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A model of brand engagement in online brand communities: Co-creating value for the brand and the community

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Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.
This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Signature:…….

Date:……...

Abstract

In an increasingly interactive environment, the behavioural manifestation of customer engagement has recently emerged as an important concept in the marketing literature (Jaakkola and Alexander 2014). A key tenet of the customer engagement behaviour concept is interactive customer experience and value co-creation (Brodie et al. 2011; Hoyer et al. 2010). Customers co-create value in many ways but the development of the OBC technology platforms has enabled customers to co-create value through interactive experience in online brand communities. Online social media communities have been identified as important venues for examining customer engagement behaviours (Merz, He and Vargo 2009). The current study conceptualizes 'customer engagement behaviours' in different types of voluntary extra-roles and discretionary behaviours (i.e., outside of the customer's required role for service delivery and service encounter) that are intended to co-create value for themselves (i.e., brand related), other customers (i.e., involving the brand) and the firm in online brand communities.

The marketing literature has contributed limited insights to the theoretical development of the engagement concept, and more specifically, to customer engagement behaviours in value co-creation in online brand communities (Gambetti and Graffigna 2014). In concert with this research stream, the Marketing Science Institute stipulated customer engagement as a research priority in 2012 and again in 2014 and 2016. The need for conclusive research that examines various customer engagement behaviour types has also been highlighted in a number of articles in the top marketing journals (Jaakkola and Alexander 2014; Pervan and Bove 2011; Kabadayi and Price 2014; Groeger, Moroko, and Hollebeek 2016; Kumar and Pansari 2016). The current study addresses this gap by proposing a conceptual model of customer engagement behaviours in online brand communities that explores the antecedents and outcomes of customer engagement behaviours.

Building on social exchange theory (Jin Yong and Hye-Shin 2010) and self-determination theory (Gagné and Deci 2005), the current study model examines the combined impact of perceived benefits and autonomous motivation on different types of engagement behaviours. Specifically, this study integrates two sources of motivation. The former

source pertains to the uses and gratifications framework of perceived benefits (Nambisan and Baron 2009) that customers derive from OBCs: social, status, hedonic, and functional benefits. The latter set relates to how the effects of these benefits are integrated with the intrinsic part of one's motivation (autonomous motivation) to explain engagement behaviours. Lastly, the research model tests the individual impact of each type of engagement behaviours on brand loyalty in terms of word of mouth and purchase intention.

This research utilises a qualitative netnography approach to explore four online brand communities, and a quantitative online survey to test the research model in two online brand communities. Data were analysed using structural equation modelling AMOS 21 software.

Central to the objectives of this study, the exploratory findings demonstrate that engagement behaviours are common in online brand communities and co-create value for different objects (e.g., firm/brand or other members). The findings support the existing engagement behaviour constructs as well as extend the conceptual definition of customer engagement behaviours. The quantitative findings confirm that functional benefits are directly related to CEB toward oneself and that the relationship between social, status and hedonic benefits and the three types of engagement behaviours are mediated by autonomous motivation. The findings suggest that customers engage in different types of behavioural manifestations not only for the sake of benefits, but rather they engage autonomously out of interest and self-satisfaction. Additionally, this study establishes that each type of CEB positively affects brand loyalty in terms of purchase intention and WOM.

The findings of this research contribute to the brand community and customer engagement behaviour literature by identifying three types of engagement behaviours and confirming an empirical model that explains the antecedents and outcomes of these engagement behaviours. Furthermore, the findings also present a theoretical contribution by explaining the interaction between benefits and autonomous motivation as antecedents of customer engagement behaviours. This research concludes by highlighting a number of managerial implications, future research directions and limitations.

Keywords: engagement behaviours, online brand communities, value co-creation, autonomous motivation, perceived benefits, social exchange theory, self-determination theory

Dedication

This thesis is dedicated to my parents.

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Many wonderful people supported me throughout my PhD study. I owe them my deepest appreciation.

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List of Abbreviations

AVE	Average Variance Extracted
C2C	Customer-to-Customer
CB	citizenship behaviours
CEB	Customer Engagement Behaviours
CFA	Confirmatory Factor Analysis
CI	Confidence Interval
CR	Construct Reliability
MI	Modification Indices
MSI	Marketing Science Institute
OBC	Online Brand Communities
OCB	Organization citizenship behaviours
SD logic	Service-dominant Logic
SDT	Self-determination Theory
SEM	Structural Equation Modelling
SET	Social Exchange Theory
SST	Self-service Technologies
WOM	Word-of-Mouth

Chapter One: Introduction

This chapter defines and highlights the importance of customer engagement behaviours (CEBs) in online brand communities (OBCs), identifies relevant gaps in the engagement literature and relevant gaps in the brand community literature. In doing so, this chapter outlines the objectives of the research and then presents the methods employed in this study. It also briefly addresses the scope of the research and its significance to the marketing literature.

1.1 Customer Engagement Behaviours

The concept of customer engagement (CE) is a new relational paradigm that has emerged recently in marketing academia (Hollebeek, Glynn, and Brodie, 2014). Recent scholarly works have described, in-depth, the interactive nature of consumer-brand interactions with greater emphasis to social media context (Goldsmith, Flynn, & Clark, 2011; Hollebeek et al. 2014; Park and Kim, 2014). Specifically, in the context of CE, the term "engagement" entails focal interactive experiences between a customer and brand (Brodie et al. 2011). Scholars in this area provide different definitions and conceptualizations to study engagement including customer engagement (Brodie et al. 2011), brand engagement (Dwivedi 2015), customer engagement behaviours (Van Doorn et al. 2010), customer engagement behaviours in value co-creation (Jaakkola and Alexander 2014), and brand community engagement (Baldus, Voorhees, and Calantone 2015) (all are discussed later in the thesis). Research examining "engagement" generally defines and conceptualises engagement in two ways. The first approach conceptualises customer engagement as a multi-dimensional construct including cognitive, emotional, and behavioural facets (Brodie et al. 2011). In this approach, customer engagement is defined as 'a psychological state that occurs by virtue of interactive, co-creative customer experiences with a focal agent/object in focal service relationships' (Brodie et al. 2011, 7-9). Following this approach, Hollebeek, Glynn, and Brodie (2014, 154) develop three consumer brand engagement dimensions that measure and capture 'a consumer's positively valenced brand-related'engagement: these are cognitive processing, affection, and activation 'during or related to focal consumer/brand interactions'. The second

approach focuses on the behavioural facets of customer engagement (Van Doorn et al. 2010; Porter et al. 2011; Groeger, Moroko, and Hollebeek, 2016). This behavioural approach is predominant in the social media and social community literature when examining and measuring CEB (Cova, Pace, and Skålén 2015; Pongsakornrungsilp and Schroeder, 2011; Ray, Kim, and Morris 2014). The behavioural approach to examining customer engagement is the focus of this study. More specifically, this study examines customer engagement behaviours in the context of online brand communities.

In an increasingly interactive environment, the role of CEB is receiving greater attention from business practitioners and marketing academia (Jaakkola and Alexander 2014; Brodie et al. 2011). The central focus is on non-transactional forms of CEBs. Specifically, Van Doorn et al. (2010; 254) define customer engagement behaviours as 'behavioural manifestations that go beyond purchase transactions that have a brand or firm focus, resulting from motivational drivers'. CEBs can incorporate the transaction, but extend beyond the scope of the transaction. Brodie et al. (2011, 259) concur that 'CE behaviours exhibited may extend beyond individual transactions and as such, include specific customers' pre- and/or post-purchase'. Examples of behavioural manifestations include suggestion for service improvement, CEB toward other members, seeking information, and co-developing products (Van Doorn et al. 2010, Jaakkola and Alexander 2014). These authors highlight that these behavioural manifestations help the brand or firm and are the essence of value co-creation.

Researchers investigating online communities and brand communities have suggested that CEBs revolve around knowledge creation and other valuable resources that can co-create value for both community members and the firm (Ray, Kim and Morris 2014; Nambisan and Baron 2010; Muniz and Schau 2011). More specifically, CEBs are customer-led interactions that entail a range of active behaviours toward the brand/firm and other customers (France, Merrilees and Miller 2015). In this regard, these behavioural manifestations have been linked to the concept of co-creation. According to Hoyer et al. (2010, 283) 'co-creation is considered as an important manifestation of customer engagement behaviours'. In accordance with the Van Doorn et al. (2010) and Jaakkola and Alexander (2014) definitions of CEBs, the focus of this current study is on CEBs that

go beyond the transaction or purchase, and co-create value for different entities including oneself, other members (i.e., customer to customer), and the firm.

The extant literature confirms that CEBs entail value co-creation (Jaakkola and Alexander 2014; Nambisan and Baron 2010) and can be directed toward the firm, other customers, or the customers themselves (Wei et al. 2013; Jaakkola and Alexander 2014). Jaakkola and Alexander (2014, 254) define CEBs that co-create value as 'the customer provision of resources during nontransactional, joint value processes that occur in interaction with the focal firm and/or other stakeholders, thereby affecting their respective value processes and outcomes'. Such resources include time, effort, and behavioural actions. Jaakkola and Alexander's (2014) definition recognizes that CEBs in value co-creation entail voluntary and extra-role behaviours (i.e., not just in-role behaviours). Similarly, Bolton and Saxena-Iyer (2009) suggest that value co-creation occurs when the customer engages through spontaneous, discretionary behaviours that create a service or consumption experience beyond the customer service encounter. The concept of CEBs that co-create value can be viewed from the perspective of SD logic, which suggests that customers 'always' co-create value because 'value can only be created with and determined by the user in the consumption process and through use or what is referred to as value in use' (Lusch and Vargo 2006, 284). Specifically, S-D logic has extended the marketing thinking by focusing on how 'value is always co-created with customers (and others) rather than unilaterally created by the firm' (Merz, He and Vargo 2009, 328).

However, CEBs do not always result in positive outcomes for the firm. For example, an organisation may suffer when customers engage in negative expressions toward the firm. Wei, Miao, and Huang (2013) found that negative comments posted by customers can hurt a hotel's reputation. The current study focuses on CEBs that add value for the firm or customers. Generally speaking, if CEBs provide voluntary benefits or unpaid benefits to the brand (e.g., enhancing the performance of the brand), firm (e.g., making suggestion/feedback to the firm), or other customers (e.g., assisting other customers), then customers directly or indirectly determine the value derived (Jaakkola and Alexander 2014; Pace, and Skalen 2015).

The current study conceptualizes CEBs as different types of voluntary extra-role and discretionary behaviours (i.e., outside of the customer's required role for service delivery and service encounter) that are intended to co-create value for themselves, other customers and the firm. The concept of CE including the behavioural part of CE fits well with the core arguments of relationship marketing and service dominant (SD) logic which emphasise 'consumer contribution to brand interactions' and to other customers (Hollebeek 2011, 556). This approach is consistent with SD logic and is consistent with more behaviourally oriented definitions of customer engagement (as per Porter et al. 2011; Van Doorn et al. 2010; Wei et al. 2013; Jaakkola and Alexander 2014). An understanding of how CEBs add value for different stakeholders has not been adequately developed in the marketing literature (Jaakkola and Alexander 2014).

1.2 The Importance of CEBs in OBCs

The advent of online social media communities has contributed to a dramatic shift of power from marketers to customers, with customers taking more interactive and active roles in brand value co-creation (Merz, He and Vargo 2009). The interactive nature of social media communities not only encourages CEBs in these communities, but it also redefines the customer's role in value co-creation activities (Jaakkola and Alexander 2014; Verhoef, Reinartz and Krafft 2010). Customer willingness and ability to engage in these platforms can add significant value by facilitating two-way customer-to-firm and customer-to-customer (C2C) interactions. Research suggests that CEBs in social communities is determined by a customer's willingness to interact to add value for other customers or the firm (Sashi 2012; Porter et al. 2011).

Business has realised the benefits of building brand communities not only in terms of word-of-mouth (WOM) and brand loyalty, but also to encourage CEBs (Vallaster and von Wallpach 2013; Muniz and Schau 2011). An increasing number of firms are now hosting OBCs to engage their customers in product development, product innovation, and product support activities (Nambisan and Baron 2009; O'Hern and Rindfleisch 2009; Sawhney, Verona and Prandelli 2005). CEBs in the brand communities co-create many different forms of value for a brand (Habibi et al. 2014). For instance, it has been reported that customers submitted more than 75,000 ideas to 'My Starbucks Idea' within the first

six months of the launch of this virtual community. As customers increasingly use social media and online communities to engage with other consumers and the brand, the opportunity grows for brands to listen, to encourage value co-creation and to develop relationships (Kozinets 2014). Thus, CEB with the brand, and with other customers, is a positive outcome for brands and organisational performance (Porter et al. 2011).

CEBs have become more important to firms/brands as increased online interactivity (Verhoef, Reinartz and Krafft 2010) has allowed customer interactions and contributions beyond purchase. This supports the idea of a customer-centric approach to enhance experiences and brand value. The opportunity to engage customers in product support, co-consumption and product improvement through two-way interactions has significant and positive effects on business performance (Sawhney, Verona and Prandelli 2005). Product support (Nambisan and Baron 2009), co-consumption, and product improvements are key dimensions of CEBs. For example, when a customer engages in providing product support, he/she engages in helping other customers (Nambisan and Baron 2009). Product development or product improvement entails co-developing behaviour—when a customer gives ideas for new or improved products and services (Jaakkola and Alexander 2014). Research suggests that these dimensions capture a large part of CEBs in online brand communities (Nambisan and Baron 2009; Muniz and Schau 2011, O'Hern and Rindfleisch 2009; Gummerus et al. 2012). Specifically, CEBs include behavioural activities toward the firm or brand through communication and interaction in online brand communities (Gummerus et al. 2012; Baldus, Voorhees, and Calantone 2015).

Thus, the level of interaction between customers and different types of agents, including other customers and the firm, comprises a large part of CEBs (Franzak, Makarem, and Jae 2014; Hollebeek and Brodie 2009). Therefore, if firms neglect CEBs then they lose opportunities, such as the joint development of products/services (Verhoef, Reinartz and Krafft 2010). This can occur because businesses focus on the transactional side of the customer relationship including gaining the initial sale and up-selling additional products (Sashi 2012; Verhoef, Reinartz and Krafft 2010). Given the growth of OBCs and the emerging evidence of their impact on business performance, this study focuses on operationalising and testing the types of CEBs in OBCs.

1. 3 Gaps in the Engagement Behaviours Literature

The concept of "engagement behaviours" is still being developed in the marketing literature (Van Doorn et al. 2010; Groeger, Moroka, and Hollebeek, 2016). This emerging concept of CEB takes into account the fact that customers engage in behaviours that can co-create value for the firm and other customers (Muniz and Schau 2011; Van Doorn et al. 2010). The Marketing Science Institute (MSI) (2010, 2012, 2014, 2016) in this regard stipulated CEB as a research priority needing further investigation. The increased interest in CEBs is apparent from the number of conceptual papers attempting to: define this concept (Van Doorn et al. 2010; France; Merrilees and Miller 2015), conceptualise a model of customer engagement behaviours (Gummerus et al. 2012; Verhoef, Reinartz and Krafft 2010), identify dimensions of CEBs (Jaakkola and Alexander 2014; Groeger, Moroka, and Hollebeek, 2016), and theorise on the conceptual foundation of its roots (Brodie et al. 2011). Table 1.1 presents a list of papers on CEBs that have been published in the marketing literature.

Table 1.1 Summary of Customer Engagement Behaviours Studies

Author and Research Type	**Focus of the Paper**
(Van Doorn et al. 2010) Conceptual	The main focus is to define customer engagement behaviours toward a brand and firm. The authors identify several engagement behaviours, including helping other customers, writing reviews, WOM and blogging.
(Kumar et al. 2010) Conceptual	The authors propose four components of a customer's engagement. Two transactional behaviours (e.g., purchasing behaviours, customer referral behaviour) and two non-transactional behaviours (WOM, and helping the firm through suggestions and ideas).
(Groeger, Moroka, and Hollebeek 2016) Quantitative and Qualitative methods	The focus of this paper is to capture value from non-paying customer engagement behaviours (CEBs). The authors focus on positive CEB toward a product, brand or firm.
France, Merrilees and Miller (2015, 852) Conceptual	The main focus of this study is to examine customer brand co-creation through behavioural manifestations. "Customer brand co-creation behaviours are the customer-led interactions between the customer and the brand". The authors identify two types of brand value co-creation behaviours: direct brand value co-creation and indirect brand value co-creation.
(Jaakkola and Alexander 2014)	The main focus is to examine the role of customer engagement behaviour (CEB) in value co-creation. The study identified four types of CEBs in value co-creation: augenting behaviour, co-

Case study—Exploratory investigations	developing behaviour, inflencing behaviour, and mobilizing behaviour.
(Verleye et al. 2014) Qualitative and quantitative methods	The main focus is to examine customer engagement behaviours. The study identified a number of CEBs including helping other customers, helping the firm (feedback), cooperation, compliance, and postive WOM.
(Gummerus et al. 2012) Empirical study	The focus of this study is to study the effect of customer engagement behaviours on perceived relationship benefits and relationship outcomes.
(Verhoef, Reinartz and Krafft 2010) Conceptual	Explore the literature and proposes a conceptual model of customer engagement. The authors conclude that engagement is a behavioural manifestation towards a brand or firm that goes beyond transactions. "Co-creation is considered as an important manifestation of customer engagement behaviours" (Hoyer et al. 2010, 283).
(Porter et al. 2011) Qualitative methods	Provide behavioural definition of engagement in online brand communities that reflect community member's willingness to create value for themselves, for others and the firm. Develop a conceptual framework for firms to promote participation and motivate cooperation by fulfilling customer needs so well that they engage with the firm rather than just for their own benefit in OBCs.
Pervan and Bove (2011) Conceptual	Highlight the importance of voluntary and discretionary extra-role behaviours. The authors identify two key questions: What motivates customers to participate beyond their expected roles? What are the types of customer engagement?
(Brodie et al. 2013) Qualitative methods	Explore consumer engagement in an online brand community and the interactive experiences between consumers and the brand. The authors identify that consumer engagement includes interactive experiences (e.g., learning, socialising) and value co-creation behaviours (e.g., sharing with others and co-developing with the firm) that result in brand loyalty and other positive marketing outcomes.
Wirtz et al. (2013) Conceptual	Develop a conceptual framework of customer engagement in brand communities indicating that engagement is driven by perceived benefits and that engagement behaviours are comprised of helping other members, participating in joint activities, and creating value for themselves.
Dessart et al. (2015) Qualitative methods	Explore consumer engagement in online brand communities in terms of engagement with the brand and the community members. The authors identify three engagement dimensions: behavioural engagement, cognitive engagement, and affective engagement. They also suggest that benefits are antecedents to engagement.
Cova et al. (2015) Qualitative methods: enthnography and netnography	Introduces the concept of brand volunteering in value co-creation with unpaid consumers. The authors discuss that consumers provide unpaid work for the exclusive benefit of the brand in brand communities.

As evident in Table 1.1, CEB is a broad concept that encompasses a range of behaviours that are not only directed to the brand/firm, but also to other stakeholders (Jaakkola and Alexander 2014). CEBs are commonly described as customer-led interactive, brand-related experiences that occur either between customers and the brand (e.g., giving suggestions and ideas for product/services) or between customers (e.g., helping other

customers to use a product) (France, Merrilees and Miller 2015). The other common theme defining CEBs is that CEBs entail extra-role behaviours that seek to benefit the focal object (e.g., the brand or firm) (Jaakkola and Alexander 2014; Groeger, Moroko, and Hollebeek 2016). For example, Verleye et al. (2014, 69) conclude that 'CEB{s} refer to voluntary, discretionary customer behaviours with a firm focus'. The final theme defining CEBs is that they occur beyond the scope of the service delivery process or transaction (Jaakkola and Alexander 2014). These attributes are essential to distinguish CEBs from other related concepts such as customer voluntary performance (Bettencourt 1997), customer citizenship behaviours (Groth 2005), and in-role helping behaviours (Johnson and Rapp 2010). Specifically, some of these behaviours entail in-role behaviours that are designed by the firm. Research suggests that not every CEB co-creates value or benefits the focal object equally. That is, not all CEBs lead to value co-creation or are equally important sources of value co-creation (Hartmann, Wiertz, and Arnould 2015). For example, despite the fact that WOM is a behavioural manifestation, it is not aligned with the concept of value co-creation in terms of creating value for the focal object (i.e., suggestion for improving brand or supporting other customers with the brand).

Verleye et al. (2014) examined five types of CEBs (i.e, compliance, cooperation, feedback, helping other customers, and positive word of mouth) in a service context. Customer compliance and cooperation are often specific to the service encounter (Verleye et al. 2014). That is, these CEBs occur during the transaction and are likely to be beneficial for service encounters (i.e., in-role behaviours assigned by the firm) but these will not lead to improvement of the firm's offerings or brand performance (Jaakkola and Alexander 2014). In this regard, Jaakkola and Alexander (2014, 248) stated that 'other related concepts such as customer voluntary performance (CVP; e.g., Bettencourt 1997) and customer citizenship behaviors (e.g., Rosenbaum and Massiah 2007) focus on customer contributions to the service quality of a firm through benevolent behaviours that are consistent with the role assigned to customers by the provider, the stance being that the customer is helping the firm according to the plans of the firm. The concept of CEB in turn views customers exogenously, driven by their own unique purposes and intentions instead of those originating from the firm'. It is important to note that some related concepts to CEBs including OCB or CCB share extra-role behaviours (discussed in chapter two).

Furthermore, the context will influence the type and the way that CEBs are performed. For instance, behaviours such as cooperation and compliance are not as relevant in an OBC context as they are in a service context (Verleye et al. 2014). On the contrary, the context of an OBC represents a valuable platform for collaboration and value creation because customers are able to help the firm as well as other community members beyond purchase (Sawhney, Verona and Prandelli 2005). The OBC context also enables the exchange of resources customer-to-customer (Jaakkola and Alexander 2014; Brodie et al. 2011). In this respect, studies report that 'brand communities significantly contribute to co-creating the brand' when community members act 'as providers and beneficiaries in a way that they are co-creating value for themselves, for brand communities, and for organizations' (Cova et al. 2015, 464; Pongsakornrungsilp and Schroeder 2011). Thus, unlike such customer citizenship behaviours (i.e., behaviours often assigned by the firm), CEBs seek to enhance the focal object to fit their particular needs through two-way interactions (Jaakkola and Alexander 2014).

From Table 1.1, it is obvious that many of the marketing papers on customer engagement behaviours are conceptual (e.g., Van Doorn et al. 2010; Pervan and Bove 2011; France, Merrilees and Miller 2015) or exploratory (Dessart et al. 2015; Brodie et al. 2013; Porter et al. 2011; Jaakkola and Alexander 2014) with a limited number of empirical papers (Verleye et al. 2014). As mentioned earlier, CEBs represent the behavioural dimensions of "customer engagement" (Brodie et al. 2011). The recent scales on "customer engagement or brand engagement" often capture the behavioural engagement in terms of activation (Hollebeek et al. 2014), vigour (Dwivedi 2015) and interaction (Patterson et al. 2006; So et al. 2012). The main focus of the scale papers (Hollebeek et al. 2014; So et al. 2012) is to capture engagement from a multidimensional perspective. Consequently, this has led the literature to give little weight to the behavioural part of CE. For instance, scales measuring the behavioural dimensions of 'customer engagement' or 'brand engagement' often do not capture the exact meaning of CEBs in several ways. First, the behavioural scales focus on time and effort invested in using the brand (Hollebeek et al. 2014) or general interactions in the brand community (So et al. 2012). Second, the scales do not take into account the different stakeholders, including the firm or other customers that can be the target of the CEBs (as shown in Table 1.1). Thus, the extant

conceptualisation of CEBs and the breadth of partners in CEBs are missing from the current studies to date (Cova et al. 2015; Jaakkola and Alexander 2014; Groeger, Moroka, and Hollebeek 2016).

The potential contribution of CEBs has led a number of scholars to call for a more comprehensive understanding of the phenomenon (e.g., Verhoef, Reinartz and Krafft 2010; Pervan and Bove 2011; Verleye et al. 2014), and particularly, for research addressing CEBs in the social context (Brodie et al. 2013; Hollebeek 2011a; Porter et al. 2011). For example, Groeger, Moroko, and Hollebeek (2016) conclude that the concept of CEB (s) is still unclear and needs further research examining the nature of CEBs, their antecedents, and consequences that arise from voluntary CEBs. Accordingly, many studies suggest that online environments play a significant role in capturing and understanding the dynamics of CEBs (Ray, Kim, and Morris 2014; Laroche et al. 2012; Porter et al. 2011). Similarly, Dessart et al. (2015) highlight that engagement behaviour is best understood in rich social contexts that foster beyond-purchase interactive behavioural manifestations. The role of the online brand community in sustaining CEBs with a focal brand is partially acknowledged by Dessart et al. (2015).

Therefore, more empirical research is required to operationalise and test the CEB construct. This call is also endorsed by the Marketing Science Institute, which states that a better understanding

> *is needed to help establish what individual consumer or user engagement in social media is, what causes it, what it affects, and how it changes over time. Research comparing different types of engagement with respect to how they generate different returns (or kinds of marketing value) would be useful* (MSI 2012, 2).

While SD logic has brought CEBs and their interactive experiences to the forefront (Bolton and Saxena-Iyer 2009; Vargo and Lusch 2008), the motivations driving CEBs beyond the service encounter are not adequately addressed in the marketing literature, particularly CEBs in OBCs (Dessart et al. 2015; Jaakkola and Alexander 2014; Pervan and Bove 2011; Bijmolt et al. 2010; Payne, Storbacka and Frow 2008). Therefore, there is a need to determine what motivates customers to engage in different types of CEBs

(i.e., CEB directed toward oneself, other customers, and firm beyond the service transaction).

Porter et al. (2011) suggest that engagement behaviours in OBCs is a situated consumption phenomenon that can be understood from the perspective of consumer benefits and autonomous motivation. This combined approach has not yet been quantitatively examined although Baldus, Voorhees, and Calantone (2015) relate customer engagement behaviours in OBCs to intrinsic motivation and others have included benefits in customer engagement models (Gummerus et al. 2012; Porter et al. 2011; Verleye 2015). Consistent with the Porter et al (2011) suggestion, the current study draws on self-determination theory (SDT) (Gagné and Deci 2005) and social exchange theory (SET) (Blau 1964) to collectively explain the role of benefits and autonomous motivation in customer engagement behaviours in OBCs.

Both SET and SDT provide explain for why customers engage in CEBs. Each theory provides a different interpretation of the underlying motives of CEBs. For instance, SET explains CEBs on the basis of reciprocity. It argues that CEBs expect to receive social and status benefits from the other party involved in the exchange (Hemetsberger 2003). That is, SET explains engagement behaviours from a benefits approach (discussed later in chapter two). On the other hand, SDT embraces the autonomous part of one's motivation (i.e., intrinsic motivation) as a main predictor for engagement behaviours (Gagné and Deci 2005). SDT theorizes that a social context, such as a brand community, offers customers a supportive and meaningful way to satisfy psychological needs through social relatedness, autonomy (i.e., hedonic benefits), and choice. Based on SDT, the more people experience these needs (e.g., social, functional, hedonic and personal recognition benefits), the greater the likelihood of their autonomous motivation is energized and activated (Hagger and Chatzisarantis 2007).

The proposed model of this study builds on SET and SDT by integrating both benefits and autonomous motivation as drivers of engagement behaviours. It incorporates perceived functional, social, status, and hedonic benefits that consumers derive from participating in an OBC context. The study also explores the interaction between benefits and autonomous motivation. Autonomous motivation occurs when members engage in

things that interest them, meet internal needs and fit into their value system (i.e., feeling better, reaching personal goals, feeling good at supporting other members) (Gagné and Deci 2005; Algesheimer, Dholakia, and Herrmann 2005). Therefore, the current study responds to the need for further examination of different types of, and drivers of, CEBs in OBCs (Gummerus et al. 2012; Porter et al. 2011) and is the first academic study to integrate both perspectives to explain CEBs. Further discussions are provided in chapter two.

1.4 Gaps in the OBC Literature

An OBC is a brand community on the World Wide Web (Gummerus et al. 2012, 858) and is defined as 'a specialised, non-geographically bound community, based on a structured set of social relations among admirers of a brand'(Muniz and O'Guinn 2001, 421). OBCs act as a connection platform for people to identify socially with others who share their interest in a brand (Algesheimer, Dholakia and Herrmann 2005; Sawhney, Verona and Prandelli 2005). OBCs provide an important interactive and experiential platform for customers (Habibi et al. 2014).

Customer interactions within OBCs comprise three different types of CEBs: engagement between consumers and the brand, or between consumers and other members of the community (Brodie et al. 2013; Porter et al. 2011) or a consumer deriving value for themselves. Most interactions in these brand communities are non-transactional, and are revealed through behaviours directed to the firm, brand or other community members (Van Doorn et al. 2010; Verhoef, Reinartz and Krafft 2010; Kumar et al. 2010). For instance, customers in these platforms contribute to content creation, by contributing product development ideas, supporting other members in product use, and promoting products and services to other members (Muniz and Schau 2011; Dholakia et al. 2009; Nambisan and Baron 2009). From a customer centric perspective, these platforms support the co-creation process by providing customers with opportunities to co-create value that are otherwise difficult and costly to deliver in an offline context. For example, the opportunity to engage in brand-related interactions and exchange detailed or technical brand-related information is rarely observed offline (Vallaster and von Wallpach 2013).

To date, relevant studies on brand communities have focused on brand identification; commitment and intention to continue membership; and brand loyalty (Gianluca, Gabriele and Massimo 2013; Jang et al. 2008; Carlson, Suter and Brown 2008; Algesheimer, Dholakia and Herrmann 2005). Several studies have revealed and analysed brand community practices such as social networking, community engagement, and practices related to the use of the brand (Schau, Muñiz Jr and Arnould 2009), and social activity group behaviours (Bagozzi and Dholakia 2006). Another stream of brand community research has focused on how brand communities contribute to brand loyalty (Stokburger-Sauer, Ratneshwar and Sen 2012) by examining the relative impacts of satisfaction, brand community integration and consumer experience on customer loyalty (McAlexander, Kim and Roberts 2003). Related studies examine the influence of community markers (i.e., shared consciousness; shared rituals and traditions; and obligations to society), brand use, social networking, and brand trust as predictors of brand loyalty (Laroche et al. 2012). This body of research has primarily examined antecedents of customer loyalty rather than antecedents of CEBs. What is missing from the extant studies in the brand community literature is a detailed understanding of why and how customers engage in CEBs from the customer's perspective.

OBCs are important tools that enable customers to engage with products (particularly smartphone products) to co-create their own experience and derive more value from the product (Bolton and Saxena-Iyer 2009; Prahalad and Ramaswamy 2004). OBCs are ideally suited to searching for information, disseminating information to others and interacting with people who might otherwise be difficult to identify and reach. Central to these platforms, and hence CEBs, is the value of the perceived benefits. For instance, quality information and support for complex products and services is crucial to allow customers to remain up to date regarding changes to the product and take advantage of product capabilities. Many technical products with interrelated services, such as smartphones and their software, require practical information and knowledge to allow customers to learn to use the product and to maximise the benefits gained from the product and its related products/services (Dholakia et al. 2009). Thus, the primary role of an OBC is to serve as a facilitator of information on smartphone products for many community members and visitors.

The brand community provides both social value and value in the experience. Bruhn, Schnebelen, and Schäfer (2014, 169) posit that 'value is constructed and experienced in interactions in a social context', therefore brand community members perceive and experience value through social exchanges. This is in line with Holbrook's (2005) ideas that value is derived through interactivity and experience. Previous studies of OBCs highlight that members derive value from functional, social, hedonic, and status benefits (Porter et al. 2011). These benefits encourage members to build relationships with the brand community, higher levels of C2C interactions and community contributions (Bruhn, Schnebelen and Schäfer 2014; Nambisan and Baron 2010).

1.5 Objectives of the Study

Despite CEBs being relatively new to the marketing literature, a review reveals several shortcomings in existing studies of engagement behaviours in brand communities. The roles of CEBs and their impact on product/firm performance have been explored as important management practices (Verleye et al. 2014) however, very few empirical studies have investigated the antecedents of CEBs from the perspective of the customer (Verleye et al. 2014). Recent studies on CEB identify a number of CEBs, including engagement toward oneself, other customers and the firm. Ways of engaging toward the firm have included; suggestions and feedback, blogging, WOM, compliance, cooperation, co-development, brand experience creation, augmenting behaviour, mobilizing behaviour, influencing behaviours, sharing, customer create value themselves, influencing behaviours, and brand experience creation (Dessart et al. 2015; Verleye et al. 2014; Jaakkola and Alexander 2014; Groeger, Moroko, and Hollebeek, 2016). In considering the relevance of these CEBs in online brand communities (Gambetti and Graffigna, 2014), the current study addresses the following research gaps.

