 0.001 ; thus, it is recommended to keep the cases without any data transformation (Tabachnick & Fidell, 2013).

Secondly, variables screening is conducted, including: firstly, checking missing data in columns (no missing data were found in the data set of all of the variables). Secondly, the normal distribution test (normality test) is conducted on the research variables in terms of skewness that refers to the symmetry of the distribution and kurtosis that refers to the “peakedness” of the distribution (Hair et al., 2010). The results revealed that most of the values of the skewness coefficient were between -1 to +1, and most of the values of the kurtosis coefficient were between -3 to +3 for all variables, which is an acceptable range in line with Sposito (1983). Regarding the findings of the normality test, Malhotra et al. (2012) confirmed that larger samples are needed for data that deviates highly from the assumption of multivariate normality, thus the sample size should be at least 15 respondents for each parameter estimated in the model. Additionally, Hair et al. (2008) advised that the requirement of the normality test might be ignored if the sample size is over 200 respondents, which is the case in this research, where the main sample size is 830 (approximately 16 respondents for each parameter) after dropping 178 respondents due the requirements of the data screening. Accordingly, conducting structural equation modelling (SEM) with larger samples does not require the data to be

normally distributed; therefore, the researcher proceeded to the analysis without any transformation processes.

The data analysis is managed through using the statistical software packages of SPSS 24 and AMOS 24. Confirmatory Factor Analysis (CFA) and Structural Equation Modelling Path Analysis (SEM-PA) are used as a statistical technique of data analysis to test the measurement model and the structural model of the research. SEM is a statistical methodology that takes a confirmatory approach to estimate a series of relationships among a set of constructs represented by multiple measured variables and incorporated into an integrated model to test the research hypotheses (Malhotra et al., 2012; Hair et al., 2010). Additionally, SEM takes a confirmatory approach rather than an exploratory approach, as it requires researchers to draw relationships between the variables and formulate the research hypotheses and the research model (Hair et al., 2010). On the other hand, most of the multivariate procedures (e.g. exploratory factor analysis) are descriptive in nature; therefore, the hypothesis testing can be difficult if not impossible in some cases. Whilst, SEM provides an explicit estimate of the measurement errors of the variance parameters, traditional multivariate procedures such as exploratory factor analysis, do not provide any assessment or correction of any of these measurement errors; ignoring these variance error parameters may lead to serious inaccuracies (Hair et al., 2010). However, SEM considers these measurement errors and avoids such mistakes of traditional multivariate analysis procedures.

Additionally, regarding the difference between traditional multivariate procedures and SEM procedures, there are two main approaches of factor analysis: Exploratory Factor Analysis (EFA) and CFA. EFA is normally used in the early stages of research to explore the interrelationships between different groups of variables, where some or all the measurements and scales are developing new items without taking any of the measurement errors into

consideration (Hair et al., 2010). In contrast, CFA is used to test and confirm the specific measurement model concerning the structure underlying a set of variables (Byrne, 2010; Hair et al., 2010). In the current study, conducting EFA is not required, as it is incapable of either assessing or correcting measurement errors; additionally, all the measurement and scales of the research constructs are developed based on previous studies. Accordingly, the current study conducts CFA as a first stage to apply SEM methodology for data analysis (Byrne, 2010; Hair et al., 2010).

The statistical technique of this study is SEM, which includes two stages: first, CFA to test the measurement model; then conducting path analysis to test the structural model (Byrne, 2010; Hair et al., 2010). CFA starts with identifying research constructs, drawing research relationships, writing research hypotheses, and ends with dropping some items and running some modifications, in addition to assessing convergent and discriminant validity by identifying the best model fit using CFA (Kline, 2005). In testing the measurement model, it is necessary to check the model fit through using different indices parameters (Byrne, 2010; Hair et al., 2012). The current study model fit is tested through choosing several parameters to decide which measurement model is fit and acceptable: CMIN, CMIN/DF, TLI, CFI, and RMSEA; these are the most commonly used indicators found in the literature (Hair et al., 1992; Kline, 1998; Hooper et al., 2008; Byrne, 2010; Schumacker & Lomax, 2010; Westland, 2015).

A Chi-square test (CMIN) provides a statistical test of the differences in the covariance (comparing the observed sample covariance matrix to the estimated covariance matrix, or it compares the observed model to the predicted model) (Hair et al., 2012). However, Malhotra et al. (2012) confirmed that CMIN is affected by the sample size and number of observed variables, which is related to a bias in the model fit. Accordingly, with larger samples, CMIN result is not accurate enough to evaluate the goodness of the model; as a result, researchers

should examine alternative parameters to check the goodness of the model. Due to the problems associated with CMIN, new fit indices were developed. One of the first attempts to address the problem of CMIN was through adding the normed or relative normed Chi-square to the degree of freedom ratio (CMIN/DF) (Malhotra et al., 2012). The CMIN/DF was developed to address the problems of the Chi-square and to take into consideration the complexity of the model, with value from 2-5 recommended as an acceptable model fit (Hooper et al., 2008; Hair et al., 2010).

The Comparative Fit Index (CFI) represents the incremental fit indices in the identified model through comparing the proposed model to the null model, in which the variables are proposed to be uncorrelated (Malhotra et al., 2012), with value > 0.9 identified as acceptable model fit (Byrne, 2010). Additionally, the Tucker-Lewis Index (TLI) is similar to CFI but it is not a normed index and can fall outside the 0-1 range; the recommended value is > 0.9 as being indicative of good model fit (Hu & Bentler, 1999). Finally, Root Mean Square Error of Approximation (RMSEA) is one of the most common and recommended model fit indices in the literature. It examines the differences between the actual covariance with the estimated covariance through adjusting the Chi-square value by factoring the degrees of freedom and the sample size (Malhotra et al., 2012), to evaluate to what degree the model fits the population (Hair et al., 2010). The accepted values of RMSEA should not exceed 0.08, whereas values < 0.05 reflect a better model fit.

Regarding the evaluation of the factor loadings and the model fit indices and, as a part of running CFA, the reliability and validity of the measurement model are assessed (after the data collection). Reliability is assessed through Cronbach's Alpha test to measure the internal consistency between the difference constructs, where all values were > 0.7 , which indicates that the reliability was assessed (see Chapter 5). Moreover, the convergent validity is assessed through using Composite reliability (CR) and Average Variance Extracted (AVE) (see chapter

5). Additionally, the discriminant validity is assessed through using Maximum Shared Variance (MSV) to measure the shared variance and comparing the values of the square root of AVE to the correlation of the constructs. Following the reliability and validity assessment, structural equation modelling is conducted to test the research hypotheses. Concerning the complexity of the conceptual model, which includes mediating relationships in one direction (see Figure 5.7), the current study uses SEM-Path analysis, which is one of the most common SEM techniques in literature and the most suitable SEM technique for the structural model (Hair et al., 2010; Malhotra et al., 2012). Accordingly, the current study's structural model was examined, and its hypothesised relationships were tested.

3.6 Ethics and privacy

This section discusses the requirements of research ethics considered to protect the respondents' rights, especially their right to privacy and voluntary participation. The researcher followed the ethical standards set by the University of Gloucestershire (see Appendix A).

The exploratory study participants are advised about the main aim of the research and that their participation is voluntary and they can withdraw at any time. They are assured that data gathered during the interviews is used solely for research purposes. Everything is anonymous and kept confidential, stored securely and deleted when no longer required for research purposes. Pseudonyms are used to obscure their identity. Additionally, any identifying information is removed to protect the participants' identity. An informed consent form is signed by each participant (see Appendix A) (Creswell, 2014; Saunders, Lewis, & Thornhill, 2009).

The quantitative study is managed by following almost the same procedures of the exploratory study, except that the information is displayed on the cover page of the online survey. It also includes a brief description of the research aim, in addition to a confirmation that any information or response remains anonymous and is never connected to the participant in any

way. All data will be deleted when no longer required for research purposes (Creswell, 2014; Byrne, 2010; Saunders et al., 2009).

3.7 Summary

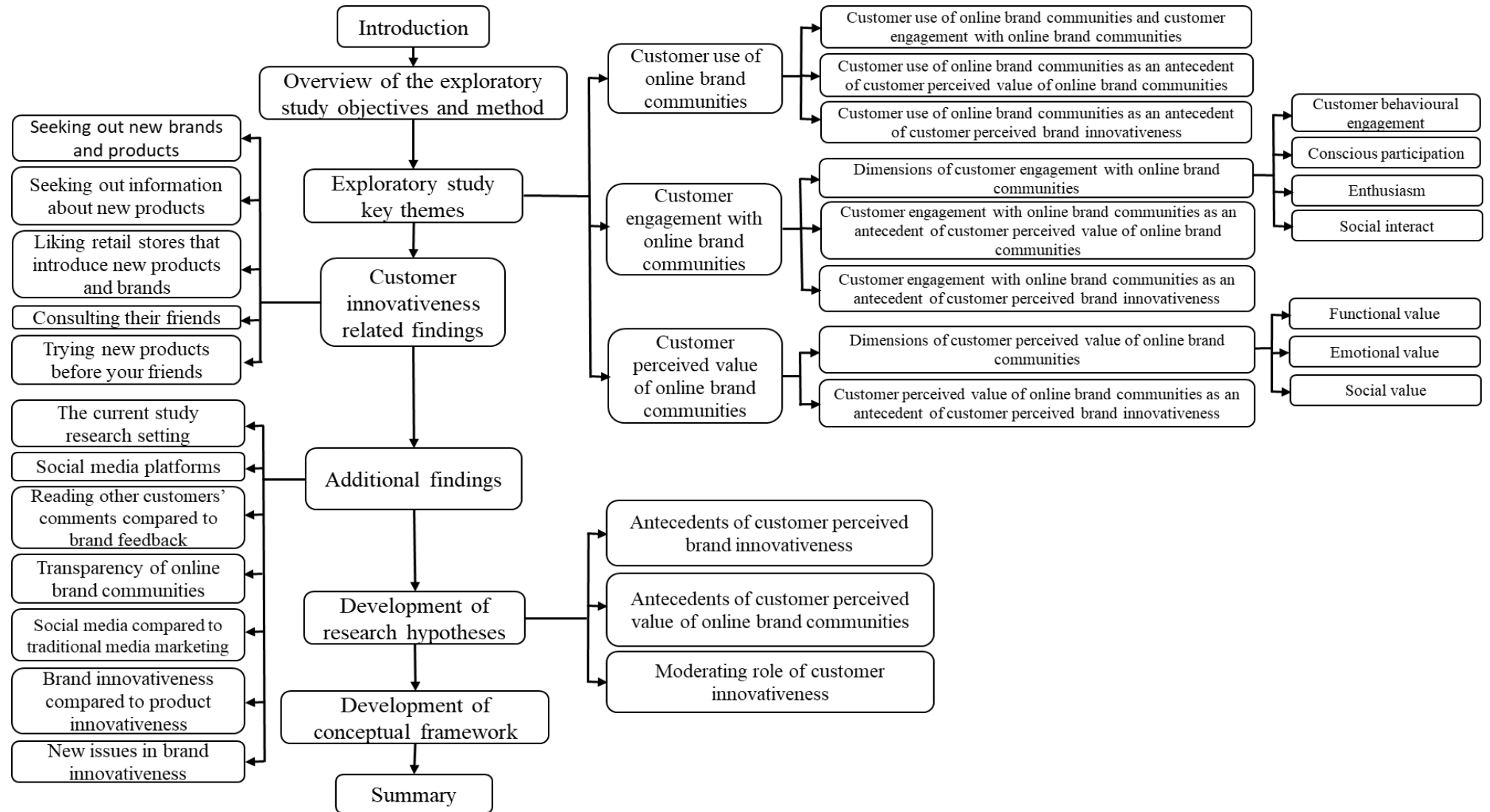
The methodology chapter describes the research paradigm, design, and methodology that are used in this present research. Considering the research design of the current research, an exploratory sequential mixed methods design – including exploratory study (semi-structured interviews) and quantitative study (online survey) - is adopted to uncover the relationships between the proposed research constructs. The other important part of this chapter is related to the quantitative study design and method, including questionnaire development, testing, data collection, and sampling. This chapter also discusses the data analysis methodology, which consists of several procedures, including data screening, normality assessment, CFA, and SEM-PA. Finally, this chapter ends by presenting the ethics and privacy of the current study. The next chapter introduces the key findings of the exploratory study, followed by chapter 5, which addresses the quantitative data analysis and presents the results of the hypothesis testing.

Chapter 4: Exploratory Study Findings

4.1 Introduction

Considering the current research objectives and propositions that have been developed based on the literature review, this chapter describes the findings and the key discussion points of the exploratory study, divided into six sections: the first section provides an overview of the exploratory study objectives and methods. The second section contains three key themes: customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities. The third section introduces findings related to customer innovativeness. The fourth section presents additional findings of the exploratory study. The fifth section presents the development of the research hypotheses. The chapter ends with the development of the conceptual framework and a summary of the chapter. Figure 4.1 introduces the structure of this chapter.

Figure 4.1 Structure of chapter four - exploratory study findings



4.2 Overview of the exploratory study objectives and method

As described in the methodology chapter (see chapter 3), an exploratory study was conducted to achieve the following objectives: firstly, to explore how customers perceived brand innovativeness is affected by three antecedents in online brand communities: customers use, customer engagement, and customer perceived value of online brand communities. Secondly, to explore the differences between customer use and customer engagement, as antecedents of customer perceived value of online brand communities. Thirdly, to identify the innovative characteristics of the participants, defined in the literature as customer innovativeness. The exploratory study also aimed to identify the key dimensions of both customer engagement with online brand communities and customer perceived value of online brand communities.

Considering the exploratory study method, personal semi-structured interviews were conducted between August 2016 and February 2017, with 20 participants (interview duration 45-60 minutes) among customers engaged with any social media brand community in the UK. Using both purposive and snowball sampling, the sample size was adequate to avoid data saturation (the number of interviews was adjusted in relation to data saturation). The interview questions were developed around the research objectives and propositions. The interviews were audio recorded and transcribed (full text transcription), and then subjected to thematic analysis (following deductive coding, in addition to inductive coding), with the whole process following the research ethics of the University of Gloucestershire (see chapter 3). The initial conceptual framework has been updated based on the exploratory study findings (see Figure 2.2). A summary of participants' demographics is presented in Appendix A, including the sample of 20 participants from different groups of age, annual income, level of education, and including males and females.

4.3 Exploratory study key themes

4.3.1 Customer use of online brand communities

In differentiating customer use of online brand communities and customer engagement with online brand communities, some literature on the first hand (e.g. Shao, 2009; Schivinski, et al., 2016) referred to customer use as a subset of customer engagement, by dividing customers' online activities based on their engagement levels into three levels: using/consuming, contributing, and creating. On the other hand, other studies (e.g. Laroche et al., 2012; Tsai & Men, 2012; Kamboj & Rahman, 2016) differentiated between customer use and engagement by dividing customers' online activities regarding their nature into passive activities (customer use) and participation activities (customer engagement). Considering the nature of customers' online brand related activities, the current study differentiates between customer use as passive activities and customer engagement as active participation activities. Customer use reflects the consumption of these communities' content, and includes a number of passive activities (e.g. following online brand communities, reading/watching brand posts), which are related to passive customer types (often termed 'lurkers' or 'free riders') who do not contribute to online brand communities.

Considering the exploratory study findings, the majority of interview participants referred to customer use as passive activities including joining, reading, and watching brand posts via online brand communities. Firstly, joining or following online brand communities is one of the essential activities of using online brand communities. The majority of participants stated that they follow/like social media platforms of their online brand communities. PC40 indicated that:

“I follow a lot of brands, in terms of fashion I follow Zara and may be Timberland online brand communities.”

Similarly, PC39 stated that:

“I follow the brand via Facebook, Instagram and also YouTube.”

In the same context, PC38 suggested that following online brand communities via social media will make customers more likely to read and see brand’s posts on online brand communities, and accordingly customers will be more likely to perform the engagement activities such as liking and commenting:

“When you follow their Facebook pages so naturally you would be able to read and see messages update on Facebook page so you will be able to like or dislike or may be comments.”

Likewise, one participant (PC38), highlighted that following social media brand communities is related to gaining information and keeping updated on the new offers:

“I rarely interact with them ... the main reason to follow them is just to be aware of their offers and anything, I want buy so for me I am not following them to buy anything specifically but to know what kind of offers they have.”

Secondly, reading posts via online brand communities is one of the main activities of customer use. Most participants stated that they read brand posts via social media brand communities, including PC22 who highlighted that:

“Through reading other people’s comments I can find their recommendations about using the product through that I feel that maybe this product is not good for me and it cannot create a value for me that is why I am not going to buy this product because of the negative comments.”

Similarly, PC32 commented:

“I am a kind of a passive consumer but I might share my experience I think that reading people’s comments is helping me to collect more information about the brand and the products that you want buy.”

Thirdly, watching/viewing videos or images is an essential online activity of using online brand communities. Many participants commented on this, including PC31 who said:

“I think that using social media brand community through watching videos and images are helping me.”

Similarly, PC31 added:

“People do see what is the brand’s posts such as new images or photos about new products or offerings.”

To conclude, customer use of online brand communities includes three main activities, which are: following/joining online brand communities on social media platforms, reading brand related posts, and watching/viewing videos or pictures. The following section of this chapter presents three sub-themes, which are; customer use in relation to customer engagement, customer use as an antecedent of customer perceived value, and customer use of online brand communities as an antecedent of customer perceived brand innovativeness.

4.3.1.1 Customer use of online brand communities and customer engagement with online brand communities

Customer use of online brand communities is clearly different from customer engagement with online brand communities. All participants distinguished between the two concepts with customer use as a group of passive activities and customer engagement with online brand

communities as a group of active participation activities, additionally, they suggested that using online brand communities is positively related to customer engagement with online brand communities. Specifically, some of the participants pointed out that the frequency of using online brand communities will make them more engaged with the brand communities. As PC38 indicated:

“My using could affect my engagement, well I mean my thinking is the more I use social media of the brand possibly increases my engagement. I mean when you find something you are interested in then might I like, so the more frequently I see things that I am interested in the more likely to engage with the community.”

Moreover, transferring customers from using online brand communities into engagement depends on the brands’ marketing efforts via their online brand communities; for example by providing promotional offers and new collections to encourage their customers to be more involved with the community to do more liking, commenting, and sharing posts, in addition to creating posts. As PC40 demonstrated:

“If you like more then you will show more of it and in that sense it can help me to know what kind of new fashion comes out, what kind of new promotion will come out, what kind of events they will do that I might be interested in going to may be and also it can help me. This is the kind of stuff that I can like and can help me with my progression. So I would say that, yeah it is possible, it is just because I think that more engagement means that I intend to react to the engagement and, yeah, definitely helps if they put more effort into knowing their customers and knowing people that like their brand. So they will get the same kind of feedback from their customers.”

Additionally, some participants confirmed the essential role of brand communications in online brand communities and demonstrated the significant role of the ongoing interactions between brand communities' members. PC22 indicated:

“Through reading people’s comments or opinions on social media and then I can see that this brand is very good. Because social media is very popular and people want to talk via social media and they are interested in introducing new ideas, so there is more brand communication, the more people talk about this brand and more fans and maybe if they put a video and picture that is fun.”

Additionally, PC23 added their view to this discussion by explaining the importance of building ongoing relationships (‘pushing’ products and receiving ideas, and then developing their products, and so on) with the brand community based on continuous improvements:

“It is so normal, before the company promotes their products, they push pictures of their products and they ask their customers for their opinions on social media communities and we, of course, reply to them on the comments sections and we always tell them what we would rather have. Like, that you have to improve the product by adding some features and normally they would change their products just a little bit. It’s a kind of relationship; therefore, using social media communities increases my engagement with the social media brand community.”

Moreover, PC24 stated that online brand communities via social media provide a good opportunity to interact with the brand and with other customers, which can provide a better chance to collect more information about the brand:

“Social media platforms provide a new way to communicate with other people, so you can find a chance to ask people about their opinions about anything and this helps me

to be more engaged with the brand through some comments. So, if someone gives comments or reviews, someone representative of the brand, so it's just engaging with them via this social media brand community. Therefore, using social media provides a chance to interact with people who have experience with this brand or with people who already work in Chanel."

PC26 felt that using online brand communities helped customers to find out more about the brands' offers and to be more engaged with the brand community, therefore, the more customers using online brand communities, the more customer engagement occurs:

"Using social media is going to help me to like or share something related to the brand because I already like this brand and I see their offers and, for example, I know if Estee Lauder on Facebook has a gift time and I would like that so I will go and buy it, and I know the same in case of John Lewis or Boots."

PC28 added that the importance of interacting with the brand directly through this brand community: the customer's interactions with the brand community increases the engagement with the community:

"Sometime when you communicate with the company representatives directly on social media and sometime you get help from the other members of the community, so it really helps. If you comment on social media, you will get more knowledge about the brand. Therefore, using social media is helping me to be more engaged with the brand community."

PC30 described the brand activities via social media, through customer use of online brand communities to share interesting information about the brand. As the participant indicated:

“With Facebook and social media, we have a better chance to interact with the brand community and to know more about the new features of the brand through reading other people’s reviews. I think that those brands are very smart in using social media brand communities because they are trying to do something special to let the people know about their new products and they just put more information and make us curious to know what they are going to have and sure this is helping me to be more engaged with the brand community via social media.”

PC31 confirmed the importance of the brand posts via online brand communities through posting new images or videos, as a part of their marketing campaigns:

“Commenting, sharing and getting reviews, people do see what is the brand posts such as new images or photos about new products or offerings and they comment and like and share the brand posts. Because if they put out posts like every day new posts, people are going to read it and like and follow and comment and this sticks in the head. I think if you use more social media you definitely have more engagement in the brand community.”

PC33 stated in this regard that engagement is related to information transparency, through having nothing to hide, whether negative or positive:

“I think that social media marketing would increase your engagement with the brand because if you can say that a particular brand is open and transparent and they are happy for the customer to comment and to make whatever comments he would say. So I think that it is increasing the level of engagement with the brand community because you can see that they are running a good business and they have nothing to hide, which is related to that there are positive and negative comment. So you have to recognize

that some people have negative comments, so the brand has to cover that through interacting with the customers and defending themselves.”

Fundamentally, the findings of the exploratory study revealed that most participants indicated that customer use of online brand communities is positively related to customer engagement with online brand communities. It does not mean that all customers who use online brand communities, will be more engaged with online brand communities. However, it does mean that customer use of online brand communities will provide a better chance to be more engaged with the online brand communities. Additionally, most participants are influenced by other customers' comments and the brand's communications or feedback via online brand communities, which creates a more opportunities for the brand to interact with their customers and discuss everything about their new products and features. Most of the participants are interested in reading and viewing brand posts, whether images or videos, or comments or feedback. Therefore, it is very important for any brand to take care of their posts on their brand community. Finally, transparency is a basic source for more engagement with the brand community.

4.3.1.2 Customer use of online brand communities as an antecedent of customer perceived value of online brand communities

Considering the exploratory study findings, the majority of the participants referred to customer use of online brand communities as an antecedent of customer perceived value of online brand communities. Most participants stated that customer use of online brand communities provides better opportunities to collect more information about the brand, which makes them more likely to gain more value from online brand communities. PC24 observed:

“I think there is a relationship between using social media brand communities and the value of social media brand communities, because without using social media brand

communities I cannot find it easy to know about the brand's new products, and I think that social media brand community gives me more value, because it's just easier to access information; for example, Chanel's new lipstick, I have not seen any adverts for it anywhere, I only see it on social media brand community."

Additionally, one participant, PC31, stated that brand advertisement via social media makes customers more able to gain more value from online brand communities:

"The brand always has adverts on social media that always help me to get more value from social media brand community; for example when I decided to purchase new shoes from Nike last time, they had adverts on social media and through different posts as well on what I already liked before I can find everything about the brand's new features and offerings."

Additionally, one of the participants (PC38), referred to reading other customers' reviews as an antecedent of gaining value from online brand communities:

"By using social media brand communities I can get more value in terms of my future purchase I probably think about more value from the community when I see people's reviews. So yeah, that could be a value from the brand community I will get value and sure I trust more in customers' comments."

Moreover, PC39 revealed that customer usage frequency of online brand communities is related to customer perceived value of online brand communities. This suggests that the more the customer uses online brand communities, the more value the customer can gain from it:

"If I stayed with brand communities like in contact every day, I will have more value, I will know the new things and if I use it one time a week I will never have that much information about the brand and its products and its new stuff. So, if I use it like every

day, I will see the new posts but if I use it like two or three time a week I will be lazy to see more posts and I will see one or three posts.”

One of the participants stated that whilst customers gain value from their interactions via social media brand communities (which increases their confidence in their purchase decision), too many notifications via social media could make the customer feel uncomfortable. Therefore, the brand should be aware of the importance of balancing between the perception of value by their customers and the number of notifications sent to them. Notifications should not be repeated too often, as it could negatively impact the customer, PC35 noted:

“Using social media brand communities gives me more confidence with my decision so yes that in sense of getting more value but if they send me more notifications I will become upset.”

Some of the participants are using the value of being a member of social media brand communities to compare between different brands. PC28 supported this:

“As you know, people want to compare between different brands so when you go to the stores and spend a long time to do that when you can do that through using social media that can help you to compare everything and get reviews from other customers on a specific brand; for example, if a customer stated that I do not want to buy this brand because of problems in delivering or quality, so these reviews and comments really help you to know more about the brand.”

Similarly, PC39 said:

“I can use social media to compare between different brands, like, for example, when you compare between Samsung and iPhone, when I found a new technology in Samsung

like extra screen so I send comment to iPhone to tell them that you have to provide this technology because it's a great thing to provide this in your devices."

Most participants referred to the significant role of their engagement with online brand communities in understanding the role of customer use of online brand communities in perceiving more value of them. Thus, they stated that customer engagement with online brand communities should moderate the relationship between customer use and customer perceived value. Specifically, the more customers' use online brand communities, the more customer engagement, and then the more customer perceived value. PC37 said:

"If I like any post or share any post with friends, I think I have to engage with the Apple post first then I can gain value because I use social media. I want to gain knowledge or information, so the value is the result and I think engagement in the middle between using social media brand communities and the value."

In summation, the exploratory study findings showed that customer use of online brand communities is an antecedent of customer perceived value of online brand communities, specifically the functional value of online brand communities. Additionally, the findings of the exploratory study revealed that passive customers (customer use) need to be engaged with online brand communities (customer engagement) to perceive value from their brand communities, which means that customer use of online brand communities as an antecedent of customer perceived value of online brand communities is mediated by customer engagement with online brand communities. Therefore, passive customers might not be able to perceive value from online brand communities without their engagement with these communities.

4.3.1.3 Customer use of online brand communities as an antecedent of customer perceived brand innovativeness

The findings of the exploratory study disclosed that most participants confirmed that using online brand communities helps them to perceive a brand as being innovative or not through collecting more information about new features, products and offerings of the brand. Therefore, more information about the innovative features of the brand through social media brand communities helps customers to perceive a brand as being innovative and provides the customer with a chance to compare between different brands. PC24 pointed out:

“... identifying a new product, like what I said about using innovative idea and if someone posts comments on social media, I think this helps me to see and know more about the product. Therefore, I think there is a definite relationship between using social media and brand innovativeness. I use this brand because I find everything about the brand through social media and through other people’s comments and through the community.”

Some of the participants confirmed that customer perceived brand innovativeness is related to posting new videos or images about the new products and features of the brand. Therefore, these types of posts about new products help customers to perceive their brand as being an innovative brand. PC23 stated:

“When they launch a new product they normally post video or a picture and they explain how to use this product and they have these features which are like we have never seen those features before in the previous products, and then when you do not understand, normally they would respond to our comments. Therefore, this helps me to say that this brand is an innovative brand.”

However, one participants, PC37, stated that receiving information from online brand communities regarding the new features and products of the brand is not enough to perceive any brand as being innovative; using this information to compare between different brands is important:

“I would say that it is an innovative brand, because, based on the information that I can gain, it is innovative; but also this information relates to my emotional and my feelings of the brand itself. Like if the information I received says it is innovative and then I react positively, but this is not the only point to say that it is innovative, but if I can compare it to another brand that’s being innovative as well.”

In the same context, PC27 confirmed the role of online brand communities in providing more information about the new products, features, and offers of the brand, which make customers perceive their brand as being innovative:

“There is a relationship between using social media and brand innovativeness because, as I said before, if there is something new about the brand they will put it, of course, on social media, so there are a lot of people will know this. So social media plays a big role in brands, it is like a commercial work so I know these new things because of social media. Therefore, through social media I can collect more information about the brand which is helping me to find this brand an innovative brand.”

Other participants referred to the increasing role of online brand communities in comparing the degree of innovation between different products for the same brand, or between different brands. PC26 commented:

“I think that using social media is helping me to perceive this brand as innovative brand because. For example, Apple with the new model, you can see the difference, especially

with the previous one and you can see how many differences is in there so when you see the differences you say 'wow' because you can see all of these new features and products, and you can find from social media how it does work."

PC31, who regarded himself as a member of both the Adidas and Nike online brand communities, added to this:

"I think that Nike is more innovative than Adidas in shoes, but in clothes I think that Adidas is more innovative than Nike. As a member of Adidas and Nike at the same time, I can see the pros and cons of each of them at the same time."

In the same context, PC37 stated that brand innovativeness is a subjective term that can be used to compare different brands, so it is a personal issue that differentiates from one customer to another based on their perceptions; accordingly, a customer can compare different brands and rank them to identify the most innovative brand compared to others:

"For me personally I would say that brand innovativeness is subjective because someone could say that it is innovative and others not innovative. So, for me, it is individual or I would say it impacts positively in terms of how the brand is different to the other brand say Apple different to Sony and Sony different to Apple."

Similarly, PC39 stated that brand innovativeness can be used to compare different mobile phone brands, whilst brand innovativeness depends on creating innovative features that reflect the customer's needs and not just creating radical innovation, which is known as the 'wow' effect (Lowe & Alpert, 2015), as the participant indicated:

"I can use brand innovativeness to compare between iPhone and Samsung, in Samsung they try to do always something above the normal and because of that they lose all of the time. It's funny, but when you go to some airways they tell you anyone have Samsung

he has to take it out of the plane because it is very dangerous, because they put many things in their mobile phones and they want to show the people that they are doing the best phones and introducing new things without thinking. So they are doing too much innovation.”

Similarly, PC39 added that:

“iPhone is more innovative than Samsung because iPhone is being creative for the people’s need like its improving and putting more things that people need, not putting things to make you think like ‘wow’ its magic; what Samsung are doing like when they start with waterproof before any brand and they lose, so I do not want the phone that can fly, Samsung they do this.”

PC40 also said that brand innovativeness should reflect the personal need of the customer:

“Brand innovativeness has to reflect my personal need I think that the technology might change my opinion but I do prefer brand innovativeness that reflect my needs first.”

One of the participants recommended that brands should use online brand communities to show their customers to what degree their products are innovative, which can affect their customers’ purchase decision. PC33 demonstrated that:

“Brands need to show innovation for the whole range of social media community and also they need to be innovative in how they introduce themselves because innovative means introducing new features and introduce something different ... Many brands keep trying to introduce something different. Therefore, I think it does help in understanding the brand and I think it helps you be emotionally attached to the brand so if you can see

that particular brand is doing something well on social media, so, you are more likely to go with it and you would normally buy this brand.”

Similarly, PC40 confirmed that a brands’ efforts via online brand communities play an important role in increasing the customer perception of the brand innovativeness. This is supposed to be achieved through building the brands for their social media marketing campaigns based on brands’ understanding of their current customers’ wants and needs.

“I do have that feeling that it is an innovative brand because they understand what the buyers want and using the platform that the buyers use and putting more promotion in it, they’re really doing the best to capitalize on the same customer base, so I feel that is innovation ... so yeah I think in that sense they can change their styles every single time they show us that they are creative.”

Moreover, PC36 stated that brands with many likes and comments are more attractive and innovative:

“If you promote certain brands on Facebook for example if you have a brand with many likes so you look at that and comments definitely people used it tried and tested and they gave their own feedback so they update the customers via social media, then it definitely affects my decision making about the brand and probably a product as well, so I think that more using social media the brand increases its innovativeness.”

Furthermore, there is a clear trend amongst participants about the important role of online brand communities in providing a circle of interactions between brands and customers to create innovative ideas and then to build the brand’s circles of innovation. As PC22 suggested:

“Social media communities is a simple way to get that customer’s idea, which helps the brand in developing their products.”

In conclusion, the exploratory study findings showed that customer use of online brand communities is a key antecedent of customer perceived brand innovativeness. Accordingly, customer use of online brand communities (through conducting a number of passive customers' online activities, including following social media pages, reading brand posts, and watching brand videos and images), would help customers gain more information/knowledge about the new products, features and offers of the brand, which make customers more capable of perceiving their brand as being innovative compared to others. The findings contribute to knowledge by introducing a new conceptualization of innovation in online brand communities; 'circle of innovation'. This reflects the ongoing process between the brand and its members and refers to a continuous process between the brand and the brand communities' members. These circles enable customers to introduce new ideas; these are then incorporated into the brands' development of new products based on these ideas and enable them to introduce new product features or develop the current products further. This encourages further customer commentary on these new products and the circle of development and innovativeness goes on. The brand launches the new products through new posts in the form of images or videos; grounded by these brand posts and customers' comments, customers can compare different brands and rank them to identify the most innovative brand. Therefore, brands need to rely on both social media marketing and traditional media marketing to show their brand innovativeness to their online and offline brand communities.

4.3.2 Customer engagement with online brand communities

This section begins by presenting the exploratory study findings regarding the dimensions of customer engagement with online brand communities, in addition to a discussion on customer engagement with online brand communities as an antecedent of customer perceived value of online brand communities. Finally, this section discusses customer engagement with online brand communities as an antecedent of customer perceived brand innovativeness.

4.3.2.1 Dimensions of customer engagement with online brand communities

The findings revealed four dimensions of customer engagement with online brand communities, which are customer behavioural engagement, conscious participation, enthusiasm, and social interaction. The four dimensions of customer engagement are presented in more detail in the following sections.

4.3.2.1.1 Customer behavioural engagement

Customer behavioural engagement in online brand communities reflects both customer contribution (e.g. liking, commenting, and sharing brand posts) and creation (e.g. producing new brand posts), and it is related to active members who are motivated to participate in online brand communities (Kamboj & Rahman, 2016). Most customers consume more than they contribute to online brand communities; for example, 53% of active social media users just follow brands rather than liking, commenting, sharing or creating brand posts (Nielsen, 2009). Additionally, not all engaged customers create content featuring the brand (Schivinski et al., 2016). This research focuses on studying customer contribution and creation as main determinants of customer behavioural engagement with online brand communities. Creating content is considered a part of customer behavioural engagement that reflects an advanced level of behavioural engagement with online brand communities.

The exploratory study showed that there are different levels of behavioural engagement with online brand communities via social media through liking and/or commenting and/or sharing brand posts and sometimes creating posts. Usually, participants do more than one online participation activity at the same time such as liking and commenting or liking and sharing or liking, commenting and sharing. Most participants are engaged with online brand communities via social media through liking, followed by commenting, and a small proportion of the

participants are interested in sharing brand posts with their friends. Finally, only one of them is interested in creating content on online brand communities.

Most participants confirmed they are engaged with different social media brand communities, but at different levels; for example, PC26 is engaged with online brand communities through liking only.

“I follow some brands on Instagram but there is nothing to say that I am crazy about them. So I am engaged with Estee Lauder through liking. I only like but I do not comment and I like this brand because it’s my taste if I like the clothes, colour or design and for the makeup things I like many of their products.”

Additionally, a few of the participants engage with the brand community through liking and sharing, and they are interested in sharing their brand’s pictures and videos with their friends, especially posts related to the new products of their brand. PC 27 highlighted:

“I like lots of brands like Nike, Adidas in sports brands and in food I like McDonald’s, Subway and KFC so all of them, I like them and I share their posts and I follow those brands ... I do not like everything about the brand but I would like to read something new, just the new products especially which is related to the new trainer.”

In the same context, PC40 indicated:

“If they post something, I can like it, if I just like it, and if I see that anything fits my friends’ characters, I would share it with them. I like and share and if I do comment, I would just mention my friends’ names.”

Moreover, some participants prefer to comment, and their comments are related to their experiences with the brand. Participants such as PC32 said follow the brand community's blogs to find out more information about the brand:

"If I found some comments useful, so I have to tell them that through commenting on the commenting section I thought that it would be nice, but actually I do that in order to tell them how useful they are for us, though I think I have commented on their good feedback, so it would be nice if I did that. Additionally, I probably share my experience with iPhone online community because I believe that is going to be useful for anybody in the brand community."

Additionally PC36 demonstrated:

"I would comment if I am particularly happy or unhappy with the product, so you can say that I comment about 50% of the time, so it's related to the experience. If I have a bad experience, I would like everybody else to know so it will not happen again ... same way, if I was happy with it ... and it's nice to say to the brand that you are doing a great job go and carry on."

Furthermore, only three participants are interested in liking, commenting and sharing brand posts. Therefore, they are very interactive with the brand communities, PC29 indicated:

"I just go to social media like Facebook and search for brands and I like them and follow them on social media. Sometimes I comment and share posts with my friends especially those kinds of products and brands they like. My favourite brand is Louis Vuitton; I usually use their bags and purses."

In the same context, PC31 specified:

“I do engage with different brands such as Nike, Adidas and others via social media such as Facebook, YouTube and Instagram. I follow their pages on social media through liking and commenting and sometime I share posts.”

Most participants described engaging with the brand communities through liking and sometimes commenting. They like the brand posts and reading other customers' comments, and sometimes comment based on the content and the attractiveness of the brand posts; for example, using attractive posts such as images or videos and introducing innovative content, including information about the quality or the new features of the product. Therefore, they interact with the brand community. As PC23 said:

“I am personally engaged with a brand called Hibernian and they provide their customers with high quality products. They sell guitars, electric bass and electric guitars and they sell their products through dealers. I am engaged with the social media brand community of this brand through liking and commenting on other people's comments about product quality, techniques and song of the musical instruments.”

PC24 added:

“I really like the brand, I like the images they post and I like their products and I would like to know everything about the brand and if they launch anything new or make any changes. I think Chanel has a good reputation ... I follow, like and comment on the brand communities on Facebook and Instagram.”

Finally, in terms of creating content as part of behavioural engagement, only one participant stated that customers can create a post on a brand blog community when they have a problem

with a product, so they can upload a picture to show a problem to the brand communities. As PC22 said:

“If this product has some problems, I can write my opinion and I can show them a picture of the problem to tell them that the problem is just like this.”

To conclude, most participants are engaged with online brand communities via social media through liking, followed by commenting and sharing, and only one of them is interested in creating content on online brand communities. Additionally, participants do more than one online participation activity at the same time, such as liking and commenting or liking and sharing or liking, commenting and sharing or liking, commenting, sharing, and creating content via online brand communities.

4.3.2.1.2 Conscious participation

Whilst all participants confirmed that they behaviourally engaged with online brand communities (behavioural engagement) through liking and/or commenting and/or sharing brand posts and/or creating content, not all of them have conscious participation via online brand communities. Conscious participation refers to cognitive activities of customers to be engaged with the community, such as paying attention to anything about the brand in online brand communities and liking to learn about the brand from online brand communities (Zheng et al., 2015). However, many of the participants have conscious participation in the form of paying attention and confirmed that their engagement with online brand communities is related to finding something that attracts their attention or interest. As PC38 said:

“When you find something you are interested in then I might like, so the more frequently I see things that I am interested in the more likely to engage with the community.”

Similarly, PC37 added:

“I do engage with a brand via social media for something I am interested in or something I am trying to buy and I need to understand what the people want from the product and what the company says about the product.”

Likewise, PC39 described customer engagement as a continuous process between customers and brand communities, so customers are not just paying attention but they are involved with their online brand communities and they are trying to keep in touch with the new features and products of the brand.

“I mean by engaged that I keep in touch with them like knowing all the new things they did with their phones, accessories and I like many of their posts.”

Half of the participants have conscious participation in the form of learning more about the brand via online brand communities and they directly indicated that they are engaging with online brand communities to learn more about the brand, which reflects their conscious participation with the online brand communities. As PC23 said:

“It’s really great to be a part of this social media brand community because we discuss what we need, like how to use our guitar and how to improve the quality, we can do that through this brand community and we can get the most recent update from this social media community.”

This is similar to PC40, who asserted the importance of customer engagement with online brand communities in exploring and knowing everything about the brand:

“If you like more then you will show more of it and in that sense it can help me to know what kind of new fashion comes out, what kind of new promotion will come out, what

kind of events they will do that I might be interested in going maybe, and also it can help me.”

In the same vein, PC31 confirmed that online brand communities provide a way to interact with other members and with the brand, which helps them to learn more about the brand:

“This brand community creates a way to interact with the other customers and with the brand, which helps me to know more about the brand and the new features of the brand’s products.”

As described above, many participants have conscious participation in the form of paying attention, involvement with their online brand communities, trying to keep in touch with the new features and products of the brand, and learning/knowing more about the brand.

4.3.2.1.3 Enthusiasm

Almost half the participants were enthusiastic to be engaged with online brand communities. Enthusiasm refers to customers’ participation with intense excitement or passion, such as having passion about online brand communities and spending more time on online brand communities (Zheng et al., 2015; Harrigan et al., 2017). However, some of the participants have enthusiasm engagement in the form of having passion about their engagement with online brand communities, such as PC24 and PC23, who described their engagement with the community as a relationship and not just engagement. As PC24 stated:

“So, it makes me feel that I have a relationship with Chanel, like a participant or almost like an employee of them but you have that relationship with the Chanel community and I can just post on their social media something and there is a chance actually for a brand representative to talk to me without seeing them. I feel like I have enough respect when the brand replies to my comments.”

Correspondingly, PC33 felt that customers really like to be a part of their online brand communities:

“As a member of this community I can perceive more information and I would feel that I am engaged with this community and I would feel part of the community.”

Similarly, PC31 has interactive communications with the brand community and feels proud of being a member of this community:

“I have an interactive communication between me and the other customers and with the brand itself. So, I get information from this community and I feel proud of being a member of this community.”

Meanwhile, some participants have enthusiastic engagement in the form of spending more time on online brand communities and they are heavily engaged with the community. For example, PC37 is ready to comment one or two times a week, stating:

“I put comments one or two times a week and I follow Samsung via Facebook and Instagram.”

This experience is close to PC39, who comments two times a day, confirming that customer engagement is related to the number of brand posts, so the more brand posts the more engagement with the brand communities. This reflects that PC39 is heavily engaged with the community:

“I comment if I find anything wrong with the products so I give them my opinion about the product and I do it like two times a week ... I will start to be more interested in their new products because I am using social media like every day, so if they have new things

every day I will have new comments and I will like their new videos and pictures and I will share more stuff like that.”

As outlined above, many participants have enthusiasm engagement in the form of having passion about their engagement with online brand communities, building interactive communications with the brand community, and spending more time on online brand communities.

4.3.2.1.4 Social interaction

Many participants are socially engaged with online brand communities. Social interaction refers to communication and interaction of opinions, ideas, and feelings among customers\members of online brand communities, such as enjoying participating in online brand communities with your friends or enjoying sharing your opinion with your friends (Zheng et al., 2015). PC40 confirmed the importance of sharing posts with friends, and that shared posts must be consistent with their characters:

“I mean by engagement, if they post something, if I like it, if I would just like it, and if I see that this thing fits my friends’ character I would share it with them. So I like and share and if I do comment I would just write my friends’ names.”

Similarly, PC36 asserted that customers also would like to share their experiences with their friends, whether positive or negative experiences:

“It’s related to the experience so if I have a bad experience, I would like everybody else to know, so it would not happen again, so you are telling the brand that your customer was not happy and you have to improve your product, similarly, if I was happy with it, I would like to tell everybody to know that I was happy with the product.”

Likewise, PC31 said that customers share with friends the brand posts related to the new products of the brand:

“I share posts, like a new product posts with friends and they can like the brand page too and they can comment on the social media platforms.”

Accordingly, some participants are socially engaged with their online brand communities in the form of enjoying sharing their opinion with their friends and interacting with their friends to share their experiences.

In conclusion, based on the interviews’ results, customer engagement with online brand communities is a multidimensional conceptualization, which includes four main dimensions: behavioural engagement, conscious participation, enthusiasm, and social participation. Importantly, behavioural engagement includes four main customer activities; liking, commenting, sharing brand posts, and creating content. Only one of the participants creates posts through uploading images via online brand communities - the meaning of creating content in this study is related to creating a new post on online brand communities in the form of uploading pictures or videos or writing posts on online brand communities. However, during the second phase of the data collection, (online survey stage), behavioural engagement can be measured through adding created content (creating posts on online brand communities) to the other three sub-constructs of behavioural engagement, which are liking, commenting, and sharing brand posts. Additionally, most participants are liking and commenting, whilst some are only liking or commenting and only three of the participants are fully engaged with the community through liking, commenting and sharing brand posts.

4.3.2.2 Customer engagement with online brand communities as an antecedent of customer perceived value of online brand communities

The findings of the exploratory study referred to customer engagement with online brand communities as an antecedent of customer perceived value. Most participants stated that their engagement with online brand communities makes them more likely to perceive increased value of the online brand communities. Therefore, the more engagement in the form of more liking, commenting, sharing posts, and creating posts, the more value is perceived of online brand communities in the form of functional, social, and emotional value. As PC27 stated, customer engagement provides better opportunities to gain more value in the form of more knowledge and information from online brand communities:

“As a member of this brand community you get a value like discount or offers; so when you like a post, you can know more about the community of the brand via social media.”

Similarly, PC33 indicated that there are different factors controlling customers to gain value from social media brand communities, which is related to their engagement with online brand communities:

“The value you get from social media brand communities in terms of the brand, in terms of that you are engaged with the brand community, and in terms of the community, I think it’s related to the value you get from people’s experiences from different perspectives.”

Additionally, PC28 suggested that the more commenting on online brand communities, the more knowledge the customer can gain, which reflects more perceived functional value:

“If you comment on social media, you will get more knowledge about the brand.”