First, in comparing the existing scales on "customer engagement" or "brand engagement" with the CEBs dimensions (identified in Table 1.1), it shows that these existing scales measure engagement as a multidimensional construct comprised of cognitive, emotional and behavioural dimensions (Hollebeek et al. 2014). The behavioural part of CE is often operationalized as activation (Hollebeek et al. 2014) and interaction (So et al., 2012), or vigour (Dwivedi 2015). As mentioned earlier, these behavioural measurement scales do

not give a comprehensive understanding of the different CEBs in online brand communities. In other words, these aforementioned scales only capture one side of CEBs (e.g., engagement toward the brand). Whilst the existing conceptualisations (as evident in Table 1.1) show that CEBs can be directed at the firm/brand, customers or other agents. Furthermore, as discussed earlier, not all CEBs entail voluntary and extra roles behaviours or are applicable in the OBC context. For example, compliance reflects how customers comply with organizational rules and procedures (i.e., in role behaviours) (Verleye et al. 2014) while CEBs entails extra-role behaviours that go beyond the transaction. For instance, customers who engage in co-developing can create value for the firm in the form of providing brand-related suggestions and feedback (Verleye et al. 2014; Groeger, Moroko, and Hollebeek, 2016). Therefore, this study contributes to the current knowledge by empirically testing three types of CEBs that entail extra-role behaviours engaging with the firm, other customers, and customers themselves that are relevant to OBCs and go beyond the transaction. In doing so, this study responds to recent calls regarding the need for further refinement and investigation of CEBs (Dessart et al. 2015; MSI 2012; Muniz and Schau 2011).

Second, the current study empirically explores what motivates CEBs beyond a customer's expected roles; a research gap needing further investigation (Pervan and Bove 2011; Baldus, Voorhees, and Calantone 2015). In reviewing the community literature, several issues can be observed. For instance, previous studies have focused on how brand communities generate brand loyalty and word of mouth by exploring the predictors of brand loyalty including brand identification, community identification, commitment, trust, satisfaction, and community markers (McAlexander, Kim and Roberts 2003; Laroche et al. 2012). Despite the importance of these studies, the predictors of brand loyalty were the main interest rather than the predictors of CEBs.

Lastly, recent studies have started to explore whether perceived benefits motivate CEBs. These studies have typically examined only one type of CEB such as CEB toward other members (Dholakia et al. 2009), participation in value creation (Nambisan and Baron 2009), or general contribution (Ray, Kim, and Morris 2014); and have typically relied on benefits as the sole motive for CEBs (Nambisan and Baron 2007). This approach relies on SET alone to explain the impact of benefits on CEBs but we know that just

experiencing benefits does not necessarily predict engagement behaviours. Meaning that, community members expect benefits (e.g., social, status) in return for CEBs based upon the perception of previously deriving benefits (Nambisan and Baron 2009). The studies utilise a cost-benefit approach rooted in SET to explain engagement behaviours in terms of reciprocity (Park et al. 2014; Jin, Yong, and Hye-Shin 2010; Nambisan and Baron 2010). However, this approach is insufficient to explain engagement behaviours since reciprocity does not explain why only some people engage more with the brand community. Research suggests that consumers assess benefits differently and therefore a certain level of benefits does not lead to reciprocation from all customers (Verleye 2015). Furthermore, the benefit approach does not consider one's intrinsic motivation (i.e., doing the activities because they are interesting and meaningful) (Gagné 2009). SDT argues that CEB is more likely explained by one's intrinsic motivation to perform the activity (Gagné 2009). Thus, using a consumer's intrinsic motivation to explain CEBs taps into the recent findings in the literature of Baldus et al. (2015) and Porter et al. (2011).

Accordingly, this current study attempts to address the aforementioned shortcomings by testing a research model that explains CEBs in online brand communities. The research model argues that CEBs in OBCs can be defined in terms of three types of interactive behaviours including CEB toward the firm, CEB toward other customers and CEB toward oneself (i.e., customers seek information to enhance their brand experience). This current study attempts to address the aforementioned shortcomings by testing a research model that explains what drives each of the various types of CEBs in online brand communities. These three types of CEBs are driven by perceived benefits but their translation in behaviour is dependent on one's autonomous motivation. The research model argues that brand loyalty is a consequence of CEBs. This is consistent with recent findings that suggest CEBs predict future purchase (Groeger, Moroko, and Hollebeek 2016).

This current study provides an empirical study that will bring operational clarity to the conceptual and exploratory work that has been done on CEBs in the marketing literature by answering the following research questions:

(i) What types of CEBs do customers engage in within OBCs?
(ii) What are the underlying motivations for CEBs in these OBCs?

(iii) What is the linkage between different types of CEBs and behavioural brand loyalty in OBCs?

To address these questions, this current study conducts an exploratory study to reveal the multiple facets of CEBs in OBCs, and an explanatory study to test an empirical model of the drivers, of each of the dimensions of CEBs, as well as the outcomes of CEBs. The research objectives of this thesis can be summarised as follows:

1. To develop a conceptual model for CEBs specific to online brand communities. (i.e., part of this objective is to explore the concept of CEBs and how this phenomenon is conceptualised in the proposed model).
2. To assess the impact of drivers (perceived benefits) on customer autonomous motivation to become engaged in OBCs.
3. To assess the relative effects of benefits versus autonomous motivation in relation to CEBs.
4. To determine the impact of each type of CEB (in OBCs) on brand loyalty.

Each objective of this current study is in line with the recent call of the MSI in terms of the following questions: What is CEB in a social context? What causes and affects it? What are the types of CEBs in a social context? How do CEBs generate marketing value? (MSI 2012).

1.6 Research Methods

To achieve these objectives, qualitative and quantitative methods were used. To address the first objective, an extensive review of the brand community literature and the service marketing literature was undertaken to develop a conceptual model of the drivers of CEBs, motivations for CEBs, facets of CEBs and their relational outcomes. The literature review was used to guide the exploratory study by providing a theoretical foundation for CEBs to address the first objective. As such, a qualitative study of four high technology OBCs (Apple Insider, iPhone forums, MacRumors and Android forums), using a netnographic approach, was conducted. The netnographic approach (Kozinets 2010) is a suitable method that is capable of enriching the understanding of how OBCs facilitate

engagement behaviours towards high-technology products. The results of this exploratory study were used to identify and define the CEB dimensions and refine the existing measurement scales for these dimensions. For the rest of the objectives, an online quantitative survey was conducted to test the hypothesised relationships. The online survey data were sourced from two OBCs (Apple Society and Eqla3). Data were analysed using the structural equation modelling AMOS 21 software.

1.7 Scope and Significance of the Research

The current study explores customer perceptions of CEBs in OBCs. The interactions between customers in these platforms have gained marketing academia's attention as this context provides unique opportunities and benefits for both marketers and customers alike (Laroche et al. 2012; Muniz and Schau 2011). Many brand enthusiasts have established their own brand communities. In particular, brand enthusiasts have created communities for brands that tend to offer products that play important roles in the lives of consumers and be information-rich products where sharing information enhances value derived. The dominant smartphone brands (currently the Apple iPhone, Samsung Galaxy) are extremely popular with consumers, available worldwide, play an important social and functional role for many consumers, and are somewhat complex to use. As such, communities for these brands offer good insights into the types of value that customers can derive from the product. It also results in good insights for managers of both the brand communities and the brands.

Despite the advantages of the social brand communities, the interactive nature between customers and the firm or brand has raised some challenges for the firm. Specifically, the content posted on these platforms is not always positive. Some comments are negative and may impact on the firm's image and reputation (Tsimonis and Dimitriadis 2014). However, the current study only examines the positive side of CEBs and the factors that drive these CEBs.

From the customer value perspective, OBCs are not only platforms from which to derive utilitarian benefits and create content. Brand community members also perceive these platforms as experiential platforms to develop customer relationships with the brand and

the brand community (McAlexander, Schouten and Koenig 2002). Fournier and Lee (2009) support this idea by proposing that people in these brand communities are more interested in the social bonding that comes with brand affiliation than they are in the brand. Furthermore, Jaakkola and Alexander (2014) note that affective benefits, such as positive recognition, are the main source of value from engagement behaviours within these communities. Yet, customers' experiences and their assessment of these benefits differ between customers (Verleye 2015). Recent research finds that not all customers visit a brand community for the sake of connecting with other like-minded customers but rather for other motives such as the need for information and recognition from their peers (Tsai and Men 2013).

Research on online communities identifies several features that drive perceived benefits including product content, social identity, and interactivity (Nambisan and Baron 2009). Similarly, Verleye (2015) identify that several OBC characteristics, including the level of techologization and connectivity, effect hedonic, social, cognitive, personal experience, economic, and pragmatic benefits. The features that drive these benefits are beyond the scope and the objectives of the current study.

The managerial value of understanding CEBs in OBCs can be summarised as three primary benefits. First, CEBs are a low-cost and effective means of delivering free support services, as they are provided by customers themselves (Dholakia et al. 2009; Pongsakornrungsilp and Schroeder 2011; Baldus, Voorhees, and Calantone 2015). For instance, Dholakia et al. (2009, 208) provided evidence that firm-hosted online communities are important service support programs for marketers as they are able to 'offer a low-cost, credible, and effective means of delivering education and ongoing assistance services to customers of complex, frequently evolving products'. Second, these engagement behaviours are highly desirable for the firm as they disclose customer needs and preferences (Hoyer et al. 2010; Lusch and Vargo 2006). Dholakia and Vianello (2009,1) highlight that 'marketers gain access to some of their most devoted and influential fans here, but they will also find more ideas for innovations; sharper criticisms of existing product problems, along with ideas for fixing them; and more sincere providers of customer service'. Similarly, Hoyer et al. (2010) highlight that the telecom technology industry relies heavily on customer participation in terms of the knowledge,

innovative ideas and inputs exchanged via their forums. Third, OBCs serve as a marketing strategy for promoting and maintaining strong brand loyalty (Casaló, Flavián and Guinalíu 2010; Fournier and Lee 2009). The emerging literature provides evidence that engagement behaviours revealed within brand communities enhance consumer brand loyalty (Brodie et al. 2013).

As highlighted earlier, both the MSI (2010, 2012, 2014) and marketing researchers have identified that CEB is one of the priority research areas for further study (e.g., Baron, Warnaby, and Hunter-Jones 2014; Jaakkola and Alexander 2014; Brodie et al. 2013). The current study makes several theoretical and managerial contributions to the marketing literature. The customer engagement behaviours literature provides only a limited number of empirical studies that examine CEBs (e.g., Brodie et al. 2013; Jaakkola and Alexander 2014) as most of the research has been qualitative (e.g., Dessart et al. 2015; Brodie et al. 2013; Porter et al. 2011; Adjei, Noble, and Noble 2010; Schau, Muniz, and Arnould 2009; Muniz and Schau 2005). This current study provides an understanding of how CEB is facilitated within online brand communities, along with a path analysis underlining motives of CEBs.

The exploratory phase of this study seeks to determine and redefine engagement behaviours within OBCs. From a customer perspective, CEBs have not been clearly identified and categorised in a uniform or generalisable way in the context of brand communities that have a brand focus (Schau, Muñiz and Arnould 2009; MSI 2014). The current study incorporates three types of CEBs including “CEB toward the firm” “CEB toward oneself” and “CEB toward other customers”. All three types of CEBs are important aspects of value co-creation in brand communities and therefore require empirical research (Nambisan and Baron 2010; Van Doorn et al. 2010; O’Hern and Rindfleisch 2009). The current study also contributes to theory by expanding the existing conceptualisations of CEBs (e.g., Van Doorn et al. 2010; Jaakkola and Alexander 2014) to incorporate customer behaviours that co-create value for themselves, other customers and the firm. The current study also tests each of these CEBs.

This current study makes a contribution to engagement research by testing a research model that explains the underlying motives of CEBs. More specifically, this study model

investigates the antecedents and outcomes of CEBs in the brand community context. As suggested by Pervan and Bove (2011), research examining the motivations of customers engaging beyond their expected roles is needed to understand the drivers of CEBs. Building on SDT (Gagné and Deci 2005) and SET (Blau 1964), this current study addresses two types of motivation for CEBs: perceived benefits and autonomous motivation. To the best of the researcher's knowledge, this is the first study that empirically shows that CEBs are driven not just by perceived benefits, but also by personal satisfaction derived from doing something they are intrinsically motivated to do. Finally, this study examines the effect of each type of CEB on purchasing intentions and positive WOM. Moreover, it appears to be the first study to identify the links between three types of CEB (i.e., CEB toward the firm by making suggestions and identifying his/her needs related to brand/firm, CEB toward other customers by providing assistance/giving advice related to brand, and CEB toward oneself in terms of consuming and seeking information to enhance the performance of the brand) on purchase intentions and positive WOM. The path results and findings of these relationships are important and significant to marketing managers seeking to create brand marketing strategies.

1.8 Definition of Concepts and Terms

Autonomous motivation: refers to an individual acting with a sense of volition and having the experience of choice (Gagné and Deci 2005). Autonomous motivation to engage was operationalised in this study as the member's intrinsic motivation to interact and engage in value-creating activities with the community's members (Algesheimer, Dholakia and Herrmann 2005).

Brand community: "a specialised, non-geographically bound community, based on a structured set of social relations among admirers of a brand" (Muniz and O'Guinn 2001, 421).

Online brand community: a brand centric community on the World Wide Web (Gummerus et al. 2012, 858).

Functional benefits: the perceived convenience of time and effort expenditure to experience the core benefit (usually information) as well as value or usefulness of the information derived (Jin Yong and Hye-Shin 2010; Nambisan and Baron 2009).

Hedonic benefits: relating to aesthetic or pleasurable experiences (Nambisan and Baron 2009).

Customer engagement behaviours (CEBs): "Customer behavioural manifestation toward brand or firm, beyond purchase, resulting from motivational drivers" (Van Doorn et al., 2010, 254).

CEB toward oneself: a member co-creates value for himself/herself by obtaining or consuming information about a brand (Yi and Gong 2013).

CEB toward other customers: behaviours that help others by giving advice and sharing information with other members in the community (Yi and Gong 2013).

CEB toward the firm: the extent to which a member provides or shares information, makes suggestions, and identifies his/her needs to the firm through the brand community (Bove et al. 2009).

CEBs in value co-creation: customer behaviours that entail voluntary extra-roles and discretionary behaviours (i.e., outside of the customer's required role for service delivery and service encounter or purchase) that are intended to co-create value for themselves, other customers or the firm.

Purchase intention: ongoing purchase and use of the brand (Algesheimer, Dholakia and Herrmann 2005).

Self-efficacy: a person's self-evaluation and confidence in their skills and capability to provide or access knowledge that is valuable and useful (Chen and Hung 2010).

Social benefits: perceptions of friendship with other members, enjoying time spent with other members and the close relationships that members derive from OBC interactions (Jin Yong and Hye-Shin 2010).

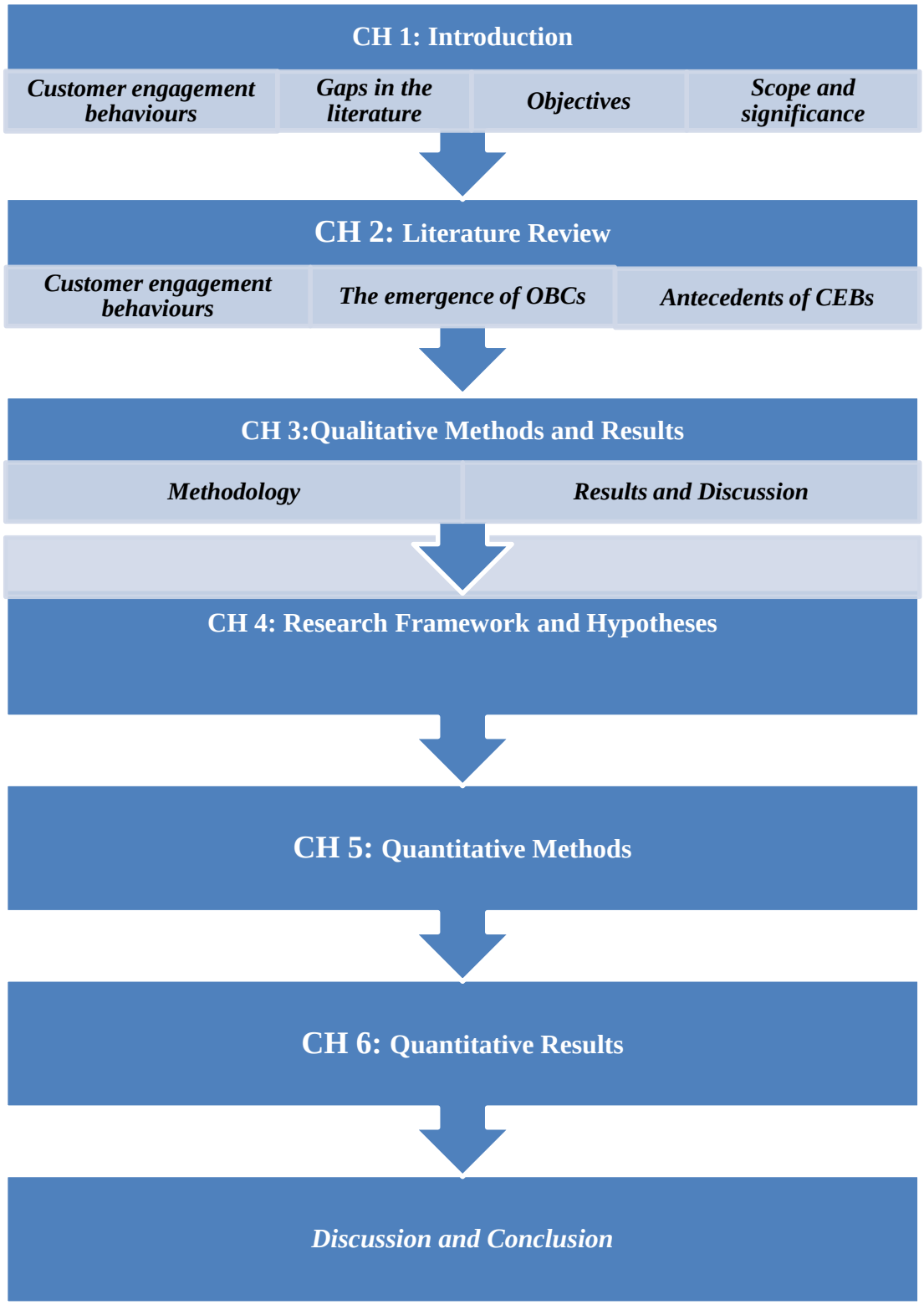
Status benefits: perceptions of enhanced personal status and gaining a positive reputation within the community (Nambisan and Baron 2009).

Transactional behaviours: are behaviours that enable a customer to purchase and consumer the product such as search, evaluation and purchase of a product (Roberts 2010; Kumar et al. 2010).

Value-co-creation: "resides in the two-way interactive, experiential nature between one or more agents, whether human or online, and a customer" (Hollebeek and Brodie 2009, 341).

WOM: is operationalised in this study as the willingness to say positive things about the brand including recommending friends and acquaintances to buy the brand (Srinivasan, Anderson and Ponnavolu 2002).

1.9 Organisation of the Study



Chapter Two: Literature Review

This chapter provides an overview of customer engagement (CE) and CEBs. It discusses the existing definitions and dimensions to show how each construct has been conceptualised. In doing so, the chapter highlights the origin of CEB, its theoretical foundation in S-D logic and its role in value co-creation. The chapter then incorporates the literature pertaining to online communities, brand communities and the emergence of OBCs to discuss CEBs specific to OBCs and to operationally define them. The chapter ends with a discussion on antecedents of CEB in OBCs along with a review of SDT and SET as theories underpinning the drivers of CEB in OBCs.

2.1 Customer Engagement

The concept of customer engagement has been increasingly recognised by marketing academia (MSI 2012, 2014, 2016; Hollebeek et al. 2016). However, the concept is still new and has limited empirical research to underpin the importance of the concept (Gummerus et al. 2012). Similarly, the concept of customer engagement is still being developed, the definition still being crystallised and the dimensionality still be explored (Dessart et al. 2015; Ray, Kim, and Morris 2014; Brodie et al. 2011; Verhoef, Reinartz, and Krafft 2010). Table 2.1 presents various emerging definitions of customer engagement, highlights the dimensions considered and categorises the research type of each study.

Table 2.1: Definitions of Customer Engagement

Definitions of Customer Engagement	**Dimensions and Degrees of Customer Engagement**	**Research Type**
'Consumer engagement as the intensity of a consumer's participation and connection with the organisation's offerings, and/or organised activities' (Vivek 2009, 7).	Multidimensional concept consisting of the following dimensions: Awareness, enthusiasm, activity, interaction, extraordinary, experience.	Empirical: Quantitative
'Active interaction of a customer with a firm, with prospects and other customers, whether they are transactional or non-transactional in nature' (Kumar et al. 2010, 297).	Transactional behaviours: Purchase behaviour, share of wallet. Non-transactional behaviours: Influencing behaviour (WOM), referral behaviour, knowledge behaviour (feedback).	Conceptual

'An engaged customer is one that is loyal to your brand and actively recommends your products and services to others' (Roberts 2010, 198).	Transactional behaviours: Purchase other product lines, consumer spending. Non-transactional behaviours: WOM, recommendation.	Conceptual
'Customer behavioural manifestation towards brand or firm, beyond purchase, resulting from motivational drivers' (Van Doorn et al. 2010, 254).	Non-transactional behaviours: WOM, recommendation, helping other customers, writing reviews, blogging, engaging in legal action.	Conceptual
'Engagement as a class of behaviours that reflects community members' demonstrated willingness to participate and cooperate with others in a way that creates value for themselves and for others—including the community sponsor' (Porter et al. 2011, 83).	Unidimensional Non-transactional behaviours: Consumers co-creating value for themselves, community members, and the firm.	Qualitative
'The level of an individual customer's motivational, brand-related and context-dependent state of mind characterized by specific levels of cognitive, emotional and behavioral activity in brand interactions' (Hollebeek 2011a, 790).	Multidimensional concept consisting of cognitive, emotional and behavioural	Conceptual
Customer engagement is 'a psychological state that occurs by virtue of interactive, co-creative customer experiences with a focal agent/object in focal service relationships' (Brodie et al. 2011, 7-9).	Virtual of interactive experiences: Dynamic, iterative process of service relationships that co-create value. It plays central role in the process of relational exchange. Multi-dimensional concept. Occurs within a specific set of situational conditions generating differing customer engagement levels.	Conceptual
'Consumer engagement in a virtual brand community involves specific interactive experiences between consumers and the brand, and/or other members of the community' (Brodie et al. 2013, 3).	Process stages: Sharing, co-developing, advocating, socialising and learning.	Netnographic
'A consumer's positively valenced brand-related cognitive, emotional, and behavioural activity during or related to focal consumer/brand interaction' (Hollebeek, Glynn and Brodie 2014,154).	Multidimensional concept consisting of cognitive processing, affection and activation.	Empirical: Qualitative and Quantitative
Customer engagement defined as a customers' personal connection to a brand as manifested in cognitive, affective, and behavioural actions (So et al. 2012, 310).	Multidimensional concept consisting of enthusiasm (i.e., vigour) attention, absorption, interaction, and identification	Empirical: scale development
Consumer brand engagement defined as "consumers' positive, fulfilling, brand-use-related state of mind that is characterized by vigor, dedication, and absorption" (Dwivedi, 2015, 100).	Multidimensional concept consisting of vigor, dedication, and absorption	Empirical
The mechanics of a customer's value addition to the firm, either through direct and/or indirect contribution (Pansari and Kumar 2016,2)	Buying, referring, influencing, and feedback.	Conceptual

It is evident from the marketing literature that the concept of customer engagement entails being connected to the brand/firm beyond the initial transaction through psychological

and behavioural interactions (Vivek et al. 2012). Brodie et al. (2011) provide a comprehensive definition that takes into account the multi-dimensional nature of engagement. The authors define customer engagement as 'a psychological state that occurs by virtue of interactive, co-creative customer experiences with a focal agent/object in focal service relationships' (Brodie et al. 2011, 7-9). The author's definition recognises a number of themes on the nature of customer engagement. The first theme is a reflection of the virtue of interactive customer experiences with a focal agent/object (e.g., a customer/firm and brand). This theme recognises the interactive experiences, including C2C and customer-to-firm interactions within a brand-related context (e.g., an OBC). The second theme suggests that customer engagement is a dynamic process within a service relationship that co-creates value. The third theme acknowledges that engagement has cognitive, emotional and behavioural dimensions. These dimensions are apparent during the engagement interactions between a customer and a brand, and between customers. Furthermore, customer engagement as a multi-dimensional concept 'plays a central role within a nomological network of service relationships' (Brodie et al. 2011, 8). That is, CE might function as antecedents or consequences based on conceptual relationships (Brodie et al. 2011). Similarly, CEBs that co-create value can operate as antecedents as well as consequences. For example, CEB toward the firm (in the form of giving feedback or suggesting product development) can be a consequence of perceived benefits (Groeger, Moroko, and Hollebeek 2016). CEB toward other members or toward the firm can be an antecedent to brand loyalty. However, Brodie et al. (2011) focus mainly on defining customer engagement and provide a conceptual foundation for further empirical research in this emerging area.

Following the multi-dimensional approach, researchers have developed scales to measure customer engagement. In examining hotel and airline customers, So et al. (2012) developed a 25-item customer engagement scale that includes brand identification, attention, absorption, enthusiasm, absorption, and interaction. These five factors of customer engagement demonstrate that customer engagement is a psychological and behavioural connection with the brand beyond service consumption. The psychological connection is manifested by cognitive and affective factors such as vigour, attention, identification and absorption. The behavioural connection is only measured by customer-customer interaction (So et al. 2012). In a similar vein, Hollebeek et al. (2014) developed

a scale measure specific to consumer brand engagement in social media context. Hollebeek et al's (2014; 154) scale measures customers' cognitive processing (i.e., a consumer level of brand-related thought processing in a particular consumer/brand interaction), affection (i.e., a consumer's degree of positive brand-related affect in a particular consumer/brand interaction) and activation engagement with a brand (i.e., a consumer's level of energy, effort and time spent on a brand in a particular consumer/brand interaction). Specifically, the scale reflects the notion of customer engagement from interactive experience 'during or related to focal consumer/brand interaction'. It is also apparent that behavioural engagement is represented by one factor (i.e., activation). Furthermore, from an organizational psychology perspective, Dwivedi, (2015, 100) define consumer brand engagement as 'consumers' positive, fulfilling, brand-use-related state of mind that is characterized by vigor, dedication, and absorption'. The author's three-dimensional view of brand engagement also captures consumer's emotional engagement (i.e., dedication), cognitive engagement (i.e., absorption), and behavioural engagement (i.e., vigour). Therefore, it is evident that studies examining customer engagement or consumer brand engagement embrace cognitive, emotional, and behavioural engagement.

Researchers have identified differing forms of engagement. In addition to customer engagement (Brodie et al. 2011), and brand engagement (Dwivedi 2015; Hollebeek et al. 2014), the marketing literature shows other forms of engagement that include community engagement (Algesheimer, Dholakia and Herrmann 2005), online engagement (Calder et al. 2009), and brand engagement for self-concept (Sprott et al. 2009). Specifically, Calder et al. (2009) and Sprott et al. (2009) develop scales for these forms of engagement. Sprott et al's (2009) scale measures consumer tendency to include important brands as part of their self-concept. Sprott et al's (2009) work suggests that brand engagement for self-concept effects important aspects of brand attitudes and behaviour. In other words, self-concept can be an antecedent construct to CEBs. Calder et al. (2009, 322) refer to online engagement (OE) as experience that reflects 'a consumer's beliefs about how a site fits into his/her life'. The scale identifies eight-dimensions on which site fit is assessed: utilitarian (i.e., functional), social facilitation (i.e., social benefits) enjoyment (i.e., hedonic benefits), stimulation and inspiration, participation, community, self-esteem, and temporal. Calder et al's (2009) work mostly explains OE based on the perceived benefits

derived. This conceptualization is consistent with Nambisan and Baron (2007; 2009) who provide evidence that perceived benefits in online community drive CEB. This approach has also been adopted in the current study, which tests functional, social, hedonic, and status benefits as antecedents to CEB. Usually customer engagement is conceptualised within the research as a predominantly psychological (e.g., cognitive and emotional engagement) construct with some including behavioural engagement (Hollebeek et al. 2014). The current study focuses on only the behavioural manifestations of customer engagement (CEBs).

2.2 Customer Engagement Behaviours (CEBs)

Research is starting to distinguish between psychological and behavioural engagement (although they must to some extent occur together). The behavioural approach has already begun to receive greater recognition in the social brand communities (Jaakkola and Alexander 2014; Van Doorn et al. 2010; and Porter et al. 2011). Van Doorn et al. (2010) and Porter et al. (2011) focus only on the behavioural manifestations of customer engagement that go beyond purchase behaviour. Kumar et al. (2010) also concur that customer engagement is a behavioural manifestation towards a brand, firm and other customers - but argue that transactional behaviours should be included as a form of CEB. Transactional behaviours are related to a customer's purchasing activities (Roberts 2010; Kumar et al. 2010) and can refer to customer participation or what is called in-role behaviours assigned by service providers (Jaakkola and Alexander 2014). In contrast to transactional behaviours, non-transactional CEBs are extra-role voluntary behaviours that are not required to enable a transaction, but co-create value for the consumer, others or the firm (Jaakkola and Alexander 2014; Porter et al. 2011; Van Doorn et al. 2010). In-role CEBs are not optional or voluntary. Thus, the focus of this current study is on extra-role CEBs beyond purchase. These types of CEBs occur in online brand communities.

Recently, Jaakkola and Alexander (2014, 254) conceptualise CEBs in value co-creation 'as the customer provision of resources during non-transactional, joint value processes that occur in interaction with the focal firm and/or other stakeholders, thereby affecting their respective value processes and outcomes'. Jaakkola and Alexander (2014) identify four types of CEBs. Augmenting behaviours refer to customer contribution of resources

such as knowledge, skills, labor, and time, to directly augment and add to the focal firm's offering beyond that which is fundamental to the transaction. For example, 'customers inventing alternate uses for a product' (Jaakkola and Alexander 2014, 255). The second type of CEB relates to co-developing behaviour which entails 'customer contribution of resources such as knowledge, skills, and time, to facilitate the focal firm's development of its offering' (Jaakkola and Alexander 2014, 255). For example, the customer giving ideas for new or improved products and services. The third type of CEB occurs when 'customer contribution of resources such as knowledge, experience, and time affects other actor's perceptions, preferences, or knowledge regarding the focal firm' (Jaakkola and Alexander 2014, 255). The last type of CEB relates to behaviour that mobilises others described as 'customer contribution of resources such as relationships and time to mobilize other stakeholders' actions toward the focal firm' (Jaakkola and Alexander 2014, 255).

Based on qualitative and quantitative studies, Verleye et al. (2014) identify five types of CEBs: compliance, cooperation, feedback (i.e., suggestions toward the firm), helping other customers, and positive word of mouth in a service context (i.e., nursing home sector). Verleye et al. (2014) test a theoretical model to explain what drives CEBs. In their service context (a nursing home), Verleye et al. (2014) demonstrate that organization support, organization socialization, support from other customers, and overall service quality generate customer affect (satisfaction component), which influences CEBs. Their findings also reveal that customers are more likely to give feedback for service improvement to resolve problems for their own benefit or to benefit others. The findings highlight that customers engage in CEBs to benefit themselves if they are embedded in a broader network of customers or other stakeholders.

Groeger, Moroko, and Hollebeek (2016, 1) extend the work of Van Doorn et al. (2010), Kumar et al. (2010), Verleye et al. (2014) and Jaakkola and Alexander (2014), by proposing that non-paying consumers also engage in 'positive behaviours toward a product, brand or firm' (CEBs). Groeger, Moroko, and Hollebeek (2016) describe these CEBs as augmenting (i.e., finding alternative product uses), co-developing (i.e., suggesting product improvement), influencing (i.e., WOM, online WOM), mobilizing behaviours (i.e., coaching other agents), market creation and branded experience creation.

The last two are slightly different to prior conceptualisations of CEB types. According to Groeger, Moroko, and Hollebeek (2016, 22) market creation and branded experience creation are discretionary and entail extra behaviours in that customers engage in creating 'part of the core offering' or engage in 'co-design or co-production'. Conceptually, 'branded experience creation' is a core form of value creation in which the customer adds experience value by creating the consumption experience (CEB toward oneself). For example, customers seek information about the ideal way to consume the product and therefore derive more value.

As evident above, authors in this area discuss multiple non-transactional CEBs including helping other customers, co-developing, augmenting behaviours, co-producing the brand creation experience, blogging, and WOM recommendations (Van Doorn et al. 2010; Jaakkola and Alexander 2014; Verleye et al. 2014; Groeger, Moroko, and Hollebeek 2016). According to Van Doorn et al. (2010), customers engage with the firm in a variety of activities, including generating new ideas for the brand and providing suggestions for modifying existing brands. In addition to these customer-to-firm non-transactional behaviours, customers also engage with other customers, especially in OBCs, by contributing suggestions and knowledge that facilitates and enhances the utility, usefulness and usability of the brand.