Moreover, PC37 correlated between customers use, engagement, and perceived value, and discussed that the more using online brand communities, the more engaged with the brand communities, and the more perceived value of online brand communities, as the participant said:

“When I start using social media of apple then I see feed from apple and read posts from apple and then I just like it or share it then after that I gain the value from reading the posts they sent and I also gain value from social interaction if you like the post or share the post with my friends. I think I have to engage with the post from apple then you gain value.”

Furthermore, PC34 referred to the mutual benefits between the communities’ members and the brand regarding the value they can gain from being engaged with online brand communities and sharing common interest:

“If you are a member of the social media brand community so you can possibly engage with people on this brand community and sharing other people experiences and that could certainly give value to the community as whole because it’s all about people who use or own something and their experiences to give the big picture of something.”

To conclude, most participants confirmed that customer engagement is an antecedent of customer perceived value of online brand communities, which indicates that the more customer engage with online brand communities through liking, commenting, sharing brand posts, and creating posts, the more perceived value of online brand communities in the form of functional, social, and emotional value.

4.3.2.3 Customer engagement with online brand communities as an antecedent of customer perceived brand innovativeness

The findings exposed that customer engagement with online brand communities indirectly relates to customer perceived brand innovativeness through customer perceived value of online brand communities. Thus, the more customer engage, the more perceived value they get from online brand communities, and the greater the customer perceived brand innovativeness. Therefore, active customers (engaged customers) cannot perceive their brand as being innovative without perceiving their value of being members of online brand communities, in the form of functional, social, and emotional value. However, many of the participants referred to customer engagement as an antecedent of customer perceived brand innovativeness through customer perceived value.

As PC34 stated, more customer engagement with online brand communities means gaining more information about the new features of the brand, which helps the customer to perceive this brand as being more innovative, as the participant said:

“More engagement with social media could be more beneficial to get more information about the brand so you can recognize that this brand is innovative.”

PC37 indicated:

“Being engaged with social media brand community does affect my perception in terms of the information that I receive from the engagement with this social media community.”

This is similar to the statement from PC39:

“When I do more comments and more likes I will have more notifications of the new things that they will put in their social media and this information will help me to perceive that this brand as more innovative.”

Moreover, PC24 focused on getting feedback from the brand and comments from the members of the online brand communities, this being a form of relationship with the brand community. Therefore, through the brand feedback and the customer's comments, the customer becomes more engaged and perceives this brand as being an innovative brand:

“Social media of the brand allows you to see the products, the collection and the prices that are more accessible for a person like me. So, it makes me feel like that I have a relationship with this brand “Chanel” and that I am a participant or employee with them but just a user at the same time.”

In the same context, almost half the participants felt that peoples' interactions via social media brand communities are antecedents of their perception of the brand innovativeness. Therefore, the more interactions between customers through liking, commenting, sharing, and creating brand posts via social media brand communities, the more they can perceive their brand as being an innovative brand. As PC25 commented:

“...because when you are liking a brand and going through other people's comments and see what the people are saying actually these features are nice and these features increase the speed, so you are going to say wow that is innovative and you will think about purchasing this product. This interaction on social media platforms makes me aware that it is very innovative, so the more people comment about the brand the more they are going to think that this brand is innovative.”

Half the participants stated that customer use of online brand communities and customer engagement with online brand communities make the customer more able to compare between different brands to identify the most innovative brand, which consequently influences a customer's purchase decision. PC28 demonstrated that:

“Even you get knowledge from social media brand community you can watch and re-watch again and again and you can compare and then you can ask questions for other members who are more knowledgeable than you and they will educate you to compare, so based on that you can say that this brand is an innovative brand or not. I think that River Island is more innovative than Next.”

Similarly, PC33 corroborated that comparing different brands via online brand communities is a relative issue and depends on each customer's perception of the brand innovativeness; therefore, more engagement would help customers to perceive a brand as being innovative, which influences their purchase decisions:

“I can compare between brands through using social media. So I think that brands have to utilize customers' reviews on social media because ... the brand should come to me through social media ... this helps me to be more engaged and the engagement with that community would help me to be find this brand as an innovative brand and influences my purchase decision.”

Additionally, some participants felt that they were treated like individual customers, due to the direct interaction between themselves and the brand through receiving direct feedback about their own comments about the brand's products and offerings; this makes the customer feel more respected. Therefore, online brand communities provide direct interactions between customers and brands, and through these interactions, the customer can comment on the brand posts and receive direct feedback from the brand itself. This makes the customer feel proud and respected from the brand side through their reply on his/her own comments and to their reaction to his/her own comments as an individual customer. PC30 highlighted:

“I think in term of innovativeness, people want to feel that they have been treated like individual and this requires a lot of attention to the customers.”

Similarly, PC24 highlighted that:

“I wait for comments from other members of the social media brand community and from the brand itself and I feel proud of doing that and I feel enough respect from receiving feedback from the representative of the brand.”

Moreover, PC40 confirmed that engaging with online brand communities helps customers to be more familiar with the brand character, which helps them in perceiving any brand as being an innovative brand:

“If people are more engaged with the brand, so the brand is able to be more innovative if they realized that this brand is not just a brand, it is more, it is like a life style, so if they can make more than just a brand, they will do perceive this brand as innovative because the brand is not just a product it’s a character so I can perceive the brand to be innovative.”

In addition, some participants assured that it is an ongoing process between the brand and its customers; through online brand communities, its customers can share their innovative ideas with the brand, and the brands develop their products based on this feedback. Therefore, the brand should consider their customers’ innovative ideas from online brand communities and introduce new features or new products from these ideas from its customers’ perspective. Therefore, the customer can become a major part of a brand’s innovation circle. PC30 said:

“Through interacting with us in this social media brand community, we can receive feedback about the different products of the brand, so the brand gets this feedback and can improve their products ... based on the innovative ideas from the customers the brands introduce innovative products and based on this circle of exchanging information, the customer can perceive this brand as innovative brand. Therefore, it is

an innovative brand because of the ongoing process between the customer and the brand.”

PC31 illustrated:

“I think if you engage more with the social media brand community ... you are going to recognize that there are many people like and comment on this brand community, those reviews help the brand to grow, create new features and the new products will come up faster, which is always a good thing for me because I would always get new products with new features.”

On the other hand, a participant stated that being engaged with online brand communities is not always positively related to perceiving this brand as being innovative, because reading customers' posts (customer use of online brand communities) might be enough to perceive a brand as being innovative compared to other brands. Some customers do not have enough time to put more likes or comments. PC38 stated:

“...if I just see something and I think it is very nice and I decide not to comment and for me I think that it is in the same balance for me commenting does not make me feel like I perceive it innovative or not. I am very busy and I do not have time that is why I rarely like and comment, I do that only when it is absolutely very great then I can sometimes share some posts but that is very rare like once or twice a year.”

In conclusion, the findings revealed that most participants referred to customer engagement with online brand communities as an antecedent of customer perceived brand innovativeness though the mediating role of customer perceived value of online brand communities. Therefore, active customers (engaged customers) cannot perceive their brand as being innovative without the perceived value of the brand communities, including functional, social, and emotional

value. Online brand communities enable customers to get further feedback from the brand and more comments from communities' members, which would help customers to compare different brands to identify the most innovative brand. Additionally, the findings showed that brand innovativeness is a continuous innovation process between the brand and the communities' members that depends on a high degree of individual relationship between the brand and their customers through mutual interactions based on customers' comments and brand feedback.

4.3.3 Customer perceived value of online brand communities

This section discusses the exploratory study findings of the key dimensions of customer perceived value of online brand communities, in addition to customer perceived value of online brand communities as an antecedent of customer perceived brand innovativeness.

4.3.3.1 Dimensions of customer perceived value of online brand communities

The results show that there are three main dimensions of customer perceived value; functional value, emotional value, and social value. All participants confirmed that they perceive the functional value of online brand communities, whilst almost half of them perceive emotional value, and only a few of them perceive social value. The three dimensions of customer perceived value are addressed in more detail in the following sections.

4.3.3.1.1 Functional value

All participants are members of different online brand communities and perceive functional value from their online brand communities in the form of getting useful and helpful information from online brand communities. PC26 felt that social media brand communities help customers in collecting more information about the design and the new products of the brand, which affect their purchase decisions:

“I think that one of the reason that I would like to follow social media brand communities is that they update me with the fashion and give me information about, for example, when I go to M&S you can find the same design of Gucci, so you do not have to pay that much money to Gucci. That is why social media is giving me something like background about new things, what I like too. If I see something, I remember when I see something for different brand and I compare so this is so close to the other one so I will buy that one. Social media brand community is giving me information about my favourite brand.”

This is similar to PC30, who confirmed the importance of these brand communities in providing more information about the brand’s new features and products that help customers in making their own purchase decisions:

“I always see and read the other people’s review so I can know more about the new features of their products and how it looks like. Therefore, I think I gain value from being a member from this social media brand community, they give me information about the new products so I can know how good they are? And how productive they are? And what kind of features they got, which giving me more information about it from people using it. That’s why I can consider to buy or not to buy it; for example, when people are writing bad comments on the new black iPhone 7, I can decide which one I have to buy based on their comments.”

Additionally, PC34 reinforced the importance of the information and its role in affecting customers’ purchase decisions:

“There is always a value from being a member of this brand community because if you do not know about the brand you would not find a chance to purchase, and the

information is related to decision making and there is an emotional value of being a member of the Aldi community because I feel happy because they are helping me.”

However, one participant (PC38) confirmed that the information that the customer gains from being a member of online brand communities is not always useful and it depends on what kind of offers they have and whether these offers fit the customer’s interests:

“The information that I gain from social media brand communities is not always valuable but sometimes I can get value ... the main reason of following them is just to be aware of their offers and to know about anything I want buy. So, for me I am not following them to buy anything specifically, but to know what kind of offers they have.”

As stated above, the majority of the participants perceive functional value from their online brand communities in the form of getting useful and helpful information from online brand communities about brands’ new features and products, which fit customers’ interests and can help them in making their own purchase decisions.

4.3.3.1.2 Emotional value

Half the participants perceive emotional value from being a member of social media brand communities, which is related to feeling happy or proud of being a member. For example, PC37 said:

“I am happy to be a member of the community with other people who have the same interest and I do not feel like satisfied but I feel happy of this discussion about the brand.”

Similarly, aPC24 added:

“I wait for comments from other members of the social media brand community and from the brand itself and I feel proud of doing that and I feel enough respect from receiving feedback from the representative of the brand.”

In the same context, PC40, described his/her emotional value as being akin to satisfaction:

“I am happy to be in the community to find the people who sharing these kind of tips and give me this kind of information that I need, I would not tell anyone that I am proud of it but I am satisfied with it.”

Additionally, P39 was very excited at being a member of online brand communities because every week there is something new to talk about related to the brand:

“I feel happy to be in this social media brand community and until now I found it is very interesting to be a part of this social media brand community, every day and every week we have something new to talk about it even until now for the iPhone 7, I am trying to know about the new things that I can do with it.”

As described above, many of the participants perceive emotional value from online brand communities in the form of feeling happy or proud of being a member of online brand communities and feeling very excited by their participation in online brand communities.

4.3.3.1.3 Social value

A few participants perceived the social value of being a member of social media brand communities, and this helps them to create new relationships with other customers and with the brand. PC23 observed:

“We can get the most recent update from this community and we also can make friendships with other people.”

Moreover, PC37 said that making friendships is a part of customers’ social relationships.

“I do get friendship from Apple community and it is adding to my social circle around me.”

Additionally, PC24 stated:

“Socially I aware of their events and everything that is coming out.”

As outlined above, some participants gain social value from online brand communities in the form of creating new relationships with other customers and with the brand and making friendships via online brand communities.

In conclusion, findings exposed that customer perceived value of online brand communities is a multidimensional conceptualization which includes three main dimensions; functional value, emotional value, and social value. Moreover, the exploratory study findings revealed that customers rank these in the following order: firstly, they are more likely to perceive functional value (information about the price, discount, quality, delivery time, new features, and new products) as being paramount; followed by emotional value (feeling happy of being a member of the brand communities); and finally, social value (interacting with other members and extending their social networks).

4.3.3.2 Customer perceived value of online brand communities as an antecedent of customer perceived brand innovativeness

The exploratory study findings revealed that the majority of the participants referred to customer perceived value of online brand communities as being an antecedent of customer perceived brand innovativeness. All confirmed that information (related to the new offers or

features or products of the brand) is the most important form of value they can gain from any online brand community, which can help customers to perceive a brand as being innovative.

PC21 maintained:

“The value and the information you gain from social media brand community definitely affects your perception of the brand innovativeness, because most of the innovative brands the companies create depends on how you find it useful.”

Similarly, PC40 confirmed that the information that the customer can gain from online brand communities could change his/her perception of the brand innovativeness:

“I think the information from this brand community does change my perception of brand innovation because I can see that the value that I can personally gain by gaining information from this social media community changes my perception that this is innovative brand and that the brand doing spends on brand innovation.”

Additionally, PC28 stated:

“For example when I purchase Samsung S6 Plus I tried to use it under water but it is not working and through social media of the brand I heard that Samsung s7 Plus provides a new option, which provides related writing and taking photos or recording videos under water, therefore I think that this social media brand community provides updated information that can help me to recognize that this brand is innovative. I get all my knowledge from social media because I do not have TV and I am always using social media to collect information.”

Furthermore, some participants correlated between the number of posts about the new features and products and customer perceived brand innovativeness. The more posts about new

products, features, and offerings of the brand via online brand communities, the more the brand is perceived as being innovative by their customer. PC30 said:

“Through this brand community, I can receive a lot of information about the brand. Therefore, I can know that the brand is innovative because they are changing and putting new things and products on social media. So, the more the brand puts and posts about new products on social media brand community, the more we discuss and the more we know that they are innovative.”

PC26 added a similar point, which is related to introducing information about new offers with high discount rates suggesting that more discounts would reflect more brand innovativeness:

“When I follow that brand I will get more value because they will send you offers like 25% or something and I will definitely use it so I think it’s an innovative brand if I follow it because we are not looking at something just new, we want this thing to get better and better.”

Additionally, PC27 confirmed the importance of the discounts as a source of perceiving a brand as being innovative:

“As a member of this community you will get a value, like discount or something, so when you love this brand you follow this brand like every day and you love it so, and you feel like one of those people who create this brand so you help them and sharing posts and liking and do what this brand should do with the other people. So, I can see that Nike is an innovative brand.”

Moreover, some of the participants confirmed the important role of online brand communities in creating circles of innovation between the brand and their customers. Therefore, the

customer can find the products or the features that reflect their expectations about the brand's new products or features. PC20 claimed that:

“Using social media is a way to interact with the other people and this creates value for me as a customer. For example, when they introduce new products I can see that they are a very innovative brand, so I say ‘wow, they did it, that’s very innovative’ because you know you are following the latest trends of the brand. It’s okay to say ‘wow’ especially when they create something I was looking for, such as when they created the Chanel phone cover, I thought that it was very innovative.”

Similarly, PC31 demonstrated that:

“For me being a member of this brand community and sharing our comments via social media, it makes you feel good and when you collect information about the brand via social media, especially that you know that those products have been created based on many people comments and ideas; so the company created products that reflect peoples’ ideas, so those brand’s products are a very creative and innovative brand.”

Furthermore, some of the participants focused on the interactions between the communities’ members as a main source of perceiving a brand as being innovative, PC25 said:

“I think that social interaction between me and the other members of this social media brand community helping me to perceive this brand as innovative brand.”

PC29 stated the role of customer use of online brand communities in comparing between the innovations of different brands:

“When I compare Louis Vuitton and other brands in social media through using social media brand communities of each brand I can find some differences between them and I can see that this brand introducing more innovative products and this can be helpful

to compare between innovations in different brands. Additionally, I can review people's feedback about innovation in different social media brand communities and which one people are more likely to buy and use."

To conclude, the findings of the exploratory study exposed that customer perceived value of online brand communities is a key antecedent of customer perceived brand innovativeness. The participants confirmed the significant role of customer perceived value of online brand communities in perceiving their brand as being innovative compared to others. Specifically, functional perceived value, which includes information related to the brand's new products, features, and discount rates of the brand (which depends on the brand posts, particularly those posts that include videos, images or comments from the brand) might make customers more able to compare between different brands and rank them afterwards. Therefore, this interaction between the communities' members and with the brand, including customers' comments and brand's feedback, would generate an increased likelihood for the customer in perceiving this brand as being an innovative brand and provides a source of innovative ideas related to the brand.

4.4 Customer innovativeness related findings

There are five characteristics of innovative customers identified based on the literature review. Accordingly, the exploratory study findings revealed that participants are different when considering their innovative characteristics, as presented in the following sections.

4.4.1 Seeking out new products

All participants sought out new products and brands, but they are doing so for different reasons which vary between:

(1) Trying new products, as highlighted by PC24:

"I am always seeking out trying new products."

(2) Gaining discount and purchasing new products with a lower price; as presented by PC27:

"I am looking for discounts and cheap prices."

(3) Gaining new knowledge, experience, and keeping up to date; as PC28 illustrated:

"I would like to get new knowledge."

(4) Providing a kind of excitement and happiness from buying new products, as PC31 said:

"I am doing that for new excitement."

Additionally, most of the participants stated that they are seeking out new products and brands through using different sources, such as social media platforms, internet websites, TV, and newspapers. However, the majority of participants use online brand communities as the main source of information about new products and brands, and about the new features of the brand. PC39 stated:

"I do that through using social media like for example I got the Apple watch based on social media."

As stated, the majority of the participants sought out new products in the form of trying new product, buying new products with good discount, gaining new experience and knowledge of the new products, and feeling excitement of buying new products.

4.4.2 Seeking out information about new products

All participants are interested in collecting information about new products and brands through using online brand communities, websites and traditional sources such as TV and newspapers.

All participants are seeking out information about new products for different reasons:

(1) Getting more knowledge and experiences, PC27 asserted:

“I am interested in the new stuff because it’s always good to have more knowledge.”

(2) Looking for good value for money, PC23 illustrated:

“Because I am always trying to purchase the best price with the best features.”

(3) Finding it an enjoyable thing to do, PC21 underscored:

“I just trying to understand what is going on in the future, so I found it enjoying me.”

(4) Getting ready for buying the product, PC26 said:

“I need to get ready to buy it.”

As proceeded, the majority of the participants search for information about new products to gain more knowledge, get good value of money, find enjoyment, and get ready to buy these new products.

4.4.3 Liking retail stores that introduce new products and brands

Most participants confirmed that they do like retail stores that introduce new products and brands. Whilst, PC24 confirmed that customers are following a brand and not just a retail store:

“I prefer to follow a brand in different stores, so I do not have a specific retail stores to purchase it from.”

In addition, some of the participants stated that innovative stores depend on what type of products they introduce, electronics or food products. In the case of electronics, customers are ready to spend more time in making their purchase decision. PC21 pointed out:

“It depends on what type of products, so if you are talking about living products like foods or drinks I do not need that because I know exactly where it is, but if you are talking about entertainment and products like electronics, I spend more time looking at it, especially laptops.”

Most of the participants confirmed the importance of the innovative retail stores as a main source of new offers, products and features. As PC29 said:

“Next is my favourite retail store for cloths because this store is introducing new products and offers and they are always giving me feedbacks about their new products.”

PC33 added:

“I like the innovative store because it is introducing something different and keeps innovations all of the time.”

PC35 expressed that:

“John Lewis, M&S and many others, so I think that those stores are innovative stores ... introducing new offerings.”

Conclusively, it can be seen that all but one of the participants are seeking innovative stores that introduce new offers and products. However, liking retail stores that introduce innovative products varies from one customer to another, based on the type of product.

4.4.4 Consulting their friends

Most participants felt that they prefer to ask their friends about their experiences in using new products via social media or face to face. PC23 highlighted:

“I always consult people about the new products especially when we are talking about musical instruments; I have to ask my friends on social media and members of social media brand community about the tone and song of this product.”

PC25 added:

“Generally I would always ask my friends but I usually want to look at the blogs and read the other people comments.”

Four participants, including PC21, contend that they do not prefer to ask their friends:

“No, primarily I do it myself ... when I buy a new phone ... so I am independent.”

Similarly, PC39 said:

“No, I am not interested in asking anyone I want to do it by myself.”

Thus, there is a high degree of independence for participants who prefer to decide without asking people for their opinion, but social media helps customers to be more dependent through reading other customers' comments.

4.4.5 Trying new products before your friends

Almost half of the participants could be considered as being risk takers, because they prefer to purchase new products before their friends. PC21 highlighted:

“I want to be the first one and share my experiences about new products with my friends.”

Additionally, PC22 said:

“I want to be the first one who purchase this product, it gives me a kind of satisfaction.”

On the other hand, almost half of the participants could be considered as being risk averse because they prefer to wait for their friends to purchase these new products first. For example, PC23 said:

“I normally wait for other people's experiences and ask them about their opinions about the product just to be safe.”

Similarly, PC38 asserted:

“I do not like to be the first so I want wait for other people to test it first then I can buy it.”

Additionally, PC25 supported this:

“I do not care about being the first one, I am afraid to waste my money and I would rather if someone tried the product first and tell me about it and then get their reactions about the product.”

As outlined above, almost half of the participants are risk takers because they are ready to take the risk as early adopters of buying new products. Otherwise, almost the second half of the participants are risk averse because of their doubts to take the risk of buying new products.

In conclusion, even though most participants are seeking new products, not all of them are risk takers. Some of the participants are still afraid of taking the risk of buying new innovative brands' products and losing their money, therefore they prefer to consult their friends or to wait for someone to try these new innovative products and features first and provide them with enough information to encourage them to try these products. This section provides more understanding of the innovative characteristics of customers. However, the next stage of the data collection (see chapter 5) will examine the moderating effect of customer innovativeness (see updated conceptual framework - Figure 4.2).

4.5 Additional findings

This section consists of several additional findings, beginning with findings related to the current study research setting, social media platforms, reading other customers' comments, transparency of the online brand communities, comparing between social media and traditional

media marketing, the differences between brand and product innovativeness, and finally this section ends with presenting new issues related to brand innovativeness.

4.5.1 The current study research setting

The exploratory findings reveal that the participants are engaged with online brand communities in three main retail sectors: 13 participants engage with online brand communities in the electronics sector, (9 of them are engaged with mobile phone online brand communities); 9 participants engage with brands in the fashion sector (4 of them overlapped with brands in electronic sector); whilst, only 2 engage with online brand communities in the grocery sector (both of them overlapped with electronics). Accordingly, the participants seem to be engaged with online brand communities of different brand categories in three retail sectors: technological and electronic products, fashion, and groceries, with the technological and electronic being the most dominant sector. In terms of the research setting, it is very difficult to focus on three retail sectors and as the majority of participants engage with brands in the electronics sector (9 out of 13 participants are engaged with mobile brands) this study focuses on the mobile phone sector in the context of social media brand communities, such as those associated with iPhone social media communities and Samsung phone social media communities.

Most literature researching innovation of mobile phone brands (e.g. Barone & Jewell, 2014; Shams et al., 2015) focused on innovation in the mobile phone sector in an offline context, and demonstrated that the mobile phones sector offers variation in innovativeness, has several well-established brands available, and has personal relevance for customers. However, to the best of the researcher's knowledge, this study is the first to focus on brand innovativeness of mobile phone brands in the context of online brand communities. Accordingly, during the second phase of data collection (quantitative), will focus on the customers who are engaged

with online mobile phone brand communities via social media, where the current research context is online brand communities and the research setting is mobile phone brands.

4.5.2 Social media platforms

The results of the exploratory study showed this pattern of behaviour in relation to the different platforms used: the majority of the participants use Facebook brand pages as the main platform to engage with online brand communities, followed by blogs and Instagram; whilst the lowest rate belongs to YouTube and Twitter. This is linked to PC23's comment that:

"Facebook is more convenient than any other social media, we can see the pictures, we can comment, we can give those likes, we can really be up-to-date. Therefore, on Facebook, it is really convenient because we can like the pics, we can follow the pic and we can get notification. Every time they post something about their products, we can see and so on. Facebook is the best social media for marketing, whereas Instagram and the others, it's really hard to use, they do not give much information."

Facebook, blogs and Instagram have the highest usage rate between social media platforms that the customers might use to engage with online brand communities.

4.5.3 Reading other customers' comments compared to brand feedback

The majority of participants confirmed the importance of reviewing peoples' comments and reading brand's feedback, and almost half the participants felt that customers' comments are more important than a brand's feedback, because they are looking for an independent source of information to help them to make purchase decision. PC21 pointed out:

"I am interested in reading the other people comments more than reading the brand feedback."

Additionally, PC38 commented that:

“I trust more in customers’ comments, definitely I trust in customers’ comments more than brand’s comments.”

Similar PC37 added:

“I believe that people’s comments are more important than the brand feedback.”

Moreover, PC31 said that customers compare different brands, especially with the more expensive products (purchasing decisions become riskier), thus the customer focuses on using more independent sources of information such as other customer comments:

“I think that I believe in people reviews more than brands especially when you are talking about expensive products.”

PC39, however contested this claim suggesting that the brand’s feedback is more important than other peoples’ comments:

“Brand feedback is more important than people’s comments because people can lie they can put comments only to speak and they can damage the phone and they are trying to take the guarantee from the company so I trust in the brand feedback more than people’s comments.”

Considering the customers who are looking for independent sources of information, it is important for any brand to manage their relationship with them through providing more innovative real time feedback to their comments. This is due to the growing importance of peoples’ comments via online brand communities, which have become a main source of information for current or potential customers in making their purchase decision.

4.5.4 Transparency of online brand communities

The exploratory study is related to the transparency of the online brand communities, which means that a brand representative has nothing to hide from their customers (everything related to the brand has the potential to go viral), which is important and positively correlated to customer engagement with online brand communities. Online brand communities provide an opportunity for companies to represent themselves and build real relationships with their customers. Therefore, transparency via online brand communities provides a chance to discuss and talk about everything connected to the brand between customers and with the brand representatives, accordingly, the transparency of the online brand communities is one of the main requirements for more customer engagement with online brand communities. PC33 stated in this regard that customer engagement is related to information transparency, through having nothing to hide, whether negative or positive, as the participant expressed:

“I think that social media marketing would increase your engagement with the brand because if you can say that a particular brand is open and transparent and they are happy for the customer to comment and to make whatever comments he would say.”

This result is consistent with Gangi, Wasko, and Hooker (2010) who found that customers became innovative collaborators within Dell online brand communities through the Ideastorm community. However, Ideastorm users expected Dell to disclose their customers' ideas and provide updates on the status of Ideastorm. The company faces a significant challenge between balancing the requirements of their communities through updates on progress against disclosing information to their competitors.

4.5.5 Social media compared to traditional media marketing

The majority of participants supported the importance of social media marketing and its role in helping customers to interact with the brand and with other customers. PC21 said:

“Social media helps you to interact with other people and know more about their experiences. T.V is not helping people to know more about the innovative side of the brand.”

In addition, PC23 commented:

“When we compare between using social media brand communities and the other traditional marketing techniques, social media marketing is most effective, because social media provides an opportunity for the people who are using electronic devices, such as laptops or mobiles; otherwise most of the people are not using TV anymore.”

Furthermore, some participants tried to compare social media and face-to-face marketing and stated that social media marketing is very important in collecting more information about the brand. PC28 commented:

“In the store you do not have a chance to talk with the brand representative, but in social media you have a chance to do that, so it’s something more knowledgeable. So yeah definite it helps, when you go through social media there are two way communications which is not present in the traditional marketing channels.”

Additionally, PC30 suggested:

“When the brand is putting new post about their new products on social media I see it and read about it. Normally, before social media, we were using traditional marketing but with Facebook and social media we have a better chance to interact with the brand community and to know more about the new features of the brand through reading the other people reviews.”

Accordingly, most participants identified the significant role of social media marketing in collecting more information about the brand, and especially about new features and offers of the brand's products. Therefore, using social media marketing became a very important and integrated part of any brands' marketing campaign.

4.5.6 Brand innovativeness compared to product innovativeness

Most participants confirmed the importance of brand innovativeness and revealed that there is a clear difference between product and brand innovativeness, and that they would prefer to purchase 'known' brands instead of buying unknown products. Therefore, they prefer to purchase brand innovativeness instead of purchasing product innovativeness, as some of the participants felt they are brand-oriented and they feel proud of having these brands. PC28 said:

"I am brand oriented person; better brand gives you better quality so sure I prefer to purchase brand innovativeness. I feel proud of wearing famous brand like River Island or Next or any of my favourite brands."

Some of the participants, including PC29, asserted that they are interested in comparing between different brands to identify the most innovative one:

"If I have to select between buying known brand like Louis Vuitton and unknown product like Chinese product, I prefer to purchase the known brand because I know it well and I know everything about it. And I have to compare between Chanel and Louis Vuitton, I would like to purchase Louis Vuitton because I like and love this brand so much. Anyway, brands nowadays are very important therefore, I am going to purchase Louis Vuitton any way because of its after sell and quality and I love it and I am a fan page of it and know everything about this brand."

Additionally, PC31 revealed:

“For example; If I want to purchase shoes now, I am going to start with social media and look at photos and images and posts and read the reviews and compare between them and look for the pros and cons of each of them based on the other people’s comments and reviews and I can decide which brand is more innovative than the other one”.

Furthermore, two participants focused on having enough money for purchasing innovative brands. Thus, they may buy unknown brands because they do not have enough money to purchase the well-known brands. PC30 said:

“Of course I prefer to buy the brand innovativeness if I have enough money to purchase it and it depends on the products; if I am going to buy electronics I think that the brand is very important, but I should have enough money to purchase it. Whilst, when you are talking about clothes I always prefer to purchase famous brands like Zara, I really like this brand I feel proud to be a member of this community and having it. The innovative brand is always introducing good and new features and they are very professional comparing to other brands.”

Otherwise, PC23 stated that in the case of musical instruments, innovativeness is not related to the known brand, but it is related to product innovativeness:

“In musical instruments, innovativeness is not related to the brand and I think that I have to try the unknown product first. I prefer the Japanese products have better quality than any other products.”

Accordingly, the majority of participants confirmed that there is a clear difference between product innovativeness and brand innovativeness and described the importance of brand

innovativeness. Therefore, most participants are looking forward to collecting more information about the new features, offerings, new product price and new product quality of the brand. Moreover, they are not interested in following or collecting more information about unknown brands, even if those brands have innovative products, because they care more about brand innovativeness. In the case that a customer does not have enough money to buy known brands, they may choose to purchase unknown brands.

4.5.7 New issues in brand innovativeness

One of the participants suggested new issues relating to innovation in social media, as PC28 classified the innovation in social media into design and technology innovations:

“Sometimes, customers stated some features of innovation, if I am talking about my favourite brand like Next and River Island so they are introducing something new according to the design but if you are talking about using new technology innovation in social media so they are using now changing digital room and you can fit the clothes on you just like a mirror and this mirror is showing you how you look.”

Thus, whatever the form of innovation, design innovation or technological innovation, and as stated in chapters 2 and 3, the second stage of data collection will focus only on studying the customer perception of brand innovativeness in the context of online mobile phone brand communities as a main source of information about brands' new products, features or offerings. Accordingly, this exploratory study aimed to explore how customer perceived brand innovativeness is affected by three key antecedents in online brand communities; customer use, customer engagement, and customer perceived value. The next section provides a discussion of key findings.

4.6 Development of research hypotheses

This section presents the development of the current research hypotheses, including the transformation of the current research propositions into research hypotheses (see Table 4.1).

This section starts by discussing the key antecedents of customer perceived brand innovativeness in online brand communities, followed by presenting the key antecedents of customer perceived value of online brand communities, and ends with introducing the moderating role of customer innovativeness.

4.6.1 Antecedents of customer perceived brand innovativeness

In regard to the first research objective, which seeks to explore and investigate how customer perceived brand innovativeness is affected by three key antecedents in online brand communities: customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities, this section presents the related findings of the exploratory study and the literature to provide sufficient support to build the research hypotheses (see Table 4.1).

To the best of the researcher's knowledge, this study is the first to explore the role of online brand communities in affecting the customer perception of brand innovativeness. Many previous studies of online brand communities have focused on customer perceived product innovativeness, which is defined as the relative difference between new and previous offerings, and only reflects customers' rational drivers (Janzik & Raasch, 2011; Sanayel et al., 2013). No online brand community studies have considered customer perceived brand innovativeness, which provides a broader conceptualization and reflects both customers' rational drivers (e.g. features, technology, and offerings of the brand's products) and non-rational drivers (e.g. feeling happy and excited to own a known brand) (Shams et al., 2015). However, the interview results reveal that brand innovativeness is more important than product innovativeness because

most participants stated that they could not trust in unknown brands or products, even if they are innovative. Therefore, customers prefer to buy innovative brands when they have enough money, they prefer to purchase brand innovativeness instead of purchase product innovativeness. This result supports the findings of Ouellet (2006) and Shams et al. (2015) that showed the significant role of customer perceived brand innovativeness compared to customer perceived product innovativeness and confirmed that the conceptualization of brand innovativeness is different and broader than the conceptualization of product innovativeness.

Considering signalling theory, customer perceived product innovativeness, which can act as a signal of customers' uncertainty that reflects a high degree of customer perceived risk, thus they will not be able to evaluate and compare all products in the market due to imperfect and asymmetric information, which is related to the lack of information about too many products in the market (Ouellet, 2006; Shams, 2015, 2017). Otherwise, customer perceived brand innovativeness presents a signal of the brand position in the market, which can lead to decreasing customer uncertainty and the perceived risk of brand innovativeness compared to product innovativeness (Shams, 2017).

Furthermore, prior studies researching innovation in online brand communities (see Table 2.4) identified three key antecedents of innovation in online brand communities: customer use of online brand communities (e.g. Bugshan, 2015), customer engagement with online brand communities (e.g. Sawhney et al., 2005; Fuller et al., 2007; Bugshan, 2014), and customer perceived value of online brand communities (e.g. Noble et al., 2012; Bugshan, 2015; Kaur, 2016). These findings are consistent with the findings of the previous studies in the context of online brand communities (see Table 2.2), which referred to these three key antecedents as key determinants of online brand communities (e.g. Gummerus, 2012; Laroche et al., 2012; Tsai & Men, 2012; Amaro et al., 2016; Kamboj & Rahman, 2016; Zhang et al., 2016). The findings of

exploratory study are consistent with the findings of the previous studies in identifying these three determinants of online brand communities as key antecedents of customer perceived brand innovativeness in the context of online brand communities. However, based on the findings of the exploratory study and the literature review, this study identified three main antecedents of customer perceived brand innovativeness in online brand communities, which are presented below.

Firstly, customer use of online brand communities as an antecedent of customer perceived brand innovativeness. A few studies in online brand communities have focused on studying customer use of online brand communities as an antecedent of innovation from the customer perspective. One exception is Bugshan (2015), who referred to using social media to interact with community members as an antecedent of customer intention to participate in open innovation. However, to the best of the researcher's knowledge, this study is the first to explore how customer perceived brand innovativeness is affected by customer use of online brand communities. The findings of the exploratory study refer to customer use of online brand communities as an antecedent of customer perceived brand innovativeness, thus, the more customers use online brand communities (through following/joining online brand communities via social media platforms, reading brand posts, and watching/viewing pictures or videos), the more customers can perceive their brand as being innovative compared to other brands. Furthermore, customer use of online brand communities contributes in creating ongoing circles of innovation between customers and brand representatives in online brand communities; through these circles, customer can introduce new ideas and the brand can develop its products, offers, and features based on these ideas. Thus, customers can like, comment, share, and create brand posts regarding these new products as feedback of these ongoing circles of innovation.

Secondly, customer engagement with online brand communities as an antecedent of customer perceived brand innovativeness. Most previous studies that refer to customer engagement with online brand communities as an antecedent of innovation from the customer perspective, focused on different conceptualizations of innovation. For example, Chu and Chan (2009) referred to customer participation as a key antecedent of the innovation success of online brand communities. Additionally, Sawhney et al. (2005) proposed that customer participation was a part of customer engagement that positively influenced product collaboration innovation. Similarly, Fuller et al. (2007) stated that product innovation is affected by customer engagement through classifying customers into lurkers, posters, and frequent posters. However, to the best of the researcher's knowledge, this is the first study to explore how customer perceived brand innovativeness is affected by customer engagement with online brand communities. The findings of the exploratory study proposed that engaged customers might not be able to perceive their brand as being innovative without the value that they can perceive of being members of their online brand communities. Accordingly, customer engagement with online brand communities is an antecedent of customer perceived brand innovativeness through the mediating role of customer perceived value of online brand communities, which means that the more customers engage with online brand communities (more liking, commenting, sharing, and creating brand posts), the more value they can perceive of their communities (more functional, social, and emotional value), and the more they can perceive their brand as being an innovative brand compared to others. Furthermore, customers can use their engagement with different online brand communities to compare between different brands and define for themselves the most innovative brands.

Thirdly, customer perceived value of online brand communities as an antecedent of customer perceived brand innovativeness. A very few studies refer to customer perceived value of online brand communities as an outcome of innovation from the customer perspective. For example,

Bao (2017) referred to customer perceived value (comprising functional, cognitive, social, and emotional value), as a key outcome of service innovation in online brand communities. Otherwise, some previous studies referred to customer perceived value as an antecedent of innovation in online brand communities. For example, Bugshan (2015) stated that customer intention to participate in open innovation is affected by customer perceived information support in online brand communities. Likewise, Kaur (2016) referred to customer perceived value (comprising functional, emotional, and social value), as a key antecedent of customer participation in user-centric service innovation on social media-based brand communities. However, to the best of the researcher's knowledge, this study is the first to explore how customer perceived brand innovativeness is affected by customer perceived value of online brand communities. The findings of the exploratory study referred to customer perceived value of online brand communities as an antecedent of customer perceived brand innovativeness. Thus, the more customer perceived value of online brand communities (more functional, social, and emotional value), the more customer perceived brand innovativeness. Customer perceived value of online brand communities makes customers able to collect more information about new offerings and features of the brand, accordingly, customers become more aware of the brand's innovativeness and can reduce their perceived risk of buying.

Considering the findings of the exploratory study and the literature review, the current study refers to customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities as key antecedents of customer perceived brand innovativeness in the context of online brand communities. As demonstrated by Malhotra (2007) and Creswell (2014), it is recommended to use the exploratory study to build research hypotheses (to refine theory, research problem or even discover a causal relationship), by transforming a research proposition into a research hypothesis (based on the exploratory study findings). Thereby, based on the exploratory study

findings, the following three research propositions RP1, RP5, and RP6 (see Table 4.1) are transformed into research hypotheses (H1, H5, and H6), as presented below:

H1: Customer use of online brand communities has a direct and positive influence on customer perceived brand innovativeness.

H5: Customer perceived value of online brand communities has a direct and positive influence on customer perceived brand innovativeness.

H6: Customer engagement with online brand communities has a direct and positive influence on customer perceived brand innovativeness.

Additionally, based on the exploratory study findings, two additional indirect hypothesised relationships will be added; the first hypothesis (H8) tests the indirect effect of customer engagement with online brand communities on customer perceived brand innovativeness through the mediating role of customer perceived value of online brand communities. The exploratory study findings revealed that engaged customers might not perceive their brand as being innovative without perceiving the value of online brand communities. Accordingly, customer perceived value of online brand communities is expected to mediate the relationship between customer engagement with online brand communities and customer perceived brand innovativeness. The second hypothesis (H7) is to test the indirect effect of customer use of online brand communities on customer perceived brand innovativeness through the mediating role of customer engagement with online brand communities and customer perceived value of online brand communities, which has been added to provide more understanding of the role of customer use of online brand communities as a key antecedent of customer perceived brand innovativeness, through testing the direct, indirect, and total effect of customer use of online brand communities on customer perceived brand innovativeness. Additionally, the exploratory study revealed that passive customers might not perceive the value of online brand

communities without their engagement with online brand communities (indirect effect of customer use on customer perceived value through the mediating role of customer engagement). Additionally, active customers (engaged customers) might not perceive their brand as being innovative without the perceived value of online brand communities (indirect effect of customer engagement on customer perceived brand innovativeness through the mediating role of customer perceived value). Accordingly, customer engagement and customer perceived value are expected to mediate the relationship between customer use of online brand communities and customer perceived brand innovativeness. These two additional indirect hypothesized relationships are presented below:

H7: Customer engagement with online brand communities and customer perceived value of online brand communities mediate the relationship between customer use of online brand communities and customer perceived brand innovativeness.

H8: Customer perceived value of online brand communities mediates the relationship between customer engagement with online brand communities and customer perceived brand innovativeness.

4.6.2 Antecedents of customer perceived value of online brand communities

Considering the second research objective; ‘to identify the different influence of customer use of online brand communities and customer engagement with online brand communities on customer perceived value of online brand communities’ in addition, to examining the influence of customer use of online brand communities on customer engagement with online brand communities’, this section presents the related findings of the exploratory study and the literature that provides support to build the related research hypotheses (see Table 4.1). This section starts with describing customer use of online brand communities in relation to customer engagement with online brand communities, followed by presenting customer use of online

brand communities as an antecedent of customer perceived value of online brand communities, and ends by introducing customer engagement with online brand communities as an antecedent of customer perceived value of online brand communities.

Firstly, customer use of online brand communities in relation to customer engagement with online brand communities. The current study differentiates between customer use and customer engagement. Previous studies have argued over the way to differentiate between customer use and customer engagement. Schivinski et al. (2016), referred to customer use as a subset of customer engagement and confirmed the positive relationship between customer use and customer engagement, which includes customer contribution and creation via online brand communities and referred to using/consuming, contributing, and creating as key activities of customer engagement. Additionally, Vries and Carlson (2014) referred to customer use as customer usage intensity of online brand communities and referred to customer engagement with online brand communities as behavioural engagement and confirmed that customer usage intensity has a positive impact on customer engagement. Moreover, Manchanda et al. (2015) confirmed that most customers who join online brand communities become more engaged with online brand communities, which reflects a significant increase in their purchases of the brand's products. However, few studies (e.g. Laroche et al., 2012; Tsai & Men, 2012; Kamboj & Rahman, 2016) differentiated between customer use and customer engagement by dividing customers' online activities regarding their nature into passive activities (customer use) and participation activities (customer engagement). The findings of the exploratory study support the differences between customer use and customer engagement, and demonstrate that customer use was positively related to customer engagement. The more customers use online brand communities (through following, reading, and watching brand posts related to new offers, products, collections and features of the brand), the more customers engage with online brand communities (through liking, commenting, sharing, and creating brand posts).

Secondly, customer use of online brand communities as an antecedent of customer perceived value of online brand communities. A few studies referred to customer use of online brand communities as an antecedent of customer perceived value. Amaro (2016) stated that customer perceived emotional value of online brand communities (perceived enjoyment value) is affected by customer use of online brand communities. Additionally, Tsai and Men (2012) argued that customer use of online brand communities as a platform to search for discounts, information about their brand, and to exchange information with other members (functional value) or to have fun and seek pleasure (emotional value); accordingly, customer functional and emotional perceived value are key antecedents of customer use of online brand communities. Moreover, Bugshan (2015) referred to customer use of social media brand communities as an antecedent of customer perceived informational support (information value). However, the current study is among few studies to explore and examine customer use of online brand communities as an antecedent of customer perceived value of online brand communities. The findings of the exploratory study revealed that passive customers (customer use) cannot perceive the value of online brand communities without their engagement with online brand communities. Thus, the more customers' use online brand communities through following, reading, and watching brand posts, the more engagement with online brand communities through liking, commenting, sharing, and creating brand posts, and the more customer perceived value of online brand communities in the form of functional, social, and emotional value. Accordingly, these findings provide enough support to build a direct hypothesised relationship between customer use and customer perceived value, in addition to an indirect hypothesised relationship between customer use of online brand communities and customer perceived value of online brand communities through the mediating role of customer engagement with online brand communities.

Thirdly, customer engagement with online brand communities as an antecedent of customer perceived value of online brand communities. Previous studies have disagreed about studying how customer perceived value is affected by customer engagement; some studies referred to customer perceived value as an antecedent of customer participation. Zheng (2015), for example, stated that customer perceived value of online brand communities is an antecedent of customer engagement. Other studies referred to customer engagement as an antecedent of customer perceived value, such as Zhang et al. (2016) who referred to customer engagement (including conscious participation, enthusiasm, social interaction) as an antecedent of customer perceived value of online brand communities (comprising functional, hedonic, and social values). Additionally, Amaro (2016) confirmed that customer participation in online brand communities (including contribution and creation) is an antecedent of customer perceived value (including emotional value). Moreover, Gummerus (2012) asserted that behavioural engagement is an antecedent of customer perceived value (including social, entertainment, and economic benefits). Likewise, Vivek et al. (2012) demonstrated that customer engagement could lead to many successful marketing outcomes such as customer perceived value. Accordingly, many previous studies referred to customer engagement as an antecedent of customer perceived value of online brand communities. However, the exploratory study findings provide more insight in terms of studying this relationship through identifying four dimensions to measure customer engagement, including; behavioural engagement, conscious participation, enthusiasm, and social interaction participation, in addition to identifying three dimensions to measure customer perceived value of online brand communities, including functional, social, and emotional value. However, the findings of the exploratory study identified customer engagement with online brand communities as an antecedent of customer perceived value of online brand communities. Thus, customer engagement with online brand communities is a preceding stage of customer perceived value. Accordingly, the following

research propositions RP2, RP3, and RP4 (see Table 2.6) are transformed into research hypotheses (H2, H3, and H4), as presented below:

H2: Customer use of online brand communities has a direct and positive influence on customer engagement with online brand communities.

H3: Customer use of online brand communities has a direct and positive influence on customer perceived value of online brand communities.

H4: Customer engagement with online brand communities has a direct and positive influence on customer perceived value of online brand communities.

Additionally, based on the exploratory study findings, customers use online brand communities first, then like and/or comment and/or share or create posts; after that, they perceive more value regarding their engagement activities in the form of functional, emotional, and social value. Thus, this study adds an additional indirect hypothesized relationship (H9) to provide more understanding of the mediating role of customer engagement with online brand communities in the relationship between customer use of online brand communities and customer perceived value of online brand communities, as presented below:

H9: Customer engagement with online brand communities mediates the relationship between customer use of online brand communities and customer perceived value of online brand communities.

Considering the determinants of online brand communities, most of the customers who used online brand communities through following and reading brand posts via online brand communities had different levels of behavioural engagement with online brand communities, which varied between liking; to commenting; to liking and commenting; to liking and sharing; to liking, commenting, and sharing posts, in addition to creating content. The majority of the participants engaged with online brand communities through liking and commenting and only

a few of them were interested in liking, commenting, and sharing their brand's posts. Furthermore, the findings of the exploratory study revealed that other customers' comments are more important than brands' feedback because most participants were looking for an independent source of information; accordingly, other customers' comments on online brand communities might be the most valuable source of information for customers' purchase decisions. This result is consistent with Lee and Chun (2016) who confirmed the positive influence of other customers' comments via social media on customers' latitude of acceptance and attitude change toward issues/companies.

The findings of the exploratory study supported the findings of many prior studies (e.g. Vries and Carlson, 2014; Dessart et al., 2015; Zheng et al., 2015; Harrigan et al., 2017), which acknowledge that customer engagement with online brand communities is a multidimensional concept. Zhang et al. (2016) identified three main dimensions of customer engagement with online brand communities; conscious participation, enthusiasm, and social participation. In addition, Vries and Carlson (2014), Dessart et al. (2015), and Harrigan et al. (2017) all confirmed that customer behavioural engagement remains a strong predictor of customer engagement with online brand communities. Despite prior studies examining some of these engagement dimensions separately, the current exploratory study identified four dimensions of customer engagement with online brand communities, which are; conscious participation, enthusiasm, social participation, and customer behavioural engagement. Additionally, the findings identified four online customers' activities of customer behavioural engagement, comprising liking, commenting, sharing, and creating brand posts.

Additionally, the findings were associated with the multidimensional nature of customer perceived value and identified three main dimensions; functional, emotional, and social value. Moreover, the findings revealed that customers prioritized these in the following order. Firstly,

they are more likely to perceive functional value (information about the price, discount, quality, delivery time, new features, and new products) as paramount, followed by emotional value (feeling happy of being a member of the brand communities), and finally social value (interacting with other members and extending their social networks). The exploratory study findings thus support the findings of previous studies (e.g. Kim & Ko, 2012; Yang et al., 2014; Carlson et al., 2015; Chen & Lin, 2015; Zhang et al., 2016), which acknowledge that customer perceived value is a multidimensional conceptualization and includes the three main dimensions.

4.6.3 Moderating role of customer innovativeness

Considering the third research objective; ‘ to investigate the extent to which customer innovativeness moderates the effects of customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities on customer perceived brand innovativeness.’, this section presents the related exploratory study findings of customer innovativeness. Many of the previous studies have argued over the nature of customer innovativeness, such as Truong (2013) who confirmed that customer innovativeness and attitude toward innovation differ across the various determinants of customer innovativeness, which are perceived as being novel and risky. Moreover, Manning et al. (1995) and Chen (2014) identified independence in decision-making and newness attraction as the main determinants of customer innovativeness. Meanwhile, Goswami and Chandra (2013) and Roehrich (2004) confirmed that newness attraction, social context, and independence in making an innovative decision are the main determinants of customer innovativeness. According to previous studies, measuring customer innovativeness should include four main determinants; newness attraction, social context, independency in innovative decision-making, and risk aversion.

Due to the difficulties of discovering or validating the moderating role of customer innovativeness through the first stage of the data collection (the exploratory study), the focus has been only on identifying the key characteristics of the innovative customer. Regarding the characteristics of innovative customers (customer innovativeness), the findings showed highly innovative customers are more likely to purchase new products and brands, to collect more information about new products and offerings, and to like innovative stores that always introduce new offerings. Otherwise, not all customers were independent in making their purchase decisions; they could be dependent through consulting their friends or through reading other customers' comments. Additionally, not all participants were ready to take the risk of trying new products; most of them stated that it was very important to wait for other customers' experience before trying new products. Therefore, peoples' comments play an important role in encouraging low innovative customers to take the risk of trying new products. Furthermore, classifying customers based on their innovativeness (customer innovativeness) into highly innovative customers (who are novelty seeking, opinion leaders, risk takers, and independent) and low innovative customers (Dobre et al., 2009), provides more understanding of the relationship between the research constructs. Many of the previous studies (e.g. Ho & Wu, 2011; Hur et al., 2012; Shams et al., 2017) confirmed the significant moderating effect of customer innovativeness in providing more understanding of the relationships between different constructs.

However, this study seeks to investigate the role of customer innovativeness in moderating the effects of customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities on customer perceived brand innovativeness. Despite the difficulties of identifying the moderating effect of customer innovativeness during the exploratory study, the moderating effect of customer

innovativeness will be examined during the quantitative study stage of data collection. The moderating relationships of customer innovativeness are hypothesised as follow:

H10.1: Customer innovativeness moderates the effect of customer use of online brand communities on customer perceived brand innovativeness.

H10.2: Customer innovativeness moderates the effect of customer engagement with online brand communities on customer perceived brand innovativeness.

H10.3: Customer innovativeness moderates the effect of customer perceived value of online brand communities on customer perceived brand innovativeness.

Building the research hypotheses and the transformation of the research propositions into research hypotheses are presented in Table 4.1.

Table 4.1 Transforming research propositions into research hypotheses

Research propositions	Research hypotheses
Direct effect	
RP1: Customer use of online brand communities will influence customer perceived brand innovativeness.	H1: Customer use of online brand communities has a direct and positive influence on customer perceived brand innovativeness.
RP2: Customer use of online brand communities will influence customer engagement with online brand communities.	H2: Customer use of online brand communities has a direct and positive influence on customer engagement with online brand communities.
RP3: Customer use of online brand communities will influence customer perceived value of online brand communities.	H3: Customer use of online brand communities has a direct and positive influence on customer perceived value of online brand communities.
RP4: Customer engagement with online brand communities will influence customer perceived value of online brand communities.	H4: Customer engagement with online brand communities has a direct and positive influence on customer perceived value of online brand communities.
RP5: Customer perceived value with online brand communities will influence customer perceived brand innovativeness.	H5: Customer perceived value with online brand communities has a direct and positive influence on customer perceived brand innovativeness.

RP6: Customer engagement with online brand communities will influence customer perceived brand innovativeness.	H6: Customer engagement with online brand communities has a direct and positive influence on customer perceived brand innovativeness.
Indirect effect	
NA (the indirect relationships have been added based on the exploratory study findings)	H7: Customer engagement with online brand communities and customer perceived value of online brand communities mediate the relationship between customer use of online brand communities and customer perceived brand innovativeness.
NA	H8: Customer perceived value of online brand communities mediates the relationship between customer engagement with online brand communities and customer perceived brand innovativeness.
NA	H9: Customer engagement with online brand communities mediates the relationship between customer use of online brand communities and customer perceived value of online brand communities.
Moderating effect	
RP7.1: Customer innovativeness will influence the relationship between customer use of online brand communities and customer perceived brand innovativeness.	H10.1: Customer innovativeness moderates the effect of customer use of online brand communities on customer perceived brand innovativeness.
RP7.2: Customer innovativeness will influence the relationship between customer engagement with online brand communities and customer perceived brand innovativeness.	H10.2: Customer innovativeness moderates the effect of customer engagement with online brand communities on customer perceived brand innovativeness.
RP7.3: Customer innovativeness will influence the relationship between customer perceived value of online brand communities and customer perceived brand innovativeness.	H10.3: Customer innovativeness moderates the effect of customer perceived value of online brand communities on customer perceived brand innovativeness.

4.7 Development of conceptual framework

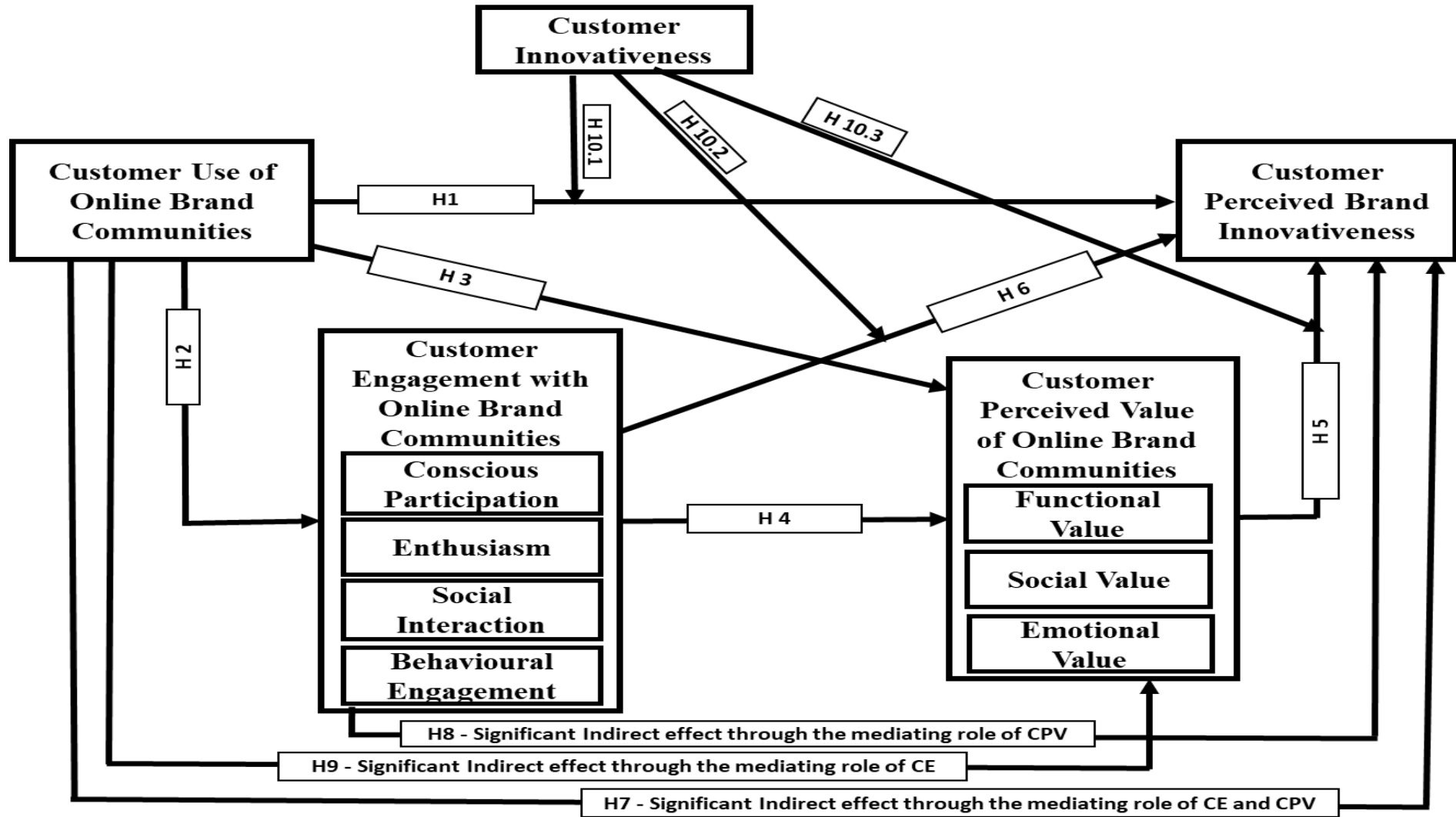
Based on the exploratory findings, the initial conceptual model has been updated: the exploratory study identified four sub-constructs of customer engagement with online brand communities including conscious participation, enthusiasm, social interaction, and behavioural engagement, which are commonly used in literature. Additionally, three sub-constructs of

customer perceived value of online brand communities were identified; functional value, social value, and emotional value, which are commonly used in literature. The overall aim of the exploratory study phase was to explore the proposed relationships (research propositions) in the initial conceptual framework (Table 4.1).

The initial conceptual model (see Figure 2.2) has been developed based on the literature review and reflects several research propositions (RP) that describe different proposed relationships. Based on the initial conceptual framework, there are six direct propositions (RP1, RP2, RP3, RP4, RP5, and RP6). Additionally, RP7.1, RP7.2, and RP7.3 refer to the moderating propositions of customer innovativeness.

Based on the exploratory study findings, all propositions in the initial conceptual framework have been transformed into research hypotheses. Additionally, it was very difficult to use the exploratory study to identify the moderating effect of customer innovativeness. Furthermore, the findings proposed three additional hypothesized relationships (presents the indirect effect in the conceptual framework), including H7, H8, and H9 (see Table 4.1). Accordingly, the initial conceptual framework is updated based on the findings of the exploratory study and the literature review. Figure 4.2 presents the updated conceptual framework.

Figure 4.2: The updated conceptual framework



Source: by the researcher based on the exploratory study findings and the literature review

As illustrated in Figure 4.2 there are 10 hypotheses including 6 direct hypothesised relationships (H1, H2, H3, H4, H5, and H6), 3 indirect hypothesised relationships (H7, H8, and H9), and 3 moderating hypothesised relationships (H10.1, H10.2, and H10.3).

4.8 Summary

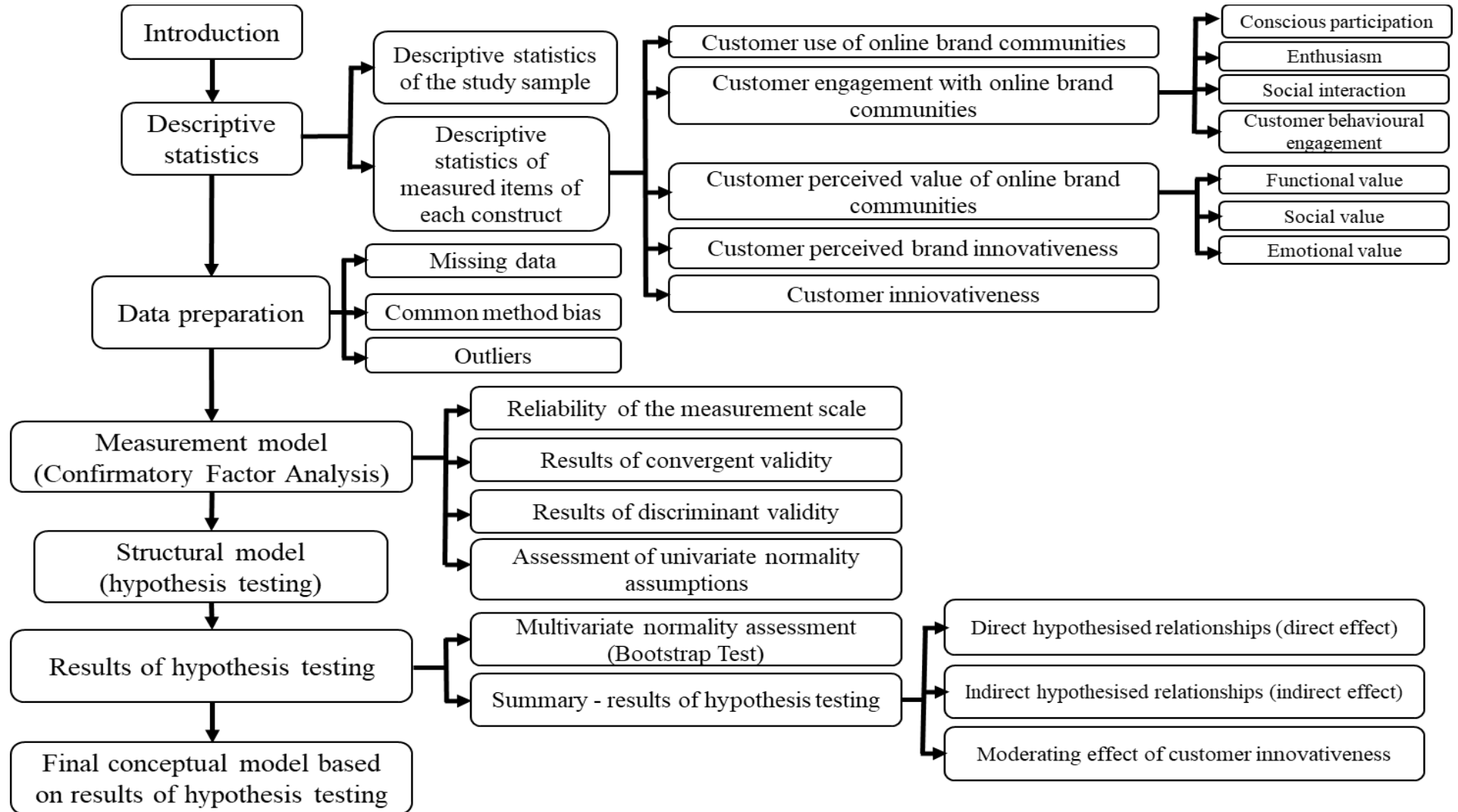
This chapter described the exploratory study findings and the development of the conceptual framework. The findings of the exploratory study achieved the following. First, refined the initial conceptual framework by adding three indirect relationships, in addition to identifying four dimensions of customer engagement with online brand communities and three dimensions of customer perceived value of online brand communities. Accordingly, the research propositions (including 7 research propositions based on the initial conceptual framework) are transformed into research hypotheses (including 10 research hypotheses based on the updated conceptual framework). Second, refined the research setting by focusing on the customers who are engaged with mobile phone online brand communities instead of studying all of the customers who are engaged with any online brand community. Finally, the following chapter of this thesis will follow a quantitative approach to test the current research hypotheses and to reach the final conceptual model of the current study.

Chapter 5: Quantitative Study Findings

5.1 Introduction

Considering the updated conceptual framework that has been developed based on the findings of the exploratory study and in line with the design of the current study, which begins with exploratory study and ends with quantitative study, the quantitative study is conducted to test the hypothesised relationships of the updated conceptual framework (see Figure 4.2 and Table 4.1). This chapter addresses the descriptive and statistical analysis of the data. It also presents the results of the hypothesis testing through the following two main stages to conduct structural equation modelling (SEM). The first stage is the measurement model using confirmatory factor analysis (CFA) including the measurement of the model fit parameters and the assessment of the reliability and the validity of the measurement model. The second stage is a structural model using the Structural Equation Modelling – Path Analysis (SEM-PA). Figure 5.1 shows the structure of this chapter.

Figure 5.1 Structure of chapter five - quantitative study findings



5.2 Descriptive statistics

The descriptive statistics provide more detailed information regarding the study sample of 830 respondents among customers resident in the UK, who engaged with online mobile phone brand communities via social media. Additionally, this section provides more details of the research constructs including the five main constructs (customer use of online brand communities, customer engagement with online brand communities, customer perceived value of online brand communities, customer perceived brand innovativeness, and customer innovativeness). In addition, it provides more details of seven sub-constructs (including 4 dimensions of customer engagement: conscious participation, enthusiasm, social interaction, and behavioural engagement, in addition to 3 dimensions of customer perceived value: functional value, social value, and emotional value).

5.2.1 Descriptive statistics of the study sample

This section provides an overview of the respondents' demographics that will be presented in the following tables, which record such variables as age, gender, education, as well as variables related to social media platforms, mobile brand communities, and frequency of customer use of online brand communities.

Table 5.1 Frequency of age

Age Groups	Frequency	Percent	Cumulative Percent
18- 24	161	19.4	19.4
25-34	343	41.3	60.7
35-44	192	23.1	83.9
45-60	118	14.2	98.1
60+	16	1.9	100.0
Total	830	100.0	

As outlined in Table 5.1, the majority of respondents were Millennials aged 18-34 (60.7%), followed by respondents aged 35 to 44 (23.1%), and then those respondents aged over 45 (16.1%, which includes a very small proportion of respondents aged over 60). Accordingly, there is a clear indicator that the majority of respondents who engage with their online brand communities via social media were younger than 35, and just a small proportion of them were older than 45.

Table 5.2 Frequency of gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	373	44.9	44.9	44.9
Female	457	55.1	55.1	100.0
Total	830	100.0	100.0	

As illustrated in Table 5.2, the sample consisted of 55.1% females and 44.9% males, which indicate that females are more engaged with online brand communities than males.

Table 5.3 Frequency of level of education

Level of Education	Frequency	Percent	Valid Percent	Cumulative Percent
Some high school, no GCSEs	20	2.4	2.4	2.4
High school, GCSEs	192	23.1	23.1	25.5
High School, A Levels	232	28.0	28.0	53.5
Associate degree	32	3.9	3.9	57.3
Bachelor's degree	254	30.6	30.6	88.0
Master's or Doctoral degree	100	12.0	12.0	100.0
Total	830	100.0	100.0	

Table 5.3 outlined different levels of education. Most respondents, (53.5%), possessed high school education and equates to approximately half of the study sample, 46.5%, held a degree,

including 30.6% holding a Bachelor's degree, 12% holding a Postgraduate degree, and only 3.9% holding an Associate degree.

Table 5.4 Frequency of reading brand's posts

Reading Brand's Posts	Frequency	Percent	Valid Percent	Cumulative Percent
Very rarely (1)	35	4.2	4.2	4.2
Rarely (2)	92	11.1	11.1	15.3
Sometimes (3)	327	39.4	39.4	54.7
Often (4)	290	34.9	34.9	89.6
Very often (5)	86	10.4	10.4	100.0
Total	830	100.0	100.0	

As illustrated in Table 5.4, the largest proportion of the respondents (39.4%) was sometimes reading brand related posts on online brand communities, more than a third of the respondents (34.9%) indicated that they often read brand's posts on online brand communities, and only 10.4% of the respondents were very often reading brand related posts. Otherwise, a small proportion of the respondents were rarely and very rarely reading their brands' posts on online brand communities (11.1% and 4.2% respectively). The majority of the respondents (45.3%) often or very often read brand's posts, whilst the minority of the respondents (15.3%) rarely to very rarely read brand's posts. Therefore, reading brand's posts was one of the most important online activities for a larger portion of the engaged customers, thereby, their engagement with online brand communities provided them with better opportunities to follow and read their brand's posts.

Table 5.5 Frequency of engagement with online mobile brand communities

Engagement with SMMBC	Frequency	Percent	Valid Percent	Cumulative Percent
Samsung social media communities	304	36.6	36.6	36.6
iPhone social media communities	380	45.8	45.8	82.4
Sony social media communities	46	5.5	5.5	88.0
LG social media communities	25	3.0	3.0	91.0
Microsoft social media communities	46	5.5	5.5	96.5
Others	29	3.5	3.5	100.0
Total	830			

Table 5.5 presents the different mobile phone brand communities that the respondents engaged with most via social media. The largest proportion of the respondents (45.8%) engaged with iPhone social media communities, followed by Samsung social media communities (36.6%), Sony (5.5%), Microsoft (5.5%), LG (3.0%), and then other social media mobile phone brand communities (3.1%) such as those linked to Google Nexus, HTC, Blackberry, Huawei, Motorola, One Plus, Nokia, Tesco mobile, and Honor. Accordingly, the majority of the respondents (82.4%) engaged with iPhone and Samsung social media communities.

Table 5.6 Frequency of using social media platforms

Social Media Platforms	Frequency	Percent
Facebook	741	89.3
YouTube	358	43.1
Twitter	399	48.1
Instagram	285	34.3
Snapchat	158	19.0
Other	31	3.7

As shown in Table 5.6, nearly all of the respondents used Facebook to engage with their online brand communities (89.3% of 830 respondents), followed by Twitter (48.1%), YouTube

(43.1%), Instagram (34.3%), Snapchat (19.0%), and then by others (3.7%) such as LinkedIn, Pinterest, Reddit, and Tinder. Accordingly, Facebook, Twitter, YouTube, Instagram, and Snapchat were the main social media platforms or blogs that customers used to engage with their mobile phone online brand communities.

5.2.2 Descriptive statistics of measured items of each construct

This section of the study presents an overview of the descriptive findings of the measured items of each construct regarding the mean, standard deviation, and the frequencies of each answer of the 5 point Likert scale.

5.2.2.1 Customer use of online brand communities

Table 5.7 Frequency of using online brand communities

Measured Items	Strongly disagree (1)		Disagree		Neither agree nor disagree		Agree		Strongly agree (5)		Mean (SD)
Customer using											3.47
	N	%	N	%	N	%	N	%	N	%	
US_1. I follow (Join/become a fan of) social media communities related to my mobile brand.	51	6.1	94	11.3	159	19.2	393	47.3	133	16.0	3.56 (1.079)
US_2. I read posts related to my mobile brand on social media communities.	37	4.5	76	9.2	118	14.2	464	55.9	135	16.3	3.70 (0.993)
US_3. I watch pictures/videos related to my mobile brand on social media communities.	39	4.7	86	10.4	170	20.5	409	49.3	126	15.2	3.60 (1.017)
US_4. I read Fanpage(s) related to my mobile brand on social media communities.	98	11.8	228	27.5	212	25.5	230	27.7	62	7.5	2.91 (1.148)
US_5. I follow my mobile brand on social media communities.	49	5.9	97	11.7	114	13.7	449	54.1	121	14.6	3.59 (1.059)

As shown in Table 5.7, the overall mean of customer use of online brand communities (3.47 out of the maximum 5 points) gives indicator that the respondents were between agree to undecided. In detail, the respondents rated their agreement of their following/joining online brand communities (US_1) with a mean of 3.56 out of the maximum 5 points, which is closer to agree. However, the largest proportion of respondents (63.3%) were between agree and strongly agree, followed by the undecided respondents (19.2%) and only 17.4 % were between disagree and strongly disagree.

Furthermore, the respondents rated their agreement of reading posts related to their mobile brand on social media (US_2) with an overall mean of 3.7, which provides an indicator that most respondents were closer to agree'. However, the majority of respondents (72.2%) were between agree and strongly agree, and only a few (13.7%) were between disagree and strongly disagree. Likewise, the respondents rated their agreement of watching pictures/videos related to their mobile brand communities via social media (US_3) with mean 3.6, which is closer to agree. Nevertheless, the majority of respondents (64.5%) were between agree and strongly agree, and only a few (15.1%) were between disagree and strongly disagree.

Otherwise, the respondents rated their agreement of reading fan pages related to their mobile brand (US_4), with a mean of 2.91, which indicates that respondents were between disagree and undecided. Accordingly, the largest proportion of respondents (39.5%) were between disagree and strongly disagree, followed by a lower percentage of respondents (35.2%) between agree and strongly agree. In contrast, the majority of respondents were generally agreeing (Mean = 3.59) they follow their mobile brand on social media brand communities (US_5). The largest proportion of the respondents (68.7%) were between agree and strongly agree, whilst only 17.6% were between disagree and strongly disagree.

5.2.2.2 Customer engagement with online brand communities

This section provides a statistical description of customer engagement (CE), which includes four sub-dimensions: conscious participation, enthusiasm, social interaction, and behavioural engagement.

5.2.2.2.1 Conscious participation

Table 5.8 Frequency of conscious participation

Measured Items	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Mean (SD)
Conscious participation											3.32
	N	%	N	%	N	%	N	%	N	%	
CE_1. Anything related to my brand's communities grabs my attention.	38	4.6	142	17.1	200	24.1	378	45.5	72	8.7	3.37 (1.012)
CE_2. I like to learn more about my brand's communities.	37	4.5	101	12.2	240	28.9	374	45.1	78	9.4	3.43 (0.972)
CE_3. I pay a lot of attention to anything about my brand's communities.	49	5.9	179	21.6	290	34.9	259	31.2	53	6.4	3.11 (1.005)
CE_4. I keep up with things related to my brand's communities.	38	4.6	116	14.0	237	28.6	367	44.2	72	8.7	3.38 (0.983)

As exhibited in Table 5.8, the overall mean (3.32) of conscious participation was between undecided to agree. The respondents rated their agreement with the measurement items of conscious participation with mean ranged between 3.11 to 3.43, which is closer to being undecided. However, the majority of the respondents agreed (varied between agree to strongly agree) that anything related their online brand communities grabs their attention (53.7% - CE_1), they like to learn more about their brand's communities (54.4% - CE_2), and they keep

up going with things related to their online brand communities (52.9% - CE_4). Otherwise, the minority of the respondents agreed (varied between agree to strongly agree) that they pay a lot of attention to anything connected to their online brand communities (37.6% - CE_3).

5.2.2.2.2 Enthusiasm

Table 5.9 Frequency of enthusiasm

Measured Items	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Mean (SD)
Enthusiasm											2.85
	N	%	N	%	N	%	N	%	N	%	
CE_5. I am heavily into my brand's communities.	93	11.2	283	34.1	306	36.9	125	15.1	23	2.8	2.64 (0.961)
CE_6. I am passionate about my brand's communities.	85	10.2	241	29.0	307	37.0	168	20.2	29	3.5	2.78 (0.997)
CE_7. I feel excited about my brand's communities.	82	9.9	189	22.8	315	38.0	208	25.1	36	4.3	2.91 (1.020)
CE_8. I am enthusiastic about my brand's communities.	59	7.1	181	21.8	292	35.2	250	30.1	48	5.8	3.06 (1.016)

As displayed in Table 5.9, the overall agreement mean of enthusiasm (2.85) was between disagree and undecided, which aligned with the agreement mean of the measured items of enthusiasm that ranged between 2.64 and 3.06 and is closer to undecided. Accordingly, about a third of the respondents, 35.2% to 38%, are closer to being uncertain about their feelings toward their enthusiasm engagement. However, only 17.9% agreed that they are heavily into online brand communities (CE_5), 23.7% of the respondents are agree that they are passionate about their online brand communities (CE_6), 29.4% of the respondents agreed that they feel excited about their online brand communities (CE_7), and finally 35.9% of the respondents agree that they are enthusiastic about their online brand communities (CE_8).

5.2.2.2.3 Social interaction

Table 5.10 Frequency of social interaction

Measured Items	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Mean (SD)
Social Interaction											2.86
	N	%	N	%	N	%	N	%	N	%	
CE_9. I love participating in my brand's communities with other members.	94	11.3	216	26.0	293	35.3	173	20.8	54	6.5	2.85 (1.078)
CE_10. I enjoy taking part in my brand's communities when I share my opinion with other members.	95	11.4	192	23.1	254	30.6	225	27.1	64	7.7	2.97 (1.126)
CE_11. Participation with other members in my brand's communities is fun for me.	103	12.4	179	21.6	269	32.4	223	26.9	56	6.7	2.94 (1.117)
CE_12. It is important for me to participate with other members in my brand's communities who share the same opinion.	133	16.0	234	28.2	255	30.7	174	21.0	34	4.1	2.69 (1.096)

As presented in Table 5.10, the overall agreement mean (2.86) of social interaction revealed that the respondents were between disagree and undecided. The average of the agreement mean of the measurement items of the social intention is ranged between 2.69 to 2.97, which is closer to undecided. Accordingly, a small proportion of respondents (25.1%) agreed (varied between agree to strongly agree) that it is important to participate with other members on their online brand communities (CE_12), 27.3% of them agreed that they love participating in their online brand communities (CE_9), 34.8% of them agreed that their participation in their online brand communities is fun for them (CE_10), and finally, 33.6% of them agreed that they enjoy taking

part in their online brand communities through sharing their opinions with other members (CE_11).

5.2.2.2.4 Customer behavioural engagement

Table 5.11 Frequency of customer behavioural engagement

Measured Items	Very rarely (1)		Rarely		Sometimes		Often		Very often (5)		Mean (SD)
Customer engagement behaviour											2.57
	N	%	N	%	N	%	N	%	N	%	
CE_13. 'Like' posts?	75	9.0	156	18.8	288	34.7	223	26.9	88	10.6	3.11 (1.110)
CE_14. Write comments?	210	25.3	258	31.1	239	28.8	74	8.9	49	5.9	2.39 (1.131)
CE_15. Share brand posts with your friends?	205	24.7	228	27.5	231	27.8	119	14.3	46	5.7	2.49 (1.171)
CE_16. Post photos or videos?	284	34.2	220	26.5	169	20.4	104	12.5	53	6.4	2.30 (1.237)

As demonstrated in Table 5.11, the overall mean of the engagement behavioural engagement (2.57), between rarely to sometimes. The respondents rated their frequency of liking brand's posts with mean of 3.11, which was between sometimes and often. However, the highest proportion of respondents (37.5%) were often to very often clicking like on brand posts, followed by 34.7% sometimes clicking like on brand's posts, and the lowest percentage (27.8%) were rarely to very rarely clicking like on brand's posts.

Otherwise, the respondents rated their frequency of writing comments in their mobile brand communities via social media with a mean of 2.39, which is between rarely to sometimes. However, a few respondents (14.8%) wrote comments between often to very often, followed by 28.8% sometimes writing comments, and the largest proportion of respondents (56.4%) writing comments between rarely to very rarely. Moreover, the respondents rated their

frequency of sharing their brand's posts with their friends with a mean of 2.49, which was between sometimes to rarely. However, a few respondents (20.0%) were often to very often sharing brand's posts with their friends, and 27.8% sometimes sharing brand's posts, but generally the largest proportion (52.2%) were rarely to very rarely sharing brand's posts with their friends.

Furthermore, the respondents rated their frequency of posting photos or videos on their mobile brand communities with a mean of 2.30, which is between sometimes to rarely. The minority of the respondents (18.9%) were often to very often posting photos and videos, and 20.4% were sometimes posting on their online brand communities. However, the majority of respondents (60.7%) were rarely and very rarely posting photos or videos on their online brand communities.

5.2.2.3 Customer perceived value of online brand communities

This section provided a statistical description of customer perceived value that includes three sub-constructs: functional value, social value and emotional value.

5.2.2.3.1 Functional value

Table 5.12 Frequency of functional value

Measured Items	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Mean (SD)
Functional Value											3.81
	N	%	N	%	N	%	N	%	N	%	
CV_1. My brand's communities offer me information about various product options or offerings for my mobile brand.	9	1.1	25	3.0	116	14.0	531	64.0	149	18.0	3.95 (0.732)

CV_2. The information (content) offered on my brand's communities makes me feel confident about my mobile brand.	7	0.8	40	4.8	206	24.8	470	56.6	107	12.9	3.76 (0.767)
CV_3. The information (content) offered on my brand's communities is helpful for me.	10	1.2	34	4.1	178	21.4	481	58.0	127	15.3	3.82 (0.780)
CV_4. The information (content) offered on my brand's communities is practical for me.	8	1.0	43	5.2	242	29.2	433	52.2	104	12.5	3.70 (0.789)

As displayed in Table 5.12, the respondents rated their agreement of the functional value, with a mean of 3.81, which was between agree to undecided. The mean indicators of the four items of the functional value were between 3.70 and 3.95, which is closer to agreeing. However, the majority of respondents agreed (between agree to strongly agree) to the role of their brand communities in providing them information about their brand. For more clarification, 82% of respondents agreed that their online brand communities offer them information about the various product options or offerings of their mobile brand (CV_1); 69.5% agreed that this information about the brand makes them feel confident about their mobile brand (CV_2); 73.3% agreed that this information is helpful for them (CV_3); 64.7% agreed that this information is practical for them (CV_4).

Otherwise, a low proportion of respondents disagreed (varied between disagree to strongly disagree) on the role of their online brand community in providing them with information about their brand, including: 4.1% disagreeing with the role of their brand communities in providing them information about the various product options or offerings of their mobile brand (CV_1); 5.6% disagree with that this information make them feel confident (CV_2); 5.3% disagree that this information is helpful (CV_3); 6.2% disagree with that this information is practical for them (CV_4).

5.2.2.3.2 Social value

Table 5.13 Frequency of social value

Measured Items	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Mean (SD)
Social Value											3.07
	N	%	N	%	N	%	N	%	N	%	
CV_5. I can make friends with people sharing common interests with me in my brand's communities.	80	9.6	168	20.2	294	35.4	223	26.9	65	7.8	3.03 (1.082)
CV_6. My brand's communities help strengthen my connections with other members.	71	8.6	196	23.6	304	36.6	215	25.9	44	5.3	2.96 (1.024)
CV_7. I can expand my social network through my brand's communities.	85	10.2	160	19.3	276	33.3	245	29.5	64	7.7	3.05 (1.098)
CV_8. I can interact with people like me on my brand's communities.	61	7.3	129	15.5	247	29.8	329	39.6	64	7.7	3.25 (1.046)

As presented in Table 5.13, the overall agreement mean (3.07) of the social value showed that respondents were between undecided and agree. The agreement mean indicators of the measurement items of social value were ranged between 2.96 to 3.25, which is closer to the undecided. However, 29.8% of respondents disagreed and 34.7% agreed that they can make friends on through their online brand communities (CV_5). Otherwise, 32.2% disagree and 32.2 agree that their online brand communities help strengthen their connections with other members (CV_6). Moreover, the biggest proportion of them agreed (29.5% disagree and 37.2% agree) that they can expand their social media network through their online brand communities (CV_7). Furthermore, the majority of respondents agreed (47.3% agreed and 22.7% disagreed)

that they can interact with people like themselves through their online brand communities (CV_8).

5.2.2.3.3 Emotional value

Table 5.14 Frequency of emotional value

Measured Items	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Mean (SD)
Emotional Value											2.95
	N	%	N	%	N	%	N	%	N	%	
CV_9. Getting information from my brand's communities gives me pleasure.	45	5.4	126	15.2	330	39.8	273	32.9	56	6.7	3.20 (0.963)
CV_10. Getting information from my brand's communities makes me feel good.	37	4.5	145	17.5	334	40.2	266	32.0	48	5.8	3.17 (0.936)
CV_11. Getting information from my brand's communities has given me a sense of self-achievement.	90	10.8	240	28.9	297	35.8	163	19.6	40	4.8	2.79 (1.033)
CV_12. Getting information from my brand's communities has boosted my self-confidence.	129	15.5	244	29.4	284	34.2	135	16.3	38	4.6	2.65 (1.068)

As demonstrated in Table 5.14, the respondents rated their agreement to the emotional value with a mean of 2.95, which is between disagree to undecided. In detail, the mean of the measurement items of Emotional Value were between 2.65 to 3.20, which is between disagree and undecided. However, the highest proportion of the respondents agreed (39.6% agreed and 20.6% disagree) that getting information from their online brand communities gives them pleasure (CV_9). Likewise, the largest percentage agreed (37.8% agreed and 22% disagreed) that getting information from online brand communities makes them feel good (CV_10).

Otherwise, the majority disagreed (39.7% disagreed and 24.4% agreed) that getting information from OBC give them sense of self-achievement (CV_11). Similarly, the majority disagreed (44.9% disagreed and 20.9% agreed) that getting information from their online brand communities boosts their self-confidence (CV_12).

5.2.2.4 Customer perceived brand innovativeness

Table 5.15 Frequency of customer perceived brand innovativeness

Measured Items	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Mean (SD)
Customer perceived brand innovativeness											3.95
	N	%	N	%	N	%	N	%	N	%	
BI_1. With regard to mobile phones, my mobile brand is dynamic.	3	0.4	21	2.5	133	16.0	453	54.6	220	26.5	4.04 (0.747)
BI_2. My mobile phone brand sets itself apart from the rest when it comes to mobile phones.	7	0.8	43	5.2	160	19.3	390	47.0	230	27.7	3.96 (0.867)
BI_3. My mobile phone brand is a cutting-edge mobile brand.	6	0.7	34	4.1	140	16.9	375	45.2	275	33.1	4.06 (0.852)
BI_4. My mobile phone brand makes me feel excited.	16	1.9	72	8.7	216	26.0	355	42.8	171	20.6	3.71 (0.952)
BI_5. My mobile phone brand launches new phones and creates market trends all the time.	8	1.0	43	5.2	133	16.0	375	45.2	271	32.7	4.03 (0.883)
BI_6. My mobile phone brand is an innovative brand when it comes to mobile phones.	6	0.7	41	4.9	132	15.9	386	46.5	265	31.9	4.04 (0.860)
BI_7. My mobile phone brand makes new mobile phones with superior design.	9	1.1	42	5.1	142	17.1	357	43.0	280	33.7	4.03 (0.899)

BI_8. With regard to mobile phones, my phone brand constantly generates new ideas.	10	1.2	42	5.1	175	21.1	375	45.2	228	27.5	3.93 (0.890)
BI_9. My mobile phone brand has changed the market with its mobile phones.	9	1.1	42	5.1	160	19.3	315	38.0	304	36.6	4.04 (0.927)
BI_10. My mobile phone brand is a new product leader in the mobile phone market.	11	1.3	82	9.9	196	23.6	305	36.7	236	28.4	3.81 (1.000)

As presented in Table 5.15, the respondents rated their agreement to customer perceived brand innovativeness with a mean of 3.95, which is very close to agreeing. The mean indicators of the measurement items of customer perceived brand innovativeness were 3.71 to 4.06, which indicates that respondents agreed on perceiving their brand as being innovative. However, the majority of respondents perceived their brand as being innovative, for more details: 81.1% of respondents agreed that their mobile brand is dynamic (BI_1); 74.7% agreed that their mobile brand sets itself apart from the rest when it comes to mobile phones (BI_2); 78.3% of respondents agreed that their mobile brand is a cutting-edge brand (BI_3).

Moreover, 63.4% of respondents agreed that their mobile brand makes them feel excited (BI_4); 77.9% agreed that their mobile brand launches new phones and creates market trends all the time (BI_5); and 78.4% agreed that their mobile phone brand is an innovative brand (BI_6).

Furthermore, 76.7% of respondents agreed that their mobile brand makes new mobile phones with superior design (BI_7); 72.7% agreed that their mobile brand generates new ideas (BI_8); 74.6% agreed that their mobile brand has changed the market with its mobile phones (BI_9). Finally, 65.1% agreed that their mobile brand is a new product leader in the mobile phone market (BI_10).

5.2.2.5 Customer innovativeness

Table 5.16 Frequency of customer innovativeness

Measured Items	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Mean (SD)
Customer Innovativeness (CI)											3.58
	N	%	N	%	N	%	N	%	N	%	
CI_1. In general, I am the first in my circle of friends to know about new products.	47	5.7	189	22.8	200	24.0	279	33.6	115	13.9	3.27 (1.130)
CI_2. I know about new products before other people do.	48	5.8	208	25.1	213	25.7	269	32.4	92	11.1	3.18 (1.109)
CI_3. I like to try new products.	3	0.4	24	3.0	106	12.8	421	50.7	276	33.3	4.13 (0.779)
CI_6. If I heard that a new version of my own product was available, I would be interested enough to buy it.	20	2.4	92	11.1	204	24.6	357	43.0	157	18.9	3.65 (0.976)
CI_7. I like to buy products that have new ideas.	6	0.8	35	4.2	151	18.2	432	52.0	206	25.7	3.96 (0.806)
CI_8. In general, I am among the first in my circle of friends to buy new products when they appear.	64	7.8	180	21.3	211	25.4	256	30.0	118	14.2	3.21 (1.168)

As exhibited in Table 5.16, overall agreement mean (3.58) of customer innovativeness was between agree and undecided. The mean indicators of the measured items of customer innovativeness were between 3.18 and 4.13, which are varied between undecided to strongly agree. The largest proportion of respondents agreed (47.5% agreed and 28.6% disagreed) that they are the first in their circle of friends to know about new products (CI_1). Likewise, 43.5% agreed and 30.9% disagreed that they know about new products before other people do (CI_2). Similarly, 44.8% agreed and 29.8% disagreed that they are the first in their circle of friends to buy new products (CI_8).

Furthermore, the majority of respondents agreed (including 84% agreed and 3.4% disagreed) that they like to try new products (CI_3). Likewise, 61.9% agreed and 13.5% disagreed that If they heard that a new version of their own product was available, they would be interested enough to buy it (CI_6). Moreover, 77.7% agreed and 5% disagreed that they like to buy products that have new ideas (CI_7).

5.3 Data preparation

This section presents the data preparation as an important stage before moving forward to statistical analysis, including checking missing data, checking data common method bias and testing data outliers, as presented below.

5.3.1 Missing data

The main data collection was conducted through using an online panel data provided by the Prolific company website. Only completed responses were logged and respondents were only rewarded if they answered the entire online questionnaire. Moreover, respondents were not able to move to the next screen without answering all questions on the current screen. Accordingly, there was no missing data in any section of the questionnaire. However, to ensure that this procedure eliminated the problem of missing data, the data was analysed and the results revealed there was no missing data in the data set rows or columns.

5.3.2 Common method bias

As demonstrated by Podsakoff (2003), the main ways that can be used to control the common methods bias (common method variance) are through the design of the study's procedures and/or statistical controls. Firstly, the current research has minimized the potential study's design problems to avoid the common method bias, through considering the following procedures: at the beginning, a time lag (a temporal separation – a time required to submit current answer and move to the next section in the next page of the online survey) was used to

separate between independent and dependent variables sections in the online survey. In addition to add a cover introduction statement to separate between independent and dependent variables by adding a short statement in a new page of the online survey to make the respondents realize that they are moving from a section related to their social media communities to another section related to their mobile phone brand (see appendix C). Moreover, the respondents were informed that their answers are anonymous and that there is no right or wrong answers and that they need to be as honest as possible as they can. In the same context, unbiased items were used through reviewing each items wording, to avoid ambiguity and social desirability. Furthermore, the data collection was conducted at different times over a three month to discover their covariance and to avoid respondents' mode effects. A potential bias related to some respondents who might answer the survey more than one time was reduced through tracking their IP and ID (Podsakoff, 2003; Byrne, 2010).

Secondly, the data was also tested for the existence of common method variance through using Harmon's (1967) test, which is known as "Harmon's single factor test" and commonly used in literature (Podsakoff, 2003). An exploratory factor analysis was performed with all of the factors as input and the first factor explained less than 50% variance (34.00% in un-rotated solution), which provides an indication for the lack of common method bias.

Furthermore, The non-response bias has been measured through using wave analysis (Rogellberg and Stanton, 2007) by verifying that there is no significant differences between early respondents and late respondents regarding their characteristics (including age, gender, and education). Accordingly, the total sample of 830 respondents has been divided into quartiles, to check if there were significant differences between the respondents placed in the first quartile and those who placed in the third quartile. The Chi-square test was used to compare between the two groups regarding their characteristics and to assess the non-response

bias. Table 5.17 shows the results of the Chi-square of the variables age, gender, and education. The results of the comparison model test showed that there is no significant differences between the two groups (early and late respondents) regarding the stated variables. Accordingly, it is recommended that the non-response bias is not a major problem in the main study sample. Table 5.17 represents chi-square test results of non-response bias.