2.2.1 Origin of CEBs and Relevant CEBs Research

Until recently, the discussion of engagement has developed primarily in organization behaviour and social psychology (Brodie et al. 2011; Schaufeli et al. 2002). The concept of CEBs originally appeared in the organisational behaviour literature in the form of organisational citizenship behaviour (Organ 1988). Organisational citizenship behaviour (OCB) is generally defined as discretionary employee behaviours that are not formally recognised by the organisation's reward system but are favourable to organisational effectiveness (Organ 1988). According to Organ (1997), organisational citizenship behaviours have three characteristics within an organisation: (1) they are extra-role, beyond the employee's job description; (2) they are engaged in voluntarily; and (3) they benefit the company. An organisational citizenship behaviour scale has been developed to measure employee behaviours and how they engage to help their employer

organisation. The organisational citizenship behaviour scale includes measures for a set of behaviours such as altruism, courtesy, sportsmanship, conscientiousness and civic virtue (Organ 1997). For example, when employees help co-workers, perform additional tasks, or sacrifice extra time to the organisation, they are engaging in organisational citizenship behaviour (Bateman and Organ 1983). In other words, these OCB scales are mainly directed to enhance organizational effectiveness rather than add value for other stakeholders (Bove et al. 2009).

A review of the marketing literature reveals that few studies have investigated citizenship behaviours from the customer's perspective (Johnson and Rapp 2010; Groth 2005). Instead, the extensive literature on citizenship behaviours usually takes the organisational, rather than customer, or customer to customer, perspective (Rosenbaum and Massiah 2007; Groth 2005; Bettencourt 1997). Marketing researchers have attempted to conceptualise CEBs and have taken different labels from across the marketing literature, such as customer voluntary performance (Bettencourt 1997), customer citizenship behaviours (Bove et al. 2009; Groth 2005), customer helping behaviours (Johnson and Rapp 2010), value co-creation (Yi and Gong 2013) and engagement behaviours (Brodie et al. 2013; Pervan and Bove 2011), engagement behaviours in value co-creation (Jaakkola and Alexander 2014) brand value co-creation (France, Merrilees and Miller 2015). The main idea of these concepts is that customers engage in voluntary, discretionary behaviours to benefit directly or indirectly the firm or other customers (Jaakkola and Alexander 2014; Cova, Pace, and Skålén 2015). Despite the fact that these behaviours are beneficial to the firm, it is important to note that these concepts to some extent have conceptual divergence in relation to the concept of CEBs beyond purchase.

Bettencourt (1997) examined the concept of 'customer voluntary performance' and demonstrated that customers act as partners or partial employees in service delivery. The author suggests that customers play critical roles in supporting the ability of the firm to deliver service quality. Further, Bettencourt (1997) identified three roles that customers contribute to service quality: promoters of the firm (loyalty behaviours), co-producers of the firm (cooperative behaviours) and consultants to the firm (participative behaviours). Further, Rosenbaum and Massiah (2007) expanded on the Bettencourt (1997) study by including empathetic behaviour and responsibility towards other customers in the service

establishment as a form of customer voluntary performance. Despite the fact that some of these voluntary performances are helpful and discretionary behaviours, they are still exhibited within the service encounter (Bettencourt 1997). In addition, these authors did not distinguish between customer voluntary behaviours that entail extra-role behaviours and in-role behaviours. Research suggests that customers who engage in extra-role behaviours vs in-role behaviours have different motivations (Groth 2005).

Bove et al. (2009) examined the role of the service worker in encouraging customers to exhibit customer citizenship behaviours. Their study investigated behaviours across three service contexts (pharmacy, hairdressing and medical services) to capture behaviours that were specific to the relationship between a customer and a service worker. Their study identified eight distinct types of behaviours that customers exhibit towards service worker employees: (1) positive WOM; (2) suggestions for service improvement; (3) policing of other customers (refers to observing the behaviour of other customers); (4) voice (refers to customers complaining to service providers); (5) benevolent acts of relationship facilitation (refers to tolerance, patience and politeness); (6) displays of relationship affiliation (refers to communication to others of their relationship with an organisation); (7) flexibility (refers to the customer's willingness to adapt to situations beyond their control); and (8) participation in the firm's activities (refers to attending organisational events or participating in sponsored activities). Their study demonstrates that customers are motivated to behave beyond their required roles to help the service worker (Bove et al. 2009). It is evident that this research focuses on both in-role behaviours (e.g., co-production, tolerance) and extra-role behaviours (suggestion for service improvement). Both types of behaviours are important to the firm, the context determines the type of behaviours (in-role behaviours vs extra-role behaviours).

Johnson and Rapp (2010) developed a scale to measure how customers engage in 'helping behaviours' towards a company. Their research identified multiple forms of behaviours that customers engage in for non-profit and for-profit organisations. The two variations of the scale measure including expansive behaviours (e.g., recommendation), supporting behaviours (e.g., fundraising and donation), forgiving behaviours, competitive information (e.g., report and contact organisation about useful information) and responding to research. According to Johnson and Rapp (2010) the scale can be used to

operationalize customer helping behaviours. It is apparent that these helping behaviours entail voluntary behaviours that are significant to the company and other stakeholders involved.

Similarly, Yi and Gong (2013) developed a scale highlighting the significant roles of customers in engaging in value co-creation behaviours in the service context. The authors propose eight types of behaviours that customers display when they engage with the firm, other customers, or with the service itself. Specifically, the scale can be classified into two types. The first type relates to customer behaviours that contribute to the service quality of the transaction itself such as responsible behaviours (e.g., 'I performed all the task that are required'), tolerance (i.e., 'if the employee makes a mistake during the service delivery, I would be willing to be patient'), personal interaction (e.g., 'I was kind to the employee'), and information sharing (e.g., 'I provide the necessary information so that the employee could perform his or her duties'). The second type of customer behaviours relates to voluntary and extra-role behaviours that go beyond the transaction such as advocacy, helping other customers, feedback for service improvement, and information seeking to consume the service as 'value co-creator' (Yi and Gong 2013, 3).

Discussion of voluntary and non-transactional behaviours in the marketing literature can be traced back to the organizational citizenship behaviour literature and customer citizenship behaviours. Furthermore, the marketing literature has advanced on the previous concepts to contribute to the understanding of the emerging concept of CEBs. For example, Bove et al. (2009, 699) differentiates OCB from 'CEBs' and CB by stating that 'functionality to the organization is a key differentiator of OCB from [these] prosocial terms' such as CEBs and citizenship behaviour. Similarly, Organ (1988) argues that unlike prosocial behaviours, OCB are extra-role behaviours of employees that mainly contribute to the effective functioning of the organization. While the difference between these CB and CEBs concepts is whether or not these behaviours are transactional (i.e., relates to service encounter/transaction) or non-transactional engagement behaviours (i.e., beyond service encounter/purchase). For example, the marketing literature refers to, and labels the following constructs as engagement behaviours: responsible behaviour, personal interaction, tolerance, and information sharing (Yi and Gong 2013; Verleye et al. 2014; Bove et al. 2009). These behaviours are essential to conduct the service transaction with the service provider. Often these engagement behaviours entail in-role

behaviours and take place within 'the duration of the service encounter only' (Jaakkola and Alexander 2014, 248). On the contrary, non-transactional CEBs entail extra-role behaviours that are 'voluntary, are outside of the customer's required role for service delivery, which provide help and assistance, and are conducive to effective organisational functioning' (Bove et al. 2009, 698) and other stakeholders (Jaakkola and Alexander 2014). Furthermore, CEBs could be beneficial (e.g., product suggestion) or not beneficial to the firm (e.g., negative feedback) (Jaakkola and Alexander 2014).

Thus, non-transactional CEBs are voluntary extra-role behaviours that occur in interaction with the firm or other stakeholders, and affect customers' respective value and outcomes (Jaakkola and Alexander 2014). Furthermore, such non-transactional CEBs have been observed in offline contexts (e.g., health services) and in online contexts (OBCs). In other words, CEBs are applicable in various contexts. For instance, helping other customers and providing feedback to the firm have been researched in both offline and online contexts (Verleye et al. 2014; Nambisan and Baron 2010). Conceptually, these CEBs entail voluntary extra-role behaviours (vs. in-role behaviours) and take place beyond the service delivery process to benefit not only the firm but also other stakeholders within a potentially broad network.

Thus, the extant literature confirms that CEBs co-create value and that this value can be directed toward the firm, other customers or customers themselves (Jaakkola and Alexander 2014; Nambisan and Baron 2010; Verleye et al. 2014). Evidently, the concept of CEB is broad and includes various behaviours. It also acknowledges that a customer might engage in a single behaviour or in multiple behaviours towards the firm or other customers (Johnson and Rapp 2010), and this may depend on the type of organisation or the context. For instance, cooperation, tolerance and responsible behaviour are not as applicable in an OBC as they might be in a face to face customer context. Furthermore, CEBs such as customer compliance, respect and adaptability are often more likely to occur during the service encounter (in-role). These CEBs occur to enable transactions but are less likely to improve the firm's offerings (Bove et al. 2009; Bettencourt 1997).

In accordance with the discussion above and the CEBs definitions of Van Doorn et al. (2010) and Jaakkola and Alexander (2014), CEBs are defined in this current study as

voluntary extra-role behaviours specific to a target brand which customers engage in to co-create value for themselves, other customers, and the firm in online brand communities. These three types of CEBs entail value co-creation by providing suggestions and feedback to the firm, providing help to other members including alternative product uses, and consuming and seeking information to create brand experience.

2.2.2 S-D logic and CEBs in Value Co-creation

While CE evolved from the OB literature, the focus on CEB has evolved from the relationship marketing and service management literature. Formalisation of the concept has occurred only recently (Van Doorn et al. 2010) and many of the studies to date have been exploratory. Despite this, there has been greater recognition of its importance from a consumer culture perspective (e.g., Wirtz et al. 2013; Brodie et al. 2011; Van Doorn et al. 2010) and increased attention to CEB has coincided with the emergence of a school of thought that has its roots in the S-D logic literature (Vargo and Lusch 2004; Vargo and Lusch 2016).

Introduced by Vargo and Lusch (2004), S-D logic presents a theoretically important contribution to CEBs (Vargo and Lusch 2008) that helps explain the multitude of customer influences and roles that transcend transactions (Van Doorn et al. 2010). The current study focuses on S-D logic to interpret CEBs in the context of OBCs (as per Brodie et al. 2011). Specifically, S-D logic helps us to understand the important role of consumers to co-create value for themselves, the firm and other stakeholders. It reorients marketers to consider the important co-creation roles played by consumers both within and outside the transaction.

S-D logic argues that ‘the customer is always a co-creator of value’ (Vargo and Lusch 2008, 7). This suggests that value co-creation is subject to the nature of the interaction (Vargo and Lusch 2008; Vargo and Lusch 2016). The role of the customer as a co-creator is obvious in OBCs, where community members are beneficiaries of information, knowledge and experiential resources, and they become providers by interacting, participating and conversing with other community members (Pongsakornrungsilp and

Schroeder 2011). A customer as a co-creator could be direct with the firm or indirect with other stakeholders. 'Direct co-creation involves customer-led interactions which occur directly between the customer and the brand' (France, Merrilees and Miller 2015, 853). This direct interaction includes when customers interact with the brand community and the firm within the brand community about various themes, such as providing suggestions for service improvement to the firm, or sharing experiences with other customers (Brodie et al. 2013; France, Merrilees and Miller 2015). 'Indirect co-creation entails the customer-led interaction which occurs indirectly between customer and the brand, and may include the customer involving the brand with other customers, friends, and family and other networks' (France, Merrilees and Miller 2015, 852-853). Thus, the active role of customers in value co-creation has the power to shape the brand irrespective of whether the interaction is direct or indirect with the brand or other customers (France, Merrilees and Miller 2015).

S-D logic suggests that 'value is always uniquely and phenomenologically determined by the beneficiary' (Vargo and Lusch 2008, 7). Specifically, S-D logic suggests that value is meaning-laden and experientially embedded, meaning that customers interpret value differently, and value is only determined by customers (Vargo and Lusch 2008). Prahalad and Ramaswamy (2004) also argue that value co-creation is embedded in customer's individual experiences. Similarly, Brodie et al. (2013) indicate that in OBCs, customers co-create value from their own experiences. Indeed, brand communities provide the opportunity to become situated in the experience (McAlexander, Schouten and Koenig 2002), as they are experiential contexts for knowledge creation and hedonic experiences (Sawhney, Verona and Prandelli 2005). This clearly indicates that value is meaning-laden in the exchange of resources (e.g., content and interaction) and thereby customers co-create the value of their own experiences in terms of brand use and product customisation (Breidbach, Brodie and Hollebeek 2014).

S-D logic also considers that 'all social and economic actors are resource integrators' (Vargo and Lusch 2008, 7). Vargo and Lusch (2008) argue that the context of value creation is within networks. The emphasis of this proposition is that the social context provides the main platform for value creation. As indicated earlier, OBCs represent a valuable and viable context for collaboration and creation of value with customers able

to help the firm as well as other community members (Sawhney, Verona and Prandelli 2005). Further, Sawhney, Verona, and Prandelli (2005) note that OBCs are powerful platforms in which customers can create value in multiple ways. Their findings suggest that firms interact with a large number of customers in OBC conversations and in the process access knowledge, such as idea generation. Merz, He and Vargo (2009) acknowledge that brand communities facilitate brand value and that it is co-created through dynamic social interactions between the firm and members.

Each of these aspects of S-D logic recognises the concept of CEB that co-creates value. Thus, value co-creation within an OBC is a key behavioural manifestation of CEB as rooted in S-D logic (Brodie et al. 2013; France, Merrilees and Miller 2015; Hoyer et al. 2010). CEB is context-specific, and brand value co-creation emerges from two-way interactions (Hollebeek 2011a; Hollebeek and Brodie 2009). Thus, S-D logic recognises value can be co-created in OBCs through CEB between the customer and the brand. This value co-creation includes customers consuming information and experiencing the brand, providing information related to service/product improvement, and customers helping other customers with brand-related issues (France, Merrilees and Miller 2015; Merz, He and Vargo 2009).

2.3 The Rise of OBCs

The concept of brand communities existed prior to the arrival of the internet (McAlexander, Schouten and Koenig 2002). For example, the brand community for Harley-Davidson Motorcycles has been discussed extensively in relation to brand loyalty. The main characteristic of a brand community is that it is geographically bound, such that customers meet face-to-face and participate in activities together (Bagozzi and Dholakia 2006). Brand communities often include small groups that express mutual sentiments and share an interest in the brand (Bagozzi and Dholakia 2006; Cova and Dalli 2009). According to Bagozzi and Dholakia (2006, 54) brand communities are ‘a friendship group of consumers with a shared enthusiasm for the brand and a well-developed social identity, whose members engage jointly in group actions to accomplish collective goals’. Bagozzi and Dholakia (2006) conclude that the social identity of brand community members plays a significant role in encouraging member interactions and behaviours.

Over the last few years, with the rise of social media channels, brand communities have experienced a major transformation. Social media platforms have come to support the notion of brand communities with no geographical boundaries. In an ethnographic study, Muniz and O'Guinn (2001) described OBCs as social entities that reflect the situated embeddedness of brands in consumers' daily lives that transcend geographical barriers. These authors defined brand community as 'a specialised, non-geographically bound community, based on a structured set of social relations among admirers of a brand' (Muniz and O'Guinn 2001, 421). Thus, brand communities are specific to brands. Though they may form around any brand, brand communities are most likely to form around brands that possess a strong image and rich history (Muniz and O'Guinn 2001).

On the other hand, McAlexander, Schouten, and Koenig (2002) define OBCs from a customer-experiential perspective. This perspective suggests that a brand community is a customer-centric community where the focus is on the customer's experience rather than on the brand around which that experience revolves. This customer-centric perspective also implies that customers and their experiences have important roles in stimulating relationships not only between customers, but also between the customer and the brand, between the customer and the firm, and between the customer and the product in use.

These two perspectives demonstrate that both the customer's experience and connecting with the brand are the focal point of interest around which customers gather to derive benefits. This is because value is a function of experience, which either comes from the brand itself or the interactions with other community members (Ramaswamy 2009). Thus, OBCs make value accessible to anyone who feels connected to the brand and its like-minded community (Ouwersloot and Odekerken-Schröder 2008). The current study concurs with these concepts, which are widely accepted by marketing researchers interested in OBCs (Dessart et al. 2015; Ouwersloot and Odekerken- Schröder 2008; Carlson, Suter, and Brown 2008; Bagozzi and Dholakia 2006; McAlexander, Schouten, and Koenig 2002).

2.3.1 Communication on Social Media Communities

The evolution of the internet has contributed to the spread of social media platforms that allow communities of people who interact online to share information, knowledge and opinions using conversational media (Hennig-Thurau et al. 2010). Conversational media are web-based applications that make it possible to create and communicate content easily in the form of words, pictures, videos and audios (Brake and Safko 2009). Similarly, Hennig-Thurau et al. (2010; 312) define these new media as 'websites and other digital communication and information channels in which active consumers engage in behaviours that can be consumed by others both in real time and long afterwards regardless of their spatial location'. Online brand communities transcend geography because the broad access to technology means that customers can access from anywhere and consequently makes geography constraints redundant (Laroche et al. 2012). Online social media communities form a world of their own, where people can seek social contact, pleasure, knowledge and opportunities for the creation of value in ways they do not find in their daily lives (Seraj 2012).

Internet technology has fundamentally changed the traditional way of marketing (Holland and Menzel Baker 2001). Customers' consumption patterns and interactions with brands have been strongly influenced by the increasing number of social media communities in various disciplines in marketing such as advertising, service marketing, and tourism (Hays, Page and Buhalis 2012; Rapp et al. 2013; Wang and Fesenmaier 2002). Before the rise of social media, the way customers interacted with brands and firms were largely controlled by firms (Burton and Khammash 2010). However, social media communities have contributed to a dramatic shift of this control from brands to customers, who are now taking more-active roles in the market (Hennig-Thurau et al. 2010). The way customers consume, gather and exchange information about a brand or service is strongly driven by the richness of the content on social media platforms, allowing consumers to derive meaningful value about an extensive range of brands, themes and interests (Burton and Khammash 2010; Hennig-Thurau et al. 2010). Social media platforms have now become channels for customer self-service, interaction and engagement with both brands and other customers (Zaglia 2013; Holland and Menzel Baker 2001).

Online social media platforms are diverse and include social networking (e.g., Facebook, YouTube, LinkedIn, and Twitter) (Hennig-Thurau et al. 2010; Hollebeek, Glynn and

Brodie 2014), blogs (Berthon et al. 2012), opinion portals (e.g., consumer reviews) (Burton and Khammash 2010), auctions (Abdul-Ghani et al. 2011), communities or forums (Wang and Fesenmaier 2004; Bickart and Schindler 2001) and OBCs (Muniz and O'Guinn 2001). Kaplan and Haelein (2010) provide detailed clarification of the various types of these online social media and highlight that, each of these media channel types has unique purposes and characteristics. Since one of the main objectives of this study is to examine CEBs specific to OBCs, it is important to centre the discussion on the online communities.

Table 2.2 Definitions of Online Communities

Authors	**Definitions of Online Communities**
Chiu, Hsu, and Wang (2006, 1880)	Virtual communities as "online social networks in which people with common interests, goals, or practices interact to share information and knowledge, and engage in social interactions."
Kozinets (1999, 254)	"Virtual communities of consumption are a specific subgroup of virtual communities that explicitly centre upon consumption-related interests. They can be defined as affiliative groups whose online interactions are based upon shared enthusiasm for, and knowledge of, a specific consumption activity or related group of activities."
Wiertz and de Ruyter (2007, 349)	Commercial online communities are defined as "firm-hosted online aggregations of customers who collectively co-produce and consume content about a commercial activity that is central to their interest by exchanging intangible resources."

Researchers have presented various definitions of online communities (as shown in Table 2.2). Online communities generally appear to take two forms and can be classified as either transactional communities that enable participants to engage in commerce or non-transactional communities that enable participants to engage together on a topic of interest rather than engage in commercial transactions (Armstrong and Hagel 1996). Transactional communities are either run by a commercial firm (Algesheimer, Dholakia and Herrmann 2005) or sponsored by firms (Wiertz and de Ruyter 2007). Notable examples of transactional online communities are auction sites, such as eBay (Algesheimer et al. 2010) and Trade Me (Abdul-Ghani et al. 2011). This type of transactional community is often centred on buying and selling, and the delivery of information related to this process (Armstrong and Hagel 1996). Such commercial communities are designed to give customers access to products, and to allow customers to communicate and interact with one another regarding product-related issues. Customer to customer interactions in these commercial communities involve social support and

giving advice to other members (Algesheimer et al. 2010). Customers of commercial online communities exchange intangible resources, such as knowledge and emotional support (Wiertz and de Ruyter 2007).

Non-transactional online communities (i.e., non-commercial communities) are generally consumer-initiated and contain user-generated content (Jang et al. 2008) but may still be sponsored by firms (Mathwick, Wiertz and De Ruyter 2008). The main theme of these online communities is to support and enable the activities and interests associated with the members' shared goals (Bagozzi and Dholakia 2006; Kozinets 1999). Participants in online communities consume information, transfer knowledge, form a culture, build social relationships and engage in social interactions (Seraj 2012; Chiu, Hsu, and Wang 2006; Kozinets 1999). Recent research suggests that online communities represent a major business opportunity for firms to gain economic benefits from consumer interactions (Manchanda et al. 2015).

Each type of non-transactional online community has its own theme or purpose. For instance, online communities generally focus within a topic of interest, such as backpacking, gardening (Bickart and Schindler 2001), travel and tourism (Hays, Page and Buhalis 2012; Wang and Fesenmaier 2004), learning and educational platforms (Ma and Yuen 2011), health issues (White and Dorman 2001), automobile reviews (Chen, Wang and Xie 2011), general sport products (Füller, Jawecki and Mühlbacher 2007) and food-related issues (Kelly et al. 2008), among many more. These types of online communities provide an opportunity for social interaction, information exchange, and relationships to develop between members. Social exchanges in these communities revolve around shared interests and allow members to communicate certain life experiences (Armstrong and Hagel 1996). Thus, online communities have become an important network for like-minded consumers who engage in social interactions about their interests. Despite the fact that these online communities are activated by consumer initiatives, the defining feature of these online communities is the type of host/sponsor (firm-managed or consumer-managed) (Porter 2004). Regardless of community type (i.e., commercial or non-commercial), the idea to engage consumers and gain such benefits has attracted practitioners to invest on these online communities (Manchanda et al. 2015).

An important type of online community, that are usually be initiated by consumers, are brand-focused online communities (Dholakia and Vianello 2009). Consumer desire to interact with other consumers with the same interest leads to a brand focused website that contains 'free content' within the community itself. Consumers start to gain functional (knowledge) benefits from the brand community as well as start to know other 'people like me' and establish relationships (McWilliam 2000, 45). The idea of like-minded people in brand communities is that they are consumers who have shared interests about brand, product, and consumption activities and interact with each other about their shared interests (Algesheimer et al. 2005; Manchanda et al. 2015; Porter and Donthu 2008). According to McWilliam (2000, 47) 'online communities evolve' when community members first start to establish social ties, and develop ideas with other members who are 'credible and responsive' in the community. This experience happens over time and helps to develop relationships with other members in community.

2.4 Relevant Research on OBCs

The concept of OBCs has attracted much attention over the last decade. However, when examining the extant literature on OBCs, a number of issues pertaining to the scope and themes of previous studies arise. As shown in Table 2.3, the most of the prior research on brand communities entails ethnographic methodologies (Dessart et al. 2015; Brodie et al. 2013; Pongsakornrungsilp and Schroeder 2011; Schau, Muniz, and Arnould 2009) that focus on general themes. Apart from a few studies (Dessart et al. 2015; Brodie et al. 2013), there is a distinct paucity of empirical studies addressing CEBs from a customer perspective.

Table 2.3: Summary of OBC Studies

Authors	Brand	Objective	Methodology
Muniz and O'Guinn (2001).	Apple (Macintosh computers)	To explore the characteristics, process, and particularities of brand communities	Ethnographic
Muniz and Schau (2005).	Apple Newton (discontinued by Apple in 1998)	To explore religiosity in a community by studying members' perceptions of authority and fellowship	Netnographic
Algesheimer, Dholakia, and Herrmann (2005).	German car clubs (Ford, Volkswagen	To explore how identification with brand community leads to positive consequences	Quantitative Online survey
Cova and Pace (2006).	Nutella	To explore the power that brand community exerts over a brand of mass-marketed convenience	Case study, netnographic
Luedicke (2006).	Hummer	To explore the role of social environment for brand communities	Interviews, netnographic
Carlson, Suter, and Brown (2008).	US theme park	To find out the impact of psychological sense of brand communities among users who may not socially interact	Quantitative Online survey
Ouwersloot and Odekerken-Schröder (2008).	Swatch	To explore whether a community population can be segmented on the basis of different motivations to join	Cluster analysis
Schau, Muniz, and Arnould (2009).	Apple, BMW mini car	To explore the process of collective value creation within brand communities	Netnographic
Nambisan and Baron (2009).	Microsoft	To explore customer's participation in value co-creation activities	Quantitative
Pongsakornrungsilp and Schroeder (2011).	Liverpool Football Club	To explore value creation in OBC	Ethnographic
Brodie et al. (2013).	Vibra-Train Ltd (about whole body vibration)	To explore the nature and scope of customer engagement in an OBC	Netnographic
Dessart et al. (2015).	Variety of brand categories	To explore engagement and behaviours with the brand and the other members in OBCs.	Semi-structured interviews
Baldus, Voorhees, and Calantone (2015).	Amazon	To develop a measure of online brand community engagement following a grounded theory approach.	Mixed methods

Muniz and O'Guinn (2001) describe brand communities as exhibiting three markers of a community: consciousness of kind, shared rituals and traditions, and a sense of moral responsibility. Consciousness of kind is an intrinsic connection that members feel towards one another and a shared belonging. The second indicator of a brand community is shared rituals and traditions, by which the members maintain the community's shared history, culture, and consciousness. Lastly, a sense of moral responsibility is a perceived sense of duty or obligation to the community as a whole. These three markers are commonly accepted by researchers as unique features for brand community members (Laroche et al. 2012; Kim et al. 2008; Algesheimer, Dholakia, and Herrmann 2005). All three markers

highlight the general characteristics of brand communities, although Muniz and O'Guinn (2001) did not correlate the relationships between these constructs. For instance, consciousness of kind is akin to the social benefits that members derive from participating in brand communities (Nambisan and Baron 2009). Furthermore, Muniz and O'Guinn (2001) suggest that consciousness encompasses friendship aspects between members, while other studies on OBCs have confirmed that friendship aspects are dependent variables for customer interactions and engagement behaviours (Nambisan and Baron 2009). Rituals and traditions in brand communities are typically centred on shared consumption experiences of the brand (Muniz and O'Guinn 2001). Sharing consumption experiences is an aspect of co-creation of value and has been found to be an outcome of both social and functional benefits (Nambisan and Baron 2009). Similarly, a sense of moral responsibility includes behavioural engagement with their use of the brand (Muniz and O'Guinn 2001). Helping other members in online communities has also been demonstrated to be an outcome variable of social and functional benefits (Dholakia et al. 2009).

The ethnographic methods utilised by Muniz and O'Guinn (2001) to investigate these community markers did not allow for further exploration of motivations beyond consumers' joining and engaging in OBCs. Furthermore, the qualitative studies including netnographic approaches employed by other researchers (summarised in Table 2.3) acknowledge the existence of value creation in OBCs and the process of collective value creation, co-creating value toward the brand and the community members (e.g., Dessart et al. 2015; Pongsakornrungsilp and Schroeder 2011; Schau, Muniz, and Arnould 2009), but they limit their scope to the importance of these practices rather than exploring and testing the underlying motivation of CEBs that co-create value. Since CEBs were recognised as a research priority by the MSI (2012; 2014), there has been an increasing interest in the motivations that underlie CEBs in brand communities (Baldus, Voorhees, and Calantone 2015). An understanding of these motivations is important for managers of online brand communities and brands who want to encourage more value adding CEBs amongst community members (McWilliam 2000; Baldus, Voorhees, and Calantone 2015).

Following Muniz and O'Guinn (2001), the first stream of OBCs research has focused broadly on the impact of group/community identification, brand identification in relation to brand commitment as well as loyalty (Stokburger-Sauer, Ratneshwar, and Sen 2012; Carlson, Suter, and Brown 2008; Algesheimer, Dholakia, and Herrmann 2005). By studying various car brands (e.g., Ford, Volkswagen) across German-speaking Europe (i.e., Germany, Austria, and Switzerland) using an online survey, Algesheimer, Dholakia, and Herrmann (2005) reveal that a customer's relationship with a brand enhances their identification with the brand community and their loyalty intentions. They also find a positive relationship between brand community identification and community engagement. In turn, the effects of community engagement influence community participation and other behavioural intentions such as recommendations and membership continuance. Jang et al. (2008) examine the influence of OBC characteristics on community commitment and brand loyalty. Similarly, Hur, Ahn, and Kim (2011) investigate the effect of commitment to brand communities and how this influences loyalty behaviours. Using a web-based survey from members of an online discussion group, Carlson, Suter, and Brown (2008) demonstrate statistically the positive influence of sense of brand community (i.e., defined as the degree to which an individual perceives relational bonds with other brand users) on brand commitment and other behavioural outcomes, such as celebrating brand history and attending brand events. Carlson, Suter, and Brown (2008) validate these findings by using respondents who were not members of a social brand community as a comparison group. Overall, this stream of research focuses on community/brand identification and community commitment in relation to brand loyalty and other relational outcomes in the context of OBCs (Stokburger-Sauer, Ratneshwar and Sen 2012).

The other dominant stream of research on OBCs is centred on the influence of customer interactions within OBCs on customer purchasing behaviour (Adjei, Noble and Noble 2010), customer empowerment (Cova and Pace 2006) and oppositional loyalty (Thompson and Sinha 2008). For instance, Adjei, Noble, and Noble (2010) demonstrate that C2C interactions, including sharing brand information and the experiences exchanged in OBCs, reduces the level of uncertainty about brands and influences purchasing intentions. Further, Thompson and Sinha (2008) examine the linkage between customer interactions, and participation, in relation to loyalty and oppositional loyalty.

These authors confirm that higher levels of participation in brand communities increase the likelihood that a customer will adopt a new product from the preferred brand and increase their oppositional loyalty. Cova and Pace (2006) indicate that interactions between customers increase their control over relationships with the brand. Thus, although this stream of research is still developing, it provides evidence that CEBs in OBCs have positively affect brand loyalty.

Recently, however, a notable trend has emerged in OBC studies that have placed greater emphasis on how CEB in brand communities impacts overall brand value (Ray, Kim, and Morris 2014; Brodie et al. 2011 2013; Pongsakornrungsilp and Schroeder 2011; Schau, Muniz, and Arnould 2009). Researchers in this area identify value co-creation practices that customers engage in to create value within OBCs. For example, in a qualitative study, Schau, Muñiz, and Arnould (2009) identified 12 practices that were grouped into four thematic categories: (1) social networking, (2) impression management, (3) community engagement, and (4) brand use. Although the identification of these practices has added to the marketing literature by providing an overview of the CEBs, these authors did not systematically identify how value is co-created. Moreover, the focus was on the taxonomy of common actions (e.g., social networking, welcoming, empathising and governing) between brand community members rather than on the causal relationships between these practices. Similarly, in their ethnographic study, Pongsakornrungsilp and Schroeder (2011) examined CEBs in relation to value co-creation through customer consumption practices in OBCs. These authors concluded that customers generally act as both providers and beneficiaries within the value co-creation process. This means that customers are able to act as either a provider or a beneficiary, depending on the way they interact, and participate in creating value within the community. These authors highlight two types of CEBs taking place in the context of brand community; however, their study did not identify the underlying motivations for these engagement behaviours.

The previous discussion clearly identifies two issues. First, recent studies recognise the importance of CEBs in facilitating brand value in these communities. It also shows that brand communities are a highly relevant social context for CEBs and brand value (Dessart et al. 2015). Despite the recognition of these engagement behaviours, the concept of CEBs and its dimensions has not been defined clearly in prior studies. Specifically, the themes

of the previous studies on OBCs were more related to brand identification, psychological sense of brand communities, the influence of customer interactions, and value creation practices rather than the concept of CEBs in OBCs. Second, the social interaction that takes place within brand communities adds another perspective to the customer-firm relationship. As shown in Table 2.4, there has been a transformation of the relationship between firms and customers (Prahalad and Ramaswamy 2004). The importance of OBCs comes from their ability to facilitate customer interactions and contributions to brands, firms and all stakeholders concerned (Merz, He and Vargo 2009).