Table 5.17 Chi-square results of non-response bias

Variables	Chi-square	P
Gender	2.108	0.147
Age	5.097	0.277
Education	10.664	0.59
Note: *P-value >0.05		

5.3.3 Outliers

Outliers are defined as “observations with a unique combination of characteristics identifiable as distinctly different from the other observations” (Hair et al., 2006, p. 73). A box plot technique in SPSS is the main technique that has been used to assess the univariate outliers. The presence of multivariate outliers was assessed using Mahalanobis distance test (D2). The suggested value of probability estimate that an outlier is $p < 0.001$ would be indicated (Tabachnick & Fidell, 2013). The test showed that only 0.0084 of all observations had a probability value of Mahalanobis distance < 0.001 . Thus, it was decided to keep the cases without performing any transformations.

5.4 Measurement model (Confirmatory Factor Analysis)

The following sections present the results of data analysis for the proposed model of the current research, through conducting structural equation modelling (SEM) via the AMOS 24 software package. There were two main stages in the SEM analysis: the first stage examines the measurement model that will be discussed in this section; and the second stage conducts the structural model that will be discussed in the next section. The first stage of SEM relates to

running confirmatory factor analysis (CFA) on the main sample of the study (N=830) to reach a decent measurement model that fulfilled the requirement of reliability and validity criteria. However, CFA is conducted by following different stages, beginning with an initial CFA and ending with reliability, validity, and normality assessments, as illustrated in Table 5.18.

Table 5.18 Processing steps for running confirmatory factor analysis

Step 1	Run the confirmatory factor analysis for the pooled measurement model.
Step 2	Examine the Fitness Indexes obtained for the measurement model and compare it to the required level.
Step 3	Drop any item having factor loading less than 0.5 through deleting the lowest item (one item at a time) and see the effect on the model fit.
Step 4	Run the new measurement model and examine the fitness indexes.
Step 5	Look at the Modification Indices (MI) if the fitness model still not achieved.
Step 6	Set the pair of redundant item that belongs to the same construct (above 20) as “free parameter estimate” and then run the measurement model again.
Step 7	Reliability and validity assessment: obtain the Cronbach’s Alpha, CR, AVE, and MSV for every construct in the research model.
Step 8	Report the normality assessment for remaining items of a construct in the study.

Source: Adopted by this research based on Byrne (2010) and Hair (2010).

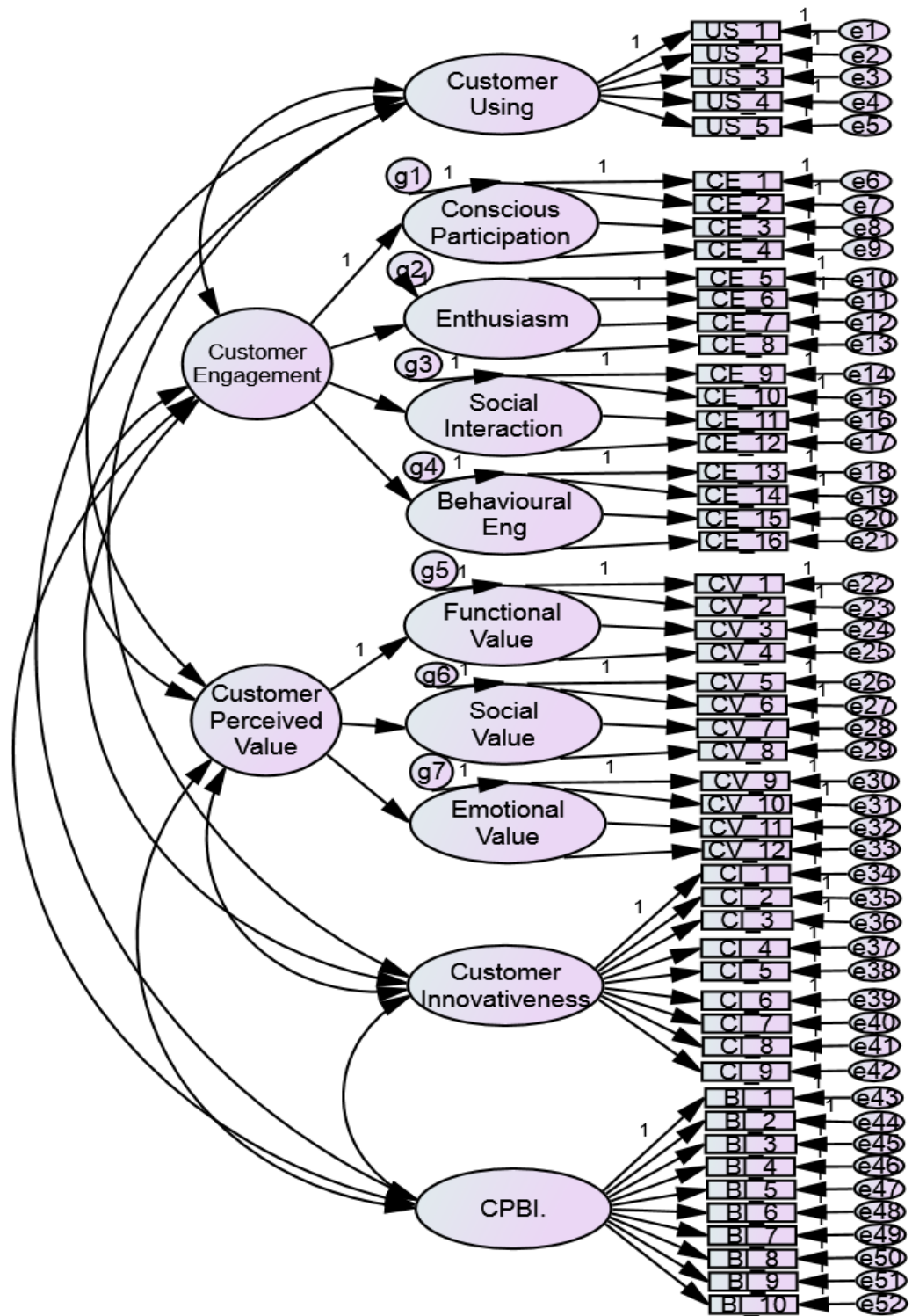
The measurement model is assessed based on evaluating the model fit indices that reflect a good model fit (see Table 5.19) though three different stages of running CFA (CFA model first run, CFA model after dropping factor loadings which were less than 0.5, and CFA model after Modification as a final model) (see Appendix D).

Table 5.19 Criteria of a good model fit parameters

Model fit index	Recommended values
CMIN (Chi-square)	the < the better
Normed or relative Chi-square	$(\text{Chi-square} / \text{DF}) < 5.0$
TLI (Tucker-Lewis Index)	> 0.9
CFI (Comparative Fit Index)	> 0.9
RMSEA (Root Mean Square Error of Approximation)	< 0.08

Source: adapted by this research based on Kline (1998), Hu and Bentler (1999), Hooper, Coughlan, and Mullen (2008), Byrne (2010), Hair et al. (2010), Schumacker and Lomax (2010), and Westland (2015).

Figure 5.2 Initial CFA model (First run model)



* Second order constructs, including: Customer Use of Online Brand Communities (Customer Using), Customer Engagement with online brand communities (Customer Engagement), Customer Perceived Value of online brand communities (Customer Perceived Value), Customer Innovativeness, and Customer Perceived Brand Innovativeness (CPBI).

* First order constructs, including: Conscious Participation, Enthusiasm, Social Interaction, Behavioural Engagement, Functional Value, Social Value, and Emotional Value.

As shown in Figure 5.2, there are five main constructs, including two constructs with first order factors. Customer engagement with online brand communities is a second order factor that includes four sub-constructs - as first order factors - in the measurement model, which are conscious participation, enthusiasm, social interaction, and behavioural engagement (see Appendix D). Customer perceived value of online brand communities includes three sub-constructs, which are functional value, social value, and emotional value (see appendix D). The measurement models of the second order factor constructs have been tested before testing the initial CFA model (see Appendix D). Table 5.20 presents the CFA models that reflect the different stages of running CFA.

Table 5.20 CFA models – model fit (full measurement model)

Model fit indices	Model 1 Values (first run)	Model 2 Values (re-specified model based on deleting factor loadings less than 0.5)	Final Model Values (re-specified following the Modification Indices roles and the validity requirements)	Criteria
CMIN	4524.022	4017.199	3493.998	the < the better
CMIN/DF	3.599	3.619	3.171	< 5.0
TLI	0.876	0.887	0.907	>0.9
CFI	0.883	0.894	0.912	> 0.9
RMSEA	0.056	0.060	0.051	< 0.08

As shown in Table 5.20, in Model 1 and 2, CMIN/DF and RMSEA of the model fit indices provide acceptable levels of fit, whilst TLI and CFI are slightly below the suggested threshold. In model 3, all of the values of the model fit indices are higher than the acceptable levels. Accordingly, Model 3 fit indices produce acceptable levels of fit, CMIN = 3493.998, DF =

1102, CIMN/DF = 3.171, TLI = 0.907, CFI = 0.912, and RMSEA = 0.051 (see appendix D for more details of the three measurement models)

There are two requirements for running CFA: first, the factor loadings were checked, where all values need to be > 0.5 to be acceptable (Hair, 2010). As shown in Table 5.21 of the factor loadings, only three items of customer innovativeness were dropped because they were less than 0.5 and the rest of the factor loadings were > 0.5 . Second, Modification Indices were checked for any potential redundant items or cross-loadings. The third CFA model has developed through using the same data set ($N = 830$) and it was evaluated based on the Modification Indices (MI) that suggested covariance between the error terms belonging to the same construct (Byrne, 2010; Hair, 2010). At the beginning, the largest modification indices (over 50) were identified first before addressing the more minor ones (over 20) (Kenny, 2011). The main reason for the redundancy between the error terms is related to the effect of triggering a high degree of error covariance, the overlap between construct items, such as the redundancy that occurs when a pair of items, although worded differently, measure the same construct (Byrne, 2010). The final CFA model (Model 3) includes the proposed covariance between pairs of error terms and reduces redundancy through setting the pair of redundant item as free parameter estimate.

Accordingly, as shown in Table 5.20, the measurement model was run again following the deletion of the three items of customer innovativeness and based on the suggested changes of the modification indices. These procedures had a significant effect on the model fit, and CIMN/DF became 3.171, TLI became greater than 0.9, CFI became greater than 0.9, and RMSEA improved to 0.051.

Table 5.21 Standardized Regression Weights (Factor Loadings)

Factor name	Factor loading (Dropping any factor loading < 0.5)
Using Online Brand Communities (CUOBC)	
CUOBC_1 (US_1)	0.743
CUOBC_2 (US_2)	0.799
CUOBC_3 (US_3)	0.764
CUOBC_4 (US_4)	0.633
CUOBC_5 (US_5)	0.779
Customer Engagement (CE)	
Conscious Participation_1 (CE_1)	0.720
Conscious Participation_2 (CE_2)	0.793
Conscious Participation_3 (CE_3)	0.858
Conscious Participation_4 (CE_4)	0.805
Enthusiasm_1 (CE_5)	0.752
Enthusiasm_2 (CE_6)	0.858
Enthusiasm_3 (CE_7)	0.811
Enthusiasm_4 (CE_8)	0.815
Social Interaction_1 (CE_9)	0.859
Social Interaction_2 (CE_10)	0.910
Social Interaction_3 (CE_11)	0.896
Social Interaction_4 (CE_12)	0.809
Engagement behavior_1 (CE_13)	0.741
Engagement behavior_2 (CE_14)	0.852
Engagement behavior_3 (CE_15)	0.850
Engagement behavior_4 (CE_16)	0.807
Customer Perceived Value (CPV)	
Functional value_1 (CV_1)	0.593
Functional value_2 (CV_2)	0.687
Functional value_3 (CV_3)	0.784
Functional value_4 (CV_4)	0.737
Social value_1 (CV_5)	0.811

Social value_2 (CV_6)	0.878
Social value_3 (CV_7)	0.816
Social value_4 (CV_8)	0.771
Emotional value_1 (CV_9)	0.785
Emotional value_2 (CV_10)	0.843
Emotional value_3 (CV_11)	0.820
Emotional value_4 (CV_12)	0.776
Customer Perceived Brand Innovativeness (CPBI)	
CPBI_1 (BI_1)	0.654
CPBI_2 (BI_2)	0.702
CPBI_3 (BI_3)	0.744
CPBI_4 (BI_4)	0.668
CPBI_5 (BI_5)	0.754
CPBI_6 (BI_6)	0.790
CPBI_7 (BI_7)	0.787
CPBI_8 (BI_8)	0.762
CPBI_9 (BI_9)	0.712
CPBI_10 (BI_10)	0.692
Customer Innovativeness	
CI_1	.843
CI_2	.811
CI_3	.641
CI_4	Dropped (-0.134)
CI_5	Dropped (0.422)
CI_6	0.656
CI_7	0.629
CI_8	0.812
CI_9	Dropped (-0.093)

5.4.1 Reliability of the measurement scale

This study used an internal consistency method to assess the reliability of the scale items through using Cronbach's Alpha. Internal Reliability indicates how strong the measuring items

hold together to measure a respective construct. This reliability is achieved when the value of Cronbach's Alpha exceeds 0.7 (calculated in SPSS). However, as shown in Table 5.22, it is shown that all coefficients of the Cronbach Alpha were > 0.7 (0.855-0.942), which reflect a high degree of internal consistency between the construct items and indicates that there is a high degree of reliability in each scale item.

Table 5.22 Results of internal consistency for all of the constructs in the study.

Research Constructs	No. Items	Cronbach's Alpha
Customer Use of Online Brand Communities (CUOBC)	5	0.855
Customer Engagement with OBC (CE/OBC)	16	0.942
Customer perceived Value of OBC (CPV/OBC)	12	0.904
Customer Perceived Brand Innovativeness (CPBI)	10	0.917
Customer Innovativeness (CI) (3 items have been deleted based on their factor loadings)	6	0.872

5.4.2 Results of convergent validity

Based on the examination of the model fit, the quality of the measurement model was established. The validity was checked during the different stages of the measurement model, which includes the concerns of the convergent and discriminant validity. Convergent validity is assessed by checking the factor loadings, calculating the average variance extracted (AVE), and computing composite reliability (CR) of the final measurement model (see Appendix D).

AVE indicates the average percentage of variation explained by the measurement items of the latent construct. An AVE value > 0.5 is required for every construct, AVE is calculated as shown in Table 5.24 (Hair, 2010). Composite Reliability (CR) indicates the reliability and internal consistency of latent constructs. A value of CR > 0.6 is required to achieve composite reliability for a construct, CR was calculated as shown in Table 5.24 (Hair, 2008; Byrne, 2010).

Table 5.23 Results of Composite Reliability (CR) and Average Variance Extracted (AVE)

Research Constructs	No. Items	AVE	CR
Customer Engagement with OBC (CE/OBC)	16	0. 699	0.902
Customer Innovativeness	6	0. 519	0.865
Customer Perceived Brand Innovativeness (CPBI)	10	0. 525	0.917
Customer Perceived Value of OBC (CPV/OBC)	12	0. 645	0.841
Customer Use of Online Brand Communities (CUOBC)	5	0. 556	0.861

Table 5.24 Formula for Average Variance Extracted (AVE) and Composite Reliability (CR)

$$AVE = \sum K^2 / n$$

$$CR = (\sum K)^2 / [(\sum K)^2 + (\sum 1 - K^2)]$$

K=factor loadings of every item

n=number of items in a model

As shown in Table 5.23, the results of the convergent validity revealed that all factor loadings (see Table 5.21) were > 0.5 (between 0.593 and 0.910) with significant level < 0.05, which is within the acceptable level set by Hair (2010), who confirmed that all Standardized Regression Weights or factor loadings must be higher than 0.5 in order to be acceptable. Following this, the convergent validity was assessed through calculating the AVE. All constructs had acceptable levels of AVE (between 0.519-0.699, all AVE values are > 0.5), which signalled the convergent validity. Furthermore, all constructs had an acceptable level of CR (0.841-0.917), which was > 0.6 and reflected a high degree of reliability and validity of the measurement model.

5.4.3 Results of discriminant validity

Discriminant validity was established based on comparing the values of the square root of AVE to the correlation of the constructs. As illustrated in Table 5.25, firstly, the square roots of the AVE were calculated and then compared to the correlation values. It can be seen that all

correlation values were higher than the square roots of AVE for each construct (the square roots of AVE for CUOBC= 0.745, CE= 0.836, CPV= 0.803, CPBI = 0.724, and CI = 0.721), for example the square root of CUOBC = 0.745 is > the correlation values of all constructs (CI = 0.557, CPBI = 0.419, CPV_OBC = 0.522, and CE_OBC = 0.655). Moreover, all the values of MSV (maximum shared variance), which means that all square root values of AVE were greater than inter-construct correlations.

Table 5.25 Results of discriminant validity through comparing square roots of AVE with correlation of each construct

Constructs	AVE	MSV	CE_OBC	CI	CPBI	CPV_OBC	CUOBC
CE_OBC	0.699	0.642	0.836				
CI	0.519	0.343	0.586	0.721			
CPBI	0.525	0.284	0.378	0.533	0.724		
CPV_OBC	0.645	0.642	0.801	0.494	0.355	0.803	
CUOBC	0.556	0.429	0.655	0.557	0.419	0.522	0.745

Table 5.26 Formula for MSV

MSV= MAX (Shared Variance^2)
 Shared Variance = Correlation ^2 of all of the construct correlation

5.4.4 Assessment of univariate normality assumptions

Normal distribution of the indicators of latent factors in terms of skewness were observed; these were close to one (-1 to +1) and kurtosis that was close to three (-3 to +3) (Sposito, 1983). Skewness reflects the symmetry of the distribution, while kurtosis refers to the peakedness of distribution (Tabachnick & Fidell, 2013). The effect of skewness and kurtosis though, is diminished with large samples (ibid), as in this case, where the sample size = 830 respondents. The results of the normality assessment as estimated from the values of skewness and kurtosis; as well as further measures of mean and standard deviation are presented in Table 5.27.

Table 5.27 Results of normality assessment

Items	Mean	Std. Deviation	skew	kurtosis
US_1	3.55	1.084	-.773	-.019
US_2	3.70	.999	-1.038	.768
US_3	3.60	1.021	-.803	.228
US_4	2.91	1.153	-.007	-.934
US_5	3.59	1.068	-.931	.224
CE_1	3.35	1.024	-.542	-.391
CE_2	3.44	.969	-.616	.017
CE_3	3.10	1.006	-.185	-.535
CE_4	3.39	.982	-.569	-.146
CE_5	2.65	1.045	.197	-.354
CE_6	2.77	1.074	.048	-.529
CE_7	2.95	1.071	-.137	-.543
CE_8	3.03	1.056	-.189	-.551
CE_9	2.84	1.088	.065	-.609
CE_10	2.96	1.131	-.088	-.796
CE_11	2.94	1.117	-.125	-.762
CE_12	2.69	1.105	.093	-.806
CE_13	3.07	1.134	-.153	-.619
CE_14	2.37	1.138	.546	-.343
CE_15	2.48	1.176	.365	-.737
CE_16	2.31	1.247	.617	-.670
CV_1	3.90	.785	-1.046	2.543
CV_2	3.73	.811	-.652	.880
CV_3	3.80	.808	-.806	1.352
CV_4	3.66	.823	-.525	.567
CV_5	2.88	1.145	-.146	-.598
CV_6	2.83	1.099	-.098	-.555
CV_7	2.94	1.160	-.218	-.652
CV_8	3.17	1.132	-.489	-.396
CV_9	3.11	1.041	-.327	-.163

CV_10	3.09	1.023	-.251	-.234
CV_11	2.70	1.057	.107	-.540
CV_12	2.55	1.101	.191	-.572
BI_1	4.00	.807	-.644	.747
BI_2	3.94	.891	-.703	.353
BI_3	4.04	.902	-.791	.499
BI_4	3.70	.986	-.546	-.035
BI_5	4.02	.910	-.853	.571
BI_6	4.04	.880	-.815	.530
BI_7	4.03	.916	-.841	.483
BI_8	3.92	.918	-.699	.358
BI_9	4.04	.979	-.789	.181
BI_10	3.80	1.041	-.527	-.435
CI_1	3.27	1.131	-.207	-.873
CI_2	3.18	1.104	-.122	-.871
CI_3	4.13	.773	-.849	1.049
CI_6	3.65	.987	-.551	-.157
CI_7	3.97	.809	-.690	.608
CI_8	3.21	1.168	-.186	-.880

It can be concluded from Table 5.27, that the kurtosis values did not exceed the criteria of limitation - less than 3 for all variables. Regarding the skewness index, all skewness values were good indicators across all item indicators (the skewness values reflect a slight deviation from the -1 to +1). Based on the findings of normality tests with regards to kurtosis and skewness values, which do not indicate strong violations of normality, it was decided not to do any data treatment. Hair et al. (2008) discussed the issues related to normality that may be ignored if the sample size exceeds 200, additionally, Field (2005) considered that it is more important to check the value of skewness and kurtosis statistics than calculate their significance if the sample size is more than 200, which is the case in this research. In this case conducting CFA and SEM does not require data normality or the normal distribution of the current dataset.

Therefore, the researcher proceeded with the analysis without transformations. However, based on the final structural model, a Bootstrap test will be conducted at the end of this chapter to provide more assessment of the multivariate normality.

5.5 Structural model (hypothesis testing)

The structural equation model shown in Figure 5.3 tested the causal relationships established in the hypothesised relationships (see Table 5.28). Accordingly, this part of the study addresses the results of the statistical analysis followed by the results of the hypotheses testing through using structural equation modelling (SEM). The structural model was examined using the final CFA model (see Figure 5.2). To test the structural model, AMOS 24 software was used to draw the structural model, and then estimate the hypothesised relationships through using the data set of 830 respondents.

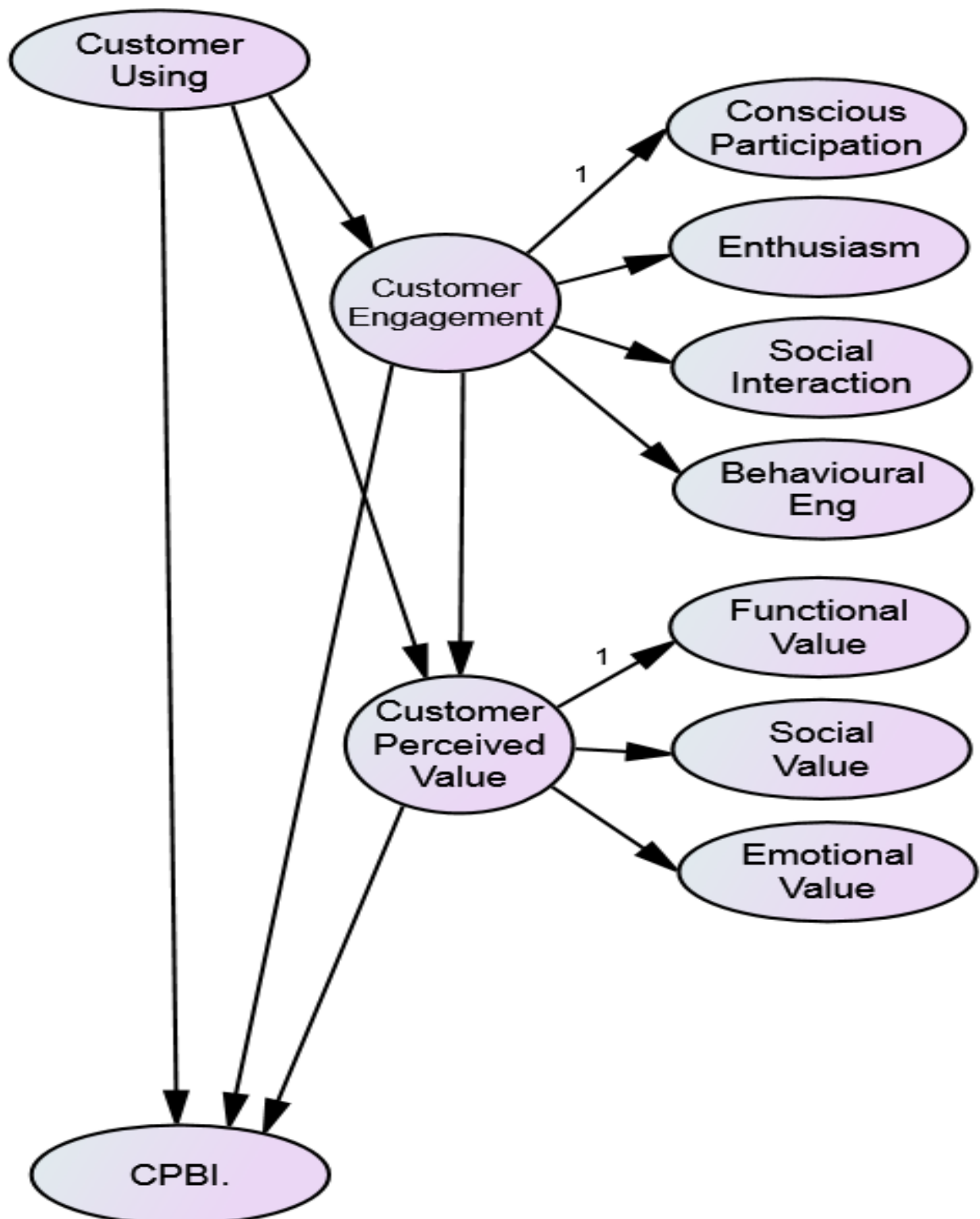
Table 5.28 Summary of research hypotheses

Direct Effect	
H1	Customer use of online brand communities has a direct and positive influence on customer perceived brand innovativeness.
H2	Customer use of online brand communities has a direct and positive influence on customer engagement with online brand communities.
H3	Customer use of online brand communities has a direct and positive influence on customer perceived value of online brand communities.
H4	Customer engagement with online brand communities has a direct and positive influence on customer perceived value of online brand communities.
H5	Customer perceived value with online brand communities has a direct and positive influence on customer perceived brand innovativeness.
H6	Customer engagement with online brand communities has a direct and positive influence on customer perceived brand innovativeness.
Indirect effect	
H7	Customer engagement with online brand communities and customer perceived value of online brand communities mediate the relationship between customer use of online brand communities and customer perceived brand innovativeness.

H8	Customer perceived value of online brand communities mediates the relationship between customer engagement with online brand communities and customer perceived brand innovativeness.
H9	Customer engagement with online brand communities mediates the relationship between customer use of online brand communities and customer perceived value of online brand communities.
Moderating effect	
H10.1	Customer innovativeness moderates the effect of customer use of online brand communities on customer perceived brand innovativeness.
H10.2	Customer innovativeness moderates the effect of customer engagement with online brand communities on customer perceived brand innovativeness.
H10.3	Customer innovativeness moderates the effect of customer perceived value of online brand communities on customer perceived brand innovativeness.

Hypothesis testing requires changing the final measurement model into a final structural model (see Appendix D) through drawing causal paths from independent variables (IV), called exogenous, to dependent variables (DV), called endogenous (Byrne, 2010). Mainly, there was only one exogenous variable (Customer Using) and three main endogenous variables (named in the model Customer Engagement, Customer Perceived Value, and CPBI), which required adding error terms (ϵ) to all the endogenous and second order constructs (see Appendix D). Similarly, error terms were also added to the first order constructs (sub-constructs as named in the model Conscious participation, Enthusiasm, Social Interaction, Behavioural ENG, Functional value, Social value, and Emotional value). The structural model is presented in Figure 5.3 and the full structural model is presented in Appendix D.

Figure 5.3 Structural model



* Second order constructs, including: Customer use of online brand communities (Customer Using), customer engagement with online brand communities (Customer Engagement), customer perceived value of online brand communities (Customer Perceived Value), and customer perceived brand innovativeness (CPBI).

* First order constructs, including: Conscious Participation, Enthusiasm, Social Interaction, Behavioural Engagement (Behavioural Eng), Functional value, Social value, and Emotional value.

As shown in Figure 5.3, there were one exogenous as main construct, three endogenous as main constructs, and seven endogenous as sub-constructs (first order factors). The initial structural model tests the research hypotheses, shown in Table 5.29 using a combination of Chi-square statistics and number of model fit indices, the model shows an acceptable level of model fit (good model fit). Chi-square test was significant (CMIN= 1934.596, DF =839, $p = 0.000$), which may signal poor model fit, the chi-square is not enough to evaluate the model fit, although the significance may indicate sensitivity to the sample size rather than inadequate model (Bagozzi & Yi, 1988). Consequently, the results of the structural model revealed a good model fit. The normed Chi-square (CMIN/DF = 2.306) was in the acceptable range < 5.00 . The root mean square error of approximation (RMSEA) = 0.053 < 0.05 with PCLOSE = 0.062 > 0.05 and root means square residual (RMR) = 0.072 < 0.10 , which presented good model fit. Likewise, Comparative Fit Index (CFI=0.909) and Tucker-Lewis Index (TLI=0.902) were above 0.90 (Byrne, 2010). Accordingly, the SEM results revealed that the structural model fitted the data and introduced a good fit model. Table 5.29, presents the results of the fit parameters of the structural model.

Table 5.29 Summary of the fit parameters of structure model

Model fit parameters	Values	Criteria	Support
CMIN	1934.596	The $<$ the better	Yes
CMIN/DF	2.306	2 - 5 good and < 5 acceptable	Yes
TLI	0.902	> 0.90	Yes
CFI	0.909	> 0.90	Yes
RMSEA	0.053	< 0.08	Yes
PCOSE	0.062	> 0.05	Yes

As illustrated in Table 5.29, the structural model is characterised by acceptable levels of fit to test the hypothesised relationships. All parameters of the structural model fit are producing

satisfactory values. Therefore, this structural model will be treated as a final model to test the hypothesised relationships. The results of testing the hypothesised relationships will be presented in the following section, which includes 9 hypotheses categorized into direct and indirect relationships, in addition to 4 hypotheses that represent the moderating effect of customer innovativeness.

5.6 Results of hypothesis testing

The results of the hypothesis testing of the structural model are presented in Table 5.30. Regarding the sample size ($N = 830$), the results of the hypothesised relationship include testing 6 direct hypotheses (H1, H2, H3, H4, H5, and H6) and testing 3 indirect hypothesised relationships (H7, H8, and H9). In addition, 4 hypotheses examine the moderating effect of customer innovativeness (H10.1, H10.2, H10.3, and H10.4) will be presented at the end of this chapter.

The results of the hypothesis testing of the structural model show support for the majority of hypothesised relationships, 7 out of 9 of the direct and indirect proposed hypothesised relationships (H1, H2, H4, H5, H7, H8, and H9) were supported, and only two hypotheses (H3 and H6) were rejected ($P > 0.1$). Results of hypothesis testing supported the significant direct and indirect influence of customer use of online brand communities on customer perceived brand innovativeness, in addition to the direct influence of customer use of online brand communities on customer engagement with online brand communities. Moreover, the results supported the indirect effect of customer use of online brand communities on customer perceived value of online brand communities through the mediating role of customer engagement with online brand communities. Furthermore, the results supported the direct relationship between customer perceived value of online brand communities and customer perceived brand innovativeness and supported the indirect relationship between customer

engagement and customer perceived brand innovativeness through the mediating role of customer perceived value. Otherwise, the results of the hypothesis testing rejected the direct influence of customer engagement with online brand communities on customer perceived brand innovativeness and the direct influence of customer use of online brand communities on customer perceived value of online brand communities.

Table 5.30 Results of hypothesis testing

Direct Effect								
Relationship			Estimate	S.E.	C.R.	P	Label	Result
CUOBC	→	CPBI	0.231	0.040	3.261	.001	H1	Supported
CUOBC	→	CE_OBC	0.583	0.047	8.872	***	H2	Supported
CUOBC	→	CPV_OBC	0.044	0.019	0.678	.498	H3	Rejected
CE_OBC	→	CPV_OBC	0.625	0.042	6.032	***	H4	Supported
CPV_OBC	→	CPBI	0.185	0.156	2.296	.022	H5	Supported
CE_OBC	→	CPBI	-0.050	0.067	-0.571	.568	H6	Rejected
Indirect Effect								
Relationship			Estimate	Lower	Upper	P	Label	Results
CUOBC → CE_OBC → CPV_OBC → CPBI			0.0674	-0.002	0.090	.070	H7	Supported
CE_OBC → CPV_OBC → CPBI			0.116	-0.004	0.208	.071	H8	Supported
CUOBC → CE_OBC → CPV_OBC			0.364	0.071	0.155	.002	H9	Supported

***: Significant at less than 0.001

* Customer Use of Online Brand Communities (CUOBC), Customer Engagement with online brand communities (CE_OBC), Customer Perceived Value of online brand communities (CPV_OBC), and Customer Perceived Brand Innovativeness (CPBI).

The indirect effect was measured through using User Defined Estimands (UDE) in the AMOS software package, which were identified based on using UDE, as indicated in Figures 5.4, 5.5, and 5.6, which calculate the indirect effects between different constructs. The main purpose of testing the mediation effect is to examine whether the effect of the independent variable (X) on the dependent variable (Y) is caused by the mediator effect (M). There are three common

methods are used in literature to measure the mediation effect. First, Preacher & Hayes (2008) model via SPSS, which includes building three regression models via SPSS to obtain the regression estimates of the indirect effect. Second, Edwards & Lambert (2007) Constrained nonlinear regression (CNLR) through using bootstrap via SPSS to determine the multiple path coefficients of the Regression Equations, and then using EXCEL to determine the estimated values and confidence intervals of the indirect effect. Third, Bayes approach through using User-Defined Estimands (UDE) via Bootstrap in AMOS, which can be measured using C sharp codes (C#) or Visual Basic codes or through adding manual codes after naming the mediation effect paths via Amos (Amos 24 User's Guide).

Regarding the nature of the current research model that includes multiple-mediators and aims to examine a specific mediation effects, this study proposed the Bayes approach through using User-Defined Estimands (UDE) Via Bootstrap estimate in AMOS, as an analysis method under the framework of structure equation modelling, which is used to analyse the indirect and total effect of multiple –mediation effects.

Despite the newness and lack of familiarity of using the Bayes approach to examine the mediation effect, especially in AMOS, and comparing to Hayes (2013) approach, Bayes approach presents a number of advantages, which are demonstrated by many researchers (e.g. Woody, 2011; Nuijten et al., 2015; Chen & Hung, 2016). First, this approach is extremely flexible due to the possibility of estimating any user-defined estimand (testing any specific mediation effect, including multiple mediator) (Woody, 2011; Chen & Hung, 2016). Second, it is also provides a better opportunity to calculate the regression estimates, the lower and higher estimates and the significance test (P-value) of the indirect effect. Third, using UDE through using the Bootstrap test (for sample size = 830 respondents and with degree of Sig = 0.90), provides a better way to calculate standard errors (SE) and the bias of the standard errors (SE-

Bias), which provides more understanding of the indirect effect and providing more accurate results (Byrne, 2010; Woody, 2011; Chen & Hung, 2016).

Figure 5.4 Indirect effect of H7

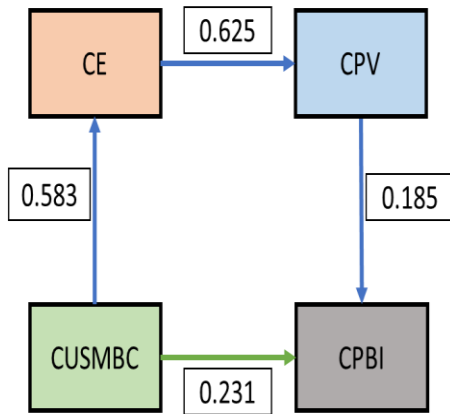


Figure 5.5 Indirect effect of H8

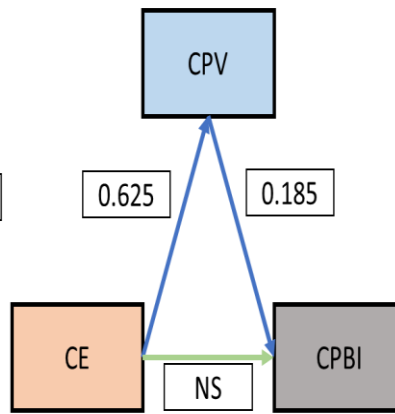


Figure 5.6 Indirect effect of H9

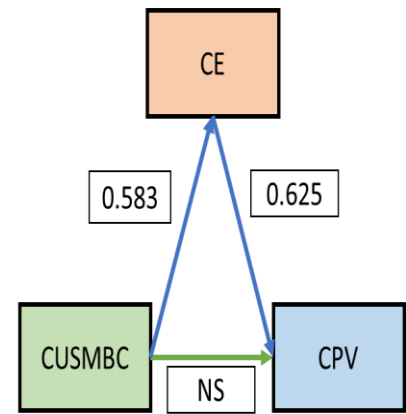


Table 5.31 Indirect effect of H7

- The indirect effect = $0.583 \times 0.625 \times 0.185 = 0.0674$
- The direct effect = 0.231
- Result: the significant direct effect (0.231) > the significant indirect relationship (0.0674).
- Decision: H7 Supported and Partial mediation occurs.
- Total effect = $0.231 + 0.0674 = 0.298$

Table 5.32 Indirect effect of H8

- The indirect effect = $0.625 \times 0.185 = 0.116$
- The direct effect = not significant
- Result: the direct effect is not significant and the indirect effect is significant.
- Decision: H8 supported and full mediation occurs.
- Total effect = 0.116

Table 5.33 Indirect effect of H9

- The indirect relationship = $0.583 \times 0.625 = 0.364$
- The direct effect = Not Significant
- Results = the direct effect is not significant and the indirect effect is significant.
- Decision: H9 supported and full mediation occurs.
- Total effect = 0.364

Source: based on the current research

Figures 5.4, 5.5, and 5.6 presented the indirect relationship between the different constructs.

Figure 5.4 illustrates the indirect relationship between customer use of online brand communities and customer perceived brand innovativeness through the mediating role of

customer engagement with online brand communities and customer perceived value of online brand communities ($CUOBC \rightarrow CE \rightarrow CPV \rightarrow CPBI$). The results reveal there is a significant direct and indirect effect but the indirect effect was lower than the direct effect, which suggests this indirect effect is not strong enough (partial mediation effect) to affect the proposed relationship between customer use and customer perceived brand innovativeness through the mediating role of customer engagement and customer perceived value. Moreover, Figure 5.5 shows significant indirect effect and non-significant direct effect, which reflects a full mediation effect of customer perceived value on the relationship between customer engagement and customer perceived brand innovativeness ($CE \rightarrow CPV \rightarrow CPBI$). Full mediation occurs when all paths coefficients presented are significant with non-significant direct effect (Baron and Kenny, 1986). Furthermore, Figure 5.6 illustrates the non-significant direct effect and the significant indirect effect, which represents a full mediation effect of customer engagement with online brand communities on the relationship between customer use of online brand communities and customer perceived value of online brand communities ($CUOBC \rightarrow CE \rightarrow CPV$).

5.6.1 Multivariate normality assessment (Bootstrap Test)

Bootstrap is known as one of the most important techniques to handle the presence of multivariate non-normal data (Byrne, 2010). Regarding the normality assessment, this study used bootstrap to provide more validation of the results of the normality assessed in a previous section in this chapter. Results of a multivariate normality test based on using the bootstrap test for the structural model revealed that there was no significant differences between Maximum Likelihood (ML) results and Bootstrap results (the Bootstrap results of estimates, two tailed significance, lower estimates, and upper estimates), which supports the normality assessment as illustrated in Table 5.34.

Table 5.34 Results of bootstrap test of structural model

Standardized direct and indirect effects (Bootstrap Estimates)								
Relationship			Estimate	Lower	Upper	P	Label	Result
CUOBC	→	CPBI	.231	.122	.382	.005	H1	Supported
CUOBC	→	CE_OBC	.583	.483	.667	.008	H2	Supported
CE_OBC	→	CPV_OBC	.625	.491	.729	.005	H4	Supported
CPV_OBC	→	CPBI	.185	-.018	.342	.074	H5	Supported
CE_OBC	→	CPBI	-.050	-.215	.145	.881	H6	Rejected
CUOBC	→	CPV_OBC	.044	-.127	.205	.679	H3	Rejected
CUOBC → CE_OBC → CPV_OBC → CPBI			0.0674	-0.002	0.090	.070	H7	Supported
CE_OBC → CPV_OBC → CPBI			0.116	-0.004	0.208	.071	H8	Supported
CUOBC → CE_OBC → CPV_OBC			0.364	0.071	0.155	.002	H9	Supported

5.6.2 Summary - results of hypothesis testing

5.6.2.1 Direct hypothesised relationships (direct effect)

Hypothesis 1: “Customer use of online brand communities has a direct and positive influence on customer perceived brand innovativeness” was supported, as indicated, by the significant standardised path estimate $\beta = 0.231$ ($p < 0.001$), which indicates that customer use explains 23.1% of the change in customer perceived brand innovativeness. The results indicate that customer use of online brand communities (CUOBC) will help passive customers who just read, and watch posts related to their brand via online brand communities to perceive their mobile phone brand as being an innovative brand.

Hypothesis 2: “Customer use of online brand communities has a direct and positive influence on customer engagement with online brand communities” was supported by the significant standardised path estimate ($p < 0.001$). The results revealed that customer use of online brand

communities has a strong positive effect ($\beta = 0.583$) on customer engagement with online brand communities, which may provide indication that the more customers use of online brand communities the more engagement there is with online brand communities.

Hypothesis 3: “Customer use of online brand communities has a direct and positive influence on customer perceived value of online brand communities” was rejected due to the non-significant standardised path estimate ($P > 0.1$). Accordingly, customer use of online brand communities has no significant direct effect on customer perceived value of online brand communities.

Hypothesis 4: “Customer engagement with online brand communities has a direct and positive influence on customer perceived value of online brand communities” was supported by the significant standardised path estimate ($P < 0.001$). Thereby, the more customer engagement with online brand communities, the more perceived value of online brand communities, which explains the strong positive direct effect ($\beta = 0.625$) of customer engagement with online brand communities on customer perceived value of online brand communities.

Hypothesis 5: “Customer perceived value of online brand communities has a direct and positive influence on customer perceived brand innovativeness” was supported by the significant standardised path estimate $\beta = 0.185$ ($P < 0.05$). Therefore, the more customer perceived value of online brand communities, the more that brand is perceived as being innovative, which illustrates the positive relationship between customer perceived value of online brand communities and customer perceived brand innovativeness.

Hypothesis 6: “Customer engagement with online brand communities has a significant direct influence on customer perceived brand innovativeness” was rejected due to the non-significant standardised path estimate ($P > 0.1$). Accordingly, customer engagement with online brand communities has no significant direct effect on customer perceived brand innovativeness.

5.6.2.2 Indirect hypothesised relationships (indirect effect)

Hypothesis 7: “Customer engagement with online brand communities and customer perceived value of online brand communities mediate the relationship between customer use of online brand communities and customer perceived brand innovativeness” was supported by the significant standardised path estimate $\beta = 0.0674$ ($P < 0.1$). Accordingly, customer use of online brand communities has a significant indirect effect on customer perceived brand innovativeness through the mediating role of customer engagement with online brand communities and customer perceived value of online brand communities. However, the significant direct effect is higher than the indirect effect of customer use on customer perceived brand innovativeness, which indicate that there is partial mediation affects the total effect which $= 0.231 + 0.0674 = 0.298$ (the total effect = the direct effect + the indirect effect).

Hypothesis 8: “Customer perceived value of online brand communities mediates the relationship between customer engagement with online brand communities and customer perceived brand innovativeness” was supported by the significant standardised path estimate $\beta = 0.116$ ($P < 0.1$). The result revealed that there is a full mediation effect of customer perceived value of online brand communities on the relationship between customer engagement with online brand communities and customer perceived brand innovativeness, due to the significant indirect effect and the non-significant direct effect of customer engagement on customer perceived brand innovativeness. Therefore, the relationship between customer engagement with online brand communities and customer perceived brand innovativeness depends on the mediating effect of customer perceived value.

Hypothesis 9: “Customer engagement with online brand communities mediates the relationship between customer use of online brand communities and customer perceived value of online brand communities” was supported by the significant standardised path estimate $\beta = 0.364$ (P

< 0.05). Accordingly, customer engagement has a full mediation effect on the relationship between customer use and customer perceived value due to the significant indirect effect and the non-significant direct effect of customer use on customer perceived value. Therefore, the relationship between customer use of online brand communities and customer perceived value of online brand communities depends on the mediating effect of customer engagement with online brand communities.

5.6.2.3 Moderating effect of customer innovativeness

To investigate the moderating effect of customer innovativeness (CI) on the relationship between: customer use of online brand communities and customer perceived brand innovativeness (Hypothesis 10.1), customer engagement with online brand communities and customer perceived brand innovativeness (Hypothesis 10.2), and customer perceived value of online brand communities and customer perceived brand innovativeness (Hypothesis 10.3). The total sample (N=830) was divided into two groups: highly innovative customers (N=369) and low innovative customers (N=461), through using the median of customer innovativeness, where the Median = 3.667.

Hypothesis 10.1: “Customer innovativeness mediates the effect of customer use of online brand communities on customer perceived brand innovativeness” was not supported due to the non-significant value of the chi-square of the comparison model between the two groups. As shown in Table 5.35, there were no significant differences between the two groups (P-value of the chi-square of the comparison model is not significant, $P > 0.05$). However, the β -value for the different groups was improved from 0.221 of the low innovative customers group to 0.265 of the highly innovative customers group of customer innovativeness.

Hypothesis 10.2: “Customer innovativeness mediates the effect of customer engagement with online brand communities on customer perceived brand innovativeness” was not supported due

to the non-significant moderating effect of customer innovativeness on this relationship. However, β -value for the different groups was changed from 0.006 of the low innovative customers group to 0.041 of highly innovative customers group. Similarly, hypothesis 10.3: “Customer innovativeness mediates the effect of customer perceived value of online brand communities on customer perceived brand innovativeness” was not supported due to the non-significant effect of customer innovativeness in mediating this relationship. However, β -value was changed from 0.120 in the low innovative customers group to 0.127 in the highly innovative group. Accordingly, customer innovativeness has no moderating effect on any of the proposed relationships: customer use of online brand communities \rightarrow customer perceived brand innovativeness, customer engagement with online brand communities \rightarrow customer perceived brand innovativeness, and customer perceived value of online brand communities \rightarrow customer perceived brand innovativeness.