Table 2.4: Transformation of the Relationship between Firms and Consumers

Transformation of the Relationship between Firms and Consumers	
From	**To**
One-way	Two-way
Firm-to-consumer	Consumer-to-firm
Controlled by firm	C2C
Choice = buy or not to buy	Consumer wants to/can impose his/her view of choice
Firms segment and target consumers; consumers must 'fit' a firm's offerings	Consumer wants to/is being empowered to co-construct a personalised experience around himself/herself, within the firm's experience environment

Adapted from Prahalad and Ramaswamy (2004, 12)

It is also clear from the previous discussion that there is a convergence in the extant brand community literature regarding the significance of value co-creation. Nonetheless, the literature on the concept of CEB that co-creates value remains for the most part ambiguous (Jaakkola and Alexander 2014; Payne, Storbacka and Frow 2008). Although there is an increasing recognition given to the role of customers in building brand value from CEBs (France, Merrilees and Miller 2015), these studies are still limited in terms of their exploratory nature and diverse conceptualisations (Dessart et al. 2015; Schau, Muñiz Jr and Arnould 2009; France, Merrilees and Miller 2015). As such, the current study attempts to clearly define CEBs from a customer perspective in online brand communities.

Next, this study discusses the operational definition for the three different types of CEBs in OBCs: CEB toward the firm, CEB toward other members and CEB toward oneself. In addition to that, this study investigates and defines the antecedents of CEBs that are relevant to OBCs. In doing so, this study integrates two theories that explain the underlining motivations of CEBs.

2.5 CEBs in OBCs

As advanced earlier, the behavioural aspect of customer engagement entails customers co-creating value for themselves, other customers and the firm within a brand community. These dimensions of CEBs are presented, in-part, in several customer engagement behaviours conceptualisations (Brodie et al. 2013; Van Doorn et al. 2010; France, Merrilees and Miller 2015; Jaakkola and Alexander 2014; Groeger, Moroko, and Hollebeek 2016). In this study, CEBs that co-create value in OBCs is defined as voluntary and extra-role (i.e., outside of the customer's required role for service delivery and the service encounter) behaviours that are intended to co-create value for themselves (i.e., brand), other customers, or the firm.

2.5.1 CEB toward the Firm

The emergence of social media communities has facilitated the role of CEBs and minimised the boundaries between customers and firms. These social platforms provide opportunities for active customers to not only engage with other customers, but also engage with the firm in certain areas regarding the brand and its products (Porter et al. 2011; Jaakkola and Alexander 2014). The literature has highlighted several areas where customers engage in behavioural manifestations towards the firm, including participating in market research (Aggarwal 2004), writing reviews (Van Doorn et al. 2010), participating in sponsored activities (Johnson and Rapp 2010), engaging in product development (Hoyer et al. 2010), helping other members (Van Doorn et al. 2010) engaging in co-development (Brodie et al. 2013), user-generated hotel reviews (Wei et al. 2013), engaging in liking and commenting on Facebook brand pages (Kabadayi and Price 2014; Gummerus et al. 2012), and suggesting improvements to the firms' products and services (Muniz and Schau 2011; Bove et al. 2009). Conceptually, CEB is a customer-led interaction toward the brand, firm, or other customers that goes beyond purchase/transaction (Van Doorn et al. 2010; France; Merrilees and Miller 2015; Jaakkola and Alexander 2014).

As evident, CEB toward the firm is a broad concept that includes multiple ways to interact with the firm (Jaakkola and Alexander 2014; Muniz and Schau 2011; Bove et al. 2009) including liking, participating in sponsored activities, writing reviews, blogging, and participating in marketing research. Specifically, the context where these CEBs take place determines and shapes the method of behavioural engagement. For example, a customer 'liking the brand' is a type of CEBs that it is more consistent with Facebook rather than OBC settings (Kabadayi and Price 2014). Similarly, a user-generated review of a hotel or similar service environment is more likely to occur on a review site (Wei et al. 2013). Liking would be considered a weak type of CEB, in comparison to giving suggestions about the brand. Therefore, the current study focuses on these stronger forms of CEBs that are specific to OBCs.

Therefore, in the current study the operational definition of 'CEB toward the firm' focuses only on the specific dimensions that contribute to the improvement of a brand or a service, such as sharing ideas and providing suggestions for improvements to the firm/brand beyond the service encounter or purchase. Thus, 'CEB toward the firm' is defined as a behavioural construct that measures the extent to which a customer shares/provides information, makes/contributes suggestions and ideas to the firm, and identifies his/her needs to the firm (Chan and Li 2010; Bove et al. 2009; Verleye et al. 2014).

2.5.2 CEBs toward Oneself and Other Members

CEBs toward other members and oneself can be traced back to the studies of C2C encounters and customer-to-customer exchange (Parker and Ward 2000; McGrath and Otnes 1995). Parker and Ward (2000) identify four customer roles in a retail context: (i) helpseeker, (ii) proactive helpseeker, (iii) reactive helpers, and (iv) proactive helpers. Using this typology, CEBs entails both proactive helpseeking roles (i.e., CEB toward oneself) and proactive helper roles (i.e., CEB toward other customers). Proactive helpseekers actively search for help to meet their needs. Proactive helpers like to interact and share knowledge with other customers and are happy to make the first move to assist, give advice and share their experiences with others. As discussed earlier, these are extra-role and voluntary behaviours.

To date studies on OBCs have not given great attention to value co-creating CEBs from a customer perspective, or more specifically, the multiple roles that customers engage in within OBCs (Brodie et al. 2013; Muniz and Schau 2011; Pervan and Bove 2011). As this study focuses only on the behavioural manifestations of CEBs that co-create value, 'CEB toward oneself' and 'CEB toward other members' are fundamental constructs that have a brand focus and go beyond the transactional (Van Doorn et al. 2010). Central to OBCs, customers are seen as value co-creators when they use knowledge and other resources to create value from their own consumption experiences (Yi and Gong 2013; Pongsakornrungsilp and Schroeder 2011; Porter et al. 2011). CEBs toward other members and oneself are central to S-D logic in terms of value in use, and meaning-laden in that they are related to improving and enhancing the use of the brand through network interactions (Vargo and Lusch 2004-2008).

This current study examines CEBs toward oneself and other members beyond transaction in an OBC context. Thus, 'CEB toward oneself' in OBCs is operationally defined as a customer co-creating value by obtaining or consuming information about a brand in an OBC context (Yi and Gong 2013; Dholakia et al. 2009). CEB toward oneself is conceptually similar to brand-experience creation: defined as 'generating part or all of the core offering marketing stimulus or brand-related experience' (Groeger, Moroko, and Hollebeek 2016, 26). They are similar because customers engage in extra role behaviours to generate a better experience by sharing the problem with other customers and seeking ideas to derive more value. Indeed, the value derived from CEB toward oneself is likely to be 'an influential input into assessment of customer satisfaction and leads to more relational behaviours by the customer' (Dholakia et al. 2009, 215). Similarly, Groeger, Moroko, and Hollebeek (2016) highlight that creating brand experience increases consumer satisfaction and predicts purchase intention.

On the other hand, 'CEB toward other members' is operationally defined as customer behaviours aimed to help other members by giving, advising and sharing information in an OBC (Yi and Gong 2013). In the online context, CEB toward other members involves helping each other to solve problems and assisting other customers to learn about a particular brand or product (Dholakia et al. 2009). CEB toward other members is a common behaviour that provides ideas and solutions to other community members

experiencing brand-related issues (Nambisan and Baron 2009). CEB toward other members is also similar to the previously described 'augmenting' behaviours because knowledgeable customers provide alternative uses for a product and post brand-related content (Jaakkola and Alexander 2014; Groeger, Moroko, and Hollebeek 2016).

Nonetheless, CEBs toward oneself and other members vary in the degree of effort required from the members. CEB toward oneself is arguably less active than CEB toward other members (or CEB toward the firm) (Shang, Chen and Liao 2006). Despite this variation, Madupu and Cooley (2010) argue that CEB toward oneself is still active and represents the most frequent behaviour in OBCs. In addition, although CEB toward oneself is not explicitly contributing to the community, members are actively finding solutions to their problems and obtaining information that helps them to co-create more value from the brand. According to Yi and Gong (2013), customers who engage in seeking information about the brand to help themselves are important for two primary reasons. First, information seeking reduces uncertainty and thereby enables customers to understand and control their co-creation environments. Second, it enables customers to master their role as value co-creators and become integrated into the value co-creation process.

The next sections shed light on antecedents of CEBs in OBCs. The section starts with a discussion on types of customer interactions in OBCs, how central the interactions are to customers, and customer evaluation of the benefits derived from the interactions. This section provides operational definitions of various benefits perceived in OBCs, and it offers theoretical explanations of what drives CEBs. This section concludes by outlining the outcomes of CEBs in OBCs.

2.6 Antecedents of CEBs in OBCs

Marketing scholars have identified that customers derive benefits from interacting with the core product (Sheth, Newman and Gross 1991), the service provider (Gwinner, Gremler and Bitner 1998) and other customers (Nambisan and Watt 2011; Chan and Li 2010). The latter type of interaction has been given the least attention in relation to what

sustains the ongoing interaction between customers and the brand community (Tsai, Huang and Chiu 2012; Nambisan and Watt 2011).

When customers interact with a core product, they derive various benefits that reflect the product's value and attributes. For instance, Sweeney and Soutar (2001) identify four types of value that consumers use to evaluate brands: emotional, social, quality/performance and value for money. Sweeney and Soutar (2001, 11) classify each of the types of value as follows:

- Emotional value as hedonic and describe it as the 'utility derived from the feelings or affective states that a product generates'.
- Social value is also considered to have partially hedonic outcomes and has been described as the 'utility derived from the product's ability to enhance social self-concept'.
- Functional value for performance/quality relates to the 'utility derived from the perceived quality and expected performance of the product'.
- Functional value for money is utilitarian and relates to the 'utility derived from the product due to the reduction of its perceived short term and longer term costs'.

These types of values or benefits are broadly classified as utilitarian, social or emotional values. From an emotional benefits perspective, for example, consumers might be more attracted to buying products that convey hedonic aspects (e.g., products that give pleasure, enjoyment or a good impression). Similarly, they may be more driven by social aspects such as positive feedback from others, or functional aspects, such as performance or quality. They also might be attracted by combinations of these benefits. The benefits customers derive from the purchase and use of a product and their evaluation of the product can be pre or post consumption. The exchange in this context is between a consumer and the product, in that it is not necessarily subject to reciprocity, but rather it is used to assess value in terms of 'benefits minus sacrifices' (Smith and Colgate 2007; Sweeney and Soutar 2001; Butz and Goodstein 1996).

Furthermore, customers derive benefits from their interactions with their service or product providers. Research in this area has examined a range of benefits and outcomes depending on the nature of the setting: online versus offline. In fact, both the type of service and the medium of the service determine the perceived benefit types, how much value is attached to each and hence influence the strength of the relationship (Kinard and Capella 2006). In the offline service context, studies highlight several benefits that may influence the degree to which consumers perceive and evaluate the value of the service encounter. A number of these studies recognise the following benefits: confidence, psychological, social, economic, and special treatment with respect to the facilitation of the exchange with the service firm (Kinard and Capella 2006; Hennig-Thurau, Gwinner and Gremler 2002). Apart from their impact on relational outcomes, such as commitment, satisfaction and loyalty, customer evaluations of these benefits are influenced by their rankings of benefit importance (Gwinner, Gremler and Bitner 1998). For instance, it was found that confidence benefits (i.e., anxiety reduction regarding the service offering) is the more important factor in high contact settings when consumers interact with the service provider (Kinard and Capella 2006). Other studies have found that special treatment benefits are more important than confidence or social benefits (Patterson and Smith 2001). A customer's willingnes to establish a relationship with the other party is conditional, and thus the relational exchange should be positive and the benefits derived must also be superior to those offered by competing firms (Hennig-Thurau, Gwinner and Gremler 2002).

Prior studies have noted that customers receive a number of benefits from their interaction with other customers. This is particularly important in the OBC context. However, it must be noted that studies on C2C interactions in both virtual communities and offline settings generally focus on the benefits that motivate customers to engage in CEBs. In offline contexts, for instance, instrumental support and social support are influential drivers that impact on a customer's willingness to contribute with helpful and voluntary behaviours towards the service provider (Rosenbaum and Massiah 2007). An understanding of the benefits specific to the OBCs context is significant to understand what enhances and fosters on-going interactions and CEBs.

In reviewing the extant literature, the perceived benefits appear to be a significant predictor of customer interactions, and this is strongly related to the type of community (Jin Yong and Hye-Shin 2010). As discussed earlier, social media communities show a number of similarities and differences that are related to their core themes and the nature of their focus. Similarly, the perceived benefits identified by prior studies in these contexts differ in terms of their relative importance to the social exchange between customers. Abdul-Ghani et al. (2011) identified three types of benefits: utilitarian, hedonic and social, which are thought to be important for customers to engage with transactional online sites. Utilitarian benefits include the information on the goods available in the marketplace and the convenience offered by offering a wide selection of goods. Hedonic benefits address the pleasure derived from interacting in the marketplace and consuming the goods. Social benefits relate to the friendship aspects with sellers, praise from friends on their purchases, and praise received for buying at bargain prices. Dholakia et al. (2009) examine the social and functional benefits that were central factors in fostering CEB to a transactional online community (eBay). Similarly, Jin Yong, and Hye-Shin (2010) focus mainly on functional benefits and social benefits that can maintain and sustain on-going interactions within online communities. Other researchers identify three types of benefits in online communities, including problem-solving support, self-enhancement, and rewards (Yen, Hsu and Chun-Yao 2011). It is apparent that benefits are central to C2C interactions, and hence to explain CEBs.

Studies specifically examining the OBCs context have highlighted similar benefits. Unsurprisingly, C2C interactions in OBCs are behaviours driven by similar motives to those driving customer interactions with other community members. Researchers in this area have also identified a number of benefits derived from community members as well as the brand community. For instance, customers engage in OBCs to derive reassurance about brand quality and brand attributes and to reduce the level of uncertainty about the firm and its products (Adjei, Noble and Noble 2010). They need to engage in social relationships with like-minded members (Madupu and Cooley 2010). They seek experiential reasons to be connected and share the consumption experiences about their brands. They feel a need to use the brand's symbolism to enhance their status as a brand user (Kuo and Feng 2013; Ouwersloot and Odekerken-Schröder 2008).

In all the various customer interaction contexts, perceived benefits are derived from customer interactions and participation. While the definition and conceptualisation of benefits varies across contexts, the following common drivers are evident: functional, social, personal status and hedonic benefits. This is because the customer's assessment of value is influenced by benefit (as a get component) and the perceived situation (Smith and Colgate 2007; Blackwell et al. 1999). Each customer's interaction type has its own benefits, i.e., customers derive different benefits depending on the interaction type and their relative importance in activating CEBs.

Nonetheless, the various benefits derived from the interactions can also be influenced by the interaction medium (e.g., offline versus online). In an online environment, service technologies offer another set of benefits: one of these is the functional benefit of convenience. The 'convenience' construct is operationalised differently across service types. According to Berry, Seiders, and Grewal (2002) convenience benefits of services consist of five dimensions: decision convenience, transaction convenience, benefit convenience, access convenience and post-benefit convenience. Decision convenience refers to a consumer's perceived time and effort to make a service purchase or use decision. Transaction convenience relates to the necessary actions that a consumer must make to use the service. Post-benefit convenience relates to the perceived time and effort expended to contact the firm after the exchange. Access convenience is related to how easily and quickly a service can be located. Benefit convenience is related to the consumer's perceived time and effort in experiencing the core benefit (Berry, Seiders and Grewal 2002). Research examining convenience benefits shows that benefits are subject to the context (Kaura, Prasad and Sharma 2013). For instance, much of the literature on self-service technologies (SSTs) operationalised consumers' convenience in using SSTs in terms of access convenience and benefit convenience. This is because these are essential aspects of exchange between consumers and SSTs (Keh and Pang 2010).

In order to examine how customers engage in different types of CEBs, a comprehensive approach is needed to consider the various benefits that are relevant to each type of CEBs. Interactions in online brand communities are not limited to one type of benefit exchange, but also capture a broad range of social exchanges (Bruhn, Schnebelen and Schäfer 2014). However, there are some limitations in the existing literature on C2C interactions. These

issues relate to the operationalisation of constructs, the conceptual approach, and the limited papers that take a holistic view of CEBs. For example, Wang and Fesenmaier (2004) operationalised the functional benefits derived from a travel community only from the convenience perspective. In contrast, Dholakia et al. (2009) examined the functional benefits of practical and useful information. Furthermore, Dholakia et al. (2009) and Jin Yong, and Hye-Shin (2010) included functional and social benefits, but these benefits are not comprehensive enough to fully examine CEBs. Furthermore, the studies of virtual communities (e.g., Abdul-Ghani et al. 2011; Dholakia et al. 2009), focus on online trading communities, such as eBay and Trade Me, rather than on specific brands and OBCs. Furthermore, several researchers have applied a two-component approach, comprised of utilitarian and hedonic dimensions (Park et al. 2014; O'Brien 2010). Others researchers have also conceptually examined customer benefits in theoretical and exploratory studies (Wirtz et al. 2013; Madupu and Cooley 2010).

As well, benefits have predominantly been explored from the perspective of customer-to-firm interactions. Few marketing researchers have focused on the benefits generated from C2C interactions, and more specifically, on the benefits from CEBs in OBCs (Jin Yong and Hye-Shin 2010; Madupu and Cooley 2010; Nambisan and Baron 2009). The current study adapts 'uses and gratifications' framework to examine the impact of four types of perceived benefits that customers obtain from OBCs, on subsequent CEBs in OBCs. More specifically, this study examines the functional, social, status and hedonic benefits that consumers derive from their interactions in OBCs. The uses and gratifications framework has been used in social media context to examine the influence of these different types of benefits on shaping consumer engagement behaviours and media usage behaviours (Nambisan and Baron 2009). Table 2.5 shows five types of benefits (including two functional benefits) that OBCs deliver to community members and introduces scale items used to measure those benefits.

Table 2.5: Perceived Benefits of OBCs

Benefits and sub-dimensions	**Definition of Each Sub-dimension**	**Scale Item**
Functional - Convenience	Refers to perceived time and effort expenditure to experience the core benefit (information) (Berry, Seiders, and Grewal 2002).	I value the convenience this online community provides me. I value the time this online community saves me. I value the advice this online community provides me.

		I make better purchase decisions because of this online community (Jin Yong, and Hye-Shin 2010).
Functional – Valuable information Learning	Relates to valuable or practical information that customers receive to solve issues or problems related to the product or brand.	Enhance my knowledge about the product and its usage. Obtain solutions to specific product usage-related problems. Enhance my knowledge about advances in product, related products, and technology (Nambisan and Baron 2009).
Social – Personal relationships Friendship	Refers to establishing and maintaining relationships with other members. Refers to the familiarity with other members of the online community.	I value the close personal relationship that I have with the members of this online community. I enjoy spending time with the members of this online community. The friendship aspect of my relationship with the members of this online community is important to me (Jin Yong, and Hye-Shin 2010).
Status – Personal recognition Personal credibility Personal satisfaction	Refers to the value that a participant derives from gaining acceptance and social approval by other members and the enhancement of one's social status with the community.	Enhance my status/reputation as product expert in the community. Reinforce my product-related credibility/authority in the community. Derive satisfaction from influencing product usage by other customers. Derive satisfaction from influencing design and development (Nambisan and Baron 2009).
Hedonic – Fun Enjoyment Generation of stimulating ideas	Refers to pleasurable sources of highly interesting and stimulating experiences.	Spend some enjoyable and relaxing time. Derive fun and pleasure. Entertain and stimulate my mind. Derive enjoyment from problem solving, idea generation (Nambisan and Baron 2009).

The next sections discuss the customer benefits outlined in Table 2.5. Then, based on this discussion, operational definitions are provided for each of these benefits.

Functional Benefits of OBCs

The literature on online communities highlights several functional benefits that customers derive from interacting with these communities. The functional benefits are primarily derived from high value content and convenient access to that content. The value of content is one of the most important dimensions to customers, as it deals with the need for valuable information and practical information (Dholakia et al. 2009). Many studies suggest that consumers do receive information benefits from OBCs as they provide them with a better understanding and knowledge of the products or service (Dholakia et al. 2009; Wasko and Faraj 2000). Consumers interact within these OBCs to learn and to derive greater value from their branded product. For example, interactions in the context of brand communities allow the brand to communicate information to the marketplace (directly or via active members). The community also provides valuable and practical

information to members as active customers solve problems for less expert customers (Nambisan and Baron 2010). Consumers who visit online communities are seeking information and answers from fellow customers regarding an issue (Wiertz and de Ruyter 2007).

Customers engage in OBCs not only to derive valuable and practical information, but also to derive it more easily and quickly (Jin Yong and Hye-Shin 2010; Wang and Fesenmaier 2004). Accessing information with less effort drives members to gather around a brand in OBCs (Cova and Pace 2006). The main source of value that individuals obtain in an online community is information that is easy to find. Consumers increasingly obtain their information about services and products from online channels rather than offline sources (Jang et al. 2008). Many studies include both the value and the convenience of information as functional benefits derived from online communities (Chan and Li 2010; Jin Yong and Hye-Shin 2010; Wang and Fesenmaier 2004). Therefore, as shown in Table 2.5, the functional benefits perceived from OBCs are operationalised in this study as: valuable information and the convenience of accessing information (Jin Yong and Hye-Shin 2010; Nambisan and Baron 2009).

Social Benefits of OBCs

Relationships between service providers and their customers have received considerable attention in the service marketing literature. Early studies in service marketing literature recognised the importance of social support in facilitating social exchange. One early conceptualisation of social benefits is a service provider's verbal or non-verbal communication to facilitate social exchange (Adelman and Ahuvia 1995). Later, Gwinner, Gremler, and Bitner (1998) identify confidence, special treatment and social as three types of benefits derived by customers from a relationship. Social benefits are important to sustain relationships as these encompass the emotions generated from the relationship, including support, the creation of friendships, personal recognition and customer familiarity with employees.

Hennig-Thurau, Gwinner, and Gremler (2002) extend the Gwinner, Gremler, and Bitner (1998) study and confirm that social benefits motivate consumers to engage in long-term

relationships across various service types. Whether interacting with a core brand or interacting with a service provider, social benefits appear to be a significant factor in the evaluation of various types of social interactions. Studies examining the role of social benefits across various types of interactions recognise these benefits as an influential driver of interactions that determine a customer's willingness to contribute with helpful and voluntary behaviours towards service providers (Rosenbaum and Massiah 2007).

In the context of OBCs, social benefits are important drivers of CEBs (Jin Yong and Hye-Shin 2010; Stokburger-Sauer 2010). Social benefits in the brand community context are non-transactional as they arise from the relationships between the members of the brand community (Hennig-Thurau, Gwinner and Gremler 2002). These authors criticise the concept of friendships that are based on transactional interactions (e.g., online auctions) because when friendships are built for instrumental purposes, they are more likely to be damaged and transient depending on the outcomes of the transactions. When discussing the forms of social benefits in OBCs, Dholakia et al. (2009) and Jin Yong, and Hye-Shin (2010) explored socialising, friendship, enjoyment and personal relationships. Friendship refers to the importance of the familiarity that builds between the members of an online community. Enjoyment refers to the pleasure derived from interacting with other members. Personal relationships are related to building close personal relationships with other members (Jin Yong and Hye-Shin 2010). The current study concurs with the Jin Yong, and Hye-Shin (2010) conceptualisation of social benefits, which emphasises the role of friendship, enjoyment and personal relationships. These dimensions are derived from interactions in brand communities and in part reflect the 'consciousness of kind' (i.e., sharing belonging to the community) in brand community markers Muniz and O'Guinn (2001).

Status Benefits of OBCs

As discussed earlier, each interaction type generates a set of benefits. Psychological aspects are apparent in several interactions types including emotional, self-enhancement, self-esteem and status benefits (Bruhn, Schnebelen and Schäfer 2014; Gummerus et al. 2012; Nambisan and Baron 2009). Unlike the service marketing literature, status benefits in the context of OBCs are conceptually and operationally independent from social

benefits (Nambisan and Baron 2009). The core of status benefits is to obtain recognition and respect from the other party (Nambisan and Baron 2009). Social brand communities offer the opportunity for people to share and exchange their knowledge and expertise on a wide variety of themes and topics. By doing this, members can enhance their status by actively offering assistance to other members and answering questions about the brand or products (Kuo and Feng 2013).

Studies on OBCs have emphasised the impact of status benefits on CEBs (Carlson, Suter and Brown 2008; Muniz Jr and Schau 2005). Status benefits relate to an individual's status or reputation as a product expert within the brand community (Nambisan and Baron 2009). Many studies highlight that this is an important personal benefit derived from C2C interactions. Many community members actively engage in engagement behaviours in OBCs because they become visible and get recognition from other members (Eisenbeiss et al. 2012; Fuller 2006). Often the intention is enhanced reputation a as product expert in the community, and enhanced self-esteem (Porter et al. 2011). In this way, brand communities allow members to earn the recognition and approval of other members and enhance their social status as they interact and engage in community activities (Eisenbeiss et al. 2012).

Hedonic Benefits of OBCs

Hedonic benefits are identified as one of the essential factors in various types of customer interactions (Franzak, Makarem, and Jae 2014). The previous discussion about different types of interactions shows that customers derive hedonic benefits from the experience itself, as distinct from the relationship aspects (Forsythe et al. 2006; Sheth, Newman and Gross 1991). For instance, consumers derive enjoyment when performing a transaction in either SSTs or online shopping contexts that comes from the performance of the transaction itself rather than from human relationships (Wang, Harris and Patterson 2012; Lin and Hsieh 2011). Brand communities are consumer communities that bind the brand and community together through their experiences, conversations with one another about the product or feature, and by allowing members as to observe and update their knowledge of brand-related issues (Nambisan and Baron 2010; McAlexander, Schouten and Koenig 2002). As such, the hedonic aspect derives from the object of interest (i.e., product or

brand) as well as the interaction aspects in the brand community (Nambisan and Watt 2011; Fuller 2006). Hedonic benefits reflect the value derived from the interactive experience, which is emotionally and mentally stimulating for customers (Bruhn, Schnebelen and Schäfer 2014).

The hedonic benefits derived from OBCs explored in this study are defined as a pleasurable source of highly interesting and mentally stimulating experiences. Stimulating experiences include customers generating ideas or solving problems for their own sake (Nambisan and Baron 2009). Hence, these benefits generate a psychological state that is associated with having fun as well as feeling fascinated and in control of one's experience (Mathwick and Rigdon 2004). This is highly applicable to the OBC context, where the experience is relevant to the customer's interest in the brand and the interaction aspect of the brand community. OBCs are described as experiential or epistemic contexts for knowledge creation (Sawhney, Verona and Prandelli 2005), as well as entertainment and idea generation (Nambisan and Baron 2009).

Having defined the perceived benefits for CEBs in the context of OBCs, it is important to note that the theoretical linkage used to explain the influence of the perceived benefits and engagement behaviours in the C2C interaction context is SET; including reciprocity and the obligations of each party. In particular, prior studies examining this linkage have demonstrated that customers reciprocate when they derive benefits in order to maintain the relationship (Jin Yong and Hye-Shin 2010; Nambisan and Baron 2007).

2.6.1 SET and the Benefits of Interaction

As discussed earlier, the marketing literature has paid attention to the benefits derived by customers and their impact on the customer's willingness to engage in relationships with companies (Hennig-Thurau, Gwinner, and Gremler 2002; Gwinner, Gremler, and Bitner 1998). This is because engagement in a relationship is driven by the customer's assessment of the relational aspects of the exchange (Yen and Gwinner 2003). It has been suggested that a relationship is only valuable when there are continued benefits to be gained from ongoing social exchanges with the company (Hennig-Thurau, Gwinner and

Gremler 2002). According to these ideas, the essence of marketing relationships is governed by the conceptual framework of SET (Vargo and Lusch 2008; Blau 1964).

Social exchange refers to voluntary actions that involve communications and interactions between two parties, where the behaviour of one party influences the behaviour of the other party. The essence of SET is that mutual expectations and obligations exist between two parties (Blau 1964; Emerson 1976). Recent studies suggest that SET involves implicit cost-benefit analysis in order to evaluate social relationships, where individuals engage in social exchange only when the benefits outweigh the cost (Nambisan and Baron 2010; Jin Yong and Hye-Shin 2010). Further, such studies also show that people feel obligated to reciprocate with voluntary actions when they benefit from others (Groth 2005). The main premise of SET is that peoples' actions towards each other are motivated by the expected returns (Emerson 1976).

SET has been widely used as a theoretical basis within various disciplines, including marketing and organisational behaviour (Bruhn, Schnebelen and Schäfer 2014; Organ 1997). For instance, studies from the organisational behaviour literature reveal that when employees receive recognition, support, training and rewards, they choose to reciprocate with voluntary behaviours, such as extra effort when performing tasks and exhibiting pro-social behaviour (Muse et al. 2008). Similarly, in the marketing literature, SET has been employed as a theoretical justification for customer-to-firm relationships (Bettencourt 1997) and C2C interactions (Jin Yong and Hye-Shin 2010). Bettencourt (1997) provides empirical support for the idea that when customers receive support from retail grocery stores it encourages them to show CEBs, such as suggestions for improvement and cooperative behaviours.

Reciprocity is central to SET, and reflects peoples' tendency to help those who have helped them by returning equivalent benefits (Jin Yong and Hye-Shin 2010). Indeed, reciprocity has been a focal interest for a number of relationship marketing studies that have highlighted the role of C2C interactions in predicting extra-role behaviours in both offline and online communities. Empirical studies in this area show that the functional, status and social benefits gained from online communities encourage customers to reciprocate with CEBs and to actively build these relationships (Nambisan and Baron

2010). Based on SET and existing findings, it is expected that social and status benefits have a direct impact on CEB toward others customers. It is also expected that functional benefits have direct impact on CEB toward themselves. However, SDT highlights some shortcomings of obligation and reciprocity (rooted in SET) and provides a new perspective on how autonomous motivation drives CEBs.

2.6.2 SDT and the Motivation

Self-determination theory (SDT) is a relatively new theoretical approach that helps to explain CEBs through autonomous motivation (Gagné and Deci 2005; Deci and Ryan 2000). SDT provides a new foundation to the concept of engagement behaviours and helps explain what makes people engage voluntarily in such behaviours. SDT has recently been applied in the organisational literature to uncover the motives beyond engagement behaviours within organisations (Gagné 2009). However, empirical studies of autonomous motivation and engagement behaviours have been limited to the organisational context (Gagné 2009, 2003). In reviewing the marketing literature, it is evident that SDT has not been applied as a theoretical foundation for investigating CEBs in the context of OBCs.

SDT (Gagné and Deci 2005) postulates that being motivated and competent drives engagement behaviours. SDT distinguishes between controlled and autonomous motivation. Controlled motivation relates to extrinsic motivation, which requires an instrumentality between the activity and some separable consequences, such as tangible or verbal rewards (e.g., social status). Therefore, satisfaction comes not from the activity itself; but rather, from the extrinsic consequences that the activity leads to (Gagné and Deci 2005). In other words, it involves acting to attain promised benefits, such as increased self-esteem, status, and positive feelings that might regulate an individual's behaviour. If CEBs arise in order to boost one's status, please other members or obey the demands of others, then these CEBs are extrinsically motivated by the outcomes (i.e., controlled). The essence of controlled motivation refers to the reciprocity and obligations that are used as the foundation to explain CEBs (Gagné 2009). Specifically, this reciprocity has been used as theoretical foundation to explain the direct linkage between perceived benefits and CEBs.

The second component of SDT, autonomous motivation, refers to an individual acting with a sense of volition and having choice. Autonomous motivation involves individuals performing an activity because they find it interesting and deriving spontaneous satisfaction from the activity itself (Gagné and Deci 2005). In explaining autonomous motivation, Gagné (2009) highlights that pursuing an activity not only comes out of interest, but also because it fits with one's value system and is personally meaningful. Similarly, Weinstein and Ryan (2010) suggest that CEBs require greater effort and care on the part of individuals, and this happens when individuals experience a greater sense of personal volition for meaningful reasons. Autonomous motivation, accordingly, is believed to drive meaningful outcomes, such as CEBs (Weinstein and Ryan 2010).

In addition to the importance of autonomous motivation, self-efficacy also appears to play a central role in SDT and therefore in explaining engagement behaviours (Chen and Hung 2010). According to SDT, people need to feel competent in order to be autonomously motivated (Gagné and Deci 2005). Rich et al. (2010) argues that autonomous motivation to engage is highly related to confidence in his/her perceived ability. Brand community literature supports the significant effect of self-efficacy on community member's intrinsic motivation and knowledge contribution (Sun, Rau, and Ma 2014; Ray, Kim, and Morris 2014).

SDT addresses the factors that facilitate autonomous motivation to engage in CEBs. According to SDT, a social context that is perceived as supportive and provides autonomy (i.e., choice of task engagement) and relatedness, promotes autonomous motivation and thereby CEBs. To stimulate engagement behaviours, the social context should satisfy psychological needs. A customer's need for relatedness with a social group 'plays a central role in internalization of values and regulation' and hence promotes autonomous motivation (Gagné and Deci 2005, 355). Members of a brand community not only derive satisfaction from social relationships with community members, they also choose how they engage in terms of type of information provided and method of providing. Similarly, Fuller (2006) confirms that developing creative solutions and personalising information reinforces a member's autonomous motivation to engage in online communities. These

aspects satisfy needs and therefore increase autonomous motivation to engage in CEBs (Deci, Ryan and Williams 1996).