A deeper look at the results of the multi-group analysis of customer innovativeness showed that customer innovativeness moderates the relationship between customer engagement with online brand communities and customer perceived value of online brand communities. Accordingly, a new hypothesis has been added, hypothesis 10.4: customer innovativeness strengthens the positive relationship between customer engagement with online brand communities and customer perceived value of online brand communities. The result of testing H10.4 was supported by the significant P-value of the chi-square test. Based on using Chi-square differences test, freely estimated the two models except constraining the one path to be equal across groups. The results of the model comparison revealed that Chi-square has a significant moderating effect ($P < 0.01$). These results indicated that the relationship between customer engagement and customer perceived value was different between innovators (highly innovative customers) and non-innovators (low innovative customers); the β -value of non-innovators ($\beta = 0.634$) was lower than the β -value of the innovators ($\beta = 0.919$). Accordingly,

customer innovativeness moderates the relationship between customer engagement with online brand communities and customer perceived value of online brand communities. The results of estimating the standardised regression weights of the high and low customer innovativeness and the results of the model comparison are presented in Tables 5.35 and 5.36.

Table 5.35 Results of Standardised regression weights (high and low CI) and model comparison

Relationship	High CI	Low CI	Model Comparison (Assuming model Unconstrained to be correct)		Support
	β -value	β -value	Chi-square (CMIN)	P	
CUOBC \rightarrow CPBI	0.265	0.221	0.037	0.847	Rejected
CE_OBC \rightarrow CPBI	0.041	0.006	0.023	0.881	Rejected
CPV \rightarrow CPBI	0.127	0.120	0.046	0.830	Rejected
CE_OBC \rightarrow CPV	0.919	0.634	9.020	0.003	Accepted

Table 5.36 Results of chi-square considering the significant moderating effect of customer innovativeness.

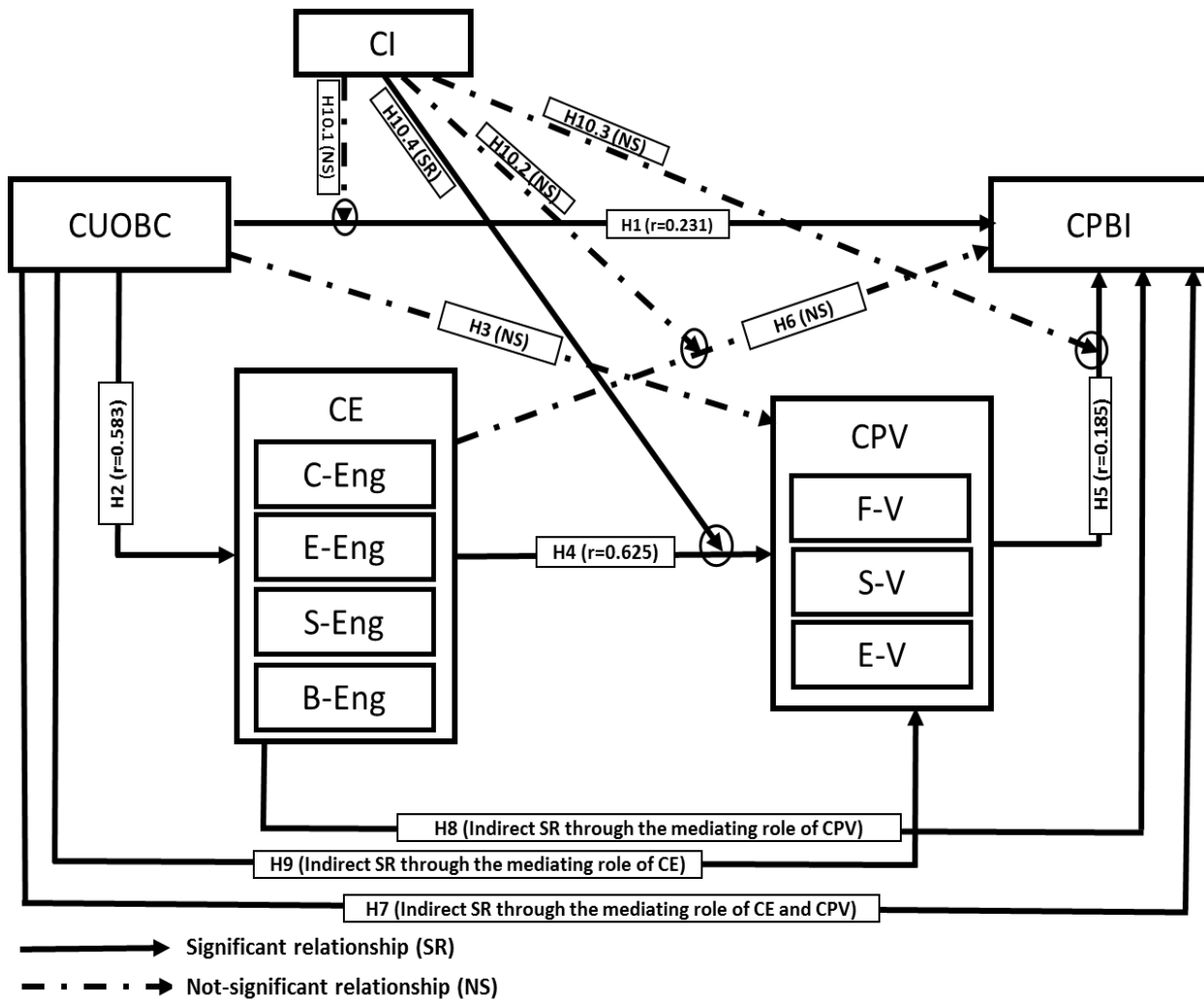
Model	NPAR	CMIN	DF	P	CMIN/DF
Unconstrained	210	3883.233	1682	.000	2.309
Structural weights	209	3892.254	1683	.000	2.313
Saturated model	1892	.000	0		
Independence model	86	23405.374	1806	.000	12.960

5.7 Final conceptual model based on results of hypothesis testing

As presented in Figure 5.7, the final conceptual model includes 6 direct hypothesised relationships (H1, H2, H3, H4, H5, and H6), 3 indirect hypothesised relationships (H7, H8, and H9), and 4 moderating hypothesised relationships (H10.1, H10.2, H10.3, and H10.4). All of the direct and indirect hypothesised relationships have been accepted except two direct

hypotheses have been rejected (H3 and H6) due to the non-significant relationship, and only one moderating has been accepted (H10.4) due to the significant Chi-square.

Figure 5.7 Current conceptual model based on hypotheses testing results



* Customer Use of Online Brand Communities (CUOBC), Customer Engagement with online brand communities (CE), Customer Perceived Value of online brand communities (CPV), Customer Innovativeness (CI), and Customer Perceived Brand Innovativeness (CPBI).

* Customer Engagement includes: Conscious Participation (C-Eng), Enthusiasm (E-Eng), Social Interaction (S-Eng), and Behavioural Engagement (B-Eng).

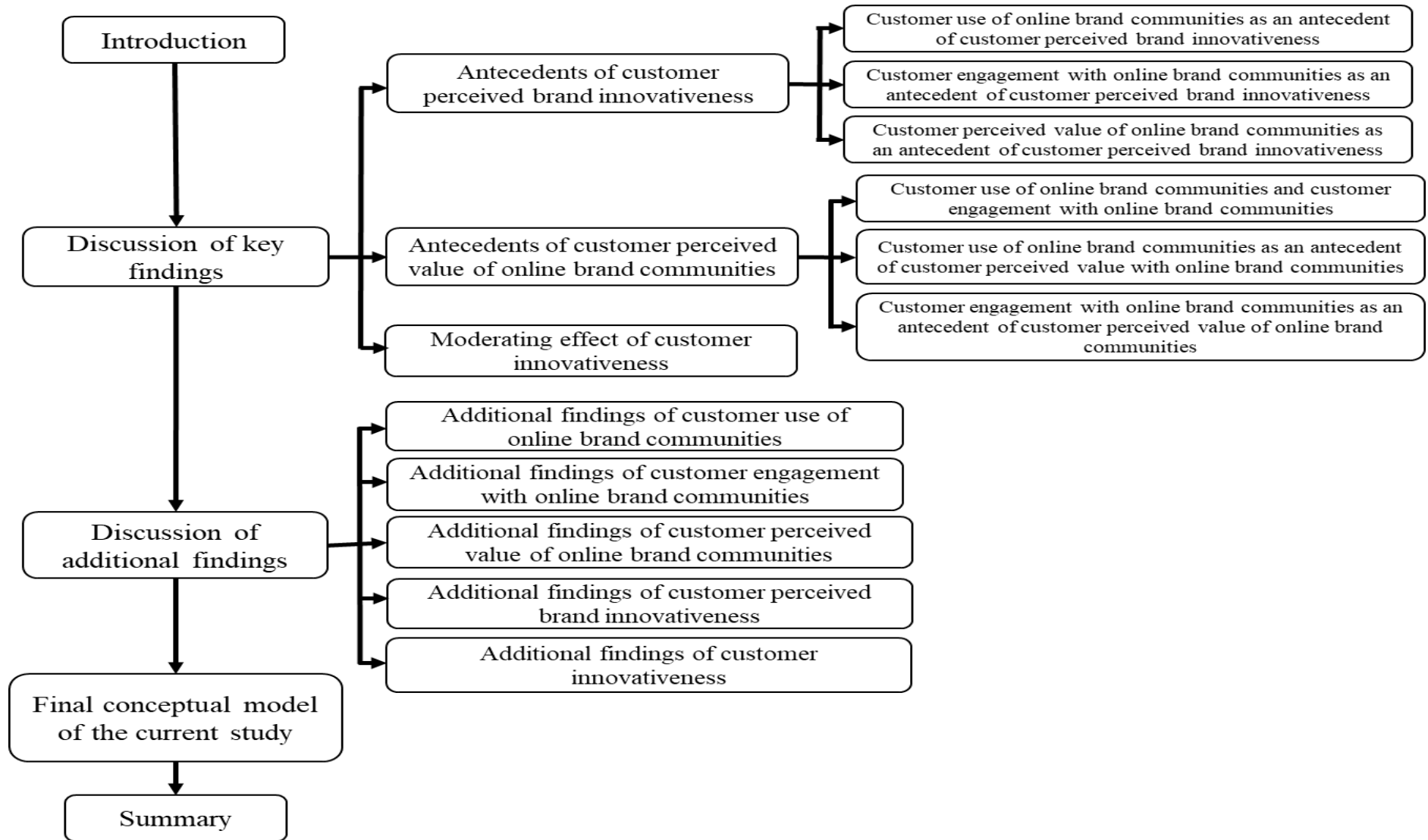
* Customer Perceived Value includes: Functional Value (F-V), Social Value (S-V), and Emotional Value (E-V).

Chapter 6: Discussion

6.1 Introduction

Having examined the objectives of this thesis through both qualitative and quantitative inquiries in previous chapters, this chapter synthesises and discusses the key findings of the study in relation to the extent literature. For this purpose, this chapter analyses how the quantitative findings of the current research relate to the findings of the exploratory study and the findings of the literature review. This chapter is divided into two main sections; discussion of key findings and discussion of additional findings, as presented in Figure 6.1.

Figure 6.1 Structure of chapter six – discussion



6.2 Discussion of key findings

This study aimed to examine the proposed conceptual framework developed based on the literature review and the findings from the exploratory study. The following section discusses the key findings of the current study drawn from the empirical findings of the qualitative and quantitative phases in the context of the previous literature. The key findings include both supported and rejected hypotheses of the final conceptual model (see Figure 5.7), which included 13 hypotheses: 6 direct hypothesised relationships, 3 indirect hypothesised relationships, and 4 moderation-hypothesised relationships. Each of the key findings related to the current research objectives and the results of the hypothesis testing and presented in the final conceptual model, are discussed in the following sections.

6.2.1 Antecedents of customer perceived brand innovativeness

The first research objective is to explore and investigate how customer perceived brand innovativeness is affected by three key antecedents in the context of online brand communities: customer use, customer engagement, and customer perceived value. Accordingly, this section discusses the three key antecedents of customer perceived brand innovativeness in the context of online brand communities separately.

6.2.1.1 Customer use of online brand communities as an antecedent of customer perceived brand innovativeness

The results of hypothesis testing show a positive relationship between customer use of online brand communities and customer perceived brand innovativeness. This result supports the findings from the exploratory study, which found that brand communities' members use them to perceive their brand as being innovative compared to other brands. Importantly, the direct effect of customer use on customer perceived brand innovativeness is stronger than the indirect effect of this relationship through the mediating role of customer engagement and customer perceived value, which provides an indicator of a partial mediation effect of customer

engagement and customer perceived value on the relationship between customer use and customer perceived brand innovativeness. The results of the hypothesis testing revealed that customer use is the strongest predictor between the three key antecedents of customer perceived brand innovativeness in the context of online brand communities.

Table 6.1 Results of hypothesis testing - customer use of online brand communities and customer perceived brand innovativeness.

Research Hypotheses		Results of hypothesis testing
H1	Customer use of online brand communities has a direct and positive influence on customer perceived brand innovativeness.	Supported
H7	Customer engagement with online brand communities and customer perceived value of online brand communities mediate the relationship between customer use of online brand communities and customer perceived brand innovativeness.	Supported

As illustrated in Table 6.1, customer use has positive/significant direct and indirect influence on customer perceived brand innovativeness. The results of testing H1 showed that customer use has a direct positive influence on customer perceived brand innovativeness. The relationship between customer use and customer perceived brand innovativeness was driven by the main research gap in online brand communities and brand innovativeness literature. Firstly, existing research focused on innovation in online brand communities from two different perspectives (organization and customer) through focusing on different constructs of innovation (e.g. product innovation, social innovation, and co-innovation). Most previous studies have focused on the role of using online communities in supporting product innovation from different perspectives (e.g. Idota et al., 2011; John, 2014). Few studies have focused on the new trends of innovation in online brand communities such as social innovation, co-

innovation, and online brand innovation (Charalabidis et al., 2014; Nguyen et al., 2015; Wang et al., 2016).

Customer perceived brand innovativeness is a broader conceptualization of innovativeness and provides rational and non-rational drivers to create an image of innovativeness, which is different from the product innovativeness commonly used in many previous studies and which reflects only the rational drivers of the customer (Sanayel et al., 2013; Shams et al., 2015). Importantly, to the best of the researcher's knowledge, current study is the first to provide empirical support to the relationship between customer use of online brand communities and customer perceived brand innovativeness. Secondly, Social media brand communities, as a part of the online brand communities, have become a main resource for exchanging information between the brand communities' members around the new features and products of the brand (Fuller et al., 2006; Janzik & Raasch, 2010; Wang et al., 2016), thus they can perceive a brand as being innovative compared to other brands.

This result is indicted in the findings from the semi-structured interviews, which referred to customer use of online brand communities as an antecedent of customer perceived brand innovativeness. Customer use through different online activities, such as following, reading brand's posts, and viewing brand's videos or pictures, will enable customers to gain more information about new features and products of their brand and to compare different brands. Accordingly, gaining more information about new features and products through using online brand communities will make customers able to compare different brands and to perceive a brand as being innovative. Furthermore, the exploratory study findings revealed that brand innovativeness is related to providing posts about the new features and products of the brand, which provide opportunities for the customer to read or watch these posts and perceive a brand as being innovative and comparing it with other brands. Additionally, exploratory study

findings showed that brands' efforts via online brand communities could increase customer perception of brand innovativeness.

There can be several explanations for this relationship. One of them may be rooted in the specific nature of the dependent variable (customer perceived brand innovativeness) of this relationship. Customer perceived brand innovativeness reflects the customer's perception about the brand's tendency toward new ideas, novelty, experimentation, and creative processes (Ouellet, 2006; Shams et al., 2015). Moreover, the conceptualization of brand innovativeness depends on the brand itself and customers may perceive a brand as being innovative, depending on the available information, which is limited in most cases (Ouellet, 2006). Using online brand communities provides more information about new features, products, and offerings of the brand, which support the customers' perception of brand innovativeness and help them to perceive a brand as being innovative. This is consistent with many of the previous studies (e.g. Fuller et al., 2006; Janzik & Raasch, 2010; Wang et al., 2016), which confirmed that online brand communities have become a major resource for innovation through providing a mechanism for exchanging information and experiences between communities' members. Thus, increasing customers' knowledge about the features, offerings, and products of the brand through using online brand communities will make them more capable of perceiving their brand as being an innovative brand.

6.2.1.2 Customer engagement with online brand communities as an antecedent of customer perceived brand innovativeness

Results of the hypothesis testing reveal that whilst there is no significant direct influence of customer engagement on customer perceived brand innovativeness, there is a significant positive indirect influence through the mediating role of customer perceived value. Regarding, the non-significant direct effect and the significant indirect effect of this relationship, customer perceived value has a full mediation effect on the relationship between customer engagement

and customer perceived brand innovativeness. These results are consistent with the findings of the exploratory study, which revealed that engaged customers perceive their brand as being innovative based on their perceived value of online brand communities.

Table 6.2 Results of hypothesis testing - customer engagement with online brand communities and customer perceived brand innovativeness.

Research Hypotheses		Results of hypothesis testing
H6	Customer engagement with online brand communities has a direct and positive influence on customer perceived brand innovativeness.	Rejected
H8	Customer perceived value of online brand communities mediates the relationship between customer engagement with online brand communities and customer perceived brand innovativeness.	Supported

As shown in Table 6.2, the results of hypothesis testing rejected H6 and supported H8, which indicated that there is no significant direct effect of customer engagement on customer perceived brand innovativeness and indicated the significant role of customer perceived value in mediating this relationship. This significant indirect relationship between customer engagement and customer perceived brand innovativeness ($r = 0.116$) was affected by the strong significant relationship between customer engagement and customer perceived value ($r = 0.625$), in addition to the significant effect of customer perceived value on customer perceived brand innovativeness ($r = 0.185$). Accordingly, active customers (engaged customers) perceive their brand as being innovative based on the value that they can perceive from their brand communities. Importantly, to the best of the researcher's knowledge, this hypothesis is the first to explore the role of customer engagement in supporting the customer perception of brand innovativeness in the context of online brand communities.

This result, regarding the significant indirect effect of customer engagement on customer perceived brand innovativeness, is not surprising for two reasons: firstly, it is in line with the exploratory study findings, which suggested a mediating role of customer perceived value in the relationship between customer engagement and customer perceived brand innovativeness. Thus, the more customer engage with online brand communities through more liking, commenting, sharing, and creating brand posts; the more customer perceives value from the brand communities; and in turn the more this brand is perceived to be innovative compared to other brands. Furthermore, the exploratory study findings revealed that perceiving a brand as being innovative would influence customers' purchase decisions, which is consistent with the findings of Shams et al. (2017). Additionally, customers can be a major part of the innovation circle, which are identified as an ongoing process between brands and customers via online brand communities. Secondly, there is a lack of support for this hypothesis in previous studies; previous studies examined innovation in relation to customer engagement in the context of online brand communities from different perspectives and through following different paths. Sawhney et al. (2005) pointed out the positive influence of customer engagement on co-innovation (collaborative innovation). Additionally, Ruengaramrut et al. (2015) confirmed the positive influence of customer engagement on service innovation. However, the current study contributes to knowledge as the first study to confirm the significant effect of customer perceived value in mediating the relationship between customer engagement and customer perceived brand innovativeness.

Unlike customer use, which has a significant direct effect on customer perceived brand innovativeness, customer engagement has no significant direct effect on customer perceived brand innovativeness. Importantly, customer use reflects the passive online activities that customers perform without any interaction or participation in online brand communities with other members, such as reading and/or watching videos or pictures (Muntinga et al., 2011;

Schivinski, et al., 2016). Customer behavioural engagement as one of the main dimensions of customer engagement (including four dimensions: customer behavioural engagement, conscious participation, enthusiasm, and social participation), reflects the active online participation activities that require customers' participation and interaction with other members in online brand communities (Dessart et al., 2015; Harrigan, 2017). Customer behavioural engagement includes two main sub-activities: contribution to brand communities (through liking, commenting, and sharing posts), and creation (through uploading pictures/video, by creating posts on online brand communities) (Tsai & Men, 2012; Amaro et al., 2016). Regarding the significant direct effect of customer use of online brand communities on customer perceived brand innovativeness ($r = 0.231$) and the non-significant direct effect of customer engagement with online brand communities on customer perceived brand innovativeness, future research should further examine the differences between customer use of online brand communities and customer engagement with online brand communities regarding their influences on customer perceived brand innovativeness.

6.2.1.3 Customer perceived value of online brand communities as an antecedent of customer perceived brand innovativeness

Results of hypothesis testing showed a positive relationship between customer perceived value of online brand communities and customer perceived brand innovativeness ($r = 0.185$). This result is consistent with the findings of the exploratory study, which also indicated that customer perceived brand innovativeness is driven by customer perceived value of online brand communities.

Table 6.3 Results of hypothesis testing - customer perceived value of online brand communities and customer perceived brand innovativeness.

Research Hypotheses		Results of hypothesis testing
H5.	Customer perceived value with online brand communities has a direct and positive influence on customer perceived brand innovativeness.	Supported

As shown in Table 6.3, the positive relationship between customer perceived value and customer perceived brand innovativeness has been supported. Accordingly, the more perceived value of online brand communities in form of more functional, emotional, and social value, the more customer perceived brand innovativeness. This finding confirms the exploratory study findings that evidenced customer perceived value has a positive effect on customer perceived brand innovativeness. Specifically, the information about the new offers or features or products of the brand, which customers gain from their online brand communities, make them more likely to perceive their brand as being innovative. Additionally, the exploratory study findings suggested the relationship between the number of posts and customer perceived brand innovativeness: the higher the number of posts on online brand communities about new products or features or offers, the greater the customer perceived value, and the greater their perception that their brand is more innovative. Therefore, customers' perceived value of online brand communities make them more capable of collecting more information about different brands in the market and comparing them to decide which brand is the more innovative compared to others.

Furthermore, only a few studies have examined the relationship between customer perceived brand innovativeness and customer perceived value and all applied to the context of offline brand communities. Both Chien (2013) and Lin et al. (2013) confirmed the positive relationship between brand innovativeness as an independent variable and customer perceived value as a

dependent variable. However, to the best of the researcher's knowledge, this hypothesis is the first to empirically examine the effect of customer perceived value on customer perceived brand innovativeness in the context of online brand communities. Considering the current research findings that reveal the significant direct effect of customer perceived value on customer perceived brand innovativeness, the greater the perceived value of online brand communities, the more likely their brand is perceived as being innovative compared to other brands. Accordingly, marketers should therefore encourage customers to increase their perceived value of online brand communities, comprising functional value (e.g. information exchange among communities' members), social value (e.g. social interaction among communities' members), and emotional value (e.g. a positive sense of community among members), which makes customers more capable of perceiving their brand as being innovative compared to other brands.

6.2.2 Antecedents of customer perceived value of online brand communities

This section introduces the related findings of customer use of online brand communities and customer engagement with online brand communities as antecedents of customer perceived value of online brand communities. The second research objective of the current study is to identify the different influence of customer use of online brand communities and customer engagement with online brand communities on customer perceived value of online brand communities; in addition, to examining the influence of customer use of online brand communities on customer engagement with online brand communities. Accordingly, this following subsection begins by introducing the relationship between customer use of online brand communities and customer engagement with online brand communities, followed by a discussion of the findings of customer use and customer engagement as antecedents of customer perceived value of online brand communities.

6.2.2.1 Customer use of online brand communities and customer engagement with online brand communities

Results of hypothesis testing of the structural model revealed a strong relationship between customer use and customer engagement ($r = 0.583$), which means that customer use has a strong positive effect on customer engagement. Likewise, the exploratory study findings point to an effect of customer use on customer engagement and indicate that customer use may lead to more customer engagement in online brand communities.

Table 6.4 Results of hypothesis testing – customer use of online brand communities and customer engagement with online brand communities.

Research Hypotheses		Results of hypothesis testing
H2.	Customer use of online brand communities has a direct and positive influence on customer engagement with online brand communities.	Supported

Table 6.4 shows the results of the hypothesis testing which supports the positive relationship between customer use and customer engagement, which indicates that customer use explains 58.3% of the change in customer engagement. The result of this direct hypothesised relationship are consistent with the exploratory study findings, which provide tentative evidence that indicates a positive relationship between customer use and customer engagement. Customers use online brand communities due to the attractive contents that grab their attention and then use the content of these brand's communities to engage with it. Accordingly, the more online brand communities are used through reading or watching videos or following brand's communities, the more customers engage with online brand communities through liking and/or commenting and/or sharing posts and/or creating brand posts. However, this positive relationship does not mean that all customers who use online brand communities will be more engaged; it means that using online brand communities will make the customer more likely to engage with the brand communities. Moreover, exploratory study findings revealed that one of

the most important things in transmitting a customer from a lurker or observer (performing passive online activities) into a poster (performing active online activities) is related to the information transparency of the brand's communities.

This result is consistent with literature that confirmed the positive relationship between customer use of online brand communities, and customer engagement with online brand communities as participation (contribution or creation). Both Vries (2014) and Bullard (2015) confirmed the positive relationship between customer usage intensity of online brand communities and customer engagement. Likewise, Brusilovskiy (2016) demonstrated that the greater the frequency, intensity and longevity of customer use of online brand communities, the higher degrees of community participation. Accordingly, many previous studies confirmed the positive relationship between customer use and customer engagement. However, to the best of the researcher's knowledge, this is the first study to differentiate between customer use of online brand communities and customer engagement with online brand communities as different conceptualizations, regarding the direct effect of customer use of online brand communities as passive online activities on customer engagement with online brand communities as active online participation activities, and regarding their influences on customer perceived value of online brand communities.

6.2.2.2 Customer use of online brand communities as an antecedent of customer perceived value with online brand communities

The direct and indirect influence of customer use on customer perceived value was examined in the structural model. Unexpectedly, the results of the hypothesis testing revealed that H3 (testing the direct relationship between customer use and customer perceived value) has been rejected. Whilst, H9 (testing the indirect effect of customer use on customer perceived value through the mediating role of customer engagement) has been accepted. However, due to the non-significant direct effect and the significant indirect effect of customer use on customer

perceived value, customer engagement has a full mediating effect on the relationship between customer use and customer perceived value. The direct effect of this relationship is not consistent with the exploratory study findings, which suggested a direct effect of customer use on customer perceived value, especially the direct effect on the functional value as one of the main dimensions of customer perceived value, which includes three main dimensions: functional, emotional, and social value. Otherwise, the indirect effect of this relationship is consistent with the exploratory study findings that supported the mediating effect of customer engagement on the relationship between customer use and customer perceived value.

Table 6.5 Results of hypothesis testing - customer use of online brand communities and customer perceived value of online brand communities.

Research Hypotheses		Results of hypothesis testing
H3.	Customer use of online brand communities has a direct and positive influence on customer perceived value of online brand communities.	Rejected
H9.	Customer engagement with online brand communities mediates the relationship between customer use of online brand communities and customer perceived value of online brand communities.	Supported

As illustrated in Table 6.5, the results of the hypothesis testing rejected H3 and supported H9, which indicated that there is no significant direct effect of customer use on customer perceived value and indicated that there is an indirect effect of customer use on customer perceived brand innovativeness through the mediating role of customer engagement. This indirect effect is affected by the strong significant direct relationship between customer use and customer engagement ($r = 0.583$), in addition to the strong direct relationship between customer engagement and customer perceived value ($r = 0.625$). Accordingly, perceiving value of online brand communities in the form of functional, emotional, and social value requires more

engagement with brand communities through performing more active online activities (customer behavioural engagement) such as liking, commenting, sharing, and creating posts, instead of doing passive online activities such as reading or watching posts (customer use of online brand communities) without any interaction with the online brand communities.

This result is surprising for several reasons. First, the results of the exploratory study suggested a direct effect of customer use on customer perceived value and indicated that customer use could drive customer perceived value, especially through the functional value (information about the brand) that reflects customers' main interests in using online brand communities. Therefore, the more use of online brand communities the more value the customer gains. Secondly, the lack of support for this direct relationship also contradicts the evidence from literature in studying customer perceived value in online communities (Tsai & Men, 2012; Yang et al., 2014; Chen & Lin, 2015; Amaro, 2016). Amaro (2016) confirmed the positive relationship between customer use and the emotional value and indicated that consumption of online brand communities has a strong/positive correlation with the emotional value (perceived enjoyment value). Likewise, Tsai and Men (2012) indicated that customers use of brand communities as a platform to search for discounts, information about their brand, and to exchange information with other members (Functional Value) or to have fun and seek leisure (Emotional Value); therefore, they are motivated by utilitarian reasons, rather than gaining more social support or voicing their opinions via online brand communities (Social Value).

There are several explanations for these contradictory findings, regarding the differences between the findings of the quantitative study and the exploratory study, in addition to the literature, as stated above. Firstly, customer use is related to passive online activities, through reading or watching pictures/videos without doing any interactive activities (Schlosser, 2005; Shao, 2009; Bullard, 2015). Consequently, customers who are not engaged with online brand

communities and only use them through passive activities are not capable of perceiving value from being members of online brand communities. Accordingly, gaining functional, social, and emotional value from being members, is related to the engaged customers, who are interested in participating and interacting with other members in the brand communities. Secondly, despite the lack of support for the direct influence of customer use on customer perceived value, the results of the interviews have implied an important role of customer engagement in mediating the relationship between customer use and customer perceived value. Meanwhile, many of the participants in the exploratory study referred to the mediating role of customer engagement as a prerequisite to building a relationship between customer use and customer perceived value, which provides support for the non-significance of this direct relationship. Thirdly, the quantitative study focused only on examining the effect of customer use on customer perceived value of online brand communities without examining the effect of customer use of online brand communities on the three sub-constructs of customer perceived value (functional, emotional, social value). Accordingly, the indirect effect in this relationship reflects full mediation effect of customer engagement due to the non-significant direct effect of customer use on customer perceived value.

6.2.2.3 Customer engagement with online brand communities as an antecedent of customer perceived value of online brand communities

The direct relationship between customer engagement and customer perceived value in online brand communities was tested in the structural model and the results of the hypothesis testing supported the positive influence of customer engagement on customer perceived value. This result is consistent with the findings of the exploratory study, which referred to customer engagement as an antecedent of customer perceived value.

Table 6.6 Results of hypothesis testing - customer engagement with online brand communities and customer perceived value of online brand communities.

Research Hypotheses		Results of hypothesis testing
H4.	Customer engagement with online brand communities has a direct and positive influence on customer perceived value of online brand communities.	Supported

As presented in Table 6.6, the results of the hypothesis testing revealed that customer engagement has a strong positive influence on customer perceived value. Accordingly, engaged customers are moving from observer to content contributor, therefore only engaged customers (active customers) may perceive value from being members of online brand communities. Meanwhile, users (passive customers) need to be engaged first to perceive value from being members of their brand communities via social media. Most customers consume more than they contribute to online brand communities, as Nielsen (2009) confirmed that 53% of active users are just following brands rather than liking or commenting or sharing or creating posts. However, customer engagement with online brand communities helps customers to find out more about their brand's offers and products and perceive more value from being members of these brand's communities.

The finding further strengthens the evidence from the exploratory study, which indicated that the higher the customer engagement with online brand communities through liking, commenting, sharing, and creating posts, the greater the customer perceived value from these brand communities. The results of the exploratory study revealed that customer engagement makes the customer more likely to gain functional value (e.g. information about discounts, offers, and product features of the brand), emotional value (e.g. feeling happy from gaining information from brand communities), and social value (e.g. interacting with other members

and expanding social relationships through brand communities). Accordingly, the result of this hypothesis provides confirmation of the exploratory study findings.

The support for the positive direct influence of customer engagement on customer perceived value is anticipated and consistent with the existing literature in the context of online communities. Amaro (2016) confirmed the positive influence of customer engagement (including contribution and creation) on customer perceived value (including only emotional value). Zhang (2016) asserted the positive influence of three sub-constructs of customer engagement: conscious participation, enthusiasm, and social interaction, on three sub-constructs of customer perceived value: functional value, social value, and emotional value, except the positive influence of social interaction on functional value and on social value, which were found to have no significant influence. Moreover, Gummerus (2012) assured the positive influence of behavioural engagement on customer perceived value (including social, entertainment, and economic benefits). Likewise, Vivek et al. (2012) demonstrated that customer engagement could lead to many successful marketing outcomes, such as customer perceived value. Accordingly, the previous studies, despite following different paths of defining and measuring both customer engagement and customer perceived value, all confirmed the positive direct effect of customer engagement with online brand communities on customer perceived value of online brand communities.

However, considering the results of hypotheses H3, H4, and H9, no studies in online brand communities have been found by the researcher that consider the differences between customer use and customer engagement regarding their separate influence on customer perceived value of online brand communities. In regard to the current study findings that confirmed the non-significant direct effect of customer use on customer perceived value (H3) and the significant indirect effect of customer use on customer perceived value through the mediating effect of

customer engagement (H9), transferring customers from using (passive customer) to engagement (active customer) is essential to gain the perceived value of online brand communities – in form of functional, emotional, and social value – therefore, passive customer might not perceive any of these perceived values without their engagement with online brand communities. Accordingly, marketing managers should discriminate between customer use as passive activities and customer engagement as active participation activities regarding their influences on customer perceived value of online brand communities.

6.2.3 Moderating effect of customer innovativeness

The third objective of the current study is to investigate the extent to which customer innovativeness moderates the effects of customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities on customer perceived brand innovativeness. The results of the hypothesis testing also revealed that customer innovativeness (CI) has no significant moderating effect on the relationship between: customer use of online brand communities and customer perceived brand innovativeness, customer engagement with online brand communities and customer perceived brand innovativeness, and customer perceived value of online brand communities and customer perceived brand innovativeness. Unexpectedly, customer innovativeness has a moderating effect on the relationship between customer engagement with online brand communities and customer perceived value of online brand communities. Classifying the respondents into highly innovative customers (high CI – innovators) and low innovative customers (low CI – non-innovators) has a significant moderating effect on the relationship between customer engagement and customer perceived value, thus the highly innovative customers have a stronger effect ($r = 0.919$) on this relationship than the low innovative customers ($r = 0.634$).

Table 6.7 Results of hypothesis testing – moderating effect of customer innovativeness

Research hypotheses		Results of hypothesis testing
H10.1	Customer innovativeness moderates the effect of customer use of online brand communities on customer perceived brand innovativeness.	Rejected
H10.2	Customer innovativeness moderates the effect of customer engagement with online brand communities on customer perceived brand innovativeness.	Rejected
H10.3	Customer innovativeness moderates the effect of customer perceived value of online brand communities on customer perceived brand innovativeness.	Rejected
H10.4	Customer innovativeness strengthens the positive relationship between customer engagement with online brand communities and customer perceived value of online brand communities.	Supported

As shown in Table 6.7, hypothesis 10.1, 10.2, and 10.3 have been rejected. Accordingly, customer innovativeness does not mediate any of the proposed relationships. Otherwise, hypothesis 10.4 has been supported and the results show that customer innovativeness has a significant moderating effect on the relationship between customer engagement and customer perceived value. Accordingly, customer innovativeness strengthens the positive relationship between customer engagement with online brand communities and customer perceived value of online brand communities. To the best of the researcher's knowledge, this study is the first to empirically examine the moderating effect of customer innovativeness on the relationship between customer engagement and customer perceived value in online brand communities or even in offline communities.

Highly innovative customers have a stronger effect on the relationship between customer engagement and customer perceived value than low innovative customers did. Highly innovative customers perceive more value from their engagement with their online brand communities, whilst low innovative customers perceive less value from their engagement with

their online brand communities. The main explanation for this stronger effect of highly innovative customers might be related to having more passion for gaining more value and collecting more information about new products and features of their brand through their engagement with their online brand communities. By contrast, low innovative customers might not have the same level of passion for information through their engagement with their online brand communities.

Exploring the moderating effect of customer innovativeness provides more understanding of the relationship between customer engagement and customer perceived value through classifying customers based on their personal characteristics as highly innovative customers (who tend to be earlier adopters and are more likely to be opinion leaders) and low innovative customers (Aldas-Manzano et al., 2009). This finding is consistent with several previous studies (e.g. Ho & Wu, 2011; Hur et al., 2012) that confirmed the significant moderating effect of customer innovativeness in providing more understanding of several relationships. However, this moderating effect of customer innovativeness on the relationship between customer engagement with online brand communities and customer perceived value of online brand communities will provide more clarification and understanding regarding the degree to which customer innovativeness characteristics, through customer engagement, might affect their perceived value of online brand communities. Accordingly, this hypothesis supported the moderating effect of customer innovativeness in strengthening the positive relationship between customer engagement and customer perceived value, which refers to highly innovative customers tending to perceive more value from their engagement with online brand communities than low innovative customers.

6.3 Discussion of additional findings

Regarding the exploratory study findings and the descriptive analysis results of the quantitative study, there are several additional findings that have been discovered and provide additional insights for the findings.

6.3.1 Additional findings of customer use of online brand communities

The previous studies identified five main activities for customer use: reading brand posts, following/joining online brand communities, watching videos/pictures, reading fan pages related to the brand, and following brand on social media communities (Tsai & Men, 2012; Schivinski et al., 2016). The findings of the descriptive statistic revealed that the highest rate of agreement between the usage activities belongs to reading brand posts on online brand communities (72.1%); after that joining/following their brand on online brand communities (68.8%); then watching videos/pictures and following/joining online brand communities (64.5% and 63.1% respectively); whilst the lowest proportion belongs to reading fan pages related to their brand on social media communities.

Furthermore, the results of the descriptive statistics also showed that the main social media platforms customers use to engage with their brand communities are Facebook (89.3%), followed by Twitter (48.1%), YouTube (43.1%), Instagram (34.3%), and then Snapchat (19.0%), in addition to a small proportion (3.7%) of other social media platforms such as LinkedIn, Pinterest, and Tinder. Moreover, regarding this research was applied to the mobile phone sector in the UK, the results of the descriptive statistics revealed that customers are highly engaged with social media communities associated with iPhone (45.8%), followed by Samsung (36.6%), Sony and Microsoft (5.5% for each), then LG (3.0%), in addition to other mobile phone brand social media communities with a very small percentage (3.5%) such as social media communities of Google Nexus, HTC, Blackberry, Huawei, Motorola, One Plus,

Nokia, Tesco mobile, and Honor. In regard to the results of a report which ranked the mobile phone manufacturers in the UK based on their market share (Staista, 2018): iPhone comes first with 48%, followed by Samsung (34%), Sony (4%), followed by HTC (3%), LG (2%), Microsoft (1%), and other (8%). Consequently, comparing these results with study findings provides an indicator that iPhone and Samsung, which have the highest proportions of the engaged customers, are also dominating the mobile phone market in the UK. Accordingly, it is recommended to the mobile phone brands with lower market share to increase their online marketing efforts through creating more creative and effective online brand communities.

The exploratory study findings demonstrated the importance of social media as a new marketing tool compared to traditional media marketing. Social media brand communities introduce a very important source for customers to collect more information about the brand. Customers are likely to use social media, which provide a chance to interact with the brand representatives and with the brand communities' members.

6.3.2 Additional findings of customer engagement with online brand communities

The findings from the exploratory study revealed that customers are influenced by brand's posts or feedback and are also influenced by peoples' comments. Meanwhile, the results of the exploratory study revealed that customers are more likely to rely on more independent sources of information to find out more about their brand, such as other customers' comments instead of the comments or feedback of the brand's representatives. This result is consisted with the research of Lee and Chun (2016) who confirmed that other customers' comments on social media positively influence customers' latitude of acceptance and attitude change toward issues/companies. Therefore, it is very important to provide more understanding of the role of other customers' comments via online brand communities in improving customer perception of brand innovativeness. Additionally, findings of the exploratory study revealed that the

presence of negative comments may provide an indicator of the transparency of the brand communities via social media. Additionally, the purchasing decisions of customers may be affected by negative comments from other members

The results of the exploratory study are used to support the findings in the stream of existing research such as Vries and Carlson (2014), Dessart et al. (2015), Zheng et al. (2015), and Harrigan et al. (2017) which acknowledge customer engagement may be conceptualized as a multidimensional concept that includes four dimensions: conscious participation, enthusiasm, social participation, and customer behavioural engagement. Moreover, behavioural engagement includes four main customers' online activities, including liking, commenting, sharing, and creating brand related posts.

Results of descriptive statistics exposed (N=830) that liking brand posts has the highest frequency (36.9%) among the respondents followed by sharing brand posts (20.1%), creating brand posts (19.4%), and finally writing comments (14.8%). Likewise, the exploratory study findings indicated that customers are engaged with different online brand communities at different levels of engagement. Whilst some customers are liking, commenting, sharing, and creating posts; other customers are liking and commenting or commenting and sharing, or liking only or commenting only, which indicates that there are different degrees of customer engagement with online brand communities.

6.3.3 Additional findings of customer perceived value of online brand communities

The findings of the exploratory study are used to support the findings in the stream of existing research (e.g. Kim & Ko, 2012; Carlson et al., 2015; Chen & Lin, 2015; Zhang et al., 2016), which referred to customer perceived value as a multidimensional conceptualization that includes three dimensions; functional, emotional, and social value. Furthermore, the exploratory study findings show that customers, as members of online brand communities,

perceive them as useful and helpful. Regarding the three dimensions of customer perceived value, customers are more likely to perceive functional value, including information about their brand's new features, offers, and products, which may help them to make their own purchasing decisions. However, this information is not always useful, thus it depends on what kind of information and whether it fits customers' interests. Accordingly, acquiring customers' attention through providing useful information will make them perceive more functional value from being members of these brand communities.

6.3.4 Additional findings of customer perceived brand innovativeness

The exploratory study findings revealed that there is a clear difference between product innovativeness and brand innovativeness. Customers look forward to collecting more information about the new features, offers, and the price/quality of new products of their known brands rather than unknown brands. Moreover, they are not interested in following or collecting more information about unknown brands, even if those brands have innovative products. According to Hyun and Han (2012) and Sanayel et al. (2013) when customers are faced with unknown products, they are more likely to rely on their known brands. Furthermore, brand innovativeness in online brand communities is related to creating posts about the new features, products or offers from the brand, which allow customers to know more and perceive the brand as innovative compared to other brands. Additionally, considering the exploratory study findings, brand communities with a higher number of likes and comments are more attractive and give customers an initial indicator that their brand is more innovative than other brands. Furthermore, exploratory study findings reveal that brand innovativeness is a subjective term that reflects customer's perception of brand innovativeness and can be used to identify the most innovative brand compared to others.

This result is consistent with previous studies (e.g. Chen, 2010; Boisvert, 2012; Sanayel et al., 2013; Shams et al., 2015) which confirmed that customer perceived brand innovativeness compared to customer perceived product innovativeness is a broader conceptualization for two reasons: firstly, customer perceived brand innovativeness includes customers' rational drivers and non-rational drivers that create the image of innovativeness in customers' minds. Therefore, customer perceived brand innovativeness creates a more complete picture of innovation in customers' minds through introducing a broader conceptualization of innovativeness. Secondly, customer perceived brand innovativeness provides a signal of the brand position in the market.

With regard to the findings of the exploratory study, the likelihood of buying well-known brands may vary from one product to another for the same brand. In the mobile phones/clothes sectors, customers may prefer to buy well-known/famous brands like iPhone/Zara and they want to feel excitement resulting from having it and following the brand communities. Otherwise, in other sectors such as grocery retail sector, customers may not want to buy innovative brands and they may join the brand communities to be up to date with the latest offers or discounts. Moreover, customers may compare different products in different brands, for example, Adidas more innovative than Nike in clothes but in shoes Adidas is better than Nike. Additionally, iPhone is more innovative than Samsung in phones but in headphones, Samsung is better than iPhone. Therefore, customers as members in different online brands communities may compare different brands' products through identifying the pros and cons of each and building up their perceptions about brand innovativeness. This result is consistent with Barone and Jewell (2014) who confirmed the role of the product categories in comparing innovative and non-innovative brands.

The exploratory study findings reveal that customer perception of the brand innovativeness is related to the circles of exchanging information on online brand communities. With regard to the ongoing interaction between members and brand's representatives on online brand communities, customers can read or watch posts and write comments or give feedback that may take the form of ideas, recommendations or opinions. Consequently, brands can use these ideas to develop their products and introduce new features or products, which effectively reflect customers' expectations. Accordingly, a new circle of innovation starts to reflect the circles of exchanging information between customers and brand's representatives, which support customers' perception of the brand innovativeness. This ongoing process never ends, customers can contact the brand or comment or send feedback continuously (24 hours a day/ 7 days a week) and the brand will assimilate that feedback or comment. This is consistent with Wang et al. (2016) who examined co-innovation in online communities and confirmed the role of the ongoing interaction between brands and customers, in exchanging information and in making brands more able to share common values, discover new product usages, and even new products compared to their competitors.