Social media communities are perceived as supportive contexts that provide the opportunity to experience autonomy in terms of stimulating and generating the content, and building relationships (Kozinets 2014; Fuller, Matzler and Hoppe 2008). According to Moller, Ryan, and Deci (2006) autonomous motivation is prompted and maintained over time if people feel that they are choosing their actions without restrictions. In this study, autonomous motivation to engage is operationalised as a member's intrinsic motivation to interact and engage in value-co-creating activities that are interesting, and from which spontaneous satisfaction is derived (Algesheimer, Dholakia and Herrmann 2005; Gagné and Deci 2005).

It can be argued that SDT addresses some of the shortcomings of SET and the reciprocity norm. Autonomous motivation to engage in CEBs provide a contrast to SET. According to Gagné (2009), the existing literature on engagement behaviours has concentrated on the factors that create reciprocity and obligation rather than on the role of autonomous motivation in determining engagement behaviours. In this regard, researchers have criticised SET as the sole driver of CEBs. These authors claim that helping other customers with the intention of deriving personal benefits or creating sense of obligation for others is externally rather than intrinsically motivated (Weinstein and Ryan 2010; Gagné 2009). The idea of mutual give-and-take in helping other members works if members feel that the value added to them is adequate (Jin Yong and Hye-Shin 2010; Ipe 2003). However, many members perceive benefits without reciprocating. Therefore, CEB is not only a result of expectation of returns, but is strongly influenced by autonomous motivation (Gagné 2009). SDT is the first theory that provides evidence that 'socially valued activities' supported by a social context can be explained by autonomous motivation (Gagné and Deci 2005). SDT explains the interactions between what people perceive from a social context and its impact on autonomous motivation. These authors also report several studies showing that a social context, which satisfies social needs, promotes autonomous motivation and therefore helps to facilitate the internalization of extrinsic motives. Gagné (2009) suggests that studying CEBs under the category of

reciprocity provides only limited insights versus a more comprehensive examination that takes into account the role of autonomous motivation.

Autonomous motivation is operationalized in the current study as a mediating construct that sits between the benefits derived from OBCs and engagement behaviours. The benefits are operationalised as the four types of benefits that consumers perceive from engaging in OBCs: social, status, hedonic and functional benefits. According to SET these benefits drive CEBs. However the introduction of autonomous motivation is in line with the core of SDT, which posits that the OBC provides a social context that facilitates and supports satisfaction of intrinsic needs as well as choice. Therefore, these benefits still rely on a customer's autonomous motivation to explain CEBs (Gagné and Deci 2005). Gagné (2009) also presented autonomous motivation as a mediator construct between employee-derived benefits and knowledge sharing outcomes (i.e., engagement behaviours). Gagné and Deci (2005) and Gagné (2009) showed that autonomous motivation leads to more positive behavioural outcomes. Therefore, autonomous motivation (i.e. intrinsic motivation) is expected to mediate the relationship between the benefits perceived from OBCs and CEBs.

2.7 Outcomes of CEBs in OBCs

Online brand community platforms have been shown as powerful and effective to enhance and build customer loyalty (Fournier and Lee, 2009, Casaló et al. 2010). However, research on CEBs and its direct impact on brand loyalty outcomes is limited to date (Groeger, Moroko, and Hollebeek 2016). A number of studies highlight that customer engagement behaviours and brand engagement are promising concepts, as brands seek 'social brand engagement' (Hollebeek, Glynn and Brodie 2014; Kozinets 2014). The social side of brand engagement deals with culture, meaning and values. Kozinets (2014, 10) further explains social brand engagement as 'meaningful connection, creation and communication between one consumer and one or more other consumers, using brand or brand-related language, images and meaning'. In fact, the core of this definition of social brand engagement fits well with the notion of brand communities as a structured set of social relations among admirers of a brand, with their own shared rituals and traditions (Muniz and O'Guinn 2001). As such, the brand communities come

to support the central role of CEBs and brand engagement (Ray, Kim and Morris 2014; Brodie et al. 2013).

A major part of the interactivity of CEB resides within the power of social media, including OBCs (Hollebeek, Glynn and Brodie 2014; Ray, Kim and Morris 2014). In particular, the social interactions in OBCs are considered both effective and influential in determining CEBs. This happens as a customer begins to interact with the brand and with other community members and this social interaction influences customer purchasing decisions (Chen, Wang and Xie 2011). Indeed, positive information has an influential and positive impact on buying behaviours, since customers visit OBCs to learn about or experience the brand or product (Adjei, Noble and Noble 2010). The recent brand community studies have shown that brand communities are not only influential platforms for influencing buying behaviours, but they also influence new product adoption (Adjei, Noble and Noble 2010; Thompson and Sinha 2008) and brand loyalty (Fournier and Lee 2009).

2.8 Concluding Remarks

To summarise this chapter, authors propose various conceptualisations of customer engagement. Despite such differences, a multi-dimensional concept including emotional, cognitive and behavioural dimensions is dominant to some extent. From this literature review, the other dominant stream of studying customer engagement centres on the behavioural manifestations of customer engagement. It is apparent that the concept of CEBs resonates with citizenship behaviours theory as these CEBs are voluntary and benefit the firm and other stakeholders. Examples of CEBs include helping other customers, co-developing (i.e., giving suggestion to the firm), augmenting behaviours, brand creation experience. The idea that CEBs are voluntary and extra-role behaviours in nature features in customer engagement conceptual definitions and dimensions. ‘Value in use’ and the ‘value in context’ are two essential aspects of value co-creation that are rooted in S-D logic and help to explain the active role of CEBs.

As OBCs evolve, brands become socially shared, facilitated and co-created. The advancement of social media broadens and recognises the active role of CEBs that co-

create value with a brand as well as with other customers. The context of OBCs has played a central role in the way of CEBs in terms of stimulating both the experiential and behavioural aspects of customer connections with a brand and other community members. It is also evident that in spite of the growing attention directed towards understanding the role of CEBs that co-create value, the current literature does not offer a clear picture of the domain of CEBs, its operational dimensions or what motivates customers to engage in OBCs. Based on the comprehensive literature, this chapter provides operational definitions of CEBs.

This chapter discusses various types of customer interactions and how these interactions result in benefits that encourage social exchange. It is noted that these interactions and the benefits derived from them differ depending on the medium and context. Customer assessment and subsequent evaluation play substantial roles in determining the value of these benefits and hence subsequent engagement behaviours. In the process of developing the research model, functional, social, status and hedonic benefits derived from brand communities are defined and operationalised in the framework. In an attempt to explain the motivations underlying CEBs, social exchange theory (SET) and self-determination theory (SDT) are employed in the current study. A number of studies draw on SET to examine social interactions. Reciprocity and cost-benefit analysis are the main components of SET. These components are criticised because they control and regulate engagement behaviours but do not explain which customers engage in OBCs. SDT was utilised in the research model to address this gap by introducing autonomous motivation as the construct that explain relationship between perceived benefits and CEBs in OBCs.

Furthermore, the extant literature, while it attempts to provide a holistic view of CEBs, has not yet adequately explained the process by which CEBs influences customer attitudes or intentions. In other words, there is a paucity of research on the impact of CEBs on important relational and behavioural outcomes, such as purchase intention and WOM, which are of great significance to a firm's bottom line.

Next, this study goes further and examines how engagement behaviours are reflected in OBCs. As such, this current study conducts an exploratory study using a netnographic approach to explore how OBCs facilitate CEBs. The findings of this exploratory phase

will assist in validating and operationalising the engagement behaviours in the proposed research model. As one of the objectives of the exploratory phase is to operationalise engagement behaviours, this phase is presented in the next chapter, which describes the research methods and its findings.

Chapter Three: Exploratory Qualitative Study of CEBs in OBCs

Despite more empirical and conceptual papers on customer engagement since 2012, studies are only just beginning to explore customer engagement behaviours from a marketing perspective (Dessart et al. 2015). Therefore, an exploratory phase was undertaken in the current study to help confirm for the presence of engagement behaviours in OBCs and to clarify the types of CEBs. The phase was undertaken in independently run OBCs to explore CEBs in these rich social contexts full of interactive customer relationships and potential for behavioural engagement (Dessart et al. 2015). This chapter starts with reporting the methods that were used to explore CEBs in OBCs. The study used a qualitative approach—netnography—of four OBCs to examine the role of brand communities in facilitating CEBs. This chapter describes the sampling and data collection procedures used as well as the results. The findings help to operationalise and refine the theoretical underpinnings of CEBs in this context.

3.1 Methodology

The qualitative phase was conducted to provide further support for the concept of CEBs and how engagement behaviours are operationalised in the proposed research model. The aim of phase one was to provide a better understanding of CEBs, by contributing to achieving the first research objective:

- To explore the presence of CEBs in OBCs and how this concept should be conceptualised in the proposed model

3.1.1 Research Design

This phase of the study utilised a netnographic approach to explore the concept of CEBs in OBCs. Netnography is a qualitative research methodology that adapts ethnographic research techniques to examine the behavioural patterns of consumers' discussions in online communities (Kozinets 2002). 'Netnography, like ethnography, is inherently flexible and adaptable to the interests and skill set of the individual marketing researcher'

(Kozinets 2002, 63). Netnography has become a popular method for studying social interactions in online communities. Generally, the netnography approach is not suitable to study individuals as a unit of analysis but rather is more suited to study the 'behaviours or acts' of these individuals within online brand communities (Kozinets 2002). The use of netnography provides in-depth information on the behavioural patterns in online communities (Kozinets 2010). The reason for undertaking exploratory studies in the early stages of a research project is to provide evidence for how the concepts under investigation can be understood and measured (Forza 2002). Therefore, netnography is an appropriate technique for this study, as it specifically deals with content extracted from peoples' interactions in online communities (Kozinets 2010).

Netnographic methods in online communities have been widely adopted to explore many topics including collaborative value creation between, and among, consumers and firms (Schau, Muñiz and Arnould 2009), product adoption (Thompson and Sinha 2008), C2C interactions (Chan and Li 2010), and CEBs in OBCs (Brodie et al. 2013). Accordingly, this method is appropriate to investigate the behavioural side of customer engagement, as it provides an opportunity to explore CEBs and how this is reflected and facilitated within the OBC context.

3.1.2 Research Context

As discussed earlier, brand community members and their activities have become an integrated part of customer/brand engagement and their behaviours (Ray, Kim and Morris 2014). Members of OBCs have come to facilitate many facets of value co-creation for a brand and its products, which were not available to customers before the emergence of modern information technology (Nambisan and Baron 2009). Technology enables enthusiastic customers to establish OBCs to share their experiences, engage in product support and exchange information about various facets of the brand (Ray, Kim and Morris 2014; Schau, Muñiz and Arnould 2009). Therefore, examining the content of relevant OBCs is important, as it allows a better understanding of the concept of CEBs in OBCs and tracking of engagement behaviours.

This core aim of this study is to explore the presence of CEBs within an OBC context. CEBs occur in both consumer-run and firm-run OBCs. Most OBCs are provided by unpaid consumers for the benefit of other consumers (Pace, and Skalen 2015). Almeida, Mazzon, Dholakia and Müller (2013) find that brand members whether they are associated with consumer-managed or firm-managed brand communities prefer to interact with members who are similar to them. However, these authors also highlight that 'it is possible that demographically similar participants join the firm-managed community, and psychographically similar participants prefer the customer-managed community to a greater extent' (Almeida, Mazzon, Dholakia and Müller 2013, 212). By comparing consumer-run and firm-run brand communities, Almeida, Mazzon, Dholakia and Müller (2013) find that expressive freedom, trust in the community managers, community identification, perception of learning about the brand, and community's influence on purchasing decisions are significantly lower in firm-managed communities than consumer-managed communities. However, from a firm perspective, the idea to establish a brand community is to reach specific marketing objectives (Almeida, Mazzon, Dholakia and Müller 2013). It has been highlighted that managers of these OBCs (i.e., firm managed) often control members' discussion to help achieve these objectives. In contrast, consumer-managed communities are less strictly controlled meaning that consumers can express and share anything (within reason) about the brand (Dholakia and Vianello 2009; Almeida, Mazzon, Dholakia and Müller 2013). Thus, this study examines the presence of CEBs in brand communities that are established by consumers.

3.1.3 Method

There are four main stages in the netnographic approach: entry, data collection, analysis and interpretation, and adhering to ethical standards (Kozinets 2010). The first stage involves targeting relevant communities and becoming familiar with them. The data collection stage involves extracting or downloading the content from the targeted communities. The content may be in various forms, but this study utilised posts and texts from conversation threads. Analysis and interpretation is done by reading, coding and reducing the content into concepts and themes. The final stage involves adherence to ethical standards throughout the entire process.

3.1.3.1 Entry

Table 3.1 lists the forums that comprise the sample frame for this current study. The frame consisted of four OBCs specific to either the Apple iPhone or the Samsung Galaxy smartphones. The Apple and Samsung brands are both influential players in the smartphone industry and dominate the world market for these technologies (Lee and Evan 2011). The brand communities investigated were initiated and run by users/enthusiasts rather than by the firm. These independent OBCs were considered more representative of CEBs with the brand because members were less likely to be incentivised to engage in the community or be censored by the firm (Jang et al. 2008). The four brand communities included are in the top five independent forums when searching for 'Apple/iPhone forum' or 'Android forum' on Google and therefore represent commonly accessed brand communities. In addition, MacRumors and Androidforum represent the largest sites for Apple and Samsung brands in terms of their numbers of members (Androidforum had 1,128,058 and MacRumors 751,353 members in September 2012). Table 3.1 shows the OBC websites, the number of members in each community, and the total posts collected.

3.1.3.2 Data Collection

The data for this study were collected from the four OBCs between August and September 2012. Data were extracted from the messages posted by the brand community members.

Table 3.1: Description of the OBCs

Website	No. of Members	Brand	Total Posts
http://forums.appleinsider.com/	147,095	Apple	520 posts (17,896 words)
http://www.iphoneforums.net/	81,363	Apple and iPhone	
http://forums.macrumors.com/	751,353	Apple and other high-tech products	
http://androidforums.com/	1,128,058	Products operated by Android software, such as Samsung and Nexus devices	

The downloaded data consisted of 520 posts (17,896 words).

3.1.3.3 Analysis and Interpretation

Since this qualitative phase focuses on the presence of three types of CEBs, content analysis suits this fundamental purpose. As Braun et al. (2006) state, content analysis is an appropriate approach for research that focuses at the 'more micro level'. Whilst, thematic analysis can also be considered as a qualitative method to analyse the data as it shares similar characteristics with content analysis (Vaismoradi et al. 2013). However, it must be noted that thematic analysis focuses more on the quantification of data (Vaismoradi et al. 2013), which is not the purpose of the qualitative phase of the current study. Therefore, content analysis is chosen as the suitable qualitative method (Braun et al. 2006).

The data were analysed using NVivo 10 qualitative data analysis software, and compared to the existing theory. Bryman and Bell (2007) recommend this approach when the research objective is to refine and enhance existing theory. Brodie et al. (2013) use a similar process to explore and refine their S-D logic driven view of customer engagement theory.

Based on the objectives and the prior conceptualisation of engagement behaviours, the posts were read several times, the messages were sorted based on similarity, and then the data was reduced into concepts and themes using the NVivo 10 software. Three common approaches are applied in the existing literature to determine the unit of analysis: the unit of message, the unit of meaning (theme) or a complete sentence (Rourke et al. 2001). Since many of the posts contain different topics and themes within a single post, the analysis used the unit of the message as the unit of analysis instead of the whole post. This approach is often employed when studying online discussion communities (Dessart et al. 2015; Pfeil and Zaphiris 2010).

To ensure the reliability of the analysis, a portion of the content was re-coded independently by both an academic researcher in the School of Marketing and a PhD student in the School of Business. The coders were briefed, provided with a description of the types of CEBs and asked to identify the objects of engagement and the theme of engagement within the content. The inter-coder agreement ratio prior to discussions was 85 per cent, which is considered to be satisfactory (Pfeil and Zaphiris 2010; Stemler 2001). This increased after several discussions with the coders and some modifications

made to the codes and interpretations. This is a common approach in interpreting data in order to increase its credibility (Bryman and Bell 2007).

The reliability of coding can be seen as a continuum of coder stability (Rourke et al. 2001). The percentage of agreement between the independent coders is a reliable index of inter-coder reliability (De Wever et al. 2006). Percentage agreement is the ratio between the number of codes that were agreed upon and the total number of 'agrees and disagrees' of all codes (Pfeil and Zaphiris 2010; Stemler 2001). The agreed percentage of inter-coder reliability is sufficient to be analysed (Pfeil and Zaphiris 2010). Note that, this study analysed the content extracted from conversations on OBCs and did not consider member identifiers, member status in the brand community or member location. The methodology also maintained ethical standards in terms of ensuring the anonymity and confidentiality of the participants (Langer and Beckman 2005).

3.2 Results and Discussion

3.2.1 The Objects and Themes of CEBs

The following sections identify the objects of engagement, and explore the themes of CEBs. Similar to Brodie et al. (2013), the analysis identified a number of objects that customers discussed in the brand communities: the product/service, firm, and the firm's strategy. The object often determines the type of CEB: for example, a discussion about how to use a product feature is a different level of CEB from a discussion about future brand direction. This is consistent with the idea that brand community members and their engagement behaviours vary according to what they are seeking to achieve (i.e. social versus informational outcomes) (Dessart et al. 2015; Chandler and Lusch 2015).

Product

Most discussions within OBCs focus on products. Many participants engage by requesting information about how to use a particular product (see example below) or to provide information about how to use a particular product. These discussions are usually quite specific and objective, but can be quite technical and can lead to multiple suggestions on how to resolve an issue.

> *The Calendar on my iPhone 4s shows many days multiple times when in List mode. In Month mode the problem does not occur. Any ideas?*

Discussions that evaluate the current product or compare one product to competing products are also common in these communities. These contributions tend to be more subjective and require more justification as per below:

> *Yes, Apple has indeed done a great job in optimising the new software for older devices, a very good job. The 4S is still one of the smoothest and fastest devices considering it runs on iOS. Android on the other hand hasn't been that great until Jelly Bean was released, which kickstarts the REAL race between iOS and Android in terms of fluidity.*

Future Product

Participants also engage in analysing and predicting the firm's product development by identifying specific services/functions that they think the firm will include in the next version of the product. These contributions tend to be more subjective and emotive than product use contributions and reveal the product preferences of the participant. The following post shows that the participant appreciates the design of the brand, while the second post shows that the participant defends the firm's decision to keep the same design.

> *I love the design of the iPhone 4S, always have since the first real leaks came out. So if Apple were to keep this design for the new iPhone it would not really bother me.*

> *I don't think it's super hard to increase the size of the phone. They must not be doing it for a reason. The only reason I can come up with is that there are more people that prefer 4 inch as opposed to 4+.*

Typically, this type of CEB involves subjective comments about various aspects that are readily apparent and tangible for customers, such as the product design, camera enhancement, screen display and battery life of the brand. These contributions include diagnosing weakness and problems, identifying issues with performance and suggesting improvements for the product.

One of Apple's big focus points will surely be on ensuring that the next iPhone will have the same or better battery life than the iPhone 4S while using LTE.

Firm/Brand

Some contributions focus on the broader objects of the firm or the brand. These contributions tend to be more subjective and reveal the participant's perceptions of the firm. In the examples below, the participants engage with positive comments about the firm revealing their own perceptions.

Of course, as an owner of some Apple products (iPhone 4, iPod Touch 4th Gen, MacBook Pro, iPad 2), I definitely do appreciate Apple's well-known customer support and service.

That's a big reason Apple have been so successful in my opinion, on top of great devices, they have managed to engrain themselves so much into people's lives switching to a competitor is too difficult.

Future Firm/brand

The analysis identified broad discussions about the future direction of the firm. Often this type of engagement behaviour with the firm includes negative comments about the firm. It is often a reflection of what customers think is wrong with the brand.

The big issue I see is that I want Apple to get away from purposefully limiting the machine's performance.

You can't tell consumers your next iPhone will be the same chip as the one you had before, especially 4S owners. If I were Apple, I would scheme, trick and lie just to get as many customers on board as possible, and one of those people would be previous generation owners. How am I supposed to convince 4S owners to upgrade if I were to tell them it still has the same A5 chip?

The following post illustrates an example of a participant discussing a broad decision about whether Apple would integrate another company's technology. As part of the discussion the customer demonstrates their expertise by specifically mentioning that the CEO of Apple (Tim Cook) might tackle the issue in the future. This also shows customers' understanding of the firm's product development strategy.

I know that folks are going to say 'it's a big bag of hurt' so Apple won't ever touch any part of Blu-ray and that's likely true. But perhaps Tim might revisit that issue.

3.2.2 Themes of CEBs

The results present several engagement objects that are central for CEBs that co-create value. Engagement objects often determine the theme of CEBs. Customer posts in the brand communities reveal multiple themes of CEBs that co-create value for other members and/or for the firm. Typically customers engage and contribute with insightful and valuable information that benefits different actors within brand communities. A single post could contain multiple themes. The following are CEBs themes identified in the analysis:

Requests for help: the most common theme to start a discussion occurred when participants asked a question to resolve an issue that they were experiencing or to add value to their consumption experience.

> *How can I view contacts saved in iPhone backup?*

Solutions: the most common theme across all posts occurs when a member answers a question posed in the OBCs. There are often multiple responses to each question.

> *There are a few programmes that will allow you to access the backup data in iTunes. I like using iBackupBot.*

Suggestions: participants also suggest brand and service improvements. Sometimes, participants compare the product to a rival's products as a way to address the need and what should improve.

> *The biggest improvement I want to see in my new phone is better performance (my 4 is pissing me off lately).*
>
> *The performance of the new iPhone must at least match the S4 krait chips, if not best matching the Galaxy S3 International Version's quad core processor.*
>
> *What I'm hoping for is enough room for one of their blade SSDs along with space for the hard drives. Considering how fast the new SSDs are. In the MBPs this would have a significant impact on performance of the machine and give it a new feel.*

Predictions: members commonly make predictions in the OBCs. The example below shows a participant predicting what the firm would include in the new brand, and in the process revealing their own preferences:

> *So, I predict an optimistic estimation for the A5X chip on the new iPhone that it will have a reduced power consumption of up to 50 per cent compared to the one on the new iPad.*

3.2.3 Types of CEBs

The multiple behaviours identified can be grouped into three types of CEBs: CEB toward oneself to derive value from the brand, CEB toward other members to enhance their value-in-use and CEB toward the firm intended to co-create improvements to the brand. This is consistent with the literature review, including the behavioural engagement definitions and conceptualisations that suggest that CEBs are behavioural manifestations towards a brand or firm that are reflected by members to create value for the brand and other members (Porter et al. 2011; Van Doorn et al. 2010).

CEB toward oneself

The first type of CEB occurs when customers engage to help themselves. CEB toward oneself involves either viewing existing posts or posting new requests for help. CEB toward oneself is unlikely to be comprehensively identified in a content analysis because the most common form of CEB toward oneself in brand communities is to read an existing discussion (lurking) and use the information to resolve issues. The extent of this type of activity can be deduced from the number of views that brand communities receive and by the increasing number of views long after the discussion has finished. Certain posts tend to receive more views than others: in all four communities it was apparent that discussions of how to better use a product received more views than any other type of discussion. This is evidence of 'silent' participants engaging with the brand to help themselves.

The analysis found evidence of CEB toward oneself in posts requesting help to gain information to derive more value from the brand. The following post illustrates customers engaging to help themselves:

Guys, my iPhone 4 iOS 5.1.1, jailbroken snowbreeze 2.9.5, cydia working properly, but why is it that when I'm using winterboard themes, some icons don't change, lock screen and its background doesn't change, even the menu screen background remains the same, (only some icons changes). SB settings I guess it's working properly. So far, winterboard is my only problem. I already tried to uninstall and install it again, but still the same. What might be the problem? Thanks in advance.

CEB toward other members

The second type of CEBs confirmed in the analysis is 'CEB toward other members'. The analysis identified that CEB toward other members includes various themes of engagement behaviours. Specifically, it entails solving problems, giving advice about a particular subject and teaching other members to use the brand correctly. One of the most common examples was to engage in solving problems for other participants. In the following post, the participant pre-emptively tells other customers how to solve a common problem among iPhone customers by suggesting a way of removing large amount of photographs from iDevices.

Plug your iDevice into a PC using the USB. In Windows Explorer, right click on the iDevice, and select important pictures. A box will appear on the screen. Click on options, then always delete after importing. Click import. The photographs and videos will be imported to your PC, and then Windows will delete the photographs from the iDevice. After the deletions, I needed to reboot my iPhone, but the pictures and videos had gone. Hope this info is useful for other members.

The following post responds to a participant seeking advice about an iPhone camera issue:

*Before taking it into Apple you *must* restore and setup as new device in iTunes. That is the only way to verify the camera truly doesn't work. Plus, the Apple guys will do that when you bring it in anyway. Unless you do it before bringing it in. and since you are out of warranty…they will charge you $200–$300 for a replacement iPhone. Of course depending on what GB it is.*

Furthermore, the following post is a simple example of one member helping others to use the brand correctly. This comes as a response to a question relating to transferring songs from a computer to the phone:

All you have to do is drag the folders of music that you want into the iTunes library (upper left corner when you are in iTunes) drop them in and then sync to your phone.

CEB toward the Firm

The analysis identified many themes related to engagement behaviours toward the firm. In particular, they include making suggestions about brand improvement, identifying general and specific customer needs, contributing ideas, and giving their opinions about the brand and services. This process, where customers engage in contributing valuable information and ideas towards the firm, is co-creation of value for the firm (Yi and Gong 2013). The following post illustrates CEB toward the firm by suggesting special parts/services to be improved in the coming brand release:

> *I could imagine more research into screen clarity in bright sunlight (it has gotten better, but there is still much room for improvement), on top of power consumption and the never-ending quest to make it thinner.*

The analysis also identified that a number of customers contribute proactive ideas for brand improvement. The following post illustrates a participant contributing ideas for future products:

> *The iPod touch would only need a larger screen and an A5 processor and possibly given an updated name such as 'iPod Arcade' or 'iPod Game' because the term 'iPod touch' needs to go.*

Further, a considerable amount of CEB towards the firm is about customer identification of ways for the firm to better serve their needs. Specifically, this type of CEB is intended to better satisfy the customer's own needs and uses. The analysis also identified that customers identifying their own needs may in the process indicate an increased likelihood of repurchase. The following post illustrates a participant engaging by identifying his/her needs for the upcoming product model:

> *As an iPhone 4 owner looking forward to an upgrade, I won't like a die-shrunk 32nm A5 even if it promises a better battery life and more performance with a HIGHER clock. The performance of the new iPhone must at least match the S4 krait chips, if not best matching the Galaxy S3 International Version's quad core processor.*

3.3 Discussion of the Exploratory Findings

A major part of this exploratory phase was to explore the presence of CEBs in OBC and to conceptualise the types of CEBs. As such, the exploratory study served as a preliminary step towards building a better understanding of the different CEBs that co-create value and how to support these behaviours. The findings demonstrate that the OBC context facilitates various engagement objects through community member interactions. Specifically, the findings identify that discussions pertain to various objects, including current and future products, services, the firm, and the brand. Within these discussions, CEBs were apparent in terms of consumers accessing brand-related information, identifying their own needs, and providing advice on issues with the product or the brand, as well as ideas and suggestions for the enhancement of the product. This is consistent with the CEBs concept, in that value co-creation involves interactive experiences and contribution to the creation of the product/brand (Brodie et al. 2013; Jaakkola and Alexander 2014). In addition, the discussions also reveal that customer interests were not limited to their current brands/products, but that they identify their expectations and opinions for future offerings. These findings are consistent with the role of brand communities as a powerful platform for obtaining insight into customer needs and desirable characteristics for new product development (Kim et al. 2008). These findings support the findings of prior studies (Brodie et al. 2013), as well as expand CEBs to include CEB toward oneself. They also identify that CEBs target both current and future products.

The analysis identified multiple engagement behaviours that can be grouped into three types of CEBs: CEB toward oneself to derive value from the brand, CEB toward other members to enhance value-in-use, and CEB toward the firm by co-creating improvement and further suggestions for the brand. In particular, the findings support the idea that customers in OBCs are co-creating value for themselves (as per Pongsakornrungsilp and Schroeder 2011), other customers (as per Nambisan and Baron 2009) and the firm (as per Brodie et al. 2013; Porter et al. 2011; Verleye et al. 2014). While several definitions of CEBs are provided in the extant literature, this exploratory study defines three types of engagement behaviours that are extra-role, voluntary and are intended to co-create value for either themselves, other customers or the firm (Jaakkola and Alexander 2014; Yi and Gong 2013; Johnson and Rapp 2010; Bove et al. 2009). This resulting conceptualisation

clarifies CEBs in OBCs from a behavioural manifestations perspective (Van Doorn et al. 2010).

The finding of this exploratory phase supports the conceptualised features of the three types of CEBs identified in the literature. First, the CEBs are customer-led interactions focused on the brand (France, Merrilees and Miller 2015). Second, they are voluntary behaviours that benefit the brand directly or indirectly (France, Merrilees and Miller 2015; Cova et al. 2015). Specifically, CEB are contributed by non-paid customers of the brand (Groeger, Moroko, and Hollebeek 2016). Finally, CEBs are extra-role behaviours that co-create value for different stakeholders beyond the purchase or service encounter (Jaakkola and Alexander 2014).

These exploratory findings provide strong support for the reliability of the CEB constructs incorporated in the conceptual model of this study. This exploratory phase also helps to refine the operationalisation of these constructs for the second empirical stage of the current study. In addition, the findings further emphasise the importance of customer engagement behaviours as a key concept that co-creates value for the brand and the firm.

3.4 Concluding Remarks

As such, the following chapter attempts to builds a comprehensive model that takes into account the multi-faceted nature of customer engagement behaviours (CEB toward oneself, other members and the firm), the process by which it develops and its outcomes.

Chapter Four: Hypotheses Development

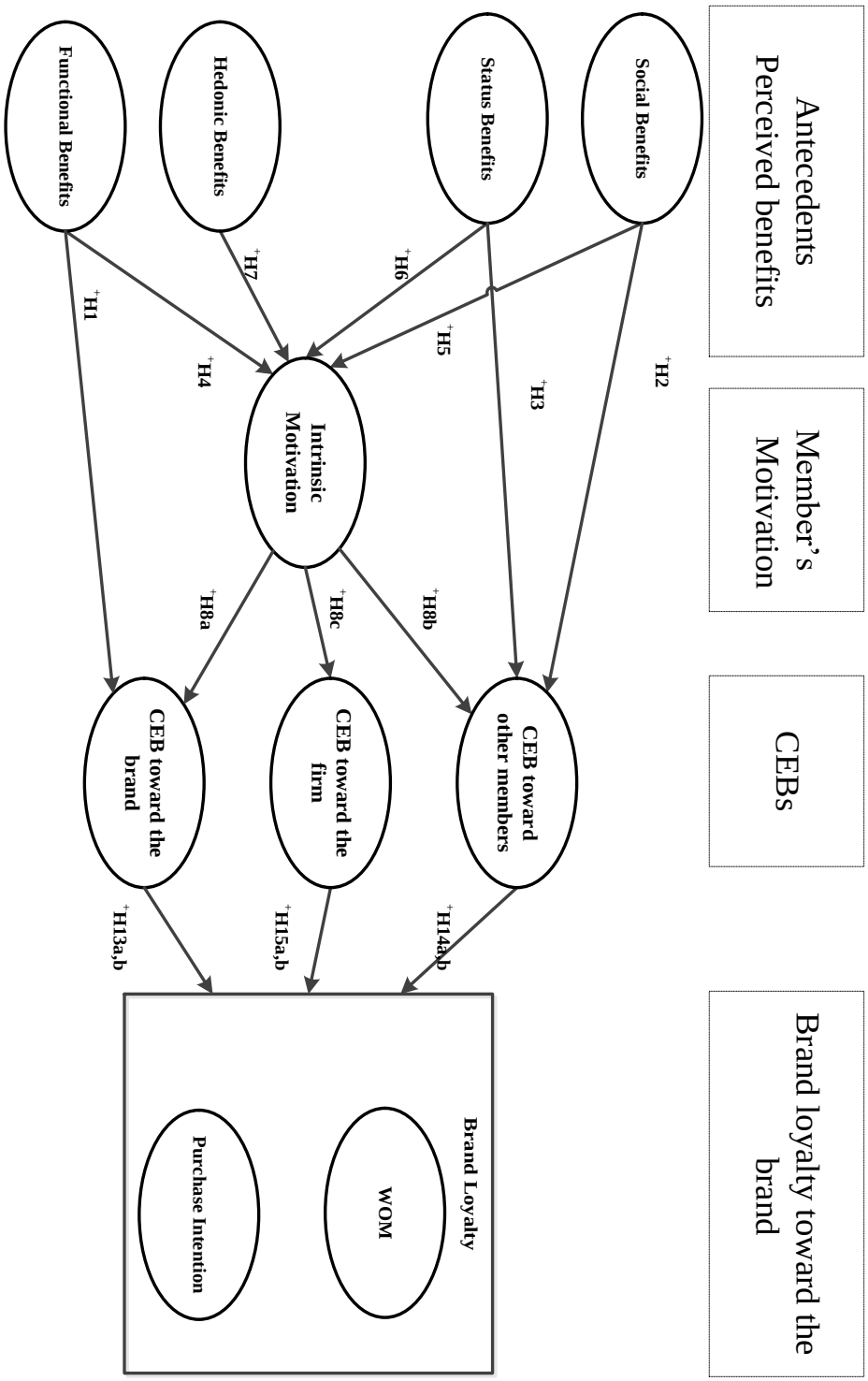
Having discussed the theoretical grounds underpinning CEBs; namely, SET and SDT, and the findings in chapter three, this chapter then presents the conceptual model and the hypotheses examined in this current study. In doing so, it examines the interactions and linkages between the various constructs within the proposed framework.