6.3.5 Additional findings of customer innovativeness

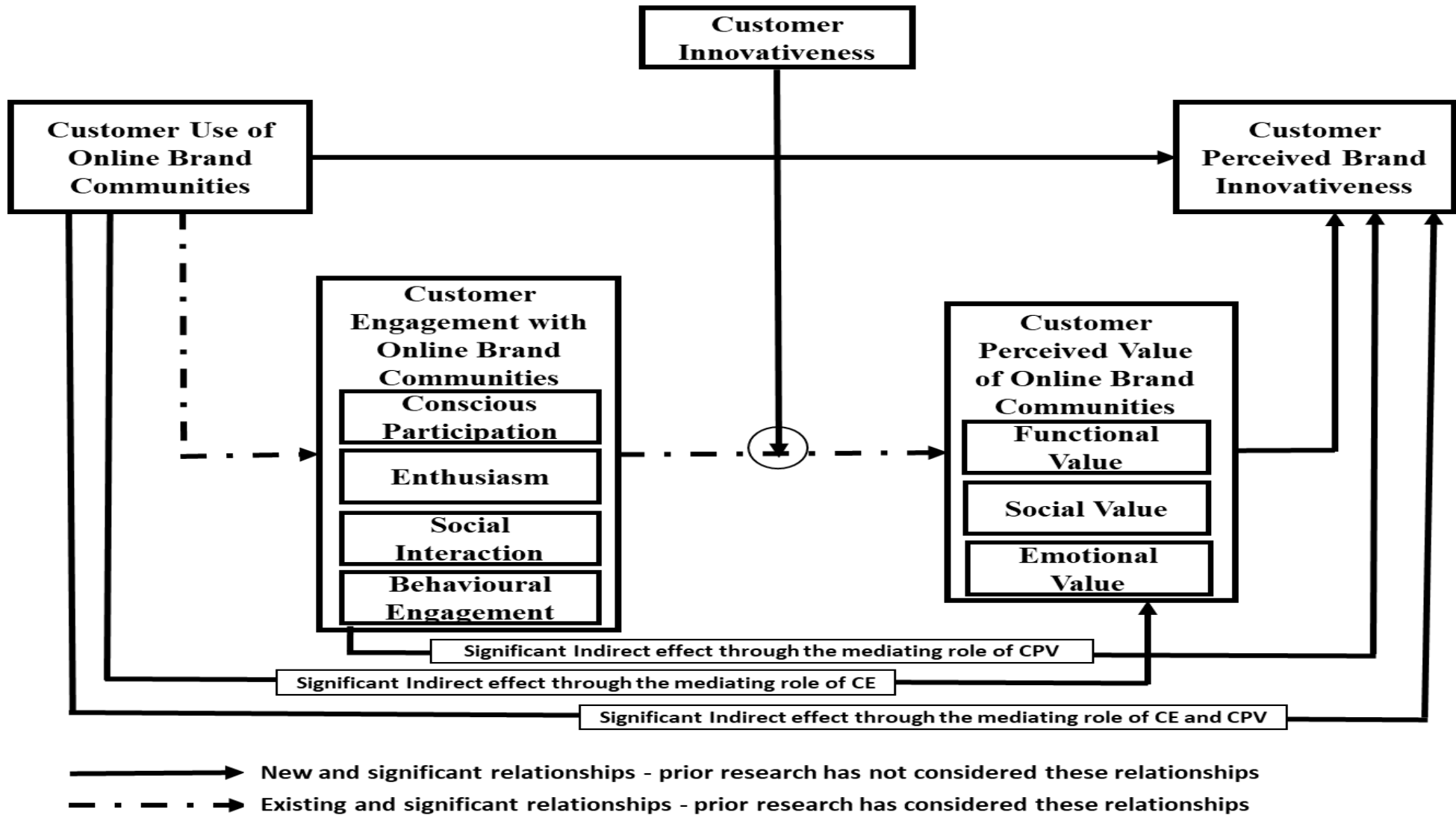
The findings of the exploratory study show that there are several additional findings related to customer innovativeness. Firstly, innovators are seeking new products and brands through using different sources of information such as social media platforms, internet websites, TV and newspapers. Importantly, they are using social media platforms as a main source for information about new features, products, and offers. This result is consistent with Goswami and Chandra (2013) who confirmed newness attraction as a main determinant of customer innovativeness. Secondly, highly innovative customers are strongly independent in their decisions, such customers are more likely to make their decisions to buy innovative products without asking other customers' opinions. By contrast, low innovative customers prefer to ask

people, read other customers' comments, and consult their friends prior to making purchasing decisions related to new products. This result is consistent with Roehrich (2004), who confirmed independence in decision making as a main determinant of customer innovativeness. Thirdly, highly innovative customers are risk takers and prefer to purchase new products before their friends, while low innovative customers are risk averse; they are afraid to lose their money through buying new products they do not know anything about; and they prefer to wait for someone to try it first then tell them about his/her experience. This result is consistent with Roehrich (2004) who confirmed the willingness to take risks as a main determinant of customer innovativeness. Comparing the findings of the current study and previous studies (e.g. Manning et al., 1995; Roehrich, 2004; Chen, 2014), there are three main sub-dimensions of customer innovativeness: newness attraction, ability to take risks, and independence in making innovative decision. Accordingly, future research should take these sub-dimensions of customer innovativeness into consideration to provide more understanding of the moderating effect of customer innovativeness. Categorising customers based on their innovative characteristics (using customer innovativeness as a moderating variable considering the three sub-dimensions) would provide more understanding of many relationships.

6.1 Final conceptual model of the current study

The final conceptual model represents only the significant relationships, which describes the new significant relationships that previous research has not considered and the existing significant relationships that previous research has considered, as presented in Figure 6.2.

Figure 6.2 Final conceptual model based on the quantitative findings



6.4 Summary

This chapter has included discussions on the findings of the exploratory study data analysis (presented in chapter 4) and the quantitative data analysis (presented in chapter 5) in relation to the existing literature. This chapter discussed how customer perceived brand innovativeness is affected by three key antecedents in the context of online brand communities: customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities. The results reveal that customer use of online brand communities has the strongest effect on customer perceived brand innovativeness, followed by customer perceived value, whilst customer engagement has no direct effect on customer perceived brand innovativeness. Considering the different influence of customer use and customer engagement on customer perceived value, the results reveal that customer engagement has a strong effect on customer perceived value, whilst customer use has no significant direct effect. In relation to the moderating effect of customer innovativeness, the results revealed that highly innovative customers have a significant moderating effect on the relationship between customer engagement and customer perceived value of online brand communities.

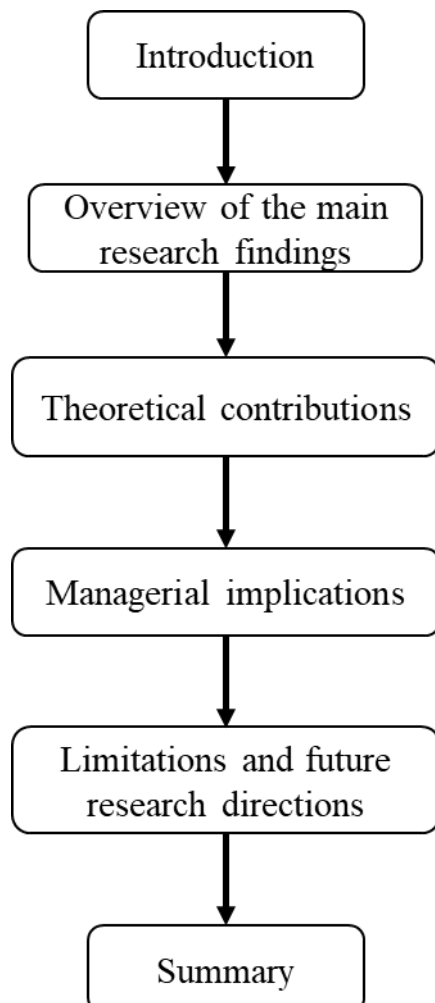
Accordingly, this chapter has discussed both key findings and additional findings of the current study, considering the findings of the exploratory study and the quantitative study and assessing them in the context of previous studies. The final chapter of the current research (Chapter 7) presents the two areas of contribution (academic and managerial). Limitations of the current research and the directions for further research are then discussed.

Chapter 7: Conclusion

7.1 Introduction

This chapter outlines the key contributions of the current research, its limitations and future research directions. As presented in Figure 7.1, the chapter contains 5 sections: the first provides an overview of the main research findings. The second presents the main theoretical contributions. The next details the practical implications and recommendations for marketing managers of online brand communities. The fourth addresses the limitations of the current research and outlines the proposed future research directions. Finally, the last section presents a summary of the chapter.

Figure 7.1 Structure of chapter seven – conclusion



7.2 Overview of the main research findings

Based on the literature review, the initial theoretical framework was developed and an exploratory study was conducted to update this initial theoretical framework. This updated conceptual framework was empirically tested and the final conceptual model was produced. This section of the chapter discusses the research findings achieved based on the current research objectives.

The first research objective was to investigate how customer perceived brand innovativeness is affected by three key antecedents in online brand communities (customer use of online brand communities; customer engagement with online brand communities, and customer perceived value of online brand communities). Findings from this study have identified customer use of online brand communities and customer perceived value of online brand communities are key antecedents of customer perceived brand innovativeness in online brand communities, due to the significant direct positive influence of customer use of online brand communities and customer perceived value of online brand communities on customer perceived brand innovativeness. Additionally, customer engagement with online brand communities has no significant direct effect on customer perceived brand innovativeness, thus, it is not one of the antecedents of customer perceived brand innovativeness in online brand communities.

The second research objective was to identify the different influence of customer use of online brand communities and customer engagement with online brand communities on customer perceived value of online brand communities; in addition, to examining the influence of customer use of online brand communities on customer engagement with online brand communities. This study's findings reveal that whilst customer engagement with online brand communities has a strong significant positive effect on customer perceived value of online brand communities, customer use of online brand communities has no significant effect on

customer perceived value of online brand communities without the mediating role of customer engagement. Additionally, the findings confirmed the significant direct effect of customer use on customer engagement with online brand communities.

The third research objective was to investigate the extent to which customer innovativeness moderates the effects of customer use, customer engagement, and customer perceived value on customer perceived brand innovativeness. The current study's findings show that customer innovativeness (low vs. highly innovative customers) has no moderating effect on any of the proposed relationships. Unexpectedly, the quantitative results revealed that customer innovativeness has a significant moderating effect on the relationship between customer engagement with online brand communities and customer perceived value of online brand communities. The results demonstrated that highly innovative customers have a stronger effect on the relationship between customer engagement with online brand communities and customer perceived value of online brand communities.

7.3 Theoretical contributions

This thesis advances several contributions to knowledge and literature in the field of online marketing, particularly online brand communities. Additionally, it contributes to the wider theory of innovation, marketing, and customer behaviour.

To the best of the researcher's knowledge, this study is one of the first attempts to empirically explore and investigate how customer perceived brand innovativeness is affected by three key antecedents in the context of online brand communities: customer use, customer engagement, and customer perceived value. This exploration can be extrapolated into three findings. First, customer use has a significant positive impact on customer perceived brand innovativeness. Specifically, this study empirically supports the positive impact of customer use on customer perceived brand innovativeness, furthermore identifying it as the strongest antecedent of

customer perceived brand innovativeness in online brand communities. Second, customer perceived value has a significant positive impact on customer perceived brand innovativeness. In particular, to the researcher's best knowledge, this study is the first to support the positive impact of customer perceived value on customer perceived brand innovativeness, in addition to determining it as the second strongest antecedent of customer perceived brand innovativeness in online brand communities. Third, whilst customer engagement has no significant direct effect on customer perceived brand innovativeness, it has a significant indirect effect on customer perceived brand innovativeness through the mediating effect of customer perceived value. Accordingly, the results reveal that customer use has the strongest effect on customer perceived brand innovativeness, followed by customer perceived value, whilst customer engagement has only an indirect effect on customer perceived brand innovativeness through the mediating role of customer perceived value. Thus, the key antecedents of customer perceived brand innovativeness in online brand communities are customer use of online brand communities and customer perceived value of online brand communities.

The current study also adds to the growing literature on customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities. To the best of the researcher's knowledge, this study is the first to differentiate between customer use and customer engagement regarding their influences on customer perceived value. This differentiation is important to identify the different influence of customer use (as passive online activities) and customer engagement (as active online participation activities) on customer perceived value of online brand communities. This differentiation can be divided into two main contributions:

First, regarding the differences between customer use of online brand communities and customer behavioural engagement with online brand communities, some literature (e.g. Shao, 2009) referred to customer use as the initial level of customer engagement by focusing on three levels of engagement: using/consuming, contributing, and creating brand posts. Whilst other studies (e.g. Laroche et al., 2012; Men & Tsai, 2013; Kamboj & Rahman, 2016) classify the nature of customers' online activities into active participation activities (customer engagement) and passive activities (customer use). The current study is one of a few studies (e.g. Laroche et al., 2012; Men & Tsai, 2013) that differentiate between customer use as comprising passive online activities (e.g. reading and watching posts on online brand communities, following/liking the platforms of online brand communities, following the brands on online communities) and customer behavioural engagement as comprising active online activities (e.g. liking, commenting, sharing, and creating brand posts). Regarding these differences between customer use and customer behavioural engagement, this study is one of a few studies (e.g. Schivinski et al., 2016) to support the strong positive impact of customer use of online brand communities on customer engagement with online brand communities. Accordingly, the passive use of online brand communities through more reading/watching brand posts and following online brand communities has a strong influence on increasing customer engagement with online brand communities through increased customer behavioural engagement (e.g. more liking, commenting, sharing, and creating posts on online brand communities). It also increased the conscious participation (e.g. customers pay attention and like to learn about the brand via online brand communities), enthusiastic participation (e.g. excitement and passion about participating in their online brand communities), and social participation (e.g. customers enjoy participating or sharing their opinions with other members or their friends on online brand communities).

Second, the quantitative findings revealed that whilst customer use has no significant direct impact on customer perceived value of online brand communities, it has an indirect impact on customer perceived value of online brand communities through the mediating role of customer engagement. Importantly, to the best of the researcher's knowledge, the current study is the first to investigate the impact of customer use of online brand communities on customer perceived value of online brand communities. Accordingly, whilst customer engagement has a strong positive direct effect on customer perceived value, customer use has no significant effect on customer perceived value without the mediating role of customer engagement. Therefore, transitioning customers from passive customers (customer use) to active customers (customer engagement) is likely to have a very strong significant effect on the value customers can gain from being a member of their online brand communities.

To the best of the researcher's knowledge, this study is the first to support the moderating effect (intervention effect) of customer innovativeness in strengthening the relationship between customer engagement with online brand communities and customer perceived value of online brand communities. Regarding the moderating effect of customer innovativeness, the results reveal that highly innovative customers have a stronger moderating effect on the relationship between customer engagement and customer perceived value. Much of the literature (e.g. Ho & Wu, 2011; Hur et al., 2012) confirms the significant moderating effect of customer innovativeness in providing a deeper understanding of many relationships between different constructs. Likewise, the current study provides more understanding of the moderating effect of customer innovativeness on the relationship between customer engagement and customer perceived value. Specifically, highly innovative customers, who are more likely to buy new products, are more independent in their decision making for buying new products, and more likely to take risks, are more likely to perceive more value of online brand communities (including gaining functional, emotional, social value of their online brand communities)

through their engagement with online brand communities (include liking, commenting, sharing, and creating posts). On the other hand, low innovative customers, who are less likely to buy new products, less independent in their decision making for buying new products, and risk averse, are less likely to perceive more value through their engagement with online brand communities. It is possible that highly innovative customers, being risk takers, independent thinkers, and opinion leaders, feel they need more information before making a decision regarding the new offers, features, and products of a brand, in addition to gaining more emotional and social value of being engaged members of online brand communities.

A further contribution of this thesis is associated with the significant role of online brand communities in creating brands' circles of innovation. Many previous studies of online brand communities (e.g. Wang et al., 2016) focused only on examining the role of online brand communities in exchanging information and enabling customers to discover the usages of new products and compare new products to their competitors. To the best of the researcher's knowledge, this study is the first to explore the role of online brand communities in creating ongoing circles of innovation between communities' members and brand representatives. The exploratory study findings uncovered the role of online brand communities in creating circles of innovation through the ongoing information exchange among communities' members and with brands' representatives. Customers can give feedback in the form of ideas, recommendations or opinions related to their own experience through writing comments or creating posts on online brand communities. Consequently, brands can use their customers' feedback to develop their own features, products, and offers as a reflection of their customers' expectations. Accordingly, a new circle of innovation starts which reflect the information exchange between customers and brands' representatives in a continuous and ongoing process. Accordingly, this thesis contributes to knowledge by uncovering the significant role of online

brand communities in creating and supporting these ongoing circles of innovation between communities' members and brand's representatives.

Finally, regarding the research setting, the exploratory study findings of the current study reveal that customers are engaged with online brand communities of different brand categories in three predominant retail sectors, which are: technological products or electronics, fashion, and groceries. The findings of the exploratory study reveal that customers engage most with the online brand communities of technological products and specifically with mobile phone online brand communities. Thus, the quantitative study of the current research focused on customers who engage with online brand communities of the mobile phone brands in the UK. Most literature researching innovation of the mobile phone brands (e.g. Barone & Jewell, 2014; Shams et al., 2015) focused on studying innovation in the mobile phone sector within an offline context, and demonstrated that the mobile phones sector offers variation in innovativeness, has several well-established brands available, and has personal relevance for customers. However, to the best of the researcher's knowledge, this study is the first to focus on brand innovativeness of the mobile phone brands in the context of online brand communities. Accordingly, since no studies have been found that examined customer perceived brand innovativeness in mobile phone online brand communities, nor any that explore the antecedents of customer perceived brand innovativeness in this context of online brand communities, thus this research represents a contribution to the knowledge in this field.

7.4 Managerial implications

The current thesis has several implications for marketing practice, concerning the effects of the three key antecedents of customer perceived brand innovativeness in the context of online brand communities: customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities.

Moreover, the study considers the differences between customer use and customer engagement as influences on customer perceived value, in addition to the moderating effect of customer innovativeness.

Firstly, this research identifies the key antecedents of customer perceived brand innovativeness in online brand communities. Customer use of online brand communities and customer perceived value of online brand communities were found to have a significant direct influence on customer perceived brand innovativeness. Considering the differences between customer use (representing passive members) and customer engagement (representing active members) as antecedents of customer perceived brand innovativeness in online brand communities, customer use (including reading posts, watching video/images, and following online brand communities) is the strongest predictor of customer perceived brand innovativeness in online brand communities. Companies managing online brand communities should focus on encouraging online brand communities' members to increase their frequency of use. Thus, the more customers use online brand communities through following, reading, and watching brand posts, the more they perceive their brand as being innovative compared to other brands.

On the other hand, customer engagement has no significant effect on customer perceived brand innovativeness without the mediating effect of customer perceived value, which means that passive customers who are not undertaking any engagement activities, would be more capable of perceiving their brand as being innovative compared to other brands. Furthermore, customer perceived value, which has a full mediating effect on the relationship between customer engagement and customer perceived brand innovativeness, has a positive effect on customer perceived brand innovativeness and is identified as the second strongest predictor of customer perceived brand innovativeness in the context of online brand communities. Accordingly, marketing practitioners should encourage engaged customer to increase their engagement

activities (through more liking, commenting, sharing, and creating posts), to perceive more value of online brand communities (comprising functional, emotional, and social value), which might increase their perception of their brand innovativeness. Additionally, marketing managers should therefore encourage information exchange (functional value), exchange social benefits (social value), and a positive sense of community among communities' members (emotional value), which makes engaged customers more capable of perceiving their brand as being innovative compared to other brands.

Secondly, this thesis distinguishes between customer use of online brand communities and customer engagement with online brand communities as influences on customer perceived value of online brand communities. Customer use of online brand communities reflects the consumption of these communities' content and includes several passive activities (e.g. following online brand communities and reading/watching brand posts), which are related to passive customer types (often termed 'lurkers' or 'free riders'), and comprises customers who are using online brand communities without any interaction with other members or even with the brand. Customer engagement with online brand communities reflects both customer contribution and creation via these brand communities and includes several active participation activities (e.g. liking, commenting, sharing, and creating posts), which are related to active members who are motivated to participate in online brand communities (often termed 'posters'), and comprises customers who are interacting with other members or with the brand via online brand communities. Regarding these results, marketing managers should therefore encourage customers to transform from using online brand communities (as passive members) to engaging with online brand communities (as active members). Moreover, considering the differences between customer use and customer engagement as influences on customer perceived value, customer engagement has a strong positive direct effect on customer perceived value, whilst customer use has no significant direct effect on customer perceived value without

the mediating role of customer engagement. Therefore, passive customers who use online brand communities without any interaction will not be able to perceive the value of being a member without engaging with it, which confirms the strong mediating effect of customer engagement on the relationship between customer use and customer perceived value. Companies managing online brand communities should recognize the significant role of transitioning customers from using into engagement in strengthening customers' perceived value of being members of online brand communities. Therefore, marketing managers should encourage their brand communities' members to be more engaged through more liking, commenting, sharing, and creating posts. It may help them to perceive more value in the form of more functional value (more information about brand's offers, features, and products), emotional value (feeling happy at being a member of the communities), and social value (social interaction among members).

Thirdly, this thesis has investigated the significant moderating effect of customer innovativeness (by categorising customers based on their innovativeness characteristics into highly innovative customers who are novelty seeking, opinion leaders, risk takers, and independent and low innovative customers) in strengthening the positive effect of customer engagement on customer perceived value. Concerning the findings of the current study, highly innovative customers were found to have a stronger effect on the relationship between customer engagement and customer perceived value than low innovative customers. Marketing managers should encourage highly innovative members to be more engaged with their communities, which will help them to gain more value from online brand communities in the form of functional value, emotional value, and social value, in addition to decreasing the risk of buying new products, and make them more independent in making their decision to buy the innovative products and features of the brand. For example, gaining more information from being engaged members of online brand communities can help highly innovative customers to

know more about the innovative products and features of the brand, which can help them to make their purchase decisions. Moreover, marketing managers should encourage highly innovative customers to share their experience with low innovative customers via brand communities (brands could do that through highlighting or tagging highly innovative customers within brand communities, sending notifications or through direct emails to ask them to share their experience with other members), to encourage low innovative customers to be more engaged with online brand communities, which will help them to gain more value from online brand communities and will encourage them to try new products and increase their degree of certainty about their decision to buy new product.

Furthermore, the exploratory study findings, which demonstrate the importance of social media compared to traditional media marketing, reveal that customers are influenced by their brand's feedback and are influenced by other customers' comments. However, customers are more likely to rely on other customers' comments instead of a brand's feedback as an independent source to know more about their brand. Marketing managers should give more attention to their marketing efforts via online brand communities (e.g. provide real time feedback on customers' comments and posts, create transparent and interactive online brand communities, and provide agile marketing teams capable of dealing with the nature of these dynamic communities), and encourage communities' members to participate and interact with other members via their brand communities. This may encourage them to write, share and/or create posts of their own experiences or opinion thus providing an independent source of information for many customers. Additionally, the exploratory study findings show the importance of negative comments in providing an indicator of the transparency of brand communities on social media and the effect it may have on customers' purchase decisions in the future. Marketing managers should encourage communities' members to share their experiences (positive or negative) and

they should be aware and careful in managing these negative comments, which have a strong effect on customers' future decisions.

Moreover, the exploratory study findings supported the findings of the prior studies (e.g. Boisvert, 2012; Sanayel et al., 2013; Shams et al., 2015) in differentiating between customer perceived brand innovativeness and customer perceived product innovativeness. Customer perceived brand innovativeness is a broader conceptualization of innovativeness and provides customers with a signal to the brand position in the market, and reflects both rational drivers (e.g. features, technology, and offerings of the brand's products) and non-rational drivers (e.g. feeling happy and excited for owning a known brand) of the customer (Shams et al., 2015). Otherwise, customer perceived product innovativeness reflects only the rational drivers of the customer and provides a signal of uncertainty about the product in the market, due to the lack of information, which creates more difficulties in comparing it with other products to identify the more innovative products in the market (Boisvert, 2012; Sanayel et al., 2013). Therefore, marketing managers should focus on building their own brand innovativeness instead of repeating their marketing efforts to build their innovativeness with each single product (for example, focusing on the innovative features, technology, and offerings of each mobile phone instead of focusing on the innovativeness of the mobile phone brand). Brand innovativeness makes it easier for customers to compare a brand with other brands and identify the more innovative brand compared to others. Meanwhile, product innovativeness makes it very difficult for companies' customers to compare between one product and others in the market to identify the more innovative product, which increases customer uncertainty and increases the risk of buying new products. Therefore, it is recommended that marketing managers focus on building their own brand innovativeness considering their customers' perspectives instead of focusing only on the organizational perspective of brand innovativeness. Accordingly, marketing managers should increase their efforts via online brand communities to provide more

information regarding the new products and features of the brand, which increases their customers' perception of the brand innovativeness.

Finally, regarding the findings of the current study, which uncovered the role of online brand communities in creating circles of innovation through the ongoing information exchange among communities' members and with brands' representatives. Customers' feedback via online brand communities in the form of new ideas, recommendations or opinions related to their own experience makes brands better able to use their customers' feedback to develop innovative features, products, and offers as a reflection of their customers' expectations. Consequently, a new circle of innovation starts that reflects the information exchange between customers and brands' representatives in a continuous and ongoing process. Accordingly, it is recommended for marketing managers to create their own circles of brand innovation using their online brand communities. These ongoing circles of innovation are beneficial for both the brand and the customer. For the brand, it creates a more innovative and competitive brand. For the customer, it provides more information about brands' products and enables comparison between different brands to help them identify the more innovative brand.

This thesis contributes to marketing practice by assisting marketing managers to improve customer perception of brand innovativeness and to understand how customers perceive their brand as being innovative, through considering their use, engagement, and perceived value of online brand communities. Additionally, it will help marketing managers to differentiate between passive customers (customer use) and active customers (customer engagement), regarding their role in improving customer perceived value of online brand communities. Furthermore, this thesis will help marketing managers to improve their understanding of how customers use and engage with online brand communities, and to identify the value that they perceive of being members of online brand communities.

7.5 Limitations and future research directions

Despite the contributions stated in the previous section, the current study accepts several limitations, which could be addressed in future research directions.

Firstly, due to the limited time available for data collection and the difficulties of collecting the quantitative data via online brand communities (which were related to the difficulties of getting access to the members of the online mobile phone brand communities through official or non-official online mobile phone brand communities) or even through using a snowball technique (due to the difficulties of providing a wide range of relationships and connections with wide range of respondents able to help the researcher in applying this convenience technique); the data collection process was conducted through customer panel data provided by the Prolific company. The Prolific population is not confined to the online population and specifically the population of online brand communities' members. Accordingly, the adoption of a non-probability sampling reduces the generalizability of the findings. As stated in the methodology chapter, the Prolific company is a panel data of customers providing a number of advantages (e.g. it provides large amounts of data; it provides more accurate data and estimates; it gives a real and quick feedback; it provides a direct contact with the participants through using their Prolific ID; it enables tracking participants' IP to ensure that there was no fraud in their answers), that are not provided by other means of data collection or even might not be provided by other panel data companies, such as Survey Monkey or Qualtrics, which are more expensive and require longer time frames. Future research should try to expand on this study by adopting a probability sample of online brand communities' members by providing longer time frames for data collection through applying different probability sampling techniques, such as traffic sample via online brand communities, which would be too time consuming to provide the requirements of a probability sample.

Secondly, this research explored how customer perceived brand innovativeness is affected by three antecedents in mobile phones online brand communities via social media, such as social media brand communities of iPhone, Samsung, and Sony. Thus, this study focuses only on mobile phone brands. Therefore, future research can focus on different categories of brands (different research settings), such as online brand communities of fashion and grocery brands. Thirdly, there is a limitation related to the antecedents of customer perceived brand innovativeness in online brand communities. This study focuses only on three antecedents of customer perceived brand innovativeness in online brand communities: customer use of online brand communities, customer engagement with online brand communities, and customer perceived value of online brand communities. Other antecedents which may affect customer perceived brand innovativeness in online brand communities should be examined. Future research could conduct additional qualitative studies to provide more understanding of what drives customer perceived brand innovativeness in online brand communities.

The next limitation arises from the results of hypothesis testing, which failed to provide support for the direct relationship between customer use of online brand communities and customer perceived value, which comprises three sub-constructs: functional, emotional, and social value. Thus, it is possible that one or more of the sub-constructs of customer perceived value will be affected by customer use. Therefore, future research might investigate the relationship between customer use of online brand communities and each of the three sub-constructs of customer perceived value separately.

Overall, it is possible that the generality of the research context – as focusing on different social media platforms and blogs such as Facebook, Twitter, and YouTube – plays a role in the strength of the relationships between the research constructs. Thus, the results of testing the conceptual model may vary from one platform to another. Future research could try to test the

proposed conceptual model by comparing different social media platforms. The current study has also uncovered a non-significant relationship between customer engagement and customer perceived brand innovativeness. Specifically, the results of hypothesis testing failed to support customer engagement as one of the antecedents of customer perceived brand innovativeness in online brand communities. Future research might develop this study by exploring how customer perceived brand innovativeness is affected by each of the four sub-constructs of customer engagement (behavioural engagement, conscious participation, enthusiasm, and social interaction) to provide better understanding of this relationship.

Due to the complicated nature of using financial measures (e.g. return on investment and return on customers), the current study has focused on using behavioural measures (e.g. passive activities - reading and watching brand posts, and active participation activities - liking, commenting, sharing brand posts via online brand communities) to differentiate between customer use and customer engagement. However, although this study provides a reliable and valid scale (the questionnaire scale items were derived from existing literature and adopted in light of the exploratory study findings) to measure and discriminate between customer use and customer engagement, the financial measures (e.g. financial ratios or equations or metrics) are still required to provide a well-defined picture of the differences between customer use and customer engagement in online brand communities. Future research should build on this study's results by exploring more effective and reliable financial measures to discriminate between customer use and customer engagement in the context of online brand communities

Moreover, this research provides a reliable and valid scale (which has been developed from existing literature) to measure customer innovativeness without taking the sub-dimensions of customer innovativeness into consideration (due to the limitations of the research objectives, budget, and time). Literature identified four sub-dimensions (newness attraction, risk taking,

and independence in decisions) to measure customer innovativeness (Manning et al., 1995; Roehrich, 2004; Goswami & Chandra 2013; Chen, 2014), which can provide more understanding of the moderating effect of customer innovativeness in the conceptual model of the current research. Future research should measure customer innovativeness by considering the stated sub-dimensions, to provide more understanding of this moderating effect of customer innovativeness and identify the role of each of these sub-dimensions in moderating the proposed relationships.

Furthermore, one of the additional findings of the exploratory study is related to uncovering the role of online brand communities in creating ongoing circles of innovation; this study did not undertake an investigation (because it is not one of the objectives of the current study) regarding the role of online brand communities in creating and supporting these ongoing innovation circles between brands and communities' members. Therefore, future research could focus on exploring the antecedents/drivers and the mechanisms of creating and managing these circles of innovation in online brand communities (from both the organizational and customer perspectives).

Finally, to reduce the bias of the self-reported data that may inflate the common method variance, a number of precautions (see Chapter 5) were taken to minimize this shortcoming through adding a time lag and a short statement to distinguish between the independent variables section and the dependent variable section and to make the respondents realize that they are moving from a section related to their social media communities to another section related to their mobile phone brand. Additionally, the respondents were informed that their answers would remain anonymous and that there were no right or wrong answers and that they needed to be as honest as they possibly could. Furthermore, unbiased items were used through reviewing each item's wording, to avoid ambiguity and social desirability. Moreover, the data

collection was conducted at different times over three months to avoid respondents' mode effects. However, as demonstrated by MacKenzie and Podsakoff (2012), it is impossible to design a study that completely eliminates all possibilities of method bias, therefore researchers should assess the most likely causes of common method bias and take a number of precautions to minimize the probability of method bias.

Despite these limitations, this research presents a significant contribution through providing important findings on how customer perceived brand innovativeness is affected by three key antecedents of online brand communities (customer use, customer engagement, and customer perceived value). It also raises some issues that might be investigated in the future.

7.6 Summary

The researcher believes that this thesis contributes to existing knowledge of online brand communities and brand innovativeness. Additionally, the author hopes that this study will motivate the thinking of academics and practitioners alike regarding the role of online brand communities in affecting customers' perception of brand innovativeness.

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Appendices

Appendix A. Semi-structured interview guideline and protocol

A1: Participant information pack

Dear customer,

I am currently running a postgraduate research study at the University of Gloucestershire and I would like to invite you to take part. Participation in the study is voluntary and data obtained from you will not be used without your permission.

The purpose of this study is to explore how customer perceived brand innovativeness is affected by customer using online brand communities. It is hoped that the results will make a theoretical contribution to knowledge and understanding in this field by developing and expanding on existing theory.

Your participation will consist initially of a single one-to-one interview session lasting less than an hour, where you will be asked to discuss topics related to [social media marketing, customer engagement, customer perceived value, customer perceived brand innovativeness, and customer innovativeness]. Participation is voluntary and you do not have to answer specific questions which you do not wish to. You can withdraw any time if you wish. In such a case, all information pertaining to you will be destroyed.

The interview will be audio recorded and transcribed afterwards, written notes will also be made. Data gained during the interview will be used solely for research purposes. Everything will be anonymous and kept confidential, stored securely and deleted when no longer required for research purposes. To obscure your identity pseudonyms will be used. If direct quotes are used, any identifying information will be removed in order to protect your identity. The information gained in this study might be published in research journals or presented at research conferences, but your identity will be kept strictly confidential.

This project conforms to the Handbook of Research Ethics of the University of Gloucestershire, and there are no known risks associated with taking part in this study.

If you would like to participate in this study, please read and sign the informed consent form attached.

Many thanks,

A2: Informed consent form

Title of Project:	"The Impact of Using Social Media Marketing on Customer Perceived Brand Innovativeness"	
Principal Investigator:		
Do you understand that we have asked you to participate in a research study?	Yes	No
Have you read and received a copy of the attached information letter	Yes	No
Do you understand the benefits and risks involved in taking part in this research study?	Yes	No
Do you understand that you are free to contact the research team to take the opportunity to ask questions and discuss this study?	Yes	No
Do you understand that you free to refuse participation, or to withdraw from the study at any time, without consequence, and that your information will be withdrawn at your request?	Yes	No
Do you understand that we will keep your data confidential? Do you understand who will have access to your information?	Yes	No

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study. I have received a copy of this Consent Form.

Printed Name: _____ Signature: _____ Date: _____

I certify that I have explained to the above individual the nature and purpose of this study. I confirm that I have answered any questions raised and have verified the signature above.

A copy of this Consent Form has been provided to the participant.

Interviewer Name _____ Signature of Interviewer _____ Date _____

A3: Semi-structured interview guidelines

General questions
Do you use social media to follow any brand?
What social media do you use to follow your brand?
Could you tell me about the brand that you follow via social media and why/how?
Could you please tell me how often do you visit your social media brand communities? Why?
Customer - Using and Engagement with social media brand communities
Do you think you engage with any social media brand communities? If so, how?
Do you think that using social media brand communities is different from engaging with social media brand community? If so, how?
How do you think that using social media brand communities might affect your ability to engage with social media brand community? And why?
Antecedents of customer perceived value of social media brand communities
Do you think you gain any value from being a member of social media brand communities? If so, how?
How do you think that using social media brand communities might affect your ability to gain more value from social media brand communities? And why?
How do you think that your engagement with social media brand communities might affect your ability to gain more value from social media brand communities? And why?
Antecedents of customer perceived brand innovativeness
Do you perceive your brand as an innovative brand compared to other brands? If so, How?
Do you think that brand innovativeness (e.g. compare innovations of different brands in the market etc.) is different from product innovativeness (e.g. compare innovations of different products in the market etc.)? If so, how?
Do you think that using social media brand communities might affect your perception of the brand innovativeness? If so, how?
Do you think that your engagement with social media brand communities might affect your perception of the brand innovativeness? If so, how?
Do you think that creating value from being a member of social media brand communities might affect your perception of the brand innovativeness? If so, how?
Customer innovativeness
Do you seek out new products and brand experiences? If so, how and why?
Do you seek out information about new products and brands? If so, how and why?
Do you like retail stores that introduce new products and offerings? If so, why?
Prior to purchasing new products and brands, do you prefer to consult your friends via social media who have experience with this new product or brand? If so, why?
Do you prefer to try new products or brands before your friends? If so, why?
Demographics
Age, education, gender, and annual income

A4: Demographics of interview participants

Code	Age	Education	Gender	Annual income
PC21	29	MA degree	Male	25,001-30,000
PC22	24	MBA degree	Male	Less than 10,000
PC23	20	UG student	Male	Less than 10,000
PC24	26	MBA degree	Female	Less than 10,000
PC25	27	MBA student	Female	Less than 10,000
PC26	32	PhD student	Female	10,001- 15,000
PC27	19	UG student	Male	Less than 10,000
PC28	27	PhD degree	Male	Less than 10,000
PC29	35	MA student	Female	Less than 10,000
PC30	33	DBA student	Male	10,001- 15,000
PC31	20	UG student	Male	Less than 10,000
PC32	52	MA degree	Male	25,001-30,000
PC33	40	MA degree	Female	More than 30,000
PC34	55	Bachelor's degree	Male	Less than 10,000
PC35	66	MA degree	Female	--
PC36	28	Bachelor's degree	Female	25,001-30,000
PC37	20	UG student	Male	Less than 10,000
PC38	32	PhD degree	Male	25,001-30,000
PC39	19	UG student	Male	10,001- 15,000
PC40	23	Bachelor's degree	Female	Less than 10,000

A5 Examples of thematic analysis

Theme	Sub-theme	Quote
Customer use of online brand communities.		<i>I follow the brand via Facebook, Instagram and also YouTube.</i>
		<i>I think that using social media brand community through watching videos and images are helping me.</i>
		<i>I am a kind of a passive consumer but I might share my experience I think that reading people's comments is helping me to collect more information.</i>
Customer engagement with online brand communities	Conscious participation	<i>The more frequently I see things that I am interested in the more likely to engage with the community.</i>
		<i>I mean by engaged that I keep in touch with them like knowing all the new things they did with their phones, accessories and I like many of their posts.</i>
		<i>This brand community creates a way to interact with the other customers and with the brand, which helps me to know more about the brand and the new features of the brand's products.</i>
	Enthusiasm	<i>... It makes me feel that I have a relationship with Chanel ... I feel like I have enough respect when the brand replies to my comments.</i>
		<i>I feel proud of being a member of this community.</i>
		<i>... I would feel part of the community.</i>
	Social interaction	<i>I share posts, like a new product posts with friends and they can like the brand page too and they can comment on the social media platforms.</i>
		<i>I mean by engagement, if they post something, if I like it, if I would just like it, and if I see that this thing fits my friends' character I would share it with them.</i>
		<i>It's related to the experience so if I have a bad experience, I would like everybody else to know, so it would not happen again.</i>
	Behavioural engagement	<i>I am engaged with Estee Lauder through liking. I only like...</i>
		<i>I am liking and sharing posts and commenting sometimes</i>
		<i>If this product has some problems, I can write my opinion and I can show them a picture of the problem to tell them that the problem is just like this.</i>

Customer perceived value of online brand communities	Functional value	<i>Social media brand community is giving me information about my favourite brand.</i>
		<i>I think I gain value from being a member of this social media brand community, they give me information about the new products, so I can know how good they are? And how productive they are? And what kind of features they got ... I can decide which one I have to buy based on their comments.</i>
		<i>There is always a value from being a member of this brand community because if you do not know about the brand you would not find a chance to purchase</i>
	Emotional value	<i>I am happy to be a member of the community with other people who have the same interest.</i>
		<i>I wait for comments from other members of the social media brand community and from the brand itself and I feel proud of doing that and I feel enough respect from receiving feedback from the representative of the brand.</i>
		<i>I am happy to be in the community to find the people who sharing these kind of tips and give me this kind of information that I need.</i>
	Social value	<i>... We also can make friendships with other people.</i>
		<i>I do get friendship from Apple community and it is adding to my social circle around me.</i>
		<i>Socially I aware of their events and everything that is coming out.</i>
Antecedents of customer perceived brand innovativeness	Customer use	<i>I would say that it is an innovative brand, because, based on the information that I can gain, it is innovative.</i>
		<i>Through social media I can collect more information about the brand which is helping me to find this brand an innovative brand.</i>
		<i>I think that using social media is helping me to perceive this brand as innovative brand because. For example, Apple with the new model, you can see the difference...</i>
	Customer engagement	<i>More engagement with social media could be more beneficial to get more and find out more information about the brand so you can recognize that this brand is innovative.</i>
		<i>When I do more comments and more likes I will have more notifications of the new things that they will put in their social media and this information will help me to perceive that this brand as more innovative.</i>
		<i>This interaction on social media platforms makes me aware that it is very innovative, so the more people comment about the brand the more they are going to think that this brand is innovative.</i>

	Customer perceived value	<i>The value and the information you gain from social media brand community definitely affects your perception of the brand innovativeness.</i>
		<i>I can personally gain by gaining information from this social media community changes my perception that this is innovative brand</i>
		<i>when you collect information about the brand via social media, especially that you know that those products have been created based on many people comments and ideas; so the company created products that reflect peoples' ideas, so those brand's products are a very creative and innovative brand.</i>
Antecedents of customer perceived value	Customer use	<i>I gain value from reading the posts.</i>
		<i>... Without using social media brand communities I cannot find it easy to know about the brand's new products, and I think that social media brand community gives me more value, because it's just easier to access information; for example, Chanel's new lipstick, I have not seen any adverts for it anywhere, I only see it on social media brand community.</i>
		<i>By using social media brand communities I can get more value in terms of my future purchase.</i>
	Customer engagement	<i>I also gain value from social interaction, if you like the post or share the post with my friends.</i>
		<i>If you comment on social media, you will get more knowledge about the brand.</i>
		<i>As a member of this brand community you get a value like discount or offers; so when you like a post, you can know more about the community of the brand via social media.</i>
Customer use and customer engagement	<i>My using could affect my engagement ... the more frequently I see things that I am interested in the more likely to engage with the community.</i>	
	<i>Using social media is going to help me to like or share something related to the brand because I already like this brand and I see their offers.</i>	

Appendix B. Questionnaire justification

Source	The adapted scale items	Justification
Customer use of online brand communities		
Schivinski et al. (2016, p 71)	1.I follow (join/become a fan of) social media communities related to my mobile brand.	- Based on the qualitative findings and the literature review, these items are the most suitable for the current research
	2.I read posts related to my mobile brand on social media communities.	
	3.I watch pictures/videos related to my mobile brand on social media communities.	
	4.I read fanpage(s) related to my mobile brand on social media communities.	
	5.I follow my mobile brand on social media communities.	
Customer engagement with online brand communities		
(1) Conscious Participation		
Zhang et al. (2016, p 10); (Vivek, Beatty, Dalela, & Morgan, 2015, p 409); Vivek (2009, p 114); Harrigan, Evers, Miles, & Daly (2017, p 602).	6. Anything related to my brand's communities grabs my attention.	- There are several key studies using these scale items in literature. - Based on the qualitative findings and the literature review, these items are the most suitable for the current research.
Zhang et al. (2016, p 10); Vivek, et al. (2015, p 409); Vivek (2009, p 114); Harrigan et al. (2017, p 602).	7.I like to learn more about my brand's communities.	
Zhang et al. (2016, p 10); Vivek, et al. (2015, p 409); Vivek (2009, p 114); Harrigan et al. (2017, p 602).	8.I pay a lot of attention to anything about my brand's communities.	

Vivek, et al. (2015, p 409).	9.I keep up with things related to my brand's communities.	- Based on the qualitative findings and the literature review, these items are the most suitable for the current research.
(2) Enthusiasm		
Zhang et al. (2016, p 10); Vivek, et al. (2015, p 409); Vivek (2009, p 114); Harrigan et al. (2017, p 602)	10. I am heavily into my brand's communities.	- There are several key studies using these scale items in literature. - Based on the qualitative findings and the literature review, these items are the most suitable for the current research.
Zhang et al. (2016, p 10); Vivek, et al. (2015, p 409); Vivek (2009, p 114); Harrigan et al. (2017, p 602).	11. I am passionate about my brand's communities.	
Harrigan et al. (2017, p 602).	12. I feel excited about my brand's communities.	
Harrigan et al. (2017, p 602).	13. I am enthusiastic about my brand's communities.	
(3) Social Interaction		
Zhang et al. (2016, p 10); Vivek, et al. (2015, p 409); Vivek (2009, p 114)	14. I love participating in my brand's communities with other members.	- There are several key studies using these scale items in literature. - Based on the qualitative findings and the literature review, these items are the most suitable for the current research.
Zhang et al. (2016, p 10); Vivek, et al. (2015, p 409); Vivek (2009, p 114)	15. I enjoy taking part in my brand's communities when I am sharing my opinion with other members.	
Zhang et al. (2016, p 10); Vivek, et al. (2015, p 409); Vivek (2009, p 114)	16. Participation with other members in my brand's communities is fun for me.	

Baldus, Voorhees, & Calantone (2015, p 982); Poorrezaei (2016, 126)	17. It is important for me to participate with other members in my brand's communities who share the same opinion.	- Based on the qualitative findings and the literature review, these items are the most suitable for the current research.
(4) Customer behavioral engagement		
Madupu (2006, p 88); (Gummerus et al. (2012, p 864); (Sjoqvist, 2015, p IV).	18. On an average, how often do you 'like' posts on my brand's communities?	- There are several key studies using these scale items in literature. - Based on the qualitative findings and the literature review, these items are the most suitable for the current research.
Madupu (2006, p 88); (Gummerus et al. (2012, p 864); (Sjoqvist, 2015, p IV); (Tsai & Men, August 2012, p 27).	19. On an average, how often do you comment on my brand's communities?	
Madupu (2006, p 88); (Gummerus et al. (2012, p 864); (Tsai & Men, August 2012, p 27); (Clvico, 2014, p 59).	20. On an average, how often do you share brand posts from my brand's communities with your friends?	
Madupu (2006, p 88); (Schivinski, Christodoulides, & Dabrowski, 2016, p 71); (Tsai & Men, August 2012, p 27); (Clvico, 2014, p 59).	21. On an average, how often do you post photos or videos on my brand's communities?	
Customer perceived value of online brand communities		
(1) Functional value		
Chen & Lin (2015, p. 48)	22. My brand's communities offer me information about various options of products or offerings of my mobile brand.	- Based on the qualitative findings and the literature review, these items are the

Chen & Lin (2015, p. 48)	23. The information offered on my brand's communities makes me feel confident about my mobile brand.	most suitable for the current research.
Vries & Carlson (2014, p 505); Zhang et al. (2016, p 10); Voss, Spangenberg, & Grohmann, (2003, p 312); Jahn & Kunz (2017, p 360).	24. The information (content) offered on my brand's communities are helpful for me.	- There are several key studies using these scale items in literature. - Based on the qualitative findings and the literature review, these items are the most suitable for the current research.
Vries & Carlson (2014, p 505); Zhang et al. (2016, p 10); Voss et al. (2003, p 312); Jahn & Kunz (2017, p 360).	25. The information (content) offered on my brand's communities are practical for me.	
(2) Social value		
Kuo & Feng (2013, p 955); Zhang et al. (2016, p 11);	26. I can make friends with people sharing common interests with me in my brand's communities.	- There are several key studies using these scale items in literature. - Based on the qualitative findings and the literature review, these items are the most suitable for the current research.
Kuo & Feng (2013, p 955); Zhang et al. (2016, p 11)	27. My brand's communities help strengthen my connections with other members.	
Kuo & Feng (2013, p 955); Zhang et al. (2016, p 11); Hsieh & Wei (2017, p 5)	28. I can expand my social network through my brand's communities.	
Jahn & Kunz (2017, p 360); Vries & Carlson (2014, p 505); Voss, Spangenberg, & Grohmann, (2003, p 312).	29. I can interact with people like me on my brand's communities.	
(3) Emotional value		
Chen & Lin (2015, p. 48)	30. Getting information from my brand's communities gives me pleasure.	- There are several key studies using these scale items in literature. - Based on the qualitative findings and the literature review,
Chen & Lin (2015, p. 48), Jahn & Kunz (2017, p 360); Vries & Carlson (2014, p 505).	31. Getting information from my brand's communities makes me feel good.	

		these items are the most suitable for the current research.
Chen & Lin (2015, p. 48)	32. Getting information from my brand's communities gives me a sense of self-achievement.	- Based on the qualitative findings and the literature review, these items are the most suitable for the current research.
Chen & Lin (2015, p. 48)	33. Getting information from my brand's communities boosts my self-confidence.	
Customer perceived brand innovativeness (CPBI)		
Shams, Alpert, & Brown (2015, p. 1605)	34. With regard to mobile phones, my mobile brand is dynamic.	- The only scale items in literature. - Based on the qualitative findings and the literature review, these items are the most suitable for the current research. - Please note, to the best of the researcher's knowledge, this scale is the only one to measure CPBI in prior studies. -
	35. My mobile brand sets itself apart from the rest when it comes to mobile phones.	
	36. My mobile brand is a cutting-edge mobile brand.	
	37. My mobile phone brand makes me feel excited.	
	38. My mobile phone brand launches new phones and creates market trends all the time.	
	39. My mobile brand is an innovative brand when it comes to mobile phones.	
	40. My mobile phone brand makes new mobile phones with superior design.	
	41. With regard to mobile phones, my phone brand constantly generates new ideas.	
	42. My mobile phone brand has changed the market with its mobile phones.	
	43. My mobile phone brand is a new product leader in the mobile phone market.	