4.1 Research Framework and Hypotheses Development

As discussed earlier, the theoretical basis for CEBs resides in SET and SDT. SDT introduces autonomous motivation as in important construct to explain engagement behaviours yet, perceived benefits still influence engagement behaviours due to the expectations for reciprocity described by SET. Therefore, in considering both theories, the proposed model of CEBs in OBCs considers both the direct effects SET and the mediated effects of SDT.

In the research model depicted in Figure 4.1, functional benefits are expected to have a positive and direct relationship with CEB toward oneself. Social benefits are expected to have a positive and direct relationship with CEB toward other members. Similarly, status benefits are expected to have a positive and direct impact on CEB toward other members. Further, the relationships between social benefits, status benefits, hedonic benefits and functional benefits and each of the CEBs (e.g., toward oneself, other customers, and the firm) are expected to be at least partially mediated by customers' autonomous motivation. Based on SDT, the model incorporates self-efficacy as a controlling variable for customer's autonomous motivation to engage in CEBs. Furthermore, the research model considers customer purchase intentions and positive WOM as key outcomes of CEBs in OBCs. The following sections outline and provide justifications for the hypotheses depicted in the research model.

Figure 4.1: Research Model for CEBs in OBCs



Note: For the sake of clarity, mediation hypotheses (from H9—H12) are not shown in the model. The self-efficacy control variable path is also not shown in the model.

4.1.1 Functional Benefits and CEB toward Oneself

For OBCs involving technological brands, asking questions about the product or the brand is a common way for members to derive value (Nambisan and Baron 2010). This is because technological brands involve complex problems and issues that need appropriate and direct answers. As such, a member asking questions (e.g., diagnosing and describing the issue) and/or searching for answers amongst community conversations is deriving useful and valuable information without expending too much time and effort (Dholakia et al. 2009).

As described in SET, customers assess the cost and benefits of an interaction compared to the value derived (Ipe 2003). If the perceived value is worthwhile then customers continue to engage with a particular brand community as a source of value co-creation (Dennis and Danielle 2005). The literature shows evidence that functional benefits are not always a good predictor of community participation or CEB toward other members (Baldus, Voorhees, and Calantone 2015; Dholakia et al. 2009) but Dholakia et al. (2009) demonstrated a positive and significant relationship between functional benefits and CEB toward oneself. Based on this reasoning, the greater the functional value they receive from the brand community, the more consumers will engage to help themselves. Note that this relationship is expected to be partially mediated by autonomous motivation (H4). This leads to the following hypothesis:

H1: Functional benefits positively influence CEB toward Oneself.

4.1.2 Social/Status Benefits and CEB toward Other Members

Each member derives social and status benefits from interactions with other community members. These commonly include building close relationships with other members, networking with other community members, and gaining recognition and reputation (Porter et al. 2011; Fuller 2006). In fact, these dimensions are not easy to establish if a member is not actively involved in engaging toward other members and the firm. In other

words, members need time to demonstrate their knowledge and skills by providing relevant product usage information, solutions, and other innovative ideas (Nambisan and Baron 2007). As this develops, members derive satisfaction from being recognised as product experts and from being socially connected with the community. Hence they are more likely to continue to contribute and assist other members (Nambisan and Baron 2010).

These linkages are in line with SET in terms of reciprocity. Reciprocity refers to mutual expectations between two parties, that each party will repay any effort made by the other party (Emerson 1976). For example, a sense of obligation occurs when one party derives functional benefits in an OBC and this is often repaid with social or status benefits. Subsequently, other members who desire similar social or status engage to help other members with expectations that they will be repaid with these benefits. Therefore, the greater the perception of likely social benefits and personal recognition, the more the member will feel obliged to help other members (Dholakia et al. 2009). Gagné (2009) describes this reciprocity between benefits and CEB toward other members as controlled motivation. That is, extrinsic satisfaction from these benefits leads to CEB toward other members. Social and status benefits have a greater impact on customer contributions in online contexts. For example, Dholakia et al. (2009) found a positive and direct relationship between social benefits and CEB toward other members in trading communities. Nambisan and Baron (2009) demonstrated that enhancement of self-image and enhancement of expertise (underlying the status benefits construct) have positive and significant relationships with CEB toward other community members. In accordance with the previous literature, this study predicts the following hypotheses:

H2: Social benefits positively influence CEB toward other members.

H3: Status benefits positively influence CEB toward other members.

There are two reasons why the proposed research model includes only three direct hypotheses between perceived benefits and CEB (H1, H2, and H3). First, the dominant relationships discussed in the OBC literature are members perceiving social and status benefits from behavioural engagement toward other members. Similarly, functional

benefits are mostly discussed in terms of members accessing or seeking information to enhance the value they derive from the product or brand. Hedonic benefits are not typically discussed as linked direct to CEBs but are derived from engaging with the brand community itself. Thus, members who enjoy the experience of the content and problem-solving within the brand community itself do not perceive that this creates obligations to reciprocate, but rather these benefits increase the member's autonomous motivation to engage in and contribute in the future. Second, the introduction of SDT into the proposed research model means that the relationships between benefits constructs and the three types CEBs are expected to be at least partially mediated.

4.2 Benefits and Autonomous Motivation

There is a paucity of research in the existing marketing literature to describe the empirical linkages between perceived benefits and a consumer's autonomous motivation (i.e., intrinsic motivation) to engage in behavioural manifestations. As discussed earlier, the literature has focused on the direct impact of perceived benefits on CEBs. Hence, there is a gap in the brand community literature about the role of autonomous motivation in explaining different types of CEBs.

Further support comes from Jaworski and MacInnis (1989), who suggest that a consumer's motivation is driven by both utilitarian and expressive motives. According to Maclnnis and Jaworski (1989, 2) the former refers to 'requirements for products that remove or avoid problems'; the latter refers to 'requirements for products that provide social and aesthetic utility'. These authors demonstrate that both utilitarian and expressive motives are antecedents for consumer motivation in brand processing.

OBCs are potential sources of both social and experiential value for customers of brands (Bruhn, Schnebelen and Schäfer 2014). Customers vary in the nature and extent of the experience they seek from any OBC interaction. While some customers might only be interested in social or functional benefits, others may seek experiential interactions with other consumers, including entertainment and status (Porter et al. 2011; Vivek 2009). This is because CEBs in OBCs could be driven by consumer needs for any combination of information, social (Brodie et al. 2013), hedonic or status benefits (Fuller 2006). These

benefits are created and facilitated by interactions in OBCs (Bruhn, Schnebelen and Schäfer 2014).

SDT proposes that a social context that supports and facilitates these benefits helps to reinforce the intrinsic aspect of autonomous motivation. According to SDT: feeling of social relatedness (i.e., social benefits derived from the community); the experience of autonomy (i.e., hedonic benefits derived from content); and perceived competence help to foster autonomous motivation through satisfying these needs. SDT argues that behaviours that are initially motivated by extrinsic needs (e.g., social, status benefits) can be internalized over time and transformed into personal values. This process of internalization happens when a person identifies with the personal value of the behavioural activity and then regulates it into personally relevant aspects (Niemiec et al. 2006). Ryan and Deci (2000) suggest that this process of internalization may occur in stages and develop over time, but this does not mean that people must progress through each stage of internalization with regard to engagement behaviours. In other words, psychological needs including social, recognition, functional, and hedonic take time and progress through stages to integrate with one's personal value in order to autonomously engage in behavioural activities. Consequently, the resulting engagement behaviour will be more autonomous if supported and experienced by a social context that supports these needs (Deci and Ryan 2000).

Recently, Porter et al. (2011) examined what fosters and sustains CEBs in online brand communities. In their qualitative study, they present a conceptual framework that suggests the fulfilment of functional, social, status and hedonic benefits is the first stage of CEBs. According to Porter et al. (2011) these benefits are essential factors for engagement behaviours because engagement behaviours in this brand community context starts with community members deriving various consumption benefits. These authors suggest that when members receive these benefits, they start to develop autonomous motivation to engage in CEBs. OBCs that facilitate these benefits can influence the role of autonomous motivation and hence behavioural engagement. This finding gives credence to the idea that benefits, derived from a social context, that meet basic psychological needs will positively influence autonomous motivation. In accordance with SDT, and findings from past qualitative studies, it is expected that perceived benefits will

positively influence autonomous motivation (i.e., intrinsic motivation). This leads to the following hypotheses:

H4: The perceived functional benefits of participating in an OBC are positively related to a customer's autonomous motivation to engage in the brand community.

H5: The perceived social benefits of participating in an OBC are positively related to a customer's autonomous motivation to engage in the brand community.

H6: The perceived status benefits of participating in an OBC are positively related to a customer's autonomous motivation to engage in the brand community.

H7: The perceived hedonic benefits of participating in an OBC are positively related to a customer's autonomous motivation to engage in the brand community.

4.3 Autonomous Motivation and CEBs

As summarised in Table 2.1 (chapter two), a number of researchers define the concept of CEBs from a motivational state perspective (Porter et al. 2011; Van Doorn et al. 2010; Patterson and Smith 2001). The central concept of STD is focused on autonomous motivation as a significant predictor of engagement behaviours (Gagné and Deci 2005). Findings in this regard come from different disciplines. Service marketing research has demonstrated that participation in a service firm depends on customer motivation (Chan, Yim and Lam 2010; Lengnick Hall 2000). In organisational research, Siemsen, Roth, and Balasubramanian (2008) demonstrated that motivation has a significant impact on successful knowledge sharing between employees.

Research from the OBC literature demonstrates a positive linkage between intrinsic motivation and engagement behaviours (Baldus, Voorhees, and Calantone 2015). Further empirical findings also demonstrate that motivation is a valid and applicable antecedent to the phenomenon of CEBs (Gruen, Osmonbekov and Czaplewski 2007; Gruen, Osmonbekov and Czaplewski 2006). Recently, Porter et al. (2011) showed that a customer's intrinsic motivation within OBCs drives CEBs with the brand, firm and other

customers. Similarly, it has been found that participants with a high level of motivation are more likely to engage to help other members (Lakhani and von Hippel 2003; Adler and Kwon 2002). In the context of CEB toward the firm, Füller, Matzler, and Hoppe (2008) empirically demonstrate that a customers' motivation determines their willingness to engage in open innovation projects (i.e., CEB toward the firm) in OBCs. Similarly, Fuller (2006) demonstrates that intrinsic innovation, interest and curiosity (aspects of autonomous motivation) are the main drivers for consumers to engage in future product development. This leads to the following hypotheses:

H8 a, b, c: Autonomous motivation to engage in an OBC has a positive influence on CEBs (CEB toward oneself, CEB toward other members, and CEB toward the firm).

As discussed earlier, a member's confidence in his/her perceived ability is a powerful determinant of autonomous motivation and hence engagement behaviours (Gagné and Deci 2005). For many members, self-efficacy is required to enable the contribution of high quality knowledge even if the member feels motivated to do so. In this regard, Ray, Kim, and Morris (2014) demonstrate that the relationship between one's autonomous motivation and knoweldge contribution is contingent on self-efficacy. Likewise, this study expects that the effect of autonomous motivation on the three types of CEBs is controlled by self-efficacy. As self-efficacy is incorporated as a control variable, this study will test the controlling effects of self-efficacy on autonomous motivation. As per past community studies, no specific hypothesis is set for the role of this control variable (Benedikt and Werner 2012).

4.4 The Mediating Role of Autonomous Motivation

Having discussed the reasoning behind the single step relationships between perceived benefits and autonomous motivation, and between autonomous motivation and CEBs, testing the mediating effects of autonomous motivation in the relationship between perceived benefits and engagement behaviours is important to establish the extent of these relationships. Establishing the mediating effects of autonomous motivation helps to support the idea that engagement behaviours are the result of a motivational state (Van

Doorn et al. 2010), that is related to the benefits derived from the OBC but explained by a member's autonomous motivation (Gagné 2009).

In line with SDT, autonomous motivation functions as the predictor for engagement behaviours (Gagné 2009). Accordingly, this study hypothesises that a customer's autonomous motivation entirely mediates the relationships between the perceived benefits (social, status, hedonic and functional) and CEBs (toward oneself, other members, and the firm). As discussed earlier, customers need to be motivated by these benefits; however, alone they are not sufficient for customers to engage in CEBs. Although some studies have established a relationship between both social and status benefits and CEB toward other members, these linkages rely on reciprocity which does not adequately explain why only some members who experience these benefits engage in helping other members (Gagné 2009). However, it is possible that social, functional and psychological benefits develop and increase over time in a relationship (Sweeney and Webb 2007) and that sustained benefits enhance autonomous motivation over time (Ryan and Deci 2000). That is, members continue their engagement behaviours to the extent that these engagement behaviours are meeting their own personal values and have meaning for the individual (Gagné 2009; Gagné and Deci 2005). Consistent with SDT, it is expected that autonomous motivation either partially or fully mediates (as specified below) the relationships between each of the perceived benefits and the three types of CEBs.

H9 a: Autonomous motivation to engage in an OBC partially mediates the positive relationship between functional benefits and CEB toward Oneself.

H9 b, c: Autonomous motivation to engage in an OBC fully mediates the positive relationship between functional benefits and CEB (CEB toward other members and CEB toward the firm).

H10 a, c: Autonomous motivation to engage in an OBC fully mediates the positive relationship between social benefits and CEB (CEB toward oneself and CEB toward the firm).

H10 b: Autonomous motivation to engage in an OBC partially mediates the positive relationship between social benefits and CEB toward other members.

H11 a: Autonomous motivation to engage in an OBC fully mediates the positive relationship between status benefits and CEB toward oneself.

H11 b: Autonomous motivation to engage in an OBC partially mediates the positive relationship between status benefits and CEB toward other members.

H11c: Autonomous motivation to engage in an OBC fully mediates the positive relationship between status benefits and CEB toward the firm.

H12 a, b, c: Autonomous motivation to engage in an OBC fully mediates the positive relationship between hedonic benefits and CEB (CEB toward oneself, CEB toward other members and CEB toward the firm).

4.5 CEBs and Brand Loyalty

The role of brand communities in building customer loyalty is well recognised and well documented (Fournier and Lee 2009). Recent studies have examined the influence of social interactions in brand-related communities and how they influence customer purchasing behaviours and brand loyalty. Brodie et al. (2011) suggests that customer engagement (i.e., including the behavioural part) is a relational concept and operates within a network of relationships. The potential consequence of this relationship is customer loyalty. According to these authors, customer loyalty can be a result of interactive brand experiences. Thus, the three CEBs examined in this study represent interactive brand experiences that may generate brand loyalty. As discussed earlier, what remains to be answered is how different CEBs (e.g., customer-to-brand, customer-to-firm/brand and C2C involving a brand) affect purchase intention and WOM. Therefore, this current study examines empirically the influence of CEB toward oneself, CEB toward the firm, and CEB toward other members on brand loyalty in terms of purchase intentions and positive WOM.

The marketing literature acknowledges that there is no consensus on the conceptual definition of brand loyalty (Rundle-Thiele and Mackay 2001). Specifically, studies examining loyalty have made a distinction between attitudinal loyalty and behavioural loyalty (Shankar et al. 2003). Attitudinal loyalty implies a customer's preference and commitment toward a brand (Gianluca et al. 2013), whereas behavioural brand loyalty implies customer's intention to purchase a brand consistently in the future (Oliver, 1999). Research in this area demonstrates that attitudinal loyalty is an antecedent of behavioural loyalty (Gianluca et al. 2013; Auh et al. 2007). In addition, the extant literature on customer's loyalty also shows some inconsistency in the dimensions of customer loyalty. For example, when in the context of brand communities, Gummerus et al. (2012) examine customer loyalty using three items that reflect both positive WOM and intention to purchase. On the other hand, Algesheimer, Dholakia, and Herrmann (2005) focus only on intention to purchase the brand. The final example assesses customer loyalty as a combination of both positive WOM and purchase intention (Gruen, Osmonbekov, and Czaplewski 2007). Despite these differences in thinking, traditional behavioural measures such as intention to purchase and positive WOM have been highlighted as the best indicators of brand loyalty (Algesheimer, Dholakia, and Herrmann 2005; Bhattacharya and Sen 2003; Holland and Menzel Baker 2001; Gruen, Osmonbekov, and Czaplewski 2007). This current study focuses on those two behavioural measures as outcomes of community engagement behaviours.

Findings on these relationships are limited, however, researchers have suggested that C2C interactions and CEBs in social media has the potential to change their preferences and actual purchase behaviours (Libai et al. 2010). Furthermore, some research suggests that product information on online communities has greater credibility, relevance and is more likely to influence consumers' behaviour (Bickart and Schindler 2001). Gruen, Osmonbekov, and Czaplewski (2007) confirm that CEBs have a positive effect on loyalty and WOM. Adjei, Noble, and Noble (2010) also find that the positive information shared by brand community members has a positive influence on purchase behaviours. Recently, Brodie et al. (2013) provides qualitative support that engaging with a firm (i.e., co-developing) or other customers (sharing) has a positive impact on brand loyalty. Hollebeek et al. (2014) also found that activation (i.e., a behavioural dimension of

customer brand engagement) has a positive impact on brand usage intention. Very recently, Groeger, Moroko, and Hollebeek (2016) provide qualitative support that CEBs can lead to future purchasing behaviours. These findings lead to the following hypotheses:

H13a: CEB toward oneself in an OBC is positively related to positive WOM.

H13b: CEB toward oneself in an OBC is positively related to purchase intention.

H14a: CEB toward other members in an OBC is positively related to positive WOM.

H14b: CEB toward other members in an OBC is positively related to purchase intention.

H15a: CEB toward the firm in an OBC is positively related to positive WOM.

H15b: CEB toward the firm in an OBC is positively related to purchase intention.

4.6 Concluding Remarks

This chapter presents the research model and discusses the relationships between the constructs. The theoretical links within the research model are established and the hypothesised relationships are discussed. Following the logic of SET, perceived social benefits have a direct impact on CEB toward other members. Functional benefits have a direct impact on CEB toward oneself. Based on the SDT, the relationships between perceived benefits and CEBs are mediated. Lastly, CEBs are expected to affect brand loyalty.

Chapter Five: Methodology

5.1 Phase Two: Quantitative Study

This section outlines the steps undertaken to collect the quantitative online survey data. It provides descriptions of the research setting, survey instrument, measures, sample, and data collection procedures, including the back translation of the questionnaire. It also provides a description of the preliminary data collation process, which includes imputation of missing data and normality testing. The chapter concludes with a description of the characteristics of the research population.

5.2 Research Setting

Online brand communities for the Apple brand were chosen for the current study. The OBCs were established to service the Saudi Arabian market. The Saudi market has rarely been examined in the extant literature, particularly from a social media perspective (Alwagait, Shahzad and Alim, 2014). However, economic growth in the Saudi Arabian market has positively affected consumer readiness for communication and information technology. The Saudi population's young average age also partly explains the increasing desire for technology as well the penetration of social media communities (Bahaddad, Houghton and Drew 2013). In 2014, the estimated population of Saudi Arabia was 30.62 million, with over 60 per cent being under 35 years of age (Statista 2014). The Economist highlights that Saudi Arabia shows the highest penetration of social media of all the Middle Eastern countries. It also indicates that social media communities have a greater impact in Saudi Arabia than elsewhere in the region ("Social Media in Saudi Arabia: A Virtual Revolution", The Economist, 2014).

Online brand communities have been examined across cultures including USA, India, Germany, Belgium, Dutch, UK, French, Hong Kong, and Australia (Zeng et al. 2015; Madupu and Cooley 2010; Dholakia et al. 2009; Ouwersloot and Odekerken-Schröder 2008; Sawhney et al. 2005; Dessart et al. 2015). The existing literature provides evidence that CEB is a behaviour that community members, irrespective of culture, engage in to co-create benefit for themselves, other members and the firm (Brodie et al. 2013, Madupu

and Cooley 2010; Nambisan and Baron 2010, Muniz and Schau 2011). According to Ahn et al. (2010) online brand community members have similar behavioural "manifestations of culture' when they interact about the brand or product. While CEB is common across cultures, Madupu and Cooley (2010) suggest there are differences regarding what motivates CEBs in OBCs between various cultures. Specifically, the authors find that perceived benefits such as social benefits, information, self-discovery, and status enhancement are stronger in collectivist cultures (e.g., India) than individualistic cultures (e.g., USA, Australia). Saudi Arabia is generally considered to be a collectivist culture (c.f., http://geert-hofstede.com/china.html) therefore it might be expected that the benefits of CEBs are stronger in Saudi Arabia. However, significant relationships have been found between perceived benefits and CEB toward other members of online brand communities from both collectivist and individualist cultures (Madupu and Cooley 2010). Based on these arguments, it is expected that the relationships between CEBs and perceived benefits are also applicable to online brand communities in Saudi Arabia and examining CEBs and what motivates these behaviours in a collectivist culture such as Saudi Arabia is relevant.

Two independent OBCs run by enthusiasts in the Saudi market were identified and agreed to cooperate with the research study: (i) the Apple Society, (ii), and the Eqla3 community. Dholakia and Vianello (2009) noted that the more successful OBCs are usually run by enthusiasts and customers of the brand. This is because OBCs run by companies control what visitors discuss and comment, and thus many visitors do not return after the first visit. In contrast, independent brand communities offer members more freedom to express their opinions of the brand and its products and therefore seem more appropriate as communities that are representative of voluntary customer engagement.

The Apple Society (http://www.i3rab.com) was the first OBC targeted. This society is run by enthusiasts, and as the name suggests, is specific to Apple products. It is the second largest OBC in Saudi Arabia in terms of membership. In 2009, two years after the launch of iPhone, the Apple Society was launched. At the time of data collection (7 February 2013), a total of 40,000 members were registered, and this number is increasing daily. According to the owner of Apple Society (Thamer Algali), there are approximately 180–

200 registered members logging in and adding content on a weekly basis. Furthermore, over 500–600 unregistered visitors (lurkers) visit the Apple Society website each day.

Eqla3 (http://www.vb.eqla3.com) was the second OBC recruited for this research study. Eqla3 is the largest OBC operating in Saudi Arabia in terms of membership size, and is the most active community in terms of participation and interactions between members. The Eqla3 community was launched in 2000 and the predominant theme at the time was technology. According to the owner of Eqla3, the word 'Eqla3' is a slang word and refers to 'flying in a hurry'. The Eqla3 community is owned and run by four telecommunication technology enthusiasts. At the time of data collection (4 March 2013) Eqla3 had over 500,000 members. Between 2000 and 2013, the main focus of this community has been on smartphones although they do have other forums focused on other types of technology as well as non-technology forums. The OBC incorporates five Apple related sub-forums (Apple World, Apple iOS, Apple iOS Support, Apple Macintosh, and Apple Macintosh Support). The current study focuses on the Apple iOS Support sub-forum. At the time of data collection, the total number of topics posted by members in this sub-forum was 49,473 and the total numbers of postings was 271,052.

It is important to note that the data collection could not be conducted simultaneously among the two brand communities because a single agreed time could not be reached. Therefore, sequential data collection was undertaken (commencing 7-02-2013 and 4-03-2013) to accommodated the owners preferred times. The time difference of the data collection of these communities was less than a month. The study is a cross-sectional study, and as such does not make longitudinal inferences.

5.3 Survey Instrument

Several steps were taken to derive the measures for this study, including a comprehensive literature review, a content analysis for engagement behaviours and a pre-test. According to Forza (2002), conducting a comprehensive literature review is an essential first step to support the constructs and relationships in the conceptual research model. Accordingly, the existing measures were reviewed to operationalise the key constructs contained in this study's research model. Subsequently, content analysis of messages posted on OBCs was

employed to refine established scales for CEB toward oneself, CEB toward other members and CEB toward the firm. The existing scales were largely consistent with the conceptualisation of customer engagement behaviours and the results of the content analysis. It is important to note that the measures underwent a pre-test and then minor modifications were made to the constructs measuring 'CEB toward the firm' and 'CEB toward oneself based on the pre-test.

A pre-test involves a small pilot study that ascertains how well a questionnaire works (Shelby, Sparkman and Wilcox 1982). The importance of pre-testing a survey is to make sure that the questionnaire communicates information to ordinary people as well as the targeted sample. Benkler (2004) states that the advantage of pre-testing a survey is that it allows the identification of problems, such as inappropriate or ambiguous questions, leading questions, loaded questions and other issues. For this current study, 15 university students who had all participated in online communities were asked to complete the questionnaire and provide feedback regarding the flow of the questionnaire, their understanding of the questions, and any other technical issues. Once the participants had completed the survey, feedback was obtained about: wording, mistakes, redundant items and loaded questions. The survey was then checked carefully and modified accordingly.

5.4 Measures

The measures for the study constructs were adapted from existing scales that had been published in peer reviewed journals, including the Journal of Marketing, Journal of Product Innovation Management, Journal of Behaviour and Information Technology, Journal of Business Research, Journal of Retailing and Journal of Information and Management. The scales adapted for this research framework have been shown to be consistent and reliable, as demonstrated by a Cronbach's alpha value of at least 0.70. Each construct for this study has been discussed in Chapter Two, including the existing operational definitions for the constructs as well as the contexts in which they have been applied. The scale items for CEBs were modified based on the results of the content analysis of the qualitative primary data collected for this study. For the remaining constructs employed in this study, minor modifications were carried out to fit them to context of this study.

5.4.1 Perceived Benefits of Engagement Behaviours

This study measured four types of benefits: social, status, hedonic and functional, all of which are hypothesised to impact on autonomous and hence customer engagement behaviours in OBCs.

The four types of benefits were measured as perceived benefits derived from prior interactions with the brand community (Jin Yong, and Hye-Shin 2010; Nambisan and Baron 2009). Consistent with previous research, the measures do not accommodate differences between expected and perceived benefits. The measures of these benefits do reflect the perceptions of members who have previously experienced these different types of benefits in online brand communities. Thus, the adapted measures used in this study reflect members' perceptions of these benefits from prior interactions in online brand communities.

Social benefits address the friendship with other members, enjoying time with other members, and close relationships that members derive from OBCs interactions (Jin Yong and Hye-Shin 2010). Originally, the social benefits scale, consisting of three items, was developed by Reynolds and Beatty (1999), and then Jin Yong, and Hye-Shin (2010) adapted and modified the scale to fit the context of OBCs. As reported by Jin Yong, and Hye-Shin (2010), the three items for social benefits (listed in Table 5.1) achieved a reliability score of 0.92 and were measured by using a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7).

Status benefits were operationalised as enhancing one's personal status and gaining reputation within the community. The status benefits scale was measured with four items. Nambisan and Baron (2009) adapted this scale from previous studies (Hertel, Niedner and Herrmann 2003; Kollock 1999) for the context of OBCs. The reliability coefficient for this construct achieved a score of 0.93, as reported by (Nambisan and Baron 2009). The wording of the scale was modified slightly for this study based on the feedback from the pre-test of the questionnaire. All four items for status benefits (listed in Table 5.1)

were measured by using a 7-point Likert scale ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (7).

Hedonic benefits were operationalised in terms of strengthening aesthetic or pleasurable experiences (Nambisan and Baron 2009). The hedonic benefits scale was measured with four items, as shown in Table 5.1. Nambisan and Baron (2009) adapted the hedonic benefits scale from previous studies (Hertel, Niedner and Herrmann 2003; Franke and Shah 2003) and made modifications to suit the context of OBCs. All four hedonic benefits items have shown internal consistency and the composite reliability coefficient achieved a score of 0.83 (Nambisan and Baron 2009). The scale items were measured by using a 7-point Likert scale anchored by ‘strongly disagree’ (1) to ‘strongly agree’ (7).

Functional benefits were operationalised in this study as the perceived convenience and expenditure of time and effort to experience the core benefit (i.e., acquisition of valuable and practical information) (Nambisan and Baron 2009; Jin Yong and Hye-Shin 2010). As discussed earlier, functional benefits include both the convenience of the information and the acquisition of practical information. Recently, Jin Yong, and Hye-Shin (2010) adapted the four items contained in the functional benefits scale from Reynolds and Beatty (1999) and modified them to suit the OBC context. The four items of this construct have demonstrated to be reliable with a composite reliability scoring 0.81. Nambisan and Baron (2009) also adapted three items relating to information acquisition from previous studies (Franke and Shah 2003; Hertel, Niedner and Herrmann 2003; Wasko and Faraj 2000) and modified them to fit the OBC context. The composite reliability scored 0.86 (Nambisan and Baron 2009). For the current study, the functional benefit scale was constructed from the functional benefits scales used by Jin Yong, and Hye-Shin (2010) and Nambisan and Baron (2009). It contains seven items (listed in the Table 5.1), which were measured using a 7-point Likert scale ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (7).

Table 5.1: Perceived Benefits of Engagement

Constructs/Authors	**Scale Measures**
Social benefits Jin Yong, and Hye-Shin (2010).	The friendship aspect of my relationship with the members of this online community is important to me. I value the close personal relationship that I have with the members of this online community. I enjoy spending time with the members of this online community.

Status benefits Nambisan and Baron (2009).	I derive satisfaction from influencing product usage by other community members. I derive satisfaction from influencing the design and development of products through this community. I enhance my status/reputation as product expert in the community. I reinforce my product-related credibility/authority in the community.
Hedonic benefits (Nambisan and Baron 2009).	I derive enjoyment from problem-solving and generating ideas within this community. I entertain myself and stimulate my mind in this community. I derive fun and pleasure from this community. I spend some enjoyable and relaxing time at this community.
Functional benefits Jin Yong, and Hye-Shin (2010) & Nambisan and Baron (2009).	I enhance my knowledge of the product and its usage from this community. I value the convenience this community provides me. I value the information this community provides me. I make better purchase decisions because of this community. I enhance my knowledge about advances in the product, related products and technology from this community. I obtain solutions to specific product usage-related problems from this community. I value the time this community saves me.

5.4.2 Autonomous Motivation

Autonomous motivation was hypothesised as a mediator variable for CEBs in OBCs. Autonomous motivation to engage was operationalised as a member's intrinsic motivation to interact and engage in value-co-creating activities that are interesting, and to derive spontaneous satisfaction from the activity itself (Algesheimer, Dholakia and Herrmann 2005; Gagné and Deci 2005). The scale consists of four items and was developed and used in the context of OBCs by Algesheimer, Dholakia, and Herrmann (2005). The construct demonstrated good internal consistency and a composite reliability score of 0.88 (Algesheimer, Dholakia, and Herrmann 2005). The four items measuring autonomous motivation to engage are presented in Table 5.2. All four items were measured by using a 7-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (7).

Table 5.2: Autonomous Motivation

Constructs/Author	**Scale measures**
Autonomous motivation Algesheimer, Dholakia, and Herrmann (2005).	I am motivated to participate in the community's activities because I am able to create value for other members. I am motivated to participate in the community's activities because I feel better afterwards. I am motivated to participate in the community's activities because I am able to reach personal goals. I benefit from following the community's rules.

5.4.3 Customer Engagement Behaviours (CEBs) in OBCs

This study investigated three different types of CEBs that co-create value: CEB toward oneself, CEB toward other members and CEB toward the firm in OBCs.

'CEB toward oneself' was operationalised as a member co-creating value for himself/herself by obtaining or consuming information about a brand (Yi and Gong 2013). As evident in the exploratory phase, this kind of CEB toward oneself is reflected in the way that community members engage in posting questions and reading existing posts to learn about and use a product or service. Specifically, community members and their interactive experience in OBCs revolve around an object that determines CEBs. The findings clearly reveal that CEB toward oneself is brand-related (i.e., to the focal object) and customers co-create value through seeking information, and asking questions about how to better use the product. Yi and Gong (2013) recently developed and validated a three-item scale that measures customers co-creating value by seeking information. The scale has shown internal consistency and a composite reliability score of 0.91 (Yi and Gong 2013). The scale measures three components of customer behaviours including asking other members for information about the service, searching for information, and paying attention to how others behave in order to use the service (Yi and Gong 2013). As the scale was developed in another context (e.g., health care, travel, hair salons, full service restaurants), minor modifications were carried out to fit the scale to the context of this study. The modifications were based on the content analysis and the feedback obtained from the pre-test. The three items for CEB toward oneself (Table 5.3) were measured by a 7-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (7).