Customer innovativeness		
Goldsmith & Hofacker (1991, p. 212)	44. In general, I am among the first in my circle of friends to buy new products when they appear.	<ul style="list-style-type: none"> - There are several key studies using these scale items in literature. - Based on the qualitative findings and the literature review, these items are the most suitable for the current research.
	45. If I heard that a new version of my own product was available, I would be interested enough to buy it.	
	46. I like to try new products.	
	47. Compared to my friends, I own few new products. (r)	
	48. If a friend has a new product, I would ask them about it.	
	49. In general I am the first in my circle of friends to know about new products.	
	50. I will not buy a new product if I haven't tried it.	
	51. I know more about new products before other people do.	
	52. I like to buy products that have new ideas.	

Appendix C. Final online questionnaire instrument

1. Are you engaged with any mobile phone social media brand communities?
2. Are you over 18 years old or above?
3. Are you a UK resident?

If yes, so the participant is qualified to participate in this research study.

What are the mobile brand communities that you engage with on social media through liking and/or commenting and/or sharing and/or creating brand posts? (select all that apply) *

Required

- ☐ Samsung social media communities
- ☐ iPhone social media communities
- ☐ Sony social media communities
- ☐ LG social media communities
- ☐ Microsoft mobile social media communities
- ☐ Other

If you selected Other, please specify:

Please identify which of the communities you selected above is the one you engage with most, which will be known as "My Mobile Brand's Social Media Communities"? *

Required

- ☐ Samsung social media communities
- ☐ iPhone social media communities
- ☐ Sony social media communities
- ☐ LG social media communities
- ☐ Microsoft social media communities
- ☐ Other

If you selected Other, please specify:

Check the extent to which you agree with the following statements (1= strongly disagree, 5 = strongly agree).

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
I follow (Join/become a fan of) social media communities related to my mobile brand.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I read posts related to my mobile brand on social media communities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I watch pictures/videos related to my mobile brand on social media communities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I read fanpage(s) related to my mobile brand on social media communities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I follow my mobile brand on social media communities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thinking about "**My Mobile Brand's Social Media Communities**" you selected above (e.g. Samsung or iPhone or Sony social media communities, etc), on average, how often do you:

	Very rarely (1)	Rarely(2)	Sometimes (3)	Often (4)	Very often(5)
Read and/or watch posts ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
'Like' posts?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Write comments ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Share brand posts with your friends?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post photos or videos ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thinking about "My Mobile Brand's Social Media Communities" that you selected above, to what extent do you agree with the following statements.

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Anything related to my brand's communities grabs my attention.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to learn more about my brand's communities .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I pay a lot of attention to anything about my brand's communities .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I keep up with things related to my brand's communities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am heavily into my brand's communities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am passionate about my brand's communities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel excited about my brand's communities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am enthusiastic about my brand's communities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I love participating in my brand's communities with other members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy taking part in my brand's communities when I share my opinion with other members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participation with other members in my brand's communities is fun for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important for me to participate with other members in my brand's communities who share the same opinion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
it's important that you pay attention to this study. please tick 'strongly agree'.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thinking about "My Mobile Brand's Social Media Communities" that you selected above, to what extent do you agree with the following statements.

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
My brand's communities offer me information about various product options or offerings for my mobile brand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information (content) offered on my brand's communities makes me feel confident about my mobile brand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information (content) offered on my brand's communities is helpful for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The information (content) offered on my brand's communities is practical for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can make friends with people sharing common interests with me in my brand's communities .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My brand's communities help strengthen my connections with other members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can expand my social network through my brand's communities .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I can interact with people like me on my brand's communities .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting information from my brand's communities gives me pleasure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting information from my brand's communities makes me feel good.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting information from my brand's communities has given me a sense of self-achievement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting information from my brand's communities has boosted my self-confidence.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Check the extent to which you agree with the following statements about your mobile brand.

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
With regard to mobile phones, my mobile brand is dynamic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My mobile phone brand sets itself apart from the rest when it comes to mobile phones.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My mobile phone brand is a cutting-edge mobile brand.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My mobile phone brand makes me feel excited.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My mobile phone brand launches new phones and creates market trends all the time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My mobile phone brand is an innovative brand when it comes to mobile phones.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My mobile phone brand makes new mobile phones with superior design.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
With regard to mobile phones, my phone brand constantly generates new ideas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My mobile phone brand has changed the market with its mobile phones.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My mobile phone brand is a new product leader in the mobile phone market.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It's important that you pay attention to this study. please tick 'strongly disagree'.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Below is a series of statements concerning your personal characteristics. Please indicate the extent to which you agree with the following statements.

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
In general, I am the first in my circle of friends to know about new products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know about new products before other people do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to try new products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compared to my friends, I own few new products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If a friend has a new product, I would ask them about it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I heard that a new version of my own product was available, I would be interested enough to buy it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to buy products that have new ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In general, I am among the first in my circle of friends to buy new products when they appear.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will not buy a new product if I haven't tried it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is your age? * Required

☐ 18- 24
 ☐ 25-34
 ☐ 35-44

☐ 45-60
 ☐ More than 60

What is your gender? * Required

☐ Male
 ☐ Female

What is the highest level of education you have completed? * Required

☐ Some high school, no GCSEs
 ☐ High school, GCSEs
 ☐ High School, A Levels

☐ Associate degree
 ☐ Bachelor's degree
 ☐ Master's or Doctoral degree

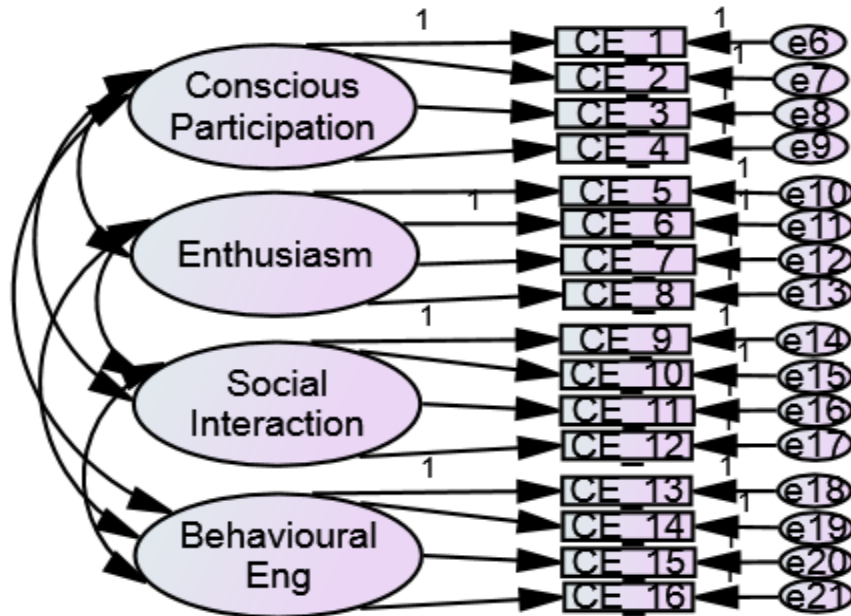
Please enter your Prolific ID: * Required

Thank you for completing this survey. Please copy this completion code (YE8SDOPK) to submit study.

AppendixD. Confirmatory factor analysis and structural equation modelling

Measurement model of the second order factors:

Engagement with correlation:



Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	38	421.646	98	.000	4.303
Saturated model	136	.000	0		
Independence model	16	9896.170	120	.000	82.468

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.045	.941	.918	.678
Saturated model	.000	1.000		
Independence model	.557	.196	.089	.173

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.957	.948	.967	.959	.967
Saturated model	1.000		1.000		1.000

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.817	.782	.790
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	323.646	263.875	390.969
Saturated model	.000	.000	.000
Independence model	9776.170	9453.065	10105.577

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.509	.390	.318	.472
Saturated model	.000	.000	.000	.000
Independence model	11.937	11.793	11.403	12.190

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.063	.057	.069	.000
Independence model	.313	.308	.319	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	497.646	499.237	677.060	715.060
Saturated model	272.000	277.695	914.114	1050.114
Independence model	9928.170	9928.840	10003.713	10019.713

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.600	.528	.682	.602
Saturated model	.328	.328	.328	.335
Independence model	11.976	11.586	12.373	11.977

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	241	263
Independence model	13	14

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
CE_1 <--- Conscious_Participation	1.000				
CE_2 <--- Conscious_Participation	1.044	.048	21.764	***	
CE_3 <--- Conscious_Participation	1.181	.050	23.687	***	
CE_4 <--- Conscious_Participation	1.075	.049	22.152	***	
CE_9 <--- Social_Interaction	1.000				
CE_10 <--- Social_Interaction	1.103	.030	36.430	***	
CE_11 <--- Social_Interaction	1.075	.031	35.219	***	
CE_12 <--- Social_Interaction	.956	.032	29.504	***	
CE_13 <--- Behavioural_Eng	1.000				
CE_14 <--- Behavioural_Eng	1.172	.048	24.228	***	
CE_15 <--- Behavioural_Eng	1.207	.050	24.090	***	
CE_16 <--- Behavioural_Eng	1.215	.053	22.956	***	
CE_5 <--- Enthusiasm	.893	.037	23.948	***	
CE_8 <--- Enthusiasm	1.072	.038	28.361	***	
CE_6 <--- Enthusiasm	1.000				
CE_7 <--- Enthusiasm	1.025	.039	26.558	***	

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
CE_1 <--- Conscious_Participation	.725
CE_2 <--- Conscious_Participation	.788
CE_3 <--- Conscious_Participation	.862
CE_4 <--- Conscious_Participation	.802
CE_9 <--- Social_Interaction	.862
CE_10 <--- Social_Interaction	.909
CE_11 <--- Social_Interaction	.893
CE_12 <--- Social_Interaction	.810
CE_13 <--- Behavioural_Eng	.742
CE_14 <--- Behavioural_Eng	.853
CE_15 <--- Behavioural_Eng	.848
CE_16 <--- Behavioural_Eng	.808
CE_5 <--- Enthusiasm	.754
CE_8 <--- Enthusiasm	.855
CE_6 <--- Enthusiasm	.813
CE_7 <--- Enthusiasm	.815

Variances: (Group number 1 - Default model)

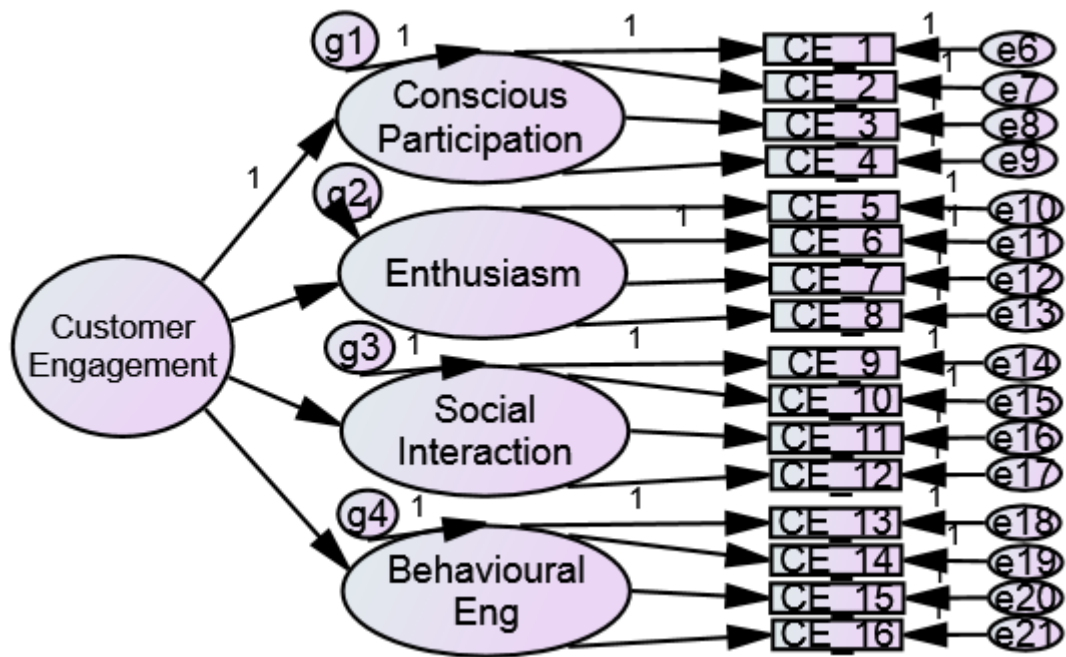
	Estimate	S.E.	C.R.	P	Label
Conscious_Participation	.537	.046	11.649	***	
Social_Interaction	.861	.056	15.356	***	
Behavioural_Eng	.676	.056	12.022	***	
Enthusiasm	.657	.047	13.845	***	
e6	.485	.027	17.812	***	
e7	.358	.022	16.551	***	
e8	.259	.019	13.608	***	
e9	.344	.021	16.147	***	

	Estimate	S.E.	C.R.	P	Label
e11	.336	.020	16.420	***	
e12	.350	.021	16.387	***	
e13	.277	.019	14.850	***	
e14	.299	.018	16.481	***	
e15	.219	.016	13.870	***	
e16	.252	.017	14.995	***	
e17	.413	.023	17.826	***	
e18	.553	.032	17.534	***	
e19	.347	.025	14.047	***	
e20	.385	.027	14.312	***	
e21	.531	.033	15.949	***	
e10	.397	.022	17.728	***	

Validity regarding the correlation between first order factors of customer engagement:

	CR	AVE	MSV	MaxR(H)	Social Interaction	Conscious Participation	Behavioural Eng	Enthusiasm
Social Interaction	0.925	0.756	0.663	0.931	0.869			
Conscious Participation	0.873	0.633	0.626	0.882	0.736	0.796		
Behavioural Engagement	0.887	0.663	0.416	0.893	0.645	0.539	0.814	
Enthusiasm	0.884	0.656	0.663	0.888	0.814	0.791	0.585	0.810

Customer engagement as a second order factor:



Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	36	440.553	100	.000	4.406
Saturated model	136	.000	0		
Independence model	16	9896.170	120	.000	82.468

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.049	.939	.917	.690
Saturated model	.000	1.000		
Independence model	.557	.196	.089	.173

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.955	.947	.965	.958	.965
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.833	.796	.804
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	340.553	279.270	409.381
Saturated model	.000	.000	.000
Independence model	9776.170	9453.065	10105.577

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.531	.411	.337	.494
Saturated model	.000	.000	.000	.000
Independence model	11.937	11.793	11.403	12.190

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.064	.058	.070	.000
Independence model	.313	.308	.319	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	512.553	514.060	682.524	718.524
Saturated model	272.000	277.695	914.114	1050.114
Independence model	9928.170	9928.840	10003.713	10019.713

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.618	.544	.701	.620
Saturated model	.328	.328	.328	.335
Independence model	11.976	11.586	12.373	11.977

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	234	256
Independence model	13	14

Regression Weights: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P
Conscious_Participation	<--- Customer_Engagement	1.000			
Enthusiasm	<--- Customer_Engagement	1.209	.067	18.043	***
Social_Interaction	<--- Customer_Engagement	1.348	.073	18.537	***
Behavioural_Eng	<--- Customer_Engagement	.899	.064	14.161	***
CE_1	<--- Conscious_Participation	1.000			
CE_2	<--- Conscious_Participation	1.045	.048	21.752	***
CE_3	<--- Conscious_Participation	1.183	.050	23.685	***
CE_4	<--- Conscious_Participation	1.074	.049	22.093	***
CE_9	<--- Social_Interaction	1.000			
CE_10	<--- Social_Interaction	1.104	.030	36.363	***
CE_11	<--- Social_Interaction	1.077	.031	35.233	***
CE_12	<--- Social_Interaction	.956	.032	29.420	***
CE_13	<--- Behavioural_Eng	1.000			
CE_14	<--- Behavioural_Eng	1.170	.048	24.172	***
CE_15	<--- Behavioural_Eng	1.209	.050	24.119	***
CE_16	<--- Behavioural_Eng	1.215	.053	22.934	***
CE_5	<--- Enthusiasm	.892	.037	24.027	***
CE_8	<--- Enthusiasm	1.067	.038	28.354	***
CE_6	<--- Enthusiasm	1.000			
CE_7	<--- Enthusiasm	1.022	.038	26.619	***

Standardized Regression Weights: (Group number 1 - Default model)

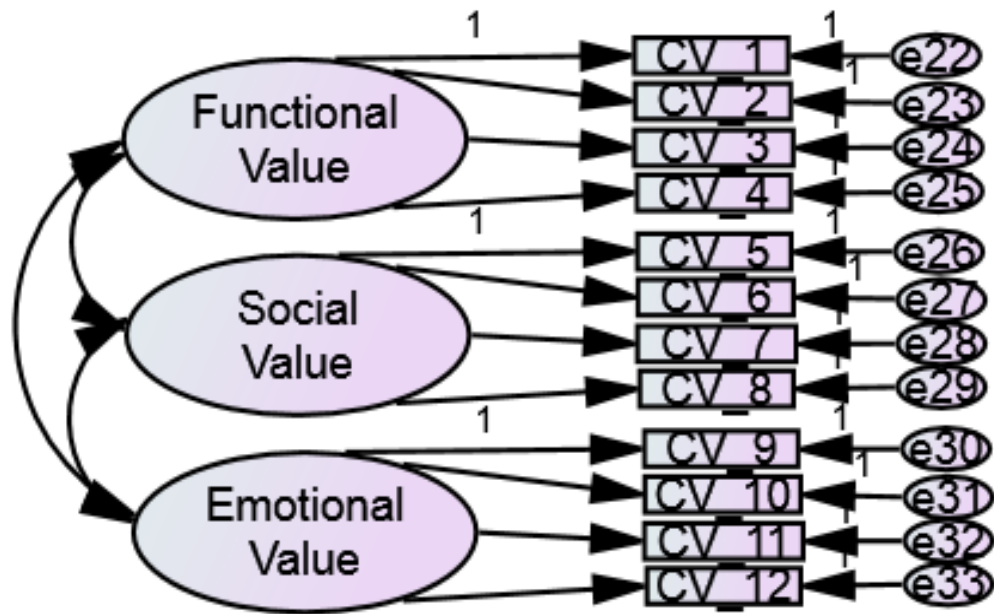
		Estimate
Conscious_Participation	<--- Customer_Engagement	.839
Enthusiasm	<--- Customer_Engagement	.915
Social_Interaction	<--- Customer_Engagement	.894
Behavioural_Eng	<--- Customer_Engagement	.672
CE_1	<--- Conscious_Participation	.725
CE_2	<--- Conscious_Participation	.788
CE_3	<--- Conscious_Participation	.863
CE_4	<--- Conscious_Participation	.801
CE_9	<--- Social_Interaction	.861
CE_10	<--- Social_Interaction	.910
CE_11	<--- Social_Interaction	.894
CE_12	<--- Social_Interaction	.809
CE_13	<--- Behavioural_Eng	.742
CE_14	<--- Behavioural_Eng	.852
CE_15	<--- Behavioural_Eng	.850
CE_16	<--- Behavioural_Eng	.808
CE_5	<--- Enthusiasm	.755
CE_8	<--- Enthusiasm	.853
CE_6	<--- Enthusiasm	.816
CE_7	<--- Enthusiasm	.814

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Customer_Engagement	.378	.038	9.893	***	
g1	.159	.018	8.900	***	
g2	.107	.016	6.569	***	
g3	.173	.020	8.504	***	
g4	.371	.034	11.053	***	

	Estimate	S.E.	C.R.	P	Label
e6	.486	.027	17.812	***	
e7	.357	.022	16.530	***	
e8	.257	.019	13.521	***	
e9	.346	.021	16.175	***	
e11	.332	.020	16.330	***	
e12	.350	.021	16.362	***	
e13	.281	.019	14.904	***	
e14	.300	.018	16.492	***	
e15	.219	.016	13.837	***	
e16	.250	.017	14.907	***	
e17	.415	.023	17.832	***	
e18	.553	.032	17.523	***	
e19	.351	.025	14.096	***	
e20	.381	.027	14.198	***	
e21	.531	.033	15.939	***	
e10	.397	.022	17.697	***	

Customer perceived value with correlation:



Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	28	292.135	50	.000	5.843
Saturated model	78	.000	0		
Independence model	12	5846.558	66	.000	88.584

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.049	.943	.911	.604
Saturated model	.000	1.000		
Independence model	.413	.300	.173	.254

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.950	.934	.958	.945	.958
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.758	.720	.726
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	242.135	192.072	299.708
Saturated model	.000	.000	.000
Independence model	5780.558	5532.890	6034.526

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.352	.292	.232	.362
Saturated model	.000	.000	.000	.000
Independence model	7.053	6.973	6.674	7.279

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.076	.068	.085	.000
Independence model	.325	.318	.332	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	348.135	349.027	480.335	508.335
Saturated model	156.000	158.485	524.271	602.271
Independence model	5870.558	5870.941	5927.215	5939.215

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.420	.360	.489	.421
Saturated model	.188	.188	.188	.191
Independence model	7.081	6.783	7.388	7.082

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	192	217
Independence model	13	14

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
CV_1 <--- Functional_Value	1.000				
CV_2 <--- Functional_Value	1.207	.082	14.687	***	
CV_3 <--- Functional_Value	1.402	.089	15.768	***	
CV_4 <--- Functional_Value	1.332	.087	15.316	***	
CV_5 <--- Social_Value	1.000				
CV_6 <--- Social_Value	1.022	.035	28.992	***	
CV_7 <--- Social_Value	1.017	.039	26.370	***	
CV_8 <--- Social_Value	.917	.037	24.506	***	
CV_9 <--- Emotional_Value	1.000				
CV_10 <--- Emotional_Value	1.038	.035	29.463	***	
CV_11 <--- Emotional_Value	.952	.041	23.505	***	
CV_12 <--- Emotional_Value	.907	.043	21.079	***	

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
CV_1 <--- Functional_Value	.596
CV_2 <--- Functional_Value	.686
CV_3 <--- Functional_Value	.784
CV_4 <--- Functional_Value	.736
CV_5 <--- Social_Value	.813
CV_6 <--- Social_Value	.878
CV_7 <--- Social_Value	.815
CV_8 <--- Social_Value	.771

	Estimate
CV_9 <--- Emotional_Value	.834
CV_10 <--- Emotional_Value	.890
CV_11 <--- Emotional_Value	.740
CV_12 <--- Emotional_Value	.682

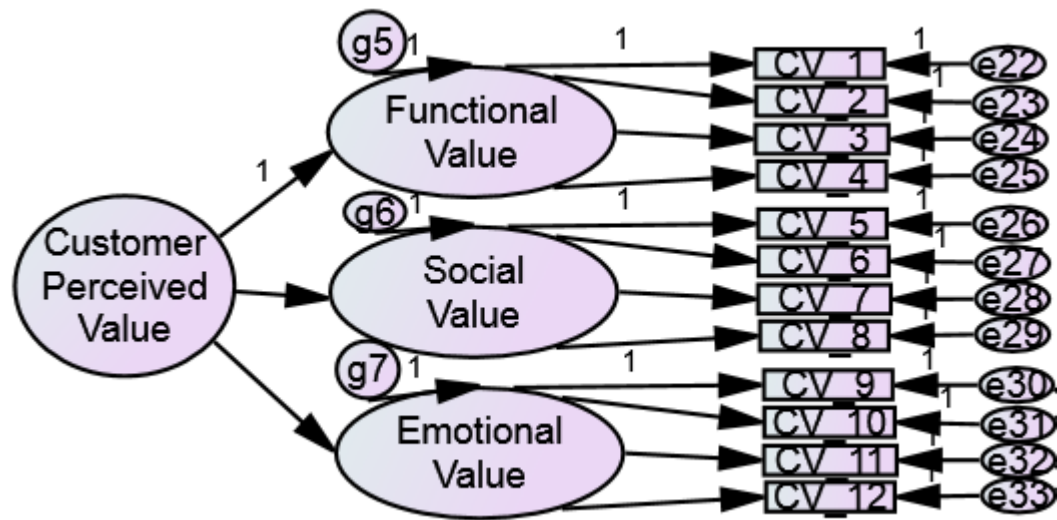
Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Functional_Value	.190	.022	8.600	***	
Social_Value	.773	.056	13.790	***	
Emotional_Value	.644	.045	14.179	***	
e22	.345	.019	17.886	***	
e23	.311	.019	16.305	***	
e24	.235	.018	13.057	***	
e25	.284	.019	14.885	***	
e26	.396	.025	16.133	***	
e27	.241	.018	13.106	***	
e28	.405	.025	16.083	***	
e29	.443	.026	17.219	***	
e30	.282	.019	14.509	***	
e31	.182	.017	10.929	***	
e32	.483	.028	17.358	***	
e33	.609	.034	18.136	***	

Validity of CPV as second order factor:

	CR	AVE	MSV	MaxR(H)	Functional Value	Social Value	Emotional Value
Functional Value	0.795	0.495	0.280	0.808	0.703		
Social Value	0.891	0.672	0.637	0.898	0.474	0.820	
Emotional Value	0.882	0.651	0.637	0.884	0.529	0.798	0.807

Customer perceived value as second order factor:



Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	28	292.135	50	.000	5.843
Saturated model	78	.000	0		
Independence model	12	5846.558	66	.000	88.584

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.049	.943	.911	.604
Saturated model	.000	1.000		
Independence model	.413	.300	.173	.254

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.950	.934	.958	.945	.958
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.758	.720	.726

Model	PRATIO	PNFI	PCFI
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	242.135	192.072	299.708
Saturated model	.000	.000	.000
Independence model	5780.558	5532.890	6034.526

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.352	.292	.232	.362
Saturated model	.000	.000	.000	.000
Independence model	7.053	6.973	6.674	7.279

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.076	.068	.085	.000
Independence model	.325	.318	.332	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	348.135	349.027	480.335	508.335
Saturated model	156.000	158.485	524.271	602.271
Independence model	5870.558	5870.941	5927.215	5939.215

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.420	.360	.489	.421
Saturated model	.188	.188	.188	.191
Independence model	7.081	6.783	7.388	7.082

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	192	217
Independence model	13	14

Regression Weights: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P
Functional_Value	<--- Customer_Perceived_Value	1.000			
Social_Value	<--- Customer_Perceived_Value	2.669	.238	11.236	***
Emotional_Value	<--- Customer_Perceived_Value	2.931	.274	10.684	***
CV_1	<--- Functional_Value	1.000			
CV_2	<--- Functional_Value	1.207	.082	14.687	***
CV_3	<--- Functional_Value	1.402	.089	15.768	***
CV_4	<--- Functional_Value	1.332	.087	15.316	***
CV_5	<--- Social_Value	1.000			
CV_6	<--- Social_Value	1.022	.035	28.992	***
CV_7	<--- Social_Value	1.017	.039	26.370	***
CV_8	<--- Social_Value	.917	.037	24.506	***
CV_9	<--- Emotional_Value	1.000			
CV_10	<--- Emotional_Value	1.038	.035	29.463	***
CV_11	<--- Emotional_Value	.952	.041	23.505	***
CV_12	<--- Emotional_Value	.907	.043	21.079	***

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
Functional_Value <--- Customer_Perceived_Value	.599
Social_Value <--- Customer_Perceived_Value	.792
Emotional_Value <--- Customer_Perceived_Value	.953
CV_1 <--- Functional_Value	.596
CV_2 <--- Functional_Value	.686

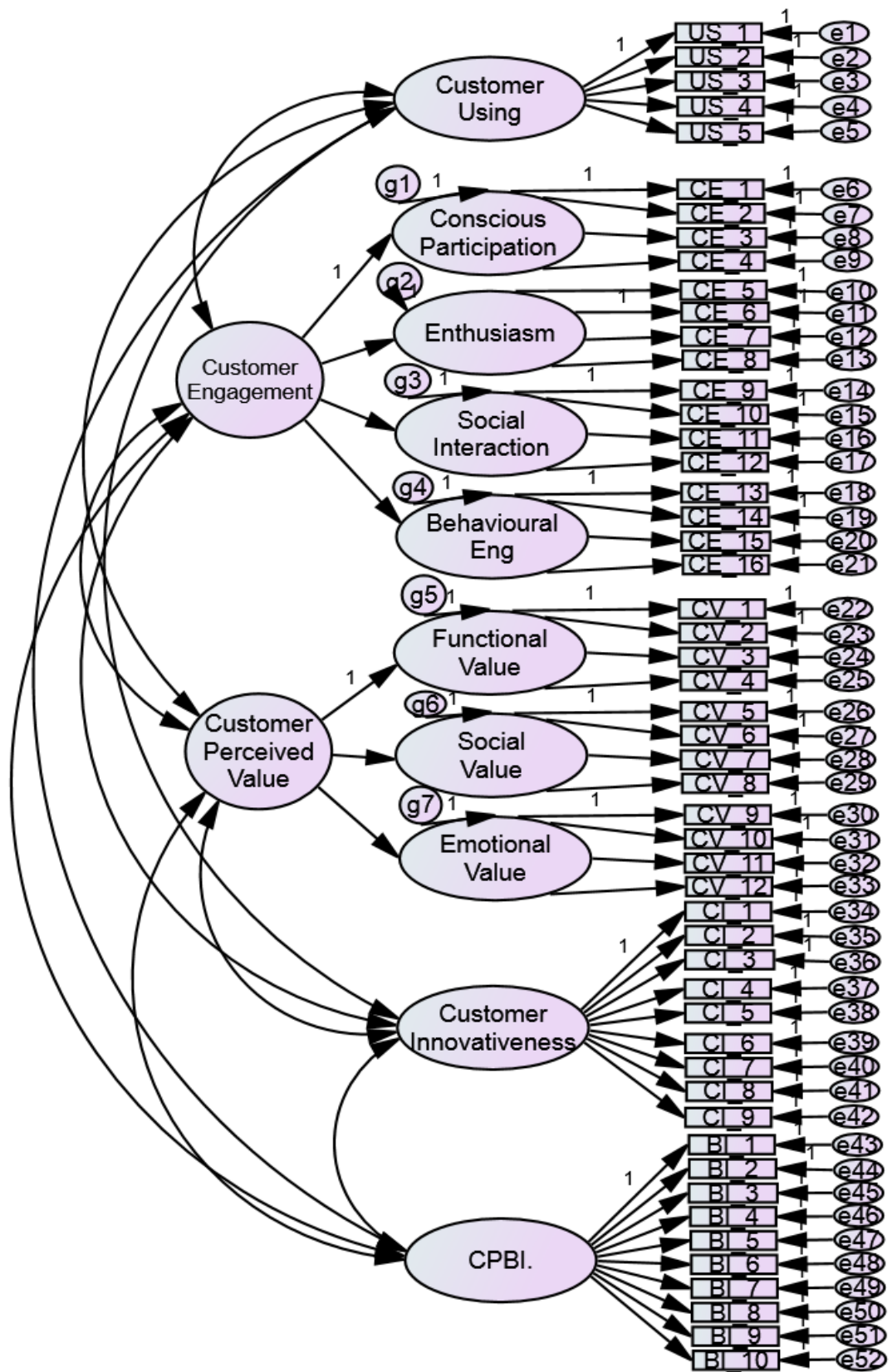
		Estimate
CV_3	<--- Functional_Value	.784
CV_4	<--- Functional_Value	.736
CV_5	<--- Social_Value	.813
CV_6	<--- Social_Value	.878
CV_7	<--- Social_Value	.815
CV_8	<--- Social_Value	.771
CV_9	<--- Emotional_Value	.834
CV_10	<--- Emotional_Value	.890
CV_11	<--- Emotional_Value	.740
CV_12	<--- Emotional_Value	.682

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P
Customer_Perceived_Value	.068	.011	6.035	***
g5	.122	.015	8.067	***
g6	.288	.036	7.989	***
g7	.060	.034	1.728	.084
e22	.345	.019	17.886	***
e23	.311	.019	16.305	***
e24	.235	.018	13.057	***
e25	.284	.019	14.885	***
e26	.396	.025	16.133	***
e27	.241	.018	13.106	***
e28	.405	.025	16.083	***
e29	.443	.026	17.219	***
e30	.282	.019	14.509	***
e31	.182	.017	10.929	***
e32	.483	.028	17.358	***
e33	.609	.034	18.136	***

Measurement model (CFA)

CFA – initial model (first model)



Notes for Group (Group number 1)

The model is recursive.

Sample size = 830

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 1378

Number of distinct parameters to be estimated: 121

Degrees of freedom (1378 - 121): 1257

Result (Default model)

Minimum was achieved

Chi-square = 4524.022

Degrees of freedom = 1257

Probability level = .000

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	121	4524.022	1257	.000	3.599
Saturated model	1378	.000	0		
Independence model	52	29169.569	1326	.000	21.998

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.070	.794	.775	.725
Saturated model	.000	1.000		
Independence model	.332	.151	.118	.145

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.845	.836	.883	.876	.883
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.948	.801	.837
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	3267.022	3065.355	3476.146
Saturated model	.000	.000	.000
Independence model	27843.569	27291.333	28402.183

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	5.457	3.941	3.698	4.193
Saturated model	.000	.000	.000	.000
Independence model	35.186	33.587	32.921	34.261

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.056	.054	.058	.000
Independence model	.159	.158	.161	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	4766.022	4782.550	5337.314	5458.314
Saturated model	2756.000	2944.232	9262.125	10640.125
Independence model	29273.569	29280.672	29519.083	29571.083

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	5.749	5.506	6.001	5.769
Saturated model	3.324	3.324	3.324	3.552
Independence model	35.312	34.646	35.986	35.320

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	246	253
Independence model	41	42

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P
Conscious_Participation	<---	Customer_Engagement	1.000			
Enthusiasm	<---	Customer_Engagement	1.163	.063	18.419	***
Social_Interaction	<---	Customer_Engagement	1.314	.069	19.105	***
Behavioural_Eng	<---	Customer_Engagement	.873	.061	14.320	***
Functional_Value	<---	Customer_Perceived_Value	1.000			
Social_Value	<---	Customer_Perceived_Value	2.754	.235	11.720	***
Emotional_Value	<---	Customer_Perceived_Value	2.657	.224	11.851	***
US_1	<---	Customer_Using	1.000			
US_2	<---	Customer_Using	.990	.045	22.161	***
US_3	<---	Customer_Using	.970	.046	21.197	***
US_5	<---	Customer_Using	1.030	.048	21.620	***
CE_1	<---	Conscious_Participation	1.000			
CE_2	<---	Conscious_Participation	1.058	.049	21.802	***
CE_3	<---	Conscious_Participation	1.183	.050	23.489	***
CE_4	<---	Conscious_Participation	1.085	.049	22.119	***
CE_9	<---	Social_Interaction	1.000			
CE_10	<---	Social_Interaction	1.107	.031	36.280	***
CE_11	<---	Social_Interaction	1.082	.031	35.245	***
CE_12	<---	Social_Interaction	.957	.033	29.339	***
CE_13	<---	Behavioural_Eng	1.000			
CE_14	<---	Behavioural_Eng	1.171	.049	24.146	***
CE_15	<---	Behavioural_Eng	1.212	.050	24.112	***

			Estimate	S.E.	C.R.	P
CE_16	<---	Behavioural_Eng	1.215	.053	22.895	***
CV_1	<---	Functional_Value	1.000			
CV_2	<---	Functional_Value	1.214	.083	14.672	***
CV_3	<---	Functional_Value	1.408	.089	15.740	***
CV_4	<---	Functional_Value	1.339	.088	15.291	***
CV_5	<---	Social_Value	1.000			
CV_6	<---	Social_Value	1.024	.035	29.093	***
CV_7	<---	Social_Value	1.020	.039	26.459	***
CV_8	<---	Social_Value	.919	.037	24.523	***
CV_9	<---	Emotional_Value	1.000			
CV_10	<---	Emotional_Value	1.044	.040	26.188	***
CV_11	<---	Emotional_Value	1.120	.044	25.306	***
CV_12	<---	Emotional_Value	1.097	.046	23.695	***
CI_1	<---	Customer_Innovativeness	1.000			
CI_2	<---	Customer_Innovativeness	.940	.034	27.341	***
CI_3	<---	Customer_Innovativeness	.519	.026	19.832	***
BI_1	<---	CPBI.	1.000			
BI_2	<---	CPBI.	1.246	.070	17.867	***
BI_3	<---	CPBI.	1.298	.069	18.761	***
BI_4	<---	CPBI.	1.302	.076	17.132	***
BI_5	<---	CPBI.	1.364	.072	18.966	***
BI_6	<---	CPBI.	1.391	.071	19.696	***
BI_7	<---	CPBI.	1.449	.074	19.645	***
BI_8	<---	CPBI.	1.388	.073	19.130	***
BI_9	<---	CPBI.	1.350	.075	18.081	***
BI_10	<---	CPBI.	1.418	.080	17.663	***
CI_6	<---	Customer_Innovativeness	.679	.033	20.442	***

			Estimate	S.E.	C.R.	P
CI_7	<---	Customer_Innovativeness	.533	.028	19.361	***
CI_8	<---	Customer_Innovativeness	.995	.036	27.370	***
US_4	<---	Customer_Using	.907	.052	17.458	***
CE_5	<---	Enthusiasm	.894	.038	23.815	***
CE_8	<---	Enthusiasm	1.079	.038	28.417	***
CE_6	<---	Enthusiasm	1.000			
CE_7	<---	Enthusiasm	1.028	.039	26.481	***
CI_4	<---	Customer_Innovativeness	-.154	.042	-3.676	***
CI_5	<---	Customer_Innovativeness	.344	.028	12.142	***
CI_9	<---	Customer_Innovativeness	-.109	.043	-2.558	.011

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Conscious_Participation	<---	Customer_Engagement	.861
Enthusiasm	<---	Customer_Engagement	.903
Social_Interaction	<---	Customer_Engagement	.891
Behavioural_Eng	<---	Customer_Engagement	.666
Functional_Value	<---	Customer_Perceived_Value	.611
Social_Value	<---	Customer_Perceived_Value	.833
Emotional_Value	<---	Customer_Perceived_Value	.933
US_1	<---	Customer_Using	.743
US_2	<---	Customer_Using	.799
US_3	<---	Customer_Using	.764
US_5	<---	Customer_Using	.779
CE_1	<---	Conscious_Participation	.720
CE_2	<---	Conscious_Participation	.793
CE_3	<---	Conscious_Participation	.858
CE_4	<---	Conscious_Participation	.805

			Estimate
CE_9	<---	Social_Interaction	.859
CE_10	<---	Social_Interaction	.910
CE_11	<---	Social_Interaction	.896
CE_12	<---	Social_Interaction	.809
CE_13	<---	Behavioural_Eng	.741
CE_14	<---	Behavioural_Eng	.852
CE_15	<---	Behavioural_Eng	.850
CE_16	<---	Behavioural_Eng	.807
CV_1	<---	Functional_Value	.593
CV_2	<---	Functional_Value	.687
CV_3	<---	Functional_Value	.784
CV_4	<---	Functional_Value	.737
CV_5	<---	Social_Value	.811
CV_6	<---	Social_Value	.878
CV_7	<---	Social_Value	.816
CV_8	<---	Social_Value	.771
CV_9	<---	Emotional_Value	.785
CV_10	<---	Emotional_Value	.843
CV_11	<---	Emotional_Value	.820
CV_12	<---	Emotional_Value	.776
CI_1	<---	Customer_Innovativeness	.843
CI_2	<---	Customer_Innovativeness	.811
CI_3	<---	Customer_Innovativeness	.641
BI_1	<---	CPBI.	.654
BI_2	<---	CPBI.	.702
BI_3	<---	CPBI.	.744
BI_4	<---	CPBI.	.668

			Estimate
BI_5	<---	CPBI.	.754
BI_6	<---	CPBI.	.790
BI_7	<---	CPBI.	.787
BI_8	<---	CPBI.	.762
BI_9	<---	CPBI.	.712
BI_10	<---	CPBI.	.692
CI_6	<---	Customer_Innovativeness	.656
CI_7	<---	Customer_Innovativeness	.629
CI_8	<---	Customer_Innovativeness	.812
US_4	<---	Customer_Using	.633
CE_5	<---	Enthusiasm	.752
CE_8	<---	Enthusiasm	.858
CE_6	<---	Enthusiasm	.811
CE_7	<---	Enthusiasm	.815
CI_4	<---	Customer_Innovativeness	-.134
CI_5	<---	Customer_Innovativeness	.422
CI_9	<---	Customer_Innovativeness	-.093

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P
Customer_Innovativeness	<-->	CPBI.	.235	.022	10.541	***
Customer_Using	<-->	CPBI.	.160	.018	8.841	***
Customer_Using	<-->	Customer_Innovativeness	.424	.037	11.461	***
Customer_Innovativeness	<-->	Customer_Perceived_Value	.119	.014	8.345	***
Customer_Using	<-->	Customer_Engagement	.329	.028	11.560	***
Customer_Using	<-->	Customer_Perceived_Value	.111	.013	8.506	***
Customer_Innovativeness	<-->	Customer_Engagement	.337	.030	11.132	***
CPBI.	<-->	Customer_Engagement	.113	.014	8.051	***

		Estimate	S.E.	C.R.	P
CPBI.	<--> Customer_Perceived_Value	.044	.007	6.757	***
Customer_Engagement	<--> Customer_Perceived_Value	.133	.014	9.545	***

Correlations: (Group number 1 - Default model)

	Estimate
Customer_Innovativeness <--> CPBI.	.505
Customer_Using <--> CPBI.	.410
Customer_Using <--> Customer_Innovativeness	.555
Customer_Innovativeness <--> Customer_Perceived_Value	.473
Customer_Using <--> Customer_Engagement	.655
Customer_Using <--> Customer_Perceived_Value	.521
Customer_Innovativeness <--> Customer_Engagement	.563
CPBI. <--> Customer_Engagement	.368
CPBI. <--> Customer_Perceived_Value	.340
Customer_Engagement <--> Customer_Perceived_Value	.801

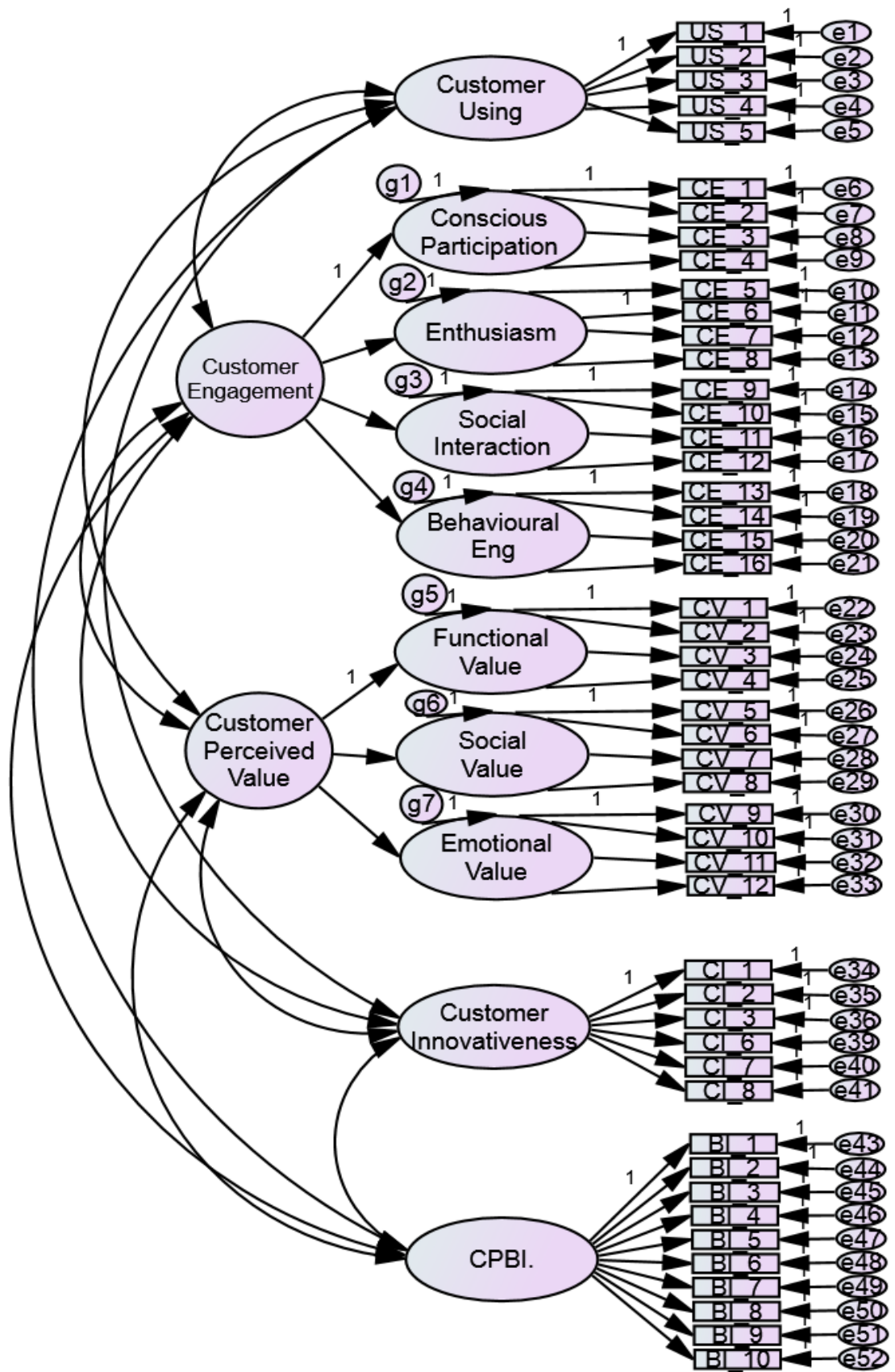
Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P
Customer_Using	.641	.054	11.908	***
Customer_Innovativeness	.908	.062	14.556	***
CPBI.	.238	.023	10.281	***
Customer_Engagement	.393	.039	10.135	***
Customer_Perceived_Value	.070	.011	6.265	***
g1	.137	.016	8.726	***
g2	.121	.015	8.046	***
g3	.177	.018	9.730	***
g4	.376	.034	11.172	***
g5	.118	.015	8.115	***
g6	.236	.025	9.493	***
g7	.074	.016	4.585	***
e1	.522	.031	16.931	***

	Estimate	S.E.	C.R.	P
e2	.356	.023	15.419	***
e3	.431	.026	16.446	***
e5	.441	.027	16.040	***
e6	.492	.027	17.967	***
e7	.350	.021	16.555	***
e8	.265	.019	14.039	***
e9	.339	.021	16.220	***
e11	.340	.021	16.536	***
e12	.350	.021	16.437	***
e13	.272	.018	14.756	***
e14	.304	.018	16.636	***
e15	.218	.016	13.930	***
e16	.246	.016	14.916	***
e17	.415	.023	17.885	***
e18	.555	.032	17.540	***
e19	.350	.025	14.098	***
e20	.379	.027	14.164	***
e21	.533	.033	15.961	***
e22	.346	.019	17.947	***
e23	.310	.019	16.326	***
e24	.234	.018	13.136	***
e25	.284	.019	14.932	***
e26	.399	.024	16.348	***
e27	.240	.018	13.341	***
e28	.402	.025	16.203	***
e29	.443	.026	17.338	***
e30	.355	.021	16.912	***
e31	.253	.017	15.031	***
e32	.350	.022	15.943	***
e33	.452	.026	17.105	***

	Estimate	S.E.	C.R.	P
e34	.369	.025	14.903	***
e35	.416	.026	16.091	***
e36	.351	.019	18.839	***
e43	.319	.017	19.093	***
e44	.381	.020	18.712	***
e45	.324	.018	18.252	***
e46	.501	.026	18.993	***
e47	.336	.019	18.122	***
e48	.278	.016	17.540	***
e49	.307	.017	17.587	***
e50	.332	.018	18.008	***
e51	.423	.023	18.617	***
e52	.520	.028	18.798	***
e39	.554	.030	18.708	***
e40	.395	.021	18.933	***
e41	.464	.029	16.072	***
e4	.789	.043	18.514	***
e10	.400	.022	17.790	***
e37	1.191	.059	20.320	***
e38	.497	.025	19.890	***
e42	1.236	.061	20.340	***

CFA – after deleting 3 items of customer innovativeness (second model)



Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 1225

Number of distinct parameters to be estimated: 115

Degrees of freedom (1225 - 115): 1110

Result (Default model)

Minimum was achieved

Chi-square = 4017.199

Degrees of freedom = 1110

Probability level = .000

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	115	4017.199	1110	.000	3.619
Saturated model	1225	.000	0		
Independence model	49	28501.771	1176	.000	24.236

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.069	.806	.786	.731
Saturated model	.000	1.000		
Independence model	.350	.146	.111	.140

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.859	.851	.894	.887	.894
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.944	.811	.843
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	2907.199	2717.301	3104.568
Saturated model	.000	.000	.000
Independence model	27325.771	26779.335	27878.574

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	4.846	3.507	3.278	3.745
Saturated model	.000	.000	.000	.000
Independence model	34.381	32.962	32.303	33.629

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.056	.054	.058	.000
Independence model	.167	.166	.169	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	4247.199	4261.961	4790.163	4905.163
Saturated model	2450.000	2607.253	8233.746	9458.746
Independence model	28599.771	28606.061	28831.121	28880.121

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	5.123	4.894	5.361	5.141
Saturated model	2.955	2.955	2.955	3.145
Independence model	34.499	33.840	35.166	34.507

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	246	253
Independence model	37	38

Regression Weights: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P
Conscious_Participation	<--- Customer_Engagement	1.000			
Enthusiasm	<--- Customer_Engagement	1.164	.063	18.415	***
Social_Interaction	<--- Customer_Engagement	1.315	.069	19.102	***
Behavioural_Eng	<--- Customer_Engagement	.873	.061	14.319	***
Functional_Value	<--- Customer_Perceived_Value	1.000			
Social_Value	<--- Customer_Perceived_Value	2.756	.235	11.716	***
Emotional_Value	<--- Customer_Perceived_Value	2.659	.224	11.846	***
US_1	<--- Customer_Using	1.000			
US_2	<--- Customer_Using	.990	.045	22.156	***
US_3	<--- Customer_Using	.970	.046	21.203	***
US_5	<--- Customer_Using	1.029	.048	21.604	***
CE_1	<--- Conscious_Participation	1.000			
CE_2	<--- Conscious_Participation	1.058	.049	21.799	***
CE_3	<--- Conscious_Participation	1.183	.050	23.491	***
CE_4	<--- Conscious_Participation	1.085	.049	22.118	***
CE_7	<--- Enthusiasm	1.028	.039	26.476	***
CE_9	<--- Social_Interaction	1.000			
CE_10	<--- Social_Interaction	1.107	.031	36.281	***
CE_11	<--- Social_Interaction	1.081	.031	35.244	***
CE_12	<--- Social_Interaction	.958	.033	29.343	***
CE_13	<--- Behavioural_Eng	1.000			
CE_14	<--- Behavioural_Eng	1.171	.049	24.144	***

		Estimate	S.E.	C.R.	P
CE_15	<--- Behavioural_Eng	1.212	.050	24.110	***
CE_16	<--- Behavioural_Eng	1.215	.053	22.894	***
CV_1	<--- Functional_Value	1.000			
CV_2	<--- Functional_Value	1.214	.083	14.671	***
CV_3	<--- Functional_Value	1.408	.089	15.739	***
CV_4	<--- Functional_Value	1.339	.088	15.290	***
CV_5	<--- Social_Value	1.000			
CV_6	<--- Social_Value	1.024	.035	29.095	***
CV_7	<--- Social_Value	1.020	.039	26.459	***
CV_8	<--- Social_Value	.918	.037	24.522	***
CV_9	<--- Emotional_Value	1.000			
CV_10	<--- Emotional_Value	1.044	.040	26.176	***
CV_11	<--- Emotional_Value	1.121	.044	25.305	***
CV_12	<--- Emotional_Value	1.097	.046	23.697	***
CI_1	<--- Customer_Innovativeness	1.000			
CI_2	<--- Customer_Innovativeness	.939	.032	29.297	***
CI_3	<--- Customer_Innovativeness	.493	.025	19.457	***
BI_1	<--- CPBI.	1.000			
BI_2	<--- CPBI.	1.246	.070	17.854	***
BI_3	<--- CPBI.	1.299	.069	18.753	***
BI_4	<--- CPBI.	1.302	.076	17.115	***
BI_5	<--- CPBI.	1.365	.072	18.957	***
BI_6	<--- CPBI.	1.392	.071	19.681	***
BI_7	<--- CPBI.	1.450	.074	19.636	***
BI_8	<--- CPBI.	1.389	.073	19.122	***
BI_9	<--- CPBI.	1.351	.075	18.069	***
BI_10	<--- CPBI.	1.419	.080	17.655	***

		Estimate	S.E.	C.R.	P
CI_6	<--- Customer_Innovativeness	.639	.032	19.823	***
CI_7	<--- Customer_Innovativeness	.498	.027	18.585	***
CI_8	<--- Customer_Innovativeness	.973	.034	28.384	***
US_4	<--- Customer_Using	.907	.052	17.463	***
CE_8	<--- Enthusiasm	1.079	.038	28.416	***
CE_6	<--- Enthusiasm	1.000			
CE_5	<--- Enthusiasm	.894	.038	23.817	***

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
Conscious_Participation <--- Customer_Engagement	.861
Enthusiasm <--- Customer_Engagement	.903
Social_Interaction <--- Customer_Engagement	.891
Behavioural_Eng <--- Customer_Engagement	.666
Functional_Value <--- Customer_Perceived_Value	.611
Social_Value <--- Customer_Perceived_Value	.833
Emotional_Value <--- Customer_Perceived_Value	.933
US_1 <--- Customer_Using	.742
US_2 <--- Customer_Using	.799
US_3 <--- Customer_Using	.764
US_5 <--- Customer_Using	.778
CE_1 <--- Conscious_Participation	.720
CE_2 <--- Conscious_Participation	.793
CE_3 <--- Conscious_Participation	.859
CE_4 <--- Conscious_Participation	.805
CE_7 <--- Enthusiasm	.814
CE_9 <--- Social_Interaction	.859
CE_10 <--- Social_Interaction	.910

		Estimate
CE_11	<--- Social_Interaction	.896
CE_12	<--- Social_Interaction	.809
CE_13	<--- Behavioural_Eng	.741
CE_14	<--- Behavioural_Eng	.852
CE_15	<--- Behavioural_Eng	.850
CE_16	<--- Behavioural_Eng	.807
CV_1	<--- Functional_Value	.593
CV_2	<--- Functional_Value	.687
CV_3	<--- Functional_Value	.784
CV_4	<--- Functional_Value	.737
CV_5	<--- Social_Value	.811
CV_6	<--- Social_Value	.878
CV_7	<--- Social_Value	.816
CV_8	<--- Social_Value	.771
CV_9	<--- Emotional_Value	.785
CV_10	<--- Emotional_Value	.843
CV_11	<--- Emotional_Value	.820
CV_12	<--- Emotional_Value	.777
CI_1	<--- Customer_Innovativeness	.863
CI_2	<--- Customer_Innovativeness	.830
CI_3	<--- Customer_Innovativeness	.623
BI_1	<--- CPBI.	.654
BI_2	<--- CPBI.	.702
BI_3	<--- CPBI.	.744
BI_4	<--- CPBI.	.668
BI_5	<--- CPBI.	.754
BI_6	<--- CPBI.	.790

		Estimate
BI_7	<--- CPBI.	.787
BI_8	<--- CPBI.	.762
BI_9	<--- CPBI.	.712
BI_10	<--- CPBI.	.692
CI_6	<--- Customer_Innovativeness	.632
CI_7	<--- Customer_Innovativeness	.601
CI_8	<--- Customer_Innovativeness	.813
US_4	<--- Customer_Using	.633
CE_8	<--- Enthusiasm	.858
CE_6	<--- Enthusiasm	.811
CE_5	<--- Enthusiasm	.752

Covariances: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P
Customer_Innovativeness	<--> CPBI.	.229	.022	10.277	***
Customer_Using	<--> CPBI.	.160	.018	8.839	***
Customer_Using	<--> Customer_Innovativeness	.427	.037	11.423	***
Customer_Innovativeness	<--> Customer_Perceived_Value	.121	.015	8.338	***
Customer_Using	<--> Customer_Engagement	.329	.028	11.558	***
Customer_Using	<--> Customer_Perceived_Value	.111	.013	8.504	***
Customer_Innovativeness	<--> Customer_Engagement	.342	.031	11.145	***
CPBI.	<--> Customer_Engagement	.112	.014	8.048	***
CPBI.	<--> Customer_Perceived_Value	.044	.006	6.754	***
Customer_Engagement	<--> Customer_Perceived_Value	.133	.014	9.542	***

Correlations: (Group number 1 - Default model)

	Estimate
Customer_Innovativeness <--> CPBI.	.482
Customer_Using <--> CPBI.	.410

	Estimate
Customer_Using <--> Customer_Innovativeness	.547
Customer_Innovativeness <--> Customer_Perceived_Value	.468
Customer_Using <--> Customer_Engagement	.655
Customer_Using <--> Customer_Perceived_Value	.521
Customer_Innovativeness <--> Customer_Engagement	.559
CPBI. <--> Customer_Engagement	.368
CPBI. <--> Customer_Perceived_Value	.339
Customer_Engagement <--> Customer_Perceived_Value	.801

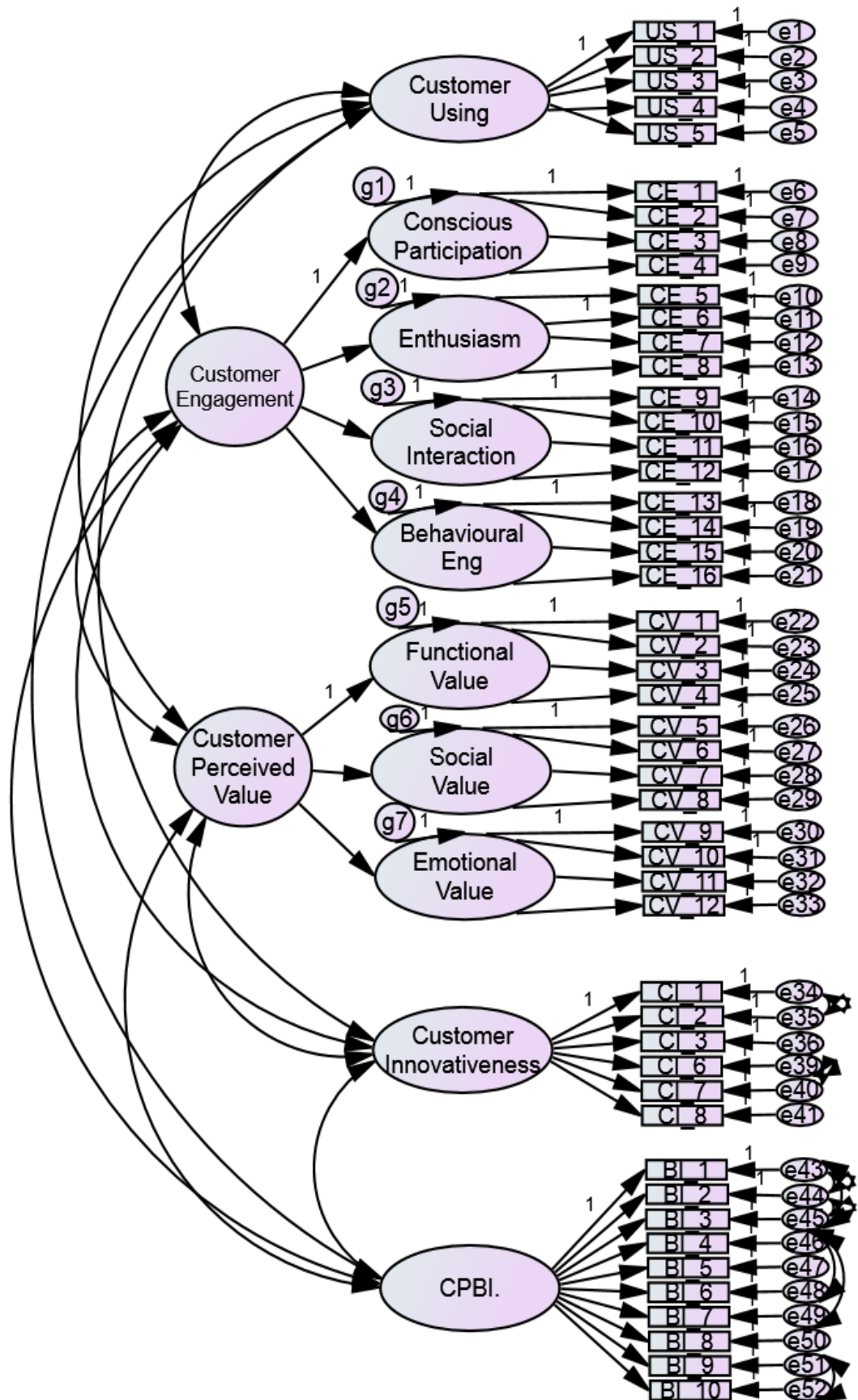
Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P
Customer_Using	.641	.054	11.906	***
Customer_Innovativeness	.952	.063	15.119	***
CPBI.	.238	.023	10.274	***
Customer_Engagement	.393	.039	10.132	***
Customer_Perceived_Value	.070	.011	6.262	***
g1	.138	.016	8.733	***
g3	.176	.018	9.723	***
g4	.375	.034	11.171	***
g5	.118	.015	8.116	***
g6	.236	.025	9.491	***
g7	.074	.016	4.579	***
g2	.121	.015	8.041	***
e1	.522	.031	16.930	***
e2	.356	.023	15.417	***
e3	.430	.026	16.434	***
e5	.441	.027	16.049	***
e6	.492	.027	17.966	***

	Estimate	S.E.	C.R.	P
e7	.350	.021	16.556	***
e8	.265	.019	14.032	***
e9	.339	.021	16.219	***
e11	.340	.021	16.538	***
e12	.350	.021	16.440	***
e13	.272	.018	14.755	***
e14	.304	.018	16.636	***
e15	.218	.016	13.931	***
e16	.246	.016	14.919	***
e17	.415	.023	17.885	***
e18	.555	.032	17.541	***
e19	.350	.025	14.097	***
e20	.379	.027	14.165	***
e21	.532	.033	15.961	***
e22	.346	.019	17.947	***
e23	.310	.019	16.326	***
e24	.234	.018	13.134	***
e25	.284	.019	14.930	***
e26	.399	.024	16.348	***
e27	.240	.018	13.340	***
e28	.402	.025	16.204	***
e29	.443	.026	17.339	***
e30	.356	.021	16.915	***
e31	.253	.017	15.039	***
e32	.350	.022	15.938	***
e33	.452	.026	17.101	***
e34	.325	.023	13.969	***

	Estimate	S.E.	C.R.	P
e35	.378	.024	15.506	***
e36	.365	.019	19.010	***
e43	.319	.017	19.092	***
e44	.381	.020	18.711	***
e45	.324	.018	18.246	***
e46	.502	.026	18.993	***
e47	.336	.019	18.115	***
e48	.278	.016	17.536	***
e49	.307	.017	17.578	***
e50	.332	.018	18.000	***
e51	.423	.023	18.614	***
e52	.520	.028	18.794	***
e39	.584	.031	18.944	***
e40	.417	.022	19.157	***
e41	.461	.029	16.104	***
e4	.789	.043	18.511	***
e10	.400	.022	17.790	***

CFA - after correlation between error terms based on modification indices (final model)



Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 1225

Number of distinct parameters to be estimated: 123

Degrees of freedom (1225 - 123): 1102

Result (Default model)

Minimum was achieved

Chi-square = 3493.998

Degrees of freedom = 1102

Probability level = .000

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	123	3493.998	1102	.000	3.171
Saturated model	1225	.000	0		
Independence model	49	28501.771	1176	.000	24.236

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.067	.830	.811	.746
Saturated model	.000	1.000		
Independence model	.350	.146	.111	.140

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.877	.869	.913	.907	.912
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.937	.822	.855

Model	PRATIO	PNFI	PCFI
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	2391.998	2217.237	2574.281
Saturated model	.000	.000	.000
Independence model	27325.771	26779.335	27878.574

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	4.215	2.885	2.675	3.105
Saturated model	.000	.000	.000	.000
Independence model	34.381	32.962	32.303	33.629

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.051	.049	.053	.155
Independence model	.167	.166	.169	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	3739.998	3755.787	4320.733	4443.733
Saturated model	2450.000	2607.253	8233.746	9458.746
Independence model	28599.771	28606.061	28831.121	28880.121

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	4.511	4.301	4.731	4.531
Saturated model	2.955	2.955	2.955	3.145
Independence model	34.499	33.840	35.166	34.507

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	281	289
Independence model	37	38

Regression Weights: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P
Conscious_Participation	<--- Customer_Engagement	1.000			
Enthusiasm	<--- Customer_Engagement	1.163	.063	18.423	***
Social_Interaction	<--- Customer_Engagement	1.314	.069	19.104	***
Behavioural_Eng	<--- Customer_Engagement	.874	.061	14.330	***
Functional_Value	<--- Customer_Perceived_Value	1.000			
Social_Value	<--- Customer_Perceived_Value	2.749	.234	11.732	***
Emotional_Value	<--- Customer_Perceived_Value	2.652	.223	11.865	***
US_1	<--- Customer_Using	1.000			
US_2	<--- Customer_Using	.990	.045	22.144	***
US_3	<--- Customer_Using	.969	.046	21.165	***
US_5	<--- Customer_Using	1.031	.048	21.616	***
CE_1	<--- Conscious_Participation	1.000			
CE_2	<--- Conscious_Participation	1.058	.049	21.804	***
CE_3	<--- Conscious_Participation	1.183	.050	23.490	***
CE_4	<--- Conscious_Participation	1.085	.049	22.117	***
CE_7	<--- Enthusiasm	1.027	.039	26.480	***
CE_9	<--- Social_Interaction	1.000			
CE_10	<--- Social_Interaction	1.107	.031	36.279	***
CE_11	<--- Social_Interaction	1.081	.031	35.242	***
CE_12	<--- Social_Interaction	.958	.033	29.350	***
CE_13	<--- Behavioural_Eng	1.000			
CE_14	<--- Behavioural_Eng	1.171	.049	24.146	***

		Estimate	S.E.	C.R.	P
CE_15	<--- Behavioural_Eng	1.212	.050	24.113	***
CE_16	<--- Behavioural_Eng	1.215	.053	22.898	***
CV_1	<--- Functional_Value	1.000			
CV_2	<--- Functional_Value	1.214	.083	14.675	***
CV_3	<--- Functional_Value	1.408	.089	15.741	***
CV_4	<--- Functional_Value	1.339	.088	15.291	***
CV_5	<--- Social_Value	1.000			
CV_6	<--- Social_Value	1.024	.035	29.088	***
CV_7	<--- Social_Value	1.021	.039	26.461	***
CV_8	<--- Social_Value	.919	.037	24.525	***
CV_9	<--- Emotional_Value	1.000			
CV_10	<--- Emotional_Value	1.044	.040	26.213	***
CV_11	<--- Emotional_Value	1.120	.044	25.304	***
CV_12	<--- Emotional_Value	1.096	.046	23.692	***
CI_1	<--- Customer_Innovativeness	1.000			
CI_2	<--- Customer_Innovativeness	.919	.028	32.457	***
CI_3	<--- Customer_Innovativeness	.571	.032	18.106	***
BI_1	<--- CPBI.	1.000			
BI_2	<--- CPBI.	1.221	.064	19.048	***
BI_3	<--- CPBI.	1.294	.068	19.014	***
BI_4	<--- CPBI.	1.421	.084	16.894	***
BI_5	<--- CPBI.	1.420	.078	18.250	***
BI_6	<--- CPBI.	1.482	.078	19.062	***
BI_7	<--- CPBI.	1.546	.081	19.039	***
BI_8	<--- CPBI.	1.442	.079	18.356	***
BI_9	<--- CPBI.	1.365	.080	17.044	***
BI_10	<--- CPBI.	1.455	.086	16.875	***

		Estimate	S.E.	C.R.	P
CI_6	<--- Customer_Innovativeness	.769	.040	19.061	***
CI_7	<--- Customer_Innovativeness	.599	.033	18.011	***
CI_8	<--- Customer_Innovativeness	1.113	.047	23.451	***
US_4	<--- Customer_Using	.907	.052	17.462	***
CE_8	<--- Enthusiasm	1.079	.038	28.420	***
CE_6	<--- Enthusiasm	1.000			
CE_5	<--- Enthusiasm	.894	.038	23.826	***

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
Conscious_Participation <--- Customer_Engagement	.861
Enthusiasm <--- Customer_Engagement	.903
Social_Interaction <--- Customer_Engagement	.891
Behavioural_Eng <--- Customer_Engagement	.667
Functional_Value <--- Customer_Perceived_Value	.612
Social_Value <--- Customer_Perceived_Value	.832
Emotional_Value <--- Customer_Perceived_Value	.932
US_1 <--- Customer_Using	.742
US_2 <--- Customer_Using	.799
US_3 <--- Customer_Using	.763
US_5 <--- Customer_Using	.779
CE_1 <--- Conscious_Participation	.720
CE_2 <--- Conscious_Participation	.793
CE_3 <--- Conscious_Participation	.858
CE_4 <--- Conscious_Participation	.805
CE_7 <--- Enthusiasm	.814
CE_9 <--- Social_Interaction	.859
CE_10 <--- Social_Interaction	.910

		Estimate
CE_11	<--- Social_Interaction	.896
CE_12	<--- Social_Interaction	.809
CE_13	<--- Behavioural_Eng	.741
CE_14	<--- Behavioural_Eng	.852
CE_15	<--- Behavioural_Eng	.850
CE_16	<--- Behavioural_Eng	.807
CV_1	<--- Functional_Value	.593
CV_2	<--- Functional_Value	.687
CV_3	<--- Functional_Value	.784
CV_4	<--- Functional_Value	.737
CV_5	<--- Social_Value	.811
CV_6	<--- Social_Value	.878
CV_7	<--- Social_Value	.816
CV_8	<--- Social_Value	.771
CV_9	<--- Emotional_Value	.785
CV_10	<--- Emotional_Value	.844
CV_11	<--- Emotional_Value	.819
CV_12	<--- Emotional_Value	.776
CI_1	<--- Customer_Innovativeness	.772
CI_2	<--- Customer_Innovativeness	.727
CI_3	<--- Customer_Innovativeness	.646
BI_1	<--- CPBI.	.629
BI_2	<--- CPBI.	.662
BI_3	<--- CPBI.	.714
BI_4	<--- CPBI.	.703
BI_5	<--- CPBI.	.756
BI_6	<--- CPBI.	.810

		Estimate
BI_7	<--- CPBI.	.809
BI_8	<--- CPBI.	.762
BI_9	<--- CPBI.	.693
BI_10	<--- CPBI.	.684
CI_6	<--- Customer_Innovativeness	.681
CI_7	<--- Customer_Innovativeness	.647
CI_8	<--- Customer_Innovativeness	.832
US_4	<--- Customer_Using	.633
CE_8	<--- Enthusiasm	.858
CE_6	<--- Enthusiasm	.811
CE_5	<--- Enthusiasm	.752

Covariances: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P
Customer_Innovativeness	<--> CPBI.	.219	.021	10.389	***
Customer_Using	<--> CPBI.	.157	.018	8.897	***
Customer_Using	<--> Customer_Innovativeness	.389	.035	11.048	***
Customer_Innovativeness	<--> Customer_Perceived_Value	.114	.014	8.322	***
Customer_Using	<--> Customer_Engagement	.329	.028	11.559	***
Customer_Using	<--> Customer_Perceived_Value	.111	.013	8.513	***
Customer_Innovativeness	<--> Customer_Engagement	.321	.029	10.986	***
CPBI.	<--> Customer_Engagement	.111	.014	8.160	***
CPBI.	<--> Customer_Perceived_Value	.044	.006	6.914	***
Customer_Engagement	<--> Customer_Perceived_Value	.134	.014	9.553	***
e34	<--> e35	.319	.029	11.003	***
e43	<--> e44	.095	.015	6.534	***
e44	<--> e45	.137	.016	8.714	***
e39	<--> e40	.121	.019	6.390	***

		Estimate	S.E.	C.R.	P
e43	<--> e45	.054	.013	4.068	***
e46	<--> e49	-.084	.015	-5.455	***
e46	<--> e48	-.080	.015	-5.449	***
e51	<--> e52	.091	.019	4.814	***

Correlations: (Group number 1 - Default model)

	Estimate
Customer_Innovativeness <--> CPBI.	.533
Customer_Using <--> CPBI.	.419
Customer_Using <--> Customer_Innovativeness	.557
Customer_Innovativeness <--> Customer_Perceived_Value	.494
Customer_Using <--> Customer_Engagement	.655
Customer_Using <--> Customer_Perceived_Value	.522
Customer_Innovativeness <--> Customer_Engagement	.586
CPBI. <--> Customer_Engagement	.378
CPBI. <--> Customer_Perceived_Value	.355
Customer_Engagement <--> Customer_Perceived_Value	.801
e34 <--> e35	.587
e43 <--> e44	.252
e44 <--> e45	.354
e39 <--> e40	.272
e43 <--> e45	.156
e46 <--> e49	-.234
e46 <--> e48	-.234
e51 <--> e52	.186

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Customer_Using	.640	.054	11.901	***	

	Estimate	S.E.	C.R.	P	Label
Customer_Innovativeness	.761	.061	12.432	***	
CPBI.	.221	.023	9.785	***	
Customer_Engagement	.393	.039	10.135	***	
Customer_Perceived_Value	.071	.011	6.273	***	
g1	.137	.016	8.731	***	
g3	.177	.018	9.748	***	
g4	.375	.034	11.171	***	
g5	.118	.015	8.113	***	
g6	.236	.025	9.501	***	
g7	.075	.016	4.621	***	
g2	.121	.015	8.046	***	
e1	.522	.031	16.925	***	
e2	.356	.023	15.404	***	
e3	.431	.026	16.449	***	
e5	.440	.027	16.014	***	
e6	.492	.027	17.967	***	
e7	.350	.021	16.553	***	
e8	.265	.019	14.038	***	
e9	.340	.021	16.223	***	
e11	.339	.021	16.534	***	
e12	.350	.021	16.443	***	
e13	.272	.018	14.762	***	
e14	.304	.018	16.634	***	
e15	.218	.016	13.934	***	
e16	.246	.017	14.919	***	
e17	.415	.023	17.882	***	
e18	.555	.032	17.540	***	

	Estimate	S.E.	C.R.	P	Label
e19	.351	.025	14.102	***	
e20	.379	.027	14.167	***	
e21	.532	.033	15.960	***	
e22	.346	.019	17.948	***	
e23	.310	.019	16.325	***	
e24	.234	.018	13.142	***	
e25	.284	.019	14.937	***	
e26	.399	.024	16.347	***	
e27	.240	.018	13.345	***	
e28	.402	.025	16.200	***	
e29	.443	.026	17.335	***	
e30	.355	.021	16.905	***	
e31	.252	.017	15.015	***	
e32	.351	.022	15.954	***	
e33	.453	.026	17.111	***	
e34	.515	.033	15.529	***	
e35	.574	.035	16.513	***	
e36	.348	.019	18.143	***	
e43	.336	.017	19.225	***	
e44	.422	.022	19.020	***	
e45	.356	.019	18.597	***	
e46	.456	.026	17.573	***	
e47	.334	.018	18.198	***	
e48	.254	.015	16.437	***	
e49	.280	.017	16.475	***	
e50	.332	.018	18.115	***	
e51	.446	.024	18.807	***	

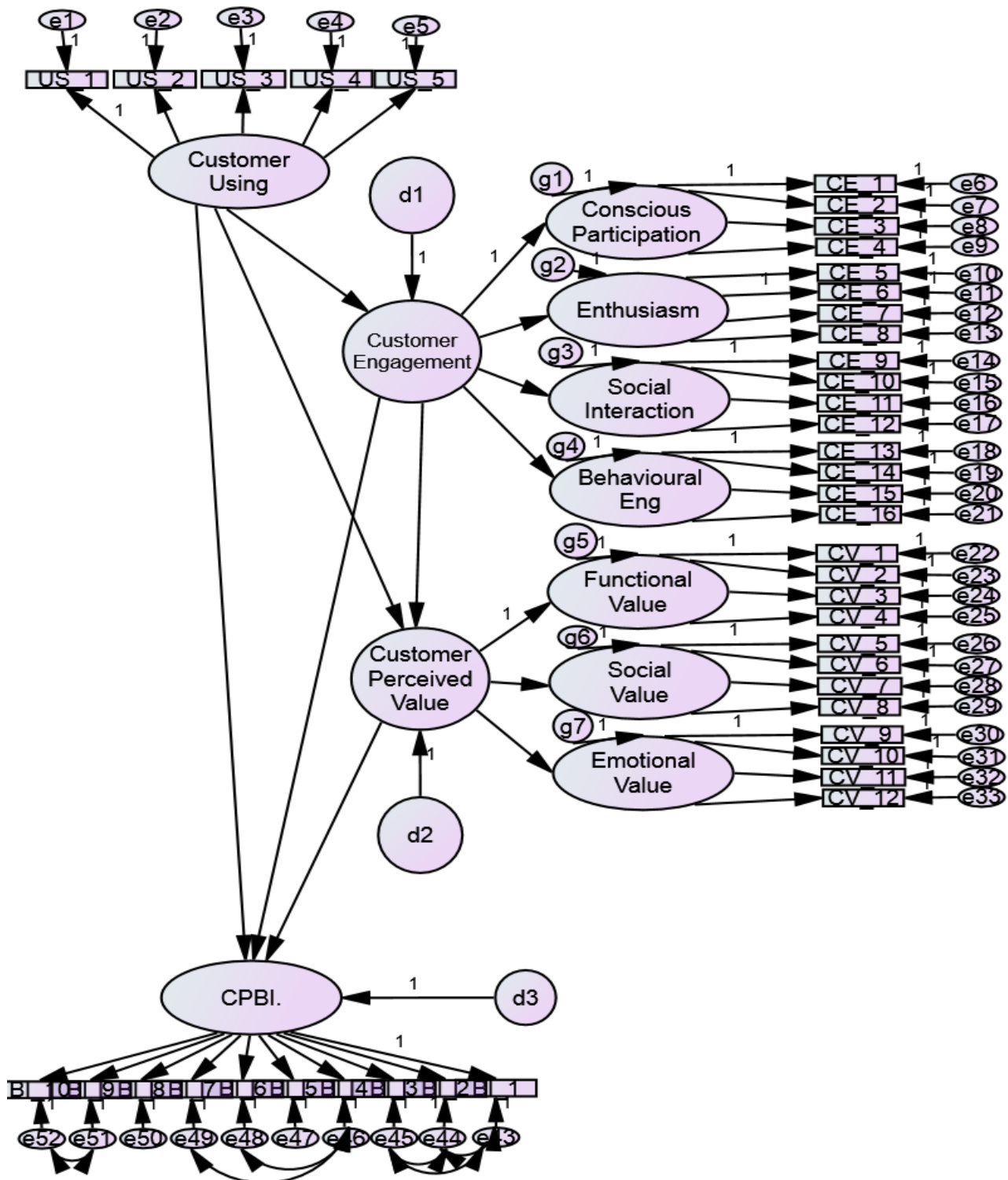
	Estimate	S.E.	C.R.	P	Label
e52	.532	.028	18.876	***	
e39	.522	.030	17.496	***	
e40	.380	.021	17.926	***	
e41	.420	.032	13.234	***	
e4	.788	.043	18.505	***	
e10	.400	.022	17.789	***	

Validity and reliability assessment

	CR	AVE	MSV	MaxR(H)	Customer Engagement	Customer Innovativeness	CPBI	Customer Perceived Value	Customer Using
Customer Engagement	0.902	0.699	0.642	0.923	0.836				
Customer Innovativeness	0.865	0.519	0.343	0.877	0.586	0.721			
CPBI.	0.917	0.525	0.284	0.922	0.378	0.533	0.724		
Customer Perceived Value	0.841	0.645	0.642	0.904	0.801	0.494	0.355	0.803	
Customer Using	0.861	0.556	0.429	0.868	0.655	0.557	0.419	0.522	0.745

Structural model

Final structure model results



Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 946

Number of distinct parameters to be estimated: 107

Degrees of freedom (946 - 107): 839

Result (Default model)

Minimum was achieved

Chi-square = 1934.596

Degrees of freedom = 839

Probability level = .000

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	107	1934.596	839	.000	2.306
Saturated model	946	.000	0		
Independence model	43	12911.621	903	.000	14.299

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.072	.826	.804	.733
Saturated model	.000	1.000		
Independence model	.268	.209	.172	.200

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.850	.839	.909	.902	.909
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.929	.790	.844
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	1095.596	971.350	1227.522
Saturated model	.000	.000	.000
Independence model	12008.621	11644.632	12379.043

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	4.143	2.346	2.080	2.629
Saturated model	.000	.000	.000	.000
Independence model	27.648	25.714	24.935	26.508

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.053	.050	.056	.062
Independence model	.169	.166	.171	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	2148.596	2170.856	2592.482	2699.482
Saturated model	1892.000	2088.804	5816.451	6762.451
Independence model	12997.621	13006.566	13176.005	13219.005

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	4.601	4.335	4.883	4.649
Saturated model	4.051	4.051	4.051	4.473
Independence model	27.832	27.053	28.625	27.851

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	220	227
Independence model	36	37

Regression Weights: (ALL - Default model)

		Estimate	S.E.	C.R.	P
Customer_Engagement	<--- Customer_Using	.420	.047	8.872	***
Customer_Perceived_Value	<--- Customer_Using	.013	.019	.678	.498
Customer_Perceived_Value	<--- Customer_Engagement	.251	.042	6.032	***
Conscious_Participation	<--- Customer_Engagement	1.000			
Enthusiasm	<--- Customer_Engagement	1.123	.090	12.517	***
Social_Interaction	<--- Customer_Engagement	1.217	.096	12.733	***
Behavioural_Eng	<--- Customer_Engagement	.815	.088	9.227	***
Functional_Value	<--- Customer_Perceived_Value	1.000			
Social_Value	<--- Customer_Perceived_Value	2.599	.347	7.481	***

			Estimate	S.E.	C.R.	P
Emotional_Value	<---	Customer_Perceived_Value	2.925	.384	7.607	***
CPBI.	<---	Customer_Using	.129	.040	3.261	.001
CPBI.	<---	Customer_Perceived_Value	.358	.156	2.296	.022
CPBI.	<---	Customer_Engagement	-.038	.067	-.571	.568
US_1	<---	Customer_Using	1.000			
US_2	<---	Customer_Using	.935	.068	13.854	***
US_3	<---	Customer_Using	.843	.068	12.326	***
US_5	<---	Customer_Using	1.024	.072	14.242	***
CE_1	<---	Conscious_Participation	1.000			
CE_2	<---	Conscious_Participation	1.077	.069	15.594	***
CE_3	<---	Conscious_Participation	1.112	.067	16.489	***
CE_4	<---	Conscious_Participation	1.070	.069	15.562	***
CE_9	<---	Social_Interaction	1.000			
CE_10	<---	Social_Interaction	1.166	.047	24.700	***
CE_11	<---	Social_Interaction	1.159	.047	24.897	***
CE_12	<---	Social_Interaction	.988	.050	19.756	***
CE_13	<---	Behavioural_Eng	1.000			
CE_14	<---	Behavioural_Eng	1.034	.061	16.903	***
CE_15	<---	Behavioural_Eng	1.038	.063	16.544	***
CE_16	<---	Behavioural_Eng	1.055	.067	15.835	***
CV_1	<---	Functional_Value	1.000			
CV_2	<---	Functional_Value	1.180	.106	11.078	***
CV_3	<---	Functional_Value	1.407	.117	12.025	***
CV_4	<---	Functional_Value	1.345	.114	11.774	***

		Estimate	S.E.	C.R.	P
CV_5	<--- Social_Value	1.000			
CV_6	<--- Social_Value	1.004	.052	19.296	***
CV_7	<--- Social_Value	1.013	.057	17.697	***
CV_8	<--- Social_Value	.952	.059	16.090	***
CV_9	<--- Emotional_Value	1.000			
CV_10	<--- Emotional_Value	1.024	.052	19.747	***
CV_11	<--- Emotional_Value	.849	.056	15.150	***
CV_12	<--- Emotional_Value	.736	.058	12.702	***
BI_1	<--- CPBI.	1.000			
BI_2	<--- CPBI.	1.154	.092	12.592	***
BI_3	<--- CPBI.	1.254	.098	12.787	***
BI_4	<--- CPBI.	1.298	.121	10.753	***
BI_5	<--- CPBI.	1.548	.123	12.537	***
BI_6	<--- CPBI.	1.553	.120	12.915	***
BI_7	<--- CPBI.	1.661	.127	13.100	***
BI_8	<--- CPBI.	1.593	.122	13.038	***
BI_9	<--- CPBI.	1.489	.125	11.963	***
BI_10	<--- CPBI.	1.638	.134	12.208	***
US_4	<--- Customer_Using	.799	.069	11.532	***
CE_5	<--- Enthusiasm	.849	.051	16.750	***
CE_8	<--- Enthusiasm	1.087	.050	21.734	***
CE_6	<--- Enthusiasm	1.000			
CE_7	<--- Enthusiasm	1.134	.050	22.801	***

Standardized Regression Weights: (ALL - Default model)

		Estimate
Customer_Engagement	<--- Customer_Using	.583
Customer_Perceived_Value	<--- Customer_Using	.044
Customer_Perceived_Value	<--- Customer_Engagement	.625
Conscious_Participation	<--- Customer_Engagement	.820
Enthusiasm	<--- Customer_Engagement	.862
Social_Interaction	<--- Customer_Engagement	.869
Behavioural_Eng	<--- Customer_Engagement	.581
Functional_Value	<--- Customer_Perceived_Value	.525
Social_Value	<--- Customer_Perceived_Value	.767
Emotional_Value	<--- Customer_Perceived_Value	.907
CPBI.	<--- Customer_Using	.231
CPBI.	<--- Customer_Perceived_Value	.185
CPBI.	<--- Customer_Engagement	-.050
US_1	<--- Customer_Using	.724
US_2	<--- Customer_Using	.740
US_3	<--- Customer_Using	.656
US_5	<--- Customer_Using	.756
CE_1	<--- Conscious_Participation	.707
CE_2	<--- Conscious_Participation	.786
CE_3	<--- Conscious_Participation	.839
CE_4	<--- Conscious_Participation	.784
CE_9	<--- Social_Interaction	.835
CE_10	<--- Social_Interaction	.897

		Estimate
CE_11	<--- Social_Interaction	.901
CE_12	<--- Social_Interaction	.777
CE_13	<--- Behavioural_Eng	.745
CE_14	<--- Behavioural_Eng	.820
CE_15	<--- Behavioural_Eng	.801
CE_16	<--- Behavioural_Eng	.765
CV_1	<--- Functional_Value	.596
CV_2	<--- Functional_Value	.684
CV_3	<--- Functional_Value	.799
CV_4	<--- Functional_Value	.759
CV_5	<--- Social_Value	.782
CV_6	<--- Social_Value	.859
CV_7	<--- Social_Value	.791
CV_8	<--- Social_Value	.728
CV_9	<--- Emotional_Value	.810
CV_10	<--- Emotional_Value	.877
CV_11	<--- Emotional_Value	.681
CV_12	<--- Emotional_Value	.587
BI_1	<--- CPBI.	.587
BI_2	<--- CPBI.	.592
BI_3	<--- CPBI.	.663
BI_4	<--- CPBI.	.617
BI_5	<--- CPBI.	.748
BI_6	<--- CPBI.	.790
BI_7	<--- CPBI.	.809

		Estimate
BI_8	<--- CPBI.	.796
BI_9	<--- CPBI.	.699
BI_10	<--- CPBI.	.720
US_4	<--- Customer_Using	.596
CE_5	<--- Enthusiasm	.708
CE_8	<--- Enthusiasm	.856
CE_6	<--- Enthusiasm	.819
CE_7	<--- Enthusiasm	.887

Variances: (ALL - Default model)

	Estimate	S.E.	C.R.	P	Label
Customer_Using	.634	.076	8.313	***	
d1	.217	.032	6.671	***	
d2	.031	.008	4.000	***	
g1	.160	.024	6.553	***	
g3	.158	.023	6.852	***	
g4	.427	.051	8.390	***	
g5	.140	.022	6.225	***	
g6	.250	.036	6.894	***	
g7	.098	.031	3.139	.002	
d3	.178	.027	6.664	***	
g2	.143	.021	6.762	***	
e1	.574	.049	11.757	***	
e2	.457	.041	11.156	***	
e3	.596	.048	12.457	***	
e5	.497	.045	10.990	***	

	Estimate	S.E.	C.R.	P	Label
e6	.489	.037	13.314	***	
e7	.350	.029	12.053	***	
e8	.255	.024	10.533	***	
e9	.350	.029	12.091	***	
e11	.274	.022	12.383	***	
e12	.193	.019	9.962	***	
e13	.239	.021	11.313	***	
e14	.279	.022	12.659	***	
e15	.214	.020	10.542	***	
e16	.200	.019	10.292	***	
e17	.412	.030	13.569	***	
e18	.516	.042	12.430	***	
e19	.335	.032	10.536	***	
e20	.389	.035	11.160	***	
e21	.509	.042	12.048	***	
e22	.349	.026	13.492	***	
e23	.305	.025	12.378	***	
e24	.216	.023	9.392	***	
e25	.256	.024	10.670	***	
e26	.385	.032	12.145	***	
e27	.218	.022	9.700	***	
e28	.374	.031	11.955	***	
e29	.488	.037	13.066	***	
e30	.290	.027	10.896	***	
e31	.174	.022	7.947	***	

	Estimate	S.E.	C.R.	P	Label
e32	.459	.034	13.385	***	
e33	.567	.040	14.089	***	
e43	.375	.026	14.517	***	
e44	.489	.034	14.499	***	
e45	.397	.028	14.166	***	
e46	.541	.039	13.844	***	
e47	.373	.028	13.520	***	
e48	.288	.023	12.585	***	
e49	.289	.024	12.207	***	
e50	.290	.023	12.859	***	
e51	.459	.033	13.865	***	
e52	.493	.036	13.699	***	
e4	.735	.054	13.558	***	
e10	.399	.029	13.876	***	