'CEB toward other members' is another type of CEB supported in the exploratory phase. Consistent with the exploratory findings, this construct was operationalised in this study as member behaviours to help others by giving advice and sharing information with other members in the community (Yi and Gong 2013). The qualitative findings provide evidence to this type of CEB where community members engage in solving problems for other members, giving them brand-related advice and sharing alternative product uses. The four items measuring CEB toward other members were developed by Yi and Gong (2013). The scale demonstrated good internal consistency and the composite reliability

for this construct was 0.97. Based on the exploratory findings, minor modifications were made to suit the OBC context and the way community members engage toward others about the brand. The four items for CEB toward other members (Table 5.3) were measured using a 7-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (7).

'CEB toward the firm' was operationalised as the extent to which a member engages in providing information, making suggestions, and identifying his/her needs to the firm through the brand community (Bove et al. 2009). As evident in the exploratory findings, CEB toward the firm involves a range of behaviours that mostly fall under the following items: making suggestions about brand improvement, identifying general and specific needs, contributing ideas and giving their opinions about the brand and services. These four items are consistent with the Bove et al. (2009) scale. Bove et al. (2009) demonstrated the internal consistency of these four items and showed that their composite reliability was 0.94. As their study was not made in the OBCs context, the scale was modified to suit the OBC context. The four items for CEB toward the firm (Table 5.3) were measured by a 7-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (7).

Table 5.3: CEBs in OBCs

Constructs/Authors	**Scale measures**
CEB toward oneself Yi and Gong (2013).	I ask other members for information related to iPhone. I pay attention to other members' interactions regarding iPhone usage. I search for information in this community about issues related to my iPhone.
CEB toward other members Yi and Gong (2013).	I give advice to other members. I assist other members if they need my help. I teach other members to use their iPhone correctly. I help other members if they seem to have problems with their iPhone.
CEB toward the firm Bove et al. (2009).	I make suggestions to improve the iPhone. I share my opinions if I feel they will benefit the iPhone. I let Apple know of ways to better serve my needs about the iPhone. I contribute ideas to my firm that could improve the iPhone.

5.4.4 Brand Loyalty

'Positive WOM' is hypothesised to be a core outcome of CEBs in OBCs. WOM was operationalised in this study as the willingness to say positive things about the brand, and recommending or encouraging friends and acquaintances to buy the brand (Srinivasan,

Anderson and Ponnavolu 2002). Srinivasan, Anderson, and Ponnavolu (2002) adapted the scale of Zeithaml, Berry and Parasuraman (1996) and applied it to the e-commerce context. For this study, minor modifications to the wording were necessary to adapt it to the context of OBCs. The WOM scale contains four items and two of them are reversed. This study modified these reversed questions to prevent some problematic issues (confusion) with reversed questions. The scale demonstrated a composite reliability of 0.92 in the Srinivasan study. The four items for WOM were measured using a 7-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (7). The items for WOM scale are presented in Table 5.4.

'Purchase intention' was hypothesised to be a dependent outcome of CEBs in OBCs. Purchase intention was operationalised in this study as intention for ongoing purchase and use of the brand. The purchase intention scale has been applied to the brand community context by Algesheimer, Dholakia, and Herrmann (2005). The scale showed a composite reliability of 0.90. Minor modifications to the wording of the brand loyalty items were made based on the feedback obtained from the pre-test. The three items for brand loyalty were measured using a 7-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (7). The items for purchase intention scale are presented in Table 5.4.

Table 5.4: Brand Loyalty

Constructs/Authors	**Scale measures**
Positive WOM (Srinivasan, Anderson, and Ponnavolu 2002).	I refer my acquaintances to the iPhone. I encourage friends to try the iPhone. I recommend the iPhone brand to anyone who seeks my advice. I say positive things about the iPhone brand to other people.
Purchase intention (Algesheimer, Dholakia, and Herrmann 2005).	I intend to buy the iPhone the next time I buy. I would actively search for this brand in order to buy it. I intend to buy other products of this brand.

5.4.5 Self-efficacy

'Self-efficacy' was conceptualised as a control variable for the research model tested in this study. Generally, a control variable is considered to have a possible interaction effect on the dependent variable. In addition, a control variable is commonly considered an extraneous variable that is not the main focus of the study. The inclusion of control

variable relates to the theoretical grounds of such a relationship (Atinc et al. 2011). Control variables, according to Carlson and Wu (2011, 2) are used to capture concepts or factors that are generally 'defined as extraneous to the desired effects'. In this regard, SDT suggests that one's competence (self-efficacy) promotes intrinsic motivation to engage in CEBs. The theory itself emphasises the role of autonomous motivation but it also suggests one's skill contributes to autonomous motivation (Gagné and Deci 2005). The inclusion of the control variable is due to this theoretical basis and the context itself (Carlson and Wu 2011; Atinc et al. 2011). For example, in the context of OBCs, a member's engagement in different CEBs is likely to be effected by a member's skill and capability to do so.

Self-efficacy was operationalised as a member's self-evaluated confidence in their skills and capabilities to provide knowledge that is valuable and useful (Chen and Hung 2010). The three items for measuring self-efficacy were adapted from the scale used by van den Hooff and De Ridder (2004). Recently, the scale was modified to the context of online communities by Chen and Hung (2010). The scale achieved a composite reliability of 0.91 (Chen and Hung 2010). Minor modifications were made to the wording to fit the scale to this study's context. The three items for self-efficacy were measured by a 7-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (7) and are presented in Table 5.5.

Table 5.5 Control Variable

Constructs/Author	**Scale measures**
Self-efficacy (Chen and Hung (2010).	I have confidence in my ability to provide knowledge that other members in this community consider valuable. I have the expertise, experience and insight to provide knowledge valuable for other members in this community. I have confidence in responding or adding comments to messages in this community.

5.4.6 Descriptive and Demographic Variables

This section reports the frequency of CEBs in OBCs (i.e., how often a member engaged in the identified OBCs within a period of time) and demographic variables to characterise community members in the identified OBCs. Table 5.6—5.7 presents a detailed description of the samples.

i) Frequency of OBC engagement behaviours

Frequency of community engagement behaviour measures the frequency of members' engagement behaviours with the OBCs. Algesheimer, Dholakia, and Herrmann (2005) used and modified a single-item scale to measure the frequency of brand community members' engagement behaviours, which consists of the following four categories: 'never', '1–5 times', '6–10 times' and 'more than ten times' (i.e., How often have you participated in the following activities in this online brand community within the last three months?). As this study incorporates three different types of CEBs, the scale was applied to each type of engagement behaviour. Thus, the three items were used to measure the frequency of the three different types of engagement behaviours, each using the following frequency categories: 'never', '1–5 times', '6–10 times' and 'more than ten times' (as presented in Table 5.7).

ii) Length of OBC membership

Length of membership is a qualifying question as it identifies whether the participant is a member or not of a brand community, and how long the respondent has been a member. Six categories were used for this variable, ordered as follows: not a member of this community, less than 1 year, 1–2 years, more than 2 years but less than 4 years, 4–6 years, and over 6 years (as presented in Table 5.6).

iii) Demographic variables

As is evident from the questionnaire included in Appendix A, the following demographic variables were included in the survey: gender; age (20 years or less, 20–30 years, 31–40 years, 41–60 years, 61 years or older); and education (less than high school, high school, diploma, bachelor's degree, master's or doctoral degree) (as presented in Table 5.6).

5.5 Sample and Data Collection Procedures

A convenience sampling procedure was employed for the data collection because two high technology OBCs in Saudi Arabia were chosen as sample frames within which data was collected. In fact, multiple OBCs were approached and these three allowed the questionnaire to be made available to their members. Convenience sampling must often be traded off with access to the sample population and in this case access to relatively

large samples was achieved which strengthens the quality of the study. As well, the OBCs were representative of independent, high technology OBCs and the participants appear representative of members of such communities. The concern of using a convenience sample is apparent in the marketing literature. For example, Simonson et al. (2001) reports that '75% of the research subjects in Journal of Consumer Research and Journal of Marketing Research articles were college students' (cited from Peterson and Merunka 2014, 1036). This concern is often related to the convenience sample of college students who might not represent the intended population and therefore the findings might not apply to the intended population (Peterson and Merunka 2014). As the main interest of this research is to test the theory based model of CEBs on an online brand community, a convenience sample that has members of high technology OBCs is appropriate. Furthermore, convenience sampling is often employed in studies of virtual communities due to its applicability and accessibility (Cheung and Lee 2012; Debatin et al. 2009; Nambisan and Baron 2009; Ridings and Gefen 2004; Wang and Fesenmaier 2004). According to Ridings and Gefen (2004), virtual communities constitute convenience samples, as there are no universal global lists to draw a random sample from. As well, respondents within a community self-select because online communities' owners/administers generally do not provide the email addresses of their community members (which could form a sample frame) in order to protect the privacy of their members.

The survey was administered online through the Qualtrics programme. Qualtrics is a web-based survey tool that creates and designs surveys for academic purposes. Two separate surveys were created on Qualtrics.com: one for the Apple Society, and another for the Eqla3 community. Qualtrics provides a unique URL that can be easily distributed and accessed online. The first page of the online questionnaire was a cover letter that briefly described the purpose of the study, provided the ethical clearance number and outlined the respondent's rights of withdrawal. It also provided the researcher's contact details in case respondents had any questions. Appendix A contains a hard copy of the questionnaire.

Each owner/administrator of the two brand communities was asked to send an invitation message, containing the URL to the online questionnaire, to their members via email. The

owners/administrators were instructed to only include active members who had posted messages within the last three months. This is in line with previous studies of virtual communities (Ridings and Gefen 2004). Including active community members is a specific criterion used in the context of online communities to determine who was qualified to be included in a particular study (Ridings, Gefen and Arinze 2002). In order to increase the response rate, the following incentives were offered: entry to a draw for an iPad, iPhone or iTunes cards. Recipients in each OBC were offered the opportunity to enter in the draw for one iPhone or iPad or one of multiple iTunes gift cards. Providing incentives is an acceptable technique to increase the response rate and has been employed by several online studies of brand communities (Shiue, Chiu and Chang 2010; Algesheimer, Dholakia and Herrmann 2005).

The first invitation to participate in the online questionnaire was sent to the Apple Society's members (http://www.i3rab.com) by email on 5 February 2013. To increase the response rate, entry to the draw for 15 iTunes gift cards was offered to the participants who completed the survey. The Apple Society's owner also posted a topic in the main forum encouraging the community members to check their emails and participate in the survey. Within two weeks after the first invitation, 185 responses were obtained. The Apple Society's owner/administrator sent out a second wave of invitations and reminders to participate in the online questionnaire, and posted the URL to the online questionnaire in the iPhone forum with words of encouragement. This second invitation resulted in 218 responses. Thus, a final total of 403 completed responses were received. This number excludes incomplete responses (i.e., members who viewed the online questionnaire for less than 4 minutes and/or did not complete all the sections).

The Eqla3 members (http://www.vb.eqla3.com) were contacted on 4 March 2013 using the same procedure as with the other Apple communities. The Eqla3 community's owner/administrator only emailed the online questionnaire to members who were affiliated with the Apple sub-forums. Additionally, the community's owner posted a topic in the sub-forum of 'Apple World' encouraging the members to participate in the online survey, which had been emailed to them previously. After four weeks, there were 1,705 completed responses recorded. This number excluded incomplete responses.

5.6 Back Translation Method

As this study was conducted in the Saudi Arabian context, this study employed a back translation method. This method is used when a survey is developed in one language and conducted in another language. This method is one of the most common methods used to overcome problems of direct translations (Green and White 1976). The advantage of back translation is that it allows the researcher to identify problems that might arise between the original questionnaire and the translated one (Maneesriwongul and Dixon 2004).

For this study, the back translation method followed by Su and Parham (2002) was used. In the forward translation stage, two bilingual translators (a Master's graduate from the English Translation School at King Saud University, and a professional translator working in an accredited office), made the initial translation of the questionnaire from the source language (English) into the target language (Arabic). These two translators worked independently and did not know each other. The reason for employing two translators is to compare and check for equivalence of meaning and quality (Su and Parham 2002). After comparing the two versions of the target language (Arabic) questionnaire, the results of this stage produced almost identical versions in terms of meaning with only minor differences in wording. As it is common to see minor differences in wording, two bilingual colleagues were consulted about the two Arabic versions in order to review and edit the translation. Few modifications to the wording were made. The two Arabic versions then were back translated into English by two different translators who worked independently and had not seen the source version (English). After receiving the back-translated versions, the two versions were compared with each other. The result of this process showed close equivalence in meaning, with minor differences in some of the words between the two versions. As a result, the version that was translated by the academic translator was chosen as it was most equivalent to the source version (English).

The final step was the pre-test to refine the translation through the opinions from a small sample of the population. A convenience sample of 14 people was given the survey. Most of the respondents had experienced and participated in OBCs and their education varied from high school level to a master's degrees. The goal of this step was to ensure the questionnaire communicated well to the targeted sample (Shelby, Sparkman and Wilcox

1982). Only a few minor changes related to wording were made to adapt the items to the specific context of this study, based on the feedback obtained from this pre-test stage.

5.7 Data Screening

Upon completion of the survey, Qualtrics provides options to transfer the data into different file formats. For this current study, the SPSS format was chosen. Given that the questionnaires for the two OBCs did not force respondents to complete all questions (a function available in Qualtrics), some missing values were present.

The key aim of the missing data analysis was to identify cases that exhibited high levels of missing data (Baraldi and Enders 2010). Missing data is a common problem in the field of empirical research. Most research is subject to varied levels of missing data, which can be dealt with by methods including listwise deletion, pairwise deletion, mean substitutions, and expectation-maximisation. These techniques are extensively used in the existing literature (Schafer and Graham 2002). For instance, listwise deletion eliminates any case that has any amount of missing data regardless of the percentage. Research often criticises this method because it leads to loss of data (Roth 1994). Pairwise deletion method tends to minimise the loss of the data by keeping the missing data. Research suggests that the use of pairwise deletion generates inconsistent correlation and could have serious negative effects on the maximum likelihood when using SEM (Roth 1994). Mean substitution method replaces the missing value of a particular variable with the mean of that variable (Roth 1994). The main advantage of this technique is to preserve the data. However, this method also has been criticised as it may affect the estimated variance and correlations (Schafer and Graham 2002). Finally, the algorithm of the expectation-maximisation (EM) is another technique to handle missing data.

To avoid replacing large amounts of data in any one case, the first step was to delete any case that missed a complete section of the survey (i.e. between 9 and 15 questions). Then, the researcher deleted any case that missed ten questions or more throughout the whole questionnaire. This process resulted in eliminating a number of cases for both of the samples. The subsequent missing values for the two samples were below 2 per cent.

According to Hair et al. (2006) missing values below 10 per cent are considered as low-level missing data and generally viewed as ignorable.

A further analysis was conducted to determine whether the data was biased with respect to outliers. Outliers can be identified either as univariate, where respondents have an extreme score on a single item, or as multivariate, where respondents have an unusual pattern of responses across a number of different items (Mullen, Milne and Doney 1995). Two separate tests were conducted to identify univariate and multivariate outliers. In identifying univariate outliers, a descriptive analysis was conducted using the boxplot test in SPSS. This analysis resulted in deleting a number of outliers for both samples. For multivariate outliers, a test for normality and outliers available in AMOS 21 was conducted, and also resulted in eliminating a number of outliers from both samples as well. As result of these analyses, 197 cases were eliminated from the Eqla3 sample due to missing values and outliers, while 83 cases were eliminated from the Apple Society.

5.7.1 Missing Data Imputation

The expectation-maximisation (EM) method was used in this study to replace missing values. The main advantage of this technique is to handle the missing values without deletion or modifying the incomplete cases. EM is an iterative process in which all other variables relevant to the construct of interest are used to predict the values of the missing variables (Baraldi and Enders 2010). Specifically, it involves two steps to replace the missing values. The first step is called expectation (E-step), which involves estimating the missing value based on the current estimate of the parameters. The second step is called maximisation (M step), which involves the use the e-step output to provide new estimates of the parameters (Moon 1996). Roth (1994) highlights using EM method is more suitable than listwise or pairwise deletion methods. The author also suggests that EM is also suitable for SEM. As there were less than 2 per cent of cases with missing values in either sample (Eqla3 sample =1%; Apple society = 2%), EM was an appropriate method to replace the missing values (Schafer and Graham 2002). According to Hair et al. (2006) missing data of up to 10 per cent is unlikely to be troublesome in the interpretation of the results. Furthermore, simulation studies have suggested that the EM method of data imputation is more consistent and accurate in predicting parameter

estimates than other methods (Graham et al. 1997). The subsequent data analysis is based on 320 cases for Apple Society sample and 1,508 cases for the Eqla3 sample.

5.7.2 Data Normality

The normality of the data was assessed through the Shapiro-Wilk test provided by the SPSS software. The null hypothesis for the Shapiro-Wilk test is that if the result is significant (i.e., the p-value is less than or equal to 0.05), the distribution is non-normal (Royston 1992). Results from Shapiro-Wilk normality tests across the (Apple Society and the Eqla3 sample revealed the data were not normally distributed as the p-values were less than 0.05. The results showed evidence of skewness and kurtosis, which are the two main ways the results would deviate from a normal distribution (Ghasemi and Zahediasl 2012). However, non-normality and skewness is not likely to have a significant impact for this study. According to Hair et al. (2006) normality can have serious effect in a small sample of less than 50 cases, but the impact effectively diminishes when the sample size is greater than 200 cases or more. The sample size for the Apple Society sample is 320 cases and the Eqla3 sample is 1,508 cases.

5.8 Sample Descriptive Statistics

Table 5.6 lists the demographic characteristics of the respondents for both samples. The respondents cover all age groups but are predominantly aged between 18 and 30 years. The Apple Society community had 85.6 per cent male and 14.4 per cent female respondents. Previous studies have also noted male dominated gender disparities in communities dealing with technical products (Powell, Hunsinger and Medlin 2010). For example, Nambisan and Baron (2009) reported that 79 per cent of participating members from a Microsoft community as well as 77 per cent from a IBM community were males. In contrast, the Eqla3 community had a much higher percentage of female respondents (86.1 per cent). The gender imbalance between the two samples is a little surprising. However, while the entire Apple Society OBC is dedicated to Apple high-tech products, the entire Eqla3 OBC includes much broader topics. So while the current study focuses only on members of Eqla3's smartphone technology forums the pool of members may be drawn by other sub-forums such as social forums and sports forums. The gender disparity

in these two samples helps to control for gender differences in relation to the hypothesised relationships and to provide model stability.

Fewer respondents had not completed high school education (5.0 per cent) in the Eqla3 community sample compared to 11.3 per cent of the Apple Society sample. However, most of the respondents had bachelor's degrees (51.1 per cent for the Eqla3 community sample and 35.3 per cent for the Apple Society sample). Regarding the length of membership, in the Eqla3 community sample 54.0 per cent of the respondents had participated in the OBC for 1–2 years, and 27.3 per cent for 2–4 years. In contrast, in the Apple Society sample, 47.8 per cent of the respondents had participated in the community for a period of 2–4 years and 39.4 per cent for 1–2 years.

Table 5.6: Eqla3 Sample and Apple Sample Characteristics

	Eqla3 Sample (N=1508)		**Apple Society Sample (N=320)**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Gender				
Male	210	13.9	274	85.6
Female	1,298	86.1	46	14.4
Age				
Less than 20 years	301	20.0	81	25.3
20–30	1,074	71.2	145	45.3
31–40	127	8.4	70	21.9
41–50	4	0.3	20	6.3
51 or more	2	0.1	4	1.2
Education				
Less than high school	75	5.0	36	11.3
High school	478	31.7	93	29.1
Diploma	152	10.1	60	18.8
Bachelor degree	770	51.1	113	35.3
Master or doctoral degree	33	2.2	18	5.6
Length as a member of this brand community				
Less than 1 year	160	10.6	30	9.4
1–2 years	815	54.0	126	39.4
More than 2 years but less than 4 years	411	27.3	153	47.8
4–6 years	72	4.8	11	3.4
More than 6 years	49	3.2	-	-

Table 5.7 presents the frequency of the three types of member engagement behaviours in the brand communities over the three months before data collection. The analysis shows that 87.0 per cent of respondents from the Eqla3 sample and 74.4 per cent from the Apple Society engaged to benefit themselves at least once. Further, the analysis reveals that 79.6 per cent of respondents from the Eqla3 sample and 61.2 per cent from the Apple Society

sample engaged with other members at least once. Finally, the analysis also shows that 19.9 per cent of the Eqla3 sample, and 30.1 per cent of the Apple Society sample, engaged to co-create value for the firm at least once. The findings are consistent with the idea that not all members will have the knowledge and self-efficacy to post advice or to make suggestions to the firm (Rowe et al. 2013). It has also been argued that the experts who interact the most make up a small proportion of each brand community (Rojo and Ragsdale 1997).

Table 5.7: Frequency of Member Engagement Behaviours in OBCs

	Eqla3 Sample		**Apple Society Sample**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
CEB toward oneself: e.g., seeking information, asking questions				
Never	196	13.0	82	25.6
1–3 times	451	29.9	106	33.1
4–6 times	296	19.6	47	14.7
7–9 times	164	10.9	22	6.9
More than 10 times	401	26.6	63	19.7
CEB toward other members: e.g., answering queries				
Never	307	20.4	124	38.8
1–3 times	519	34.4	82	25.6
4–6 times	223	14.8	33	10.3
7–9 times	98	6.5	22	6.9
More than 10 times	361	23.9	59	18.4
CEB toward the firm: e.g., suggesting ways to improve the brand				
Never	1,209	80.2	224	70.0
1–3 times	218	14.5	60	18.8
4–6 times	43	2.9	14	4.4
7–9 times	15	1.0	6	1.9
More than 10 times	23	1.5	16	5.0

The frequency distribution highlights online brand communities create value for consumers by using the know-how of other community members, by providing peer-to-peer support, and, for a smaller proportion, by providing ideas and suggestions for product improvement. Thus, each CEB is strategically important for brand managers for delivering value.

5.9 Concluding Remarks

In summary, this chapter discussed the methodology for the quantitative phase. The chapter described the data collection procedures for the quantitative online survey used to test the research model and the proposed hypotheses. As outlined, the data was

collected from two OBCs in Saudi Arabia through online surveys. After data screening procedures, the Apple Society sample yielded 320 cases while and the Eqla3 sample is 1,508 cases. This chapter also provided a discussion of the sample characteristics as shown in Table 5.6 and Table 5.7. The next chapter outlines the procedures used to analyse the quantitative data and then present the results.

Chapter Six: Quantitative Results

This chapter presents the results for the quantitative data phase. It starts with presenting the results of the exploratory factor analysis. Then, the chapter presents the data analysis procedure to test the hypotheses. Following these procedures, the chapter presents the results of confirmatory factor analysis of the measurement model including the results of the convergent and discriminant validity for each construct in the hypothesised model for each constructs. The final section reports the structural model fit and hypothesis testing results.

This research examines CEB as reflective constructs manifested by a set of measures. The choice between formative and reflective construct is central to the theoretical consideration (c.f., Diamantopoulos and Siguaw 2006). A reflective construct defines a set of measures/indicators that represent that construct. These measures often have common themes and are intercorrelated. Any change of these indicators will not normally affect the construct validity and the conceptual definition (Coltman et al. 2008). The CEB constructs in this study utilize established reflective measures and their respective items for CEB toward oneself, CEB toward other members (Yi and Gong 2013) and CEB toward the firm (Bove et al. 2009).

6.1 Exploratory Factor Analysis

The main aim of conducting the exploratory factor analysis (EFA) is to identify the underlying structure of a particular set of variables (Distefano et al. 2009). With respect to CEB constructs, the qualitative findings provide evidence that CEBs in OBCs can be grouped into three types of CEBs: CEB toward oneself (i.e., seeking information in order to add value to the consumption experiences), CEB toward the firm (i.e., provides ways to improve the brand), and CEB toward other members (i.e., provides assistance and solutions to other members). Exploratory factor analysis (EFA) was performed on the three CEB constructs to provide support for the adapted scales of CEB constructs and to the context of this study (Yi and Gong 2013).

Using a random sample of 400 cases (from the Elqa3 sample), EFA was performed on all 11 items comprising the three types of CEBs by employing principal components extraction method with Varimax rotation to examine the factor structure. The value of Kaiser-Olkin Measure of Sampling Adequacy (KMO) test was 0.885, which exceeded the recommended cut-off value of 0.5 (Williams et al. 2012). The significance of the Bartlett's test of sphericity ($\chi^2 = 2575.020$, $p < .001$) indicated the analysis was suitable to the data (Appendix C). The factor analysis revealed three factors with eigenvalues greater than 1, and explained 72.853 of the variance (Appendix C). The reliability test using Cronbach's alpha exhibited satisfactory levels of internal consistency of CEB toward other members (0.802), CEB toward oneself (0.782), and CEB toward the firm (0.894). As evident in Appendix D, the three items that corresponded to CEB toward oneself loaded in their respective factor. Whilst six items loaded on CEB toward the firm and two items loaded on CEB toward other members. Despite the fact that not all items loaded on their respective factors, the result of EFA supports the presence of three factors. Next, the three factors and their respective 11 items were subject to confirmatory factor analysis (CFA).

6. 2 CFA and SEM Analysis Procedure

Anderson and Gerbing (1988) suggested a two-step approach (i.e., a measurement model and a structural model) when using structural equation modelling (SEM) to test and develop theories. Anderson and Gerbing (1988) argued that a two-step approach is advantageous over the one-step approach. The difference between these approaches is fundamental to theory testing and development. Basically, these two approaches are highly dependent on the purpose of the research and the choice of the estimation should be relevant to the core purpose of the research (i.e., whether it is theory-oriented or predictive analysis) (Anderson and Gerbing 1988). The one-step approach (using PLS) is suitable for prediction (i.e., causal predictive analysis) whereas maximum likelihood estimation is appropriate for theory testing and development.

As this study attempts to develop a theoretical model for CEBs in OBCs, the two-step approach including a measurement model (i.e., CFA) and structural model (i.e., SEM) was appropriate for this study. The aim of the measurement model is to specify the

relationships of the observed measures to their underlying constructs, while the structural model then specifies the causal relationships between the constructs. More specifically, the first step entailed confirmatory factor analysis (CFA) to refine the constructs in the CEBs model (Anderson and Gerbing 1988). The second step tested the structural models i.e., the hypothesised relationships (from H1 to H15). Both the measurement models and structural models were tested using AMOS 21 software.

CFA for the measurement model was conducted to assess the model fit for all constructs. After the CFA for the measurement model was confirmed, convergent validity and discriminant validity were examined (Anderson and Gerbing 1988). The next step in the two-step approach is to conduct and validate the structural model (Anderson and Gerbing 1988). The conceptual model and specific hypotheses advanced earlier were tested with a full-information maximum likelihood estimation procedure available within the AMOS 21 software.

SEM is a statistical procedure for testing measurement models, as well as functional, predictive and casual hypothesis models. One of the leading software programs for SEM is AMOS (Bagozzi and Yi 2012). AMOS performs full-information maximum likelihood estimation and reports several statistics to assess the model (Savalei and Rhemtulla 2012). SEM through the AMOS software provides integrative functions and displays model specification as well as presentation of estimations (Bagozzi and Yi 2012). Table 6.1 shows the acceptable cut-off fit indices based on the marketing and business literature. As seen in Table 6.1, the fit indices for assessing the model fit for this study are commonly used and reported in past papers (Bagozzi and Yi 2012; Bentler 2007; Shook et al. 2004).

Table 6.1 Summary of Fit Indices in AMOS Software

Index	**Type**	**Accepted Model Fit Level**	**Preferred Model Fit Level**	**Notes**
χ^2	Fit statistic	Sensitive to large sample size	$p > 0.05$ for multivariate normal data	Greatly affected by sample size and distribution properties of the data.
χ^2/df	Fit statistic	< 0 5	< 3	Values close to 1 indicate perfect fit but values from 1–5 indicate accepted fit.
CFI	Incremental index	> 0.90 (Bagozzi and Yi 1988; Garver and Mentzer 1999).	> 0.95	The approximate range of 0–1.
IFI	Incremental index	> 0.90 (Hullandet al. 1996)	> 0.95	The approximate range of 0–1.
TLI	Incremental index	> 0.90 (Hu and Bentler 1999)	> 0.95	The approximate range of 0–1.
SRMR	Residual	< 0.08 (Bagozzi and Yi 2012; (Hu and Bentler 1999)	< 0.06	Values less than 0.05–0.07 is considered a good fit.
RMSEA	Fit index	< 0.08 (Hu and Bentler 1999)	< 0.05	The lower bound is zero, which indicates perfect fit. Values less than 0.08 indicate reasonable model fit.
PCLOSE	'PCLOSE is probability that RMSEA is significantly greater than zero. PCLOSE value less than 0.05 indicates that RMSEA is greater than zero, and therefore the model does not fit' (James et al. 2009, 751)	PCLOSE> 0.05: good fit	PCLOSE> 0.05: good fit	PCLOSE> 0.05: good fit

Problems associated with sample size and chi-square results have been noted with large and small sample sizes (Hult et al. 2006; Koubaa et al. 2014). According to Tabachnick and Fidell (2007), the index of the chi-square test is only applicable for moderately sized samples between 100—200 cases. In other words, samples with less than 100 cases or more than 200 cases are not suited to the chi-square test. This is because 'trivial difference between the covariance matrix derived from the hypothesized model and the covariance matrix derived from the sample becomes significant, hence leading to the rejection of the model' (Koubaa et al. 2014, 328-329).

Due to the 'unsatisfactory' nature of the chi-square test in these situations (Fan and Sivo, 2007, Hair et al. 2010; Hooper et al. 2008; Bagozzi and Yi 2012), several statistical indexes have been developed to overcome this issue. Researchers have proposed a number of indices of practical fit. As shown in Table 6.1, SEM using AMOS 21 software provides many indices of goodness-of-fit to evaluate the entire model. The recommended and recognised practical fit indices used in the existing literature are normed Chi-square ($\chi 2/df$), the root mean square error of approximation (RMSEA), the comparative fit index (CFI), (IFI), the Tucker Lewis Index (TLI) and the standardised root mean square residual (SRMR) (Hu and Bentler 1998; Bagozzi and Yi 2012). The RMSEA reports the average amount of misfit for a model per degree of freedom (Bagozzi and Yi 2012). As shown in Table 6.1, the recommended standard for assessing the model within RMSEA is <0.08 (Hu and Bentler 1998). CFI was proposed by Bentler (1990) and indicates the relative non-centrality between a hypothesised model and the null model of modified independence. As reported in the existing literature, a model fit for the CFI is satisfactory if it exceeds a value of 0.90 (Bagozzi and Yi 1988; Garver and Mentzer 1999).

The goodness of fit indices and their cut-off guidelines for model assessment including CFI, TLI, RMSEA, and normed chi-square are controversial in SEM studies (Shook et al. 2004; Hair et al. 2010). SEM research suggests there are several issues that can affect the goodness of fit indices including sample size and model size (i.e., the number of variables) (Shook et al. 2004; Moshagen 2012). The work of Moshagen (2012) suggests that the model fit can be inflated when the number of variables increases in the model. The author suggests that model size might affect CFI, TLI, and RMSEA (Moshagen 2012). The second issue is that chi-square test is not the only test sensitive to sample size but also GFI, AGFI, and normed chi-square (χ^2/df) (Hult et al. 2006, Kline 2015). According to Kline (2015, 272) there are three problems associated with the use of the normed chi-square test. First, it is highly sensitive to sample size. Second, the degree of freedom (df) used with the value of χ^2 has nothing to do with sample size. The third issue is that there is never any acceptable clear-cut guideline about maximum values of the normed chi-square (e.g., < 2.0? — <3.0?). Others suggest that the recommended value for normed chi-square lie within the following range (< 2.0— < 5.0) (Wheaton et al. 1977; Tabachnick and Fidell 2007). Hair et al. (2010) suggest that a target value of the normed

chi-square from 1—3 is only a good indicator of a better fitting model for a sample size less than 750 cases i.e., it does not apply to larger samples (greater than 750 cases).

Another critical issue in the SEM studies is the clear cut-off guidelines of the overall fit indexes in evaluating the model (Koubaa et al. 2014; Kline 2015). The argument revolves around whether the cut-off value is 0.90 and greater or 0.95 and greater for some statistical indices such as CFI and TLI (Mclntosh 2007). In general, there are two streams of thought concerning the overall fit of the model evaluation. The first stream recommends stringent cut-off values (over 0.95 for CFI, and TLI (Hult et al 2006); less than 0.05 for RMSEA and SRMR (Byrne 1998)). However, the second stream adapts cut-off values of 0.90 and greater for CFI and TLI as indicative of good model fitting (Hu and Benlter 1999, Hoe 2008; McMillan 2001; Garver and Mentzer 1999; Hullandet al. 1996). For SRMR of < 0.08 and RMSEA < 0.8 are the upper limit for acceptable fitting (Hooper et al. 2008; MacCallum et al. 1996). SEM studies suggest that the reliance on the recommended cut-off values without considering the sample size and the number of endogenous and exogenous variables in the model can lead to the incorrect rejection of an acceptable model (Marsh et al. 2004; Hooper et al. 2008; Koubaa et al. 2014). Similarly, Hair et al. (2010) argue that it is not reasonable to apply strict statistical criteria such as CFI > 0.95 and greater or RMSEA < 0.08 as evidence of good fit for SEM models with eight or more constructs and a sample size above 250 cases. Specifically, Hair et al. (2010) suggest general cut-off guidelines that consider sample size and the number of constructs. According to Hair et al. (2010) values for CFI, TLI of 0.92 and higher are acceptable for complex models including 12 variables and a sample sizes above 250; and RMSEA of 0.07 and SRMR of 0.8 are acceptable with sample size above 250. With larger samples (above 1000 cases) and highly complex models, values of 0.9 and greater for CFI, TLI indicate acceptable model fitting.

In practice, prior studies adopt less strict criteria for evaluating the model fit. Many studies report CFI and TLI values of 0.9 or greater as acceptable. The following is an example of the studies that report CFI, TLI, and normed chi-square test based on the rule of thumb of 0.9 and greater (CFI, and TLI) and normed chi-square test <5. For instance, Schaufeli et al. (2002) report a value of 0.9 for CFI and value of 4.1 for normed chi-square test as satisfactory fit for the data. Bagozzi and Dholakia (2002) report TLI of 0.93 as

acceptable fit. Hollebeek et al. (2014) report a value of 4.196 for normed chi-square (χ^2/df) as an indicator of good model fit. Similarly, Tsai et al. (2012) report (χ^2/df) of 4.43 as good model fit. Rapp et al. (2013) also report CFI of 0.90 and normed chi-square of 3.11 as good model fit. Habibi et al. (2014) report normed chi-square of 3.43 and CFI of 0.93 as acceptable fit. Jin et al. (2010) report normed chi-square of 3.98 and CFI 0.90 as acceptable fit. Benedikt and Werner (2012) report CFI of 0.92 as acceptable fit to the data along with other statistical criteria. Park and Kim (2014) also report CFI 0.919, TLI 0.909, normed chi-square 3.673 as acceptable model fit. Based on the less stringent criteria used in these studies, this study uses acceptable cut-offs for evaluating the model fit.

6. 3 Measurement Model: CFA Analysis

6.3.1 CFA Analysis: Eqla3 sample

A full measurement model with ten latent constructs was tested on the three samples (Eqla3, random sample of Eqla3 and Apple Society). The maximum likelihood method was employed using AMOS 21 to confirm the proposed online CEB model. The purpose of testing the full measurement model was to ensure that there was no significant misfit in the model. Second, once the model fit for the full measurement model was acceptable, this allowed further analysis, such as the determination of convergent and discriminant validity (Anderson and Gerbing 1988).

The first full measurement model of the Eqla3 sample (N = 1508) involved a total of ten latent constructs. The initial test of the full measurement model produced an unacceptable model fit based on the following criteria: χ^2/df = 6.291, CFI = 0.868, TLI = 0.852, IFI= 0.868, PCLOSE=0.000. Examination of the modification indices (MIs) suggested several problematic issues including low factor loadings, low squared multiple correlations, high standardized residual covariances, and crossing loadings. First item 3 (status benefits=.355), item 1 (hedonic benefits=.438), and item 7 (functional benefits=.487) were eliminated from the model due to insignificant or low factor loadings. After eliminating these items iteratively, the model fit still was not satisfactory based on the following criteria: χ^2/df = 5.629, CFI = 0.897, TLI = 0.882, IFI= 0.897, PCLOSE=0.000.

Next, MIs suggested that item 2 (functional benefits=.268), item 1(CEB toward other members=.294), and item 3 (purchase intention=.229) had low squared multiple correlation. Before eliminating these items, standardized residual covariances were consulted. MIs suggested that these items shared high standardised residual covariance with the rest of construct items exceeding the magnitude of 2 (Bentler 2007). After eliminating these items iteratively, the measurement model obtained a satisfactory fit based on the following criteria: RMSEA= 0.055, CFI= 0.911 IFI= 0.911, but not for TLI= 0.896, and PCLOSE=0.000. Therefore, further examination was necessary. MIs also suggested that item 4 (status benefits) and item 2 (CEB toward the firm), item 3 (autonomous motivation), item 1 (functional benefits) and item 4 (WOM) were problematic not only in terms of standardized residual covariances with some of the items but also they shared cross loadings with the rest of the items. After eliminating these items iteratively, an excellent model fit was obtained (χ^2/df = 4.536, RMSEA = 0.048, SRMR = 0.0435, CFI = 0.941, TLI = 0.928, IFI=0.941, PCLOSE=0.847). The recommended practical fit for all the other statistics (i.e., RMSEA, SRMR, CFI, IFI and TLI, PCLOSE) exceeded the recommended thresholds shown in Table 6.1. Therefore, all ten latent constructs and 29 indicator items for CEBs in the Eqla3 community sample were retained for convergent and discriminant validity testing.

Some of the eliminated items were conceptually inconsistent with the operational definition of constructs. For instance, by examining the conceptual definition of status benefits and its operational measures (items), it seems that the eliminated items 3: *'I derive satisfaction from influencing product usage by other community members'* and item 4 'I *derive satisfaction from influencing the design and development of products through this community'* addressed 'members' satisfaction' rather than 'personal status benefits' derived from OBCs. Based on the results of MIs and the conceptual difference, a decision was made to remove these items from the construct. Furthermore, the eliminated item 3 from autonomous motivation *'I benefit from following the community's rules'* was also not consistent with the conceptual definition (Algesheimer, Dholakia, and Herrmann 2005).

Further, the analysis suggested that 'CEB toward other members' was highly correlated with other constructs including CEB toward oneself and CEB toward the firm. After

analysis of convergent and discriminant validity, it was concluded that item 2 of (CEB toward other members) and item 3 of (functional benefits) were problematic items. Therefore, these items were eliminated from the measurement model. After eliminating item 2 (CEB toward other members), and item 3 (functional benefits), the model fit produced an excellent fit to the data. ($X^2/df = 4.226$, RMSEA = 0.046, SRMR = 0.0375, CFI = 0.953, TLI = 0.940, IFI=0.953, PCLOSE=0.988). The next section presents the results of the convergent and discriminant validity of the hypothesized model of CEBs in online brand community.

6.3.2 Convergent Validity

According to Bagozzi and Yi (2012), convergent validity is the extent to which the multiple measures of a construct are in agreement. Four indicators; namely, average variance extracted (AVE), Cronbach's alpha test, construct reliability (CR), and the standardized factor loadings were considered to assess the convergent validity. The AVE is a measure of the amount of variance captured by a construct from each scale, and the recommended value for AVE is 0.50 or higher to provide evidence of construct validity (Fornell and Larcker 1981). The second indicator, and the most common method to evaluate scale reliability, is the internal consistency measured through the use of the coefficient alpha (Shook et al. 2004). The third indicator, CR is the extent to which the measurements are repeatable and free from random errors (Fornell and Larcker 1981). CR is acceptable if it exceeds at least 0.70, as recommended by Hair, Ringle, and Sarstedt (2011). The final indicator for convergent validity is the significance of the standardised loadings for each factor item resulting from the final measurement model.

Table 6.2 shows the results of AVE, Cronbach's alpha, CR, and the standardised factor loadings. The results of the AVE met the recommended value of 0.5, indicating convergent validity as suggested by Fornell and Larcker (1981). As evident in Table 6.2, the internal consistency using Cronbach's alpha test is satisfactory exceeding the recommended value of 0.7 for the all constructs. The results for CR for all constructs ranged from 0.722—0.894. Thus, all CRs were supported, as their values exceed the cut-off level of 0.70 (Hair, Ringle and Sarstedt 2011). As can be seen from Table 6.2, the standardised loadings ranged from moderate, at 0.651, to high, at 0.904. Lastly, the

standardised loadings for all items are significant and provide support for convergent validity.

Table 6.2: CFA Analysis Convergent Validity Results for the Eqla3 Sample

	Constructs/items	AVE	Cronbach's alpha	CR	Std regression weights
	Social benefits	0.503	0.752	0.752	
1	The friendship aspect of my relationship with the members of this online community is important to me.				0.686
2	I value the close personal relationships that I have with the members of this online community.				0.733
3	I enjoy spending time with the members of this online community.				0.708
	Hedonic benefits	0.547	0.772	0.783	
1	I entertain myself and stimulate my mind in this community.				0.672
2	I derive fun and pleasure from this community.				0.779
3	I spend some enjoyable and relaxing time.				0.763
	Status benefits	0.590	0.740	0.742	
1	I enhance my status/reputation as product expert in the community.				0.792
2	I reinforce my product-related credibility/authority in the community.				0.743
	Functional benefits	0.507	0.749	0.755	
1	I make better purchase decisions because of this community.				0.681
2	I enhance my knowledge about advances in product, related products and technology from this community.				0.786
3	I obtain solutions to specific product usage-related problems from this community.				0.743
	Autonomous Motivation	0.520	0.757	0.764	
1	I am motivated to participate in the community's activities because I feel better afterwards.				0.789
2	I am motivated to participate in the community's activities because I am able to create value for other members.				0.669
3	I am motivated to participate in the community's activities because I am able to reach personal goals.				0.700
	CEB toward the firm	0.676	0.861	0.862	Factor loading
1	I make suggestions to improve the iPhone.				0.797
2	I let Apple know of ways to better serve my needs about the iPhone.				0.803
3	I contribute ideas to my firm that could improve the iPhone.				0.864
	CEB toward other members	0.716	0.834	0.834	
1	I teach other members to use their iPhone correctly.				0.839
2	I help other members if they seem to have problems with their iPhone.				0.853
	CEB toward oneself	0.506	0.755	0.754	
1	I ask other members for information related to my iPhone.				0.651
2	I search for information on this community about issues related to my iPhone.				0.762
3	I pay attention to other members' interactions regarding iPhone usage.				0.717
	WOM	0.738	0.893	0.894	
1	I refer my acquaintances to the iPhone.				0.818

2	I encourage friends to try the iPhone.				0.904
3	I recommend the iPhone brand to anyone who seeks my advice.				0.853
	Purchase intention	0.565	0.721	0.722	
1	I intend to buy the iPhone the next time I buy.				0.758
2	I would actively search for this brand in order to buy it.				0.745

Notes: P-value < 0.05 for all items. Based on the CFA analysis for the Eqla3 sample N = 1,508.

6.3.3 Discriminant Validity

A further important step of conducting measurement model CFA analysis is to establish discriminant validity for the latent variables (Anderson and Gerbing 1988). Discriminant validity is a method that reflects the extent to which the constructs in a model are different from each other in fit (Bagozzi and Yi 2012; Anderson and Gerbing 1988). Different approaches for assessing discriminant validity exist in the marketing literature (Bagozzi and Heatherton 1994). Two indicators were considered to examine the discriminant validity. The predominant method used to assess discriminant validity is that proposed by Fornell and Larcker (1981). These authors suggest comparing the AVEs with the squared correlation values between two constructs, and if the AVE is greater than the squared correlation between the constructs, discriminant validity holds (i.e., the constructs are discriminant). The second indicator for discriminant validity is to examine the 95 per cent confidence interval (CI) through bootstrapping among the constructs of correlation. If none of the 95 per cent CI of correlation between two constructs includes the value of 1, this suggests discriminant validity (Anderson and Gerbing 1988).

Discriminant validity tests were conducted for all constructs following the Fornell and Larcker (1981) approach. Table 6.3 and Table 6.4 show the final discriminant test results for all constructs. As shown in Table 6.3, the AVE for all constructs exceeded the squared correlation with exception of the WOM and purchase intention pairs, the correlation between constructs ranged between 0.1451 and 0.709. This is below the 0.8 level, and therefore supports discriminant validity among the benefit constructs. The AVE of the purchase intention construct was smaller than the squared correlation of the WOM construct. However, further testing (as follows) offers support for the discriminant validity between these constructs (i.e., WOM and purchase intention pair). As seen in Table 6.4, the results of the 95 per cent CI of correlation between two constructs showed that none of the values include the value of 1 in

either the lower and upper values (Anderson and Gerbing 1988), thus supporting discriminant validity (Anderson and Gerbing 1988).

Table 6.3: Discriminant Validity: AVE and Squared Correlation

constructs	SD	1	2	3	4	5	6	7	8	9	10
Functional benefits	0.036	**0.507**	0.194	0.278	0.267	0.230	0.080	0.045	0.266	0.070	0.066
Social benefits	0.044	0.440	**0.503**	0.355	0.240	0.503	0.144	0.164	0.134	0.041	0.039
Hedonic benefits	0.027	0.527	0.596	**0.547**	0.081	0.399	0.035	0.043	0.171	0.062	0.035
Status benefits	0.059	0.517	0.490	0.284	**0.624**	0.328	0.189	0.162	0.112	0.021	0.022
Autonomous motivation	0.057	0.480	0.709	0.632	0.573	**0.520**	0.229	0.274	0.140	0.059	0.076
CEB toward other members	0.082	0.282	0.379	0.187	0.435	0.479	**0.716**	0.594	0.497	0.084	0.114
CEB toward the firm	0.080	0.212	0.405	0.207	0.403	0.523	0.771	**0.676**	0.238	0.046	0.118
CEB toward oneself	0.046	0.516	0.366	0.413	0.334	0.374	0.705	0.488	**0.506**	0.187	0.171
WOM	0.065	0.265	0.203	0.248	0.145	0.243	0.289	0.214	0.433	**0.738**	0.778
Purchase intention	0.090	0.256	0.197	0.188	0.149	0.276	0.337	0.343	0.413	0.882	**0.565**

Note: Correlations are below the diagonal, squared correlations are above the diagonal, and AVE estimates are presented on the diagonal. Based on the CFA analysis for the Eqla3 sample N = 1,508.

Table 6.4: Discriminant Validity for all Constructs: 95 Per cent CI of Correlation

Paths			Corr	Bias-corrected Percentile Method			Percentile Method		
Parameter			Est	Low	Upp	P	Low	Upp	P
CEB toward other members	<-->	CEB toward the Firm	.771	.726	.816	.009	.725	.815	.010
CEB toward other members	<-->	CEB toward oneself	.705	.659	.767	.005	.641	.764	.010
Others	<-->	WOM	.289	.227	.351	.010	.227	.351	.010
CEB toward other members	<-->	Purchase intention	.337	.270	.421	.008	.266	.418	.010
CEB toward other members	<-->	Social benefits	.379	.315	.446	.008	.314	.446	.010
CEB toward other members	<-->	Hedonic benefits	.187	.114	.252	.010	.114	.252	.010
CEB toward other members	<-->	Status benefits	.453	.390	.517	.009	.389	.516	.010
CEB toward other members	<-->	Functional benefits	.282	.213	.343	.007	.211	.340	.010
CEB toward other members	<-->	Autonomous Motivation	.479	.419	.537	.010	.419	.537	.010
CEB toward the Firm	<-->	CEB toward oneself	.488	.417	.557	.008	.417	.547	.010
CEB toward the Firm	<-->	WOM	.214	.166	.269	.007	.165	.268	.010
CEB toward the Firm	<-->	Purchase intention	.343	.269	.406	.013	.278	.410	.010
CEB toward the Firm	<-->	Social benefits	.405	.338	.464	.007	.333	.459	.010
CEB toward the Firm	<-->	Hedonic benefits	.207	.141	.275	.007	.130	.273	.010
CEB toward the Firm	<-->	Status benefits	.403	.345	.485	.005	.336	.475	.010
CEB toward the Firm	<-->	Functional benefits	.212	.155	.283	.003	.142	.276	.010
CEB toward the Firm	<-->	Autonomous Motivation	.523	.469	.570	.012	.469	.570	.010
CEB toward oneself	<-->	WOM	.433	.360	.499	.013	.366	.504	.010
CEB toward oneself	<-->	Purchase intention	.413	.351	.483	.012	.354	.483	.010
CEB toward oneself	<-->	Social benefits	.366	.296	.438	.009	.291	.438	.010
CEB toward oneself	<-->	Hedonic benefits	.413	.353	.495	.004	.334	.483	.010
CEB toward oneself	<-->	Status benefits	.334	.258	.420	.006	.253	.412	.010
CEB toward oneself	<-->	Functional benefits	.516	.437	.594	.010	.437	.594	.010
CEB toward oneself	<-->	Autonomous Motivation	.374	.293	.434	.016	.297	.435	.010
WOM	<-->	Purchase intention	.882	.844	.915	.010	.844	.915	.010
WOM	<-->	Social benefits	.203	.112	.263	.028	.135	.279	.010
WOM	<-->	Hedonic benefits	.248	.186	.311	.010	.186	.311	.010
WOM	<-->	Status benefits	.145	.076	.205	.012	.078	.206	.010
WOM	<-->	Functional benefits	.265	.198	.330	.007	.191	.321	.010
WOM	<-->	Autonomous Motivation	.243	.176	.312	.010	.176	.312	.010
Purchase intention	<-->	Social benefits	.197	.111	.267	.023	.117	.280	.010
Purchase intention	<-->	Hedonic benefits	.188	.083	.246	.041	.113	.265	.010
Purchase intention	<-->	Status benefits	.149	.083	.219	.009	.082	.217	.010
Purchase intention	<-->	Functional benefits	.256	.190	.317	.009	.190	.314	.010
Purchase intention	<-->	Autonomous Motivation	.276	.199	.338	.026	.205	.345	.010
Social benefits	<-->	Hedonic benefits	.596	.526	.664	.009	.524	.657	.010
Social benefits	<-->	Status benefits	.490	.421	.566	.008	.413	.565	.010
Social benefits	<-->	Functional benefits	.440	.357	.507	.013	.360	.511	.010
Social benefits	<-->	Autonomous Motivation	.709	.659	.756	.006	.653	.753	.010
Hedonic benefits	<-->	Status benefits	.284	.224	.384	.002	.204	.355	.010
Hedonic benefits	<-->	Functional benefits	.527	.451	.599	.012	.452	.604	.010
Hedonic benefits	<-->	Autonomous Motivation	.632	.560	.686	.012	.560	.687	.010
Status benefits	<-->	Functional benefit	.517	.426	.600	.007	.421	.597	.010
Status benefits	<-->	Autonomous Motivation	.573	.506	.633	.006	.504	.632	.010
Functional benefits	<-->	Autonomous Motivation	.480	.415	.550	.007	.413	.544	.010

Based on the CFA analysis for the Eqla3 sample N = 1508.

6.4 CFA Analysis: Random sample of Eqla3 sample

In order to provide further validation to the measures, CFA analysis on the retained constructs and their items was conducted on 400 cases randomly selected from the Eqla3 community sample. The ten latent constructs (functional benefits= 3 items, hedonic benefits=3 items, status benefits=2 items, social benefits=3 items, autonomous motivation=3 items, CEB toward other members=2 items, CEB toward the firm=3 items, CEB toward oneself=3 items, purchase intention=2 items, and WOM=3 items) were subject to confirmatory factor analysis to evaluate the analysis of the above measurement model and its scale measure items. The initial test of the full measurement model produced an acceptable model fit to the data (χ^2/df = 1.816, RMSEA = 0.045, SRMR = 0.0437, CFI =0.958, TLI = 0.947, IFI= 0.959, PCLOSE = 0.895). As is evident, the model fit exhibited similar statistics, but generated a small value of the normed Chi-Squares (χ^2/df = 1.816). Therefore, the random sample provides further support and validation to the measurement model.

6.4.1 Convergent Validity: Random sample (N=400)

The random sample derived from Eqla3 sample also supports the convergent validity of the hypothesized constructs. As is evident in Appendix E, the values of AVE ranged from 0.507 to 0.782, which exceeded the recommended value of 0.50 (Bagozzi and Yi 1988). This suggests that each scale of the hypothesised model demonstrates convergent validity. In addition, the standardised loadings for all items are significant and thus provide support for convergent validity. Examination of the construct reliability (CR) exceeded the recommended value of 0.70 (Bagozzi and Yi 2012), suggesting construct reliability. Finally, the most frequent indicator of scale consistency is the Cronbach's alpha test reliability (Roehrich 1993; Bagozzi and Yi 2012). As shown in Appendix E, the value of each construct exceeded the recommended value of 0.70 (Bagozzi and Yi 2012). Overall, the findings provide further evidence of construct and convergent validity of the hypothesized model.

6.4.2 Discriminant Validity for all Constructs Random Sample (N=400)

As shown in Appendix F, the results of the random sample confirm discriminant validity as the AVE for all constructs exceeded the squared correlation with exception of the following pairs:

WOM and purchase intention (Fornell and Larcker 1981). As shown in Appendix F, the correlation between the WOM and purchase intention constructs exceeded the level of 0.80 (i.e., indicating a lack of discriminant validity). The third indicator showed that none of the 95 per cent CI correlations through bootstrapping include the value of 1 in the lower and upper values; thus supporting discriminant validity (Anderson and Gerbing 1988), indicating the WOM and purchase intention are distinct.

6.5 CFA Analysis: Apple Society

As the model fit statistics supported the full measurement model, the same assessments as for the Eqla3 sample were conducted on the Apple Society sample. The same procedures and analyses for assessing the convergent and discriminant validity were conducted on the Apple Society sample. Similarly, CFA with a total of ten latent constructs was examined. The initial test of the CFA for the full measurement model produced a good fit to the data (χ^2/df = 1.983, RMSEA = 0.056, SRMR = 0.0472, CFI = 0.938, TLI = 0.921, IFI=0.939, PCLOSE = 0.090).

6.5.1 Convergent Validity

The same four indicators were considered to assess convergent validity and construct validity. The results showed that the AVE met the recommended criterion of a value of 0.5 suggested by Fornell and Larcker (1981). As can be seen in Table 6.5, the AVE scores ranged from 0.502 to 0.770, suggesting convergent validity. Second, the Cronbach alpha test of reliability demonstrated internal consistency of the scale measures with values ranging from 0.746—0.892. Third, Table 6.5 shows that the construct reliability (CR) for all constructs ranged from moderate, at 0.751 for ‘autonomous motivation’, to high, at 0.894 for ‘WOM’. As all CRs exceeded the cut-off level of 0.70, they were deemed to be reliable (Hair, Ringle and Sarstedt 2011). Finally, Table 6.5 shows the standardised loadings ranged from a moderate 0.679 to high 0.911, and thus support the convergent validity of all constructs.

Table 6.5: CFA Analysis Convergent Validity Results for the Apple Society Sample

	Constructs/items	AVE	Cronbach's alpha	CR	Std reg weights
	Social benefits	0.549	0.759	0.784	
1	The friendship aspect of my relationship with the members of this online community is important to me.				0.686
2	I value the close personal relationships that I have with the members of this online community.				0.716
3	I enjoy spending time with the members of this online community.				0.814
	Hedonic benefits	0.598	0.816	0.817	
1	I entertain myself and stimulate my mind in this community.				0.786
2	I derive fun and pleasure from this community.				0.781
3	I spend some enjoyable and relaxing time.				0.753
	Status benefits	0.635	0.772	0.776	
1	I enhance my status/reputation as product expert in the community.				0.739
2	I reinforce my product-related credibility/authority in the community.				0.851
	Functional benefits	0.562	0.793	0.793	
1	I make better purchase decisions because of this community.				0.714
2	I enhance my knowledge about advances in product, related products and technology from this community.				0.783
3	I obtain solutions to specific product usage-related problems from this community.				0.750
	Autonomous Motivation	0.502	0.746	0.751	
1	I am motivated to participate in the community's activities because I feel better afterwards.				0.729
2	I am motivated to participate in the community's activities because I am able to create value for other members.				0.717
3	I am motivated to participate in the community's activities because I am able to reach personal goals.				0.679
	CEB toward the firm	0.613	0.812	0.825	
1	I make suggestions to improve the iPhone.				0.788
2	I let Apple know of ways to better serve my needs about the iPhone.				0.697
3	I contribute ideas to my firm that could improve the iPhone (4).				0.856
	CEB toward other members	0.770	0.869	0.870	
1	I teach other members to use their iPhone correctly.				0.882
2	I help other members if they seem to have problems with their iPhone.				0.873
	CEB toward oneself	0.510	0.759	0.757	
1	I ask other members for information related to my iPhone.				0.697
2	I search for information on this community about issues related to my iPhone.				0.748
3	I pay attention to other members' interactions regarding iPhone usage.				0.697
	WOM	0.737	0.892	0.894	
1	I refer my acquaintances to the iPhone.				0.810
2	I encourage friends to try the iPhone.				0.911
3	I recommend the iPhone brand to anyone who seeks my advice.				0.852
	Purchase intention	0.615	0.760	0.762	
1	I intend to buy the iPhone the next time I buy.				0.791
2	I would actively search for this brand in order to buy it.				0.778

Based on the CFA analysis for the Apple society sample N = 320.

6.5.2 Discriminant Validity

The same two steps and analysis applied to the Eqla3 sample were used to evaluate the discriminant validity for the Apple Society sample. The first test compares the AVE in relation to the squared correlation. The second test examines the correlation between two constructs. If this is below 0.80, discriminant validity holds (Bagozzi and Heatherton 1994). The third approach is to examine the 95 per cent CI through bootstrapping among the constructs of correlation (Anderson and Gerbing 1988).

Table 6.6 shows the discriminant validity results for all constructs. The results for the following construct pairs (WOM and purchase intention) were inadequate, in that the AVE was below the squared correlation. For the rest of other pairs of constructs, the AVE values were above the squared correlation, and thus passed Fornell and Larcker (1981) the discriminant validity test. With exception of WOM and purchase intention, the correlation between all these constructs was below 0.80, as shown in Table 6.6. According to Bagozzi and Heatherton (1994), if the correlations between the constructs are below 0.80, this suggests discriminant validity. The third indicator offered support for the discriminant validity of all constructs including the WOM and purchase intention pair constructs. As seen in Table 6.7, the results showed that none of the 95 per cent CIs included the value of 1 in either the lower or upper values (Anderson and Gerbing 1988). Overall, these tests offer further support for discriminant validity among the constructs.

Table 6.6: Discriminant Validity for all Constructs: AVE and Squared Correlation

Constructs	SD	1	2	3	4	5	6	7	8	9	10
Functional benefits	0.113	**0.562**	0.343	0.496	0.291	0.375	0.164	0.071	0.370	0.068	0.065
Social benefits	0.185	0.586	**0.549**	0.340	0.287	0.497	0.232	0.178	0.216	0.014	0.064
Hedonic benefits	0.103	0.704	0.583	**0.598**	0.203	0.475	0.124	0.112	0.315	0.063	0.116
Status benefits	0.176	0.539	0.536	0.451	**0.635**	0.354	0.239	0.208	0.293	0.037	0.093
Autonomous motivation	0.154	0.612	0.705	0.689	0.595	**0.502**	0.469	0.387	0.371	0.058	0.160
CEB toward other members	0.150	0.405	0.482	0.352	0.489	0.685	**0.770**	0.578	0.462	0.094	0.091
CEB toward the firm	0.166	0.267	0.422	0.334	0.456	0.622	0.760	**0.613**	0.245	0.036	0.095
CEB toward oneself	0.114	0.608	0.465	0.561	0.541	0.609	0.680	0.495	**0.510**	0.127	0.088
WOM	0.115	0.261	0.120	0.251	0.193	0.240	0.306	0.191	0.357	**0.737**	0.774
Purchase intention	0.180	0.255	0.253	0.341	0.305	0.400	0.301	0.308	0.297	0.880	**0.615**

Note: Correlations are below the diagonal, squared correlations are above the diagonal, and AVE estimates are presented on the diagonal. SD refers to standard deviation. Based on the CFA analysis for the Apple society sample N = 320.

Table 6.7: Discriminant Validity for all Constructs: 95 Per cent CI of Correlation

Paths			Correlation	Bias-corrected Percentile Method			Percentile Method		
Parameter			Estimate	Lower	Upper	P	Lower	Upper	P
CEB toward other members	<-->	CEB toward the Firm	.760	.628	.849	.016	.647	.865	.010
CEB toward other members	<-->	CEB toward oneself	.680	.506	.788	.016	.516	.800	.010
CEB toward Others	<-->	WOM	.306	.159	.448	.012	.159	.449	.010
CEB toward other members	<-->	Purchase intention	.301	.133	.440	.019	.144	.456	.010
CEB toward other members	<-->	Social benefits	.482	.331	.626	.011	.335	.627	.010
CEB toward other members	<-->	Hedonic benefits	.352	.198	.469	.015	.204	.480	.010
CEB toward other members	<-->	Status benefits	.489	.320	.628	.010	.320	.628	.010
CEB toward other members	<-->	Functional benefits	.405	.245	.513	.012	.248	.535	.010
CEB toward other members	<-->	Autonomous Motivation	.685	.554	.807	.007	.540	.796	.010
CEB toward the Firm	<-->	CEB toward oneself	.495	.365	.656	.006	.343	.635	.010
CEB toward the Firm	<-->	WOM	.191	.055	.333	.014	.040	.318	.021
CEB toward the Firm	<-->	Purchase intention	.308	.156	.497	.008	.151	.496	.010
CEB toward the Firm	<-->	Social benefits	.422	.273	.591	.010	.273	.591	.010
CEB toward the Firm	<-->	Hedonic benefits	.334	.176	.446	.014	.190	.449	.010
CEB toward the Firm	<-->	Status benefits	.456	.280	.604	.010	.280	.604	.010
CEB toward the	<-->	Functional benefits	.267	.124	.459	.005	.106	.434	.010

Firm									
CEB toward the Firm	<-->	Autonomous Motivation	.622	.479	.761	.009	.476	.759	.010
CEB toward oneself	<-->	WOM	.357	.168	.511	.014	.184	.514	.010
CEB toward oneself	<-->	Purchase intention	.297	.103	.463	.012	.104	.463	.010
CEB toward oneself	<-->	Social benefits	.465	.339	.618	.006	.320	.612	.010
CEB toward oneself	<-->	Hedonic benefits	.561	.424	.707	.004	.392	.696	.010
CEB toward oneself	<-->	Status benefits	.541	.395	.690	.009	.393	.688	.010
CEB toward oneself	<-->	Functional benefits	.608	.479	.750	.006	.477	.746	.010
CEB toward oneself	<-->	Autonomous Motivation	.609	.456	.762	.010	.456	.762	.010
WOM	<-->	Purchase intention	.880	.760	.962	.013	.764	.964	.010
WOM	<-->	Social benefits	.120	-.033	.271	.094	-.036	.260	.122
WOM	<-->	Hedonic benefits	.251	.088	.381	.013	.102	.387	.010
WOM	<-->	Status benefits	.193	.056	.344	.008	.049	.340	.014
WOM	<-->	Functional benefits	.261	.112	.421	.009	.109	.418	.010
WOM	<-->	Autonomous Motivation	.240	.077	.375	.013	.086	.379	.010
Purchase intention	<-->	Social benefits	.253	.096	.413	.009	.093	.409	.010
Purchase intention	<-->	Hedonic benefits	.341	.185	.534	.013	.191	.550	.010
Purchase intention	<-->	Status benefits	.305	.121	.453	.012	.123	.456	.010
Purchase intention	<-->	Functional benefits	.255	.083	.495	.010	.079	.481	.014
Purchase intention	<-->	Autonomous Motivation	.400	.232	.597	.007	.228	.589	.010
Social benefits	<-->	Hedonic benefits	.583	.460	.727	.006	.444	.714	.010
Social benefits	<-->	Status benefits	.536	.366	.687	.009	.362	.684	.010
Social benefits	<-->	Functional benefits	.586	.495	.755	.002	.454	.698	.010
Social benefits	<-->	Autonomous Motivation	.705	.588	.840	.005	.582	.823	.010
Hedonic benefits	<-->	Status benefits	.451	.319	.592	.006	.298	.588	.010
Hedonic benefits	<-->	Functional benefits	.704	.536	.797	.015	.551	.806	.010
Hedonic benefits	<-->	Autonomous Motivation	.689	.558	.842	.007	.544	.837	.010
Status benefits	<-->	Functional benefit	.539	.351	.679	.012	.361	.681	.010
Status benefits	<-->	Autonomous Motivation	.595	.431	.709	.013	.450	.713	.010
Functional benefits	<-->	Autonomous Motivation	.612	.496	.748	.006	.494	.743	.010

Based on the CFA analysis for the Apple society sample N = 320.

The mixed discriminant validity results between WOM and purchase intention (in the first two tests) are not surprising, since both WOM and purchase intention represent brand loyalty in the marketing literature (Gruen, Osmonbekov and Czaplewski 2005). Previous studies have used WOM and purchase intention to measure brand loyalty (Maxham 2001; Kim and Son 2009). Nevertheless, WOM and purchase intention constitute distinct post-purchase behaviours. Furthermore, the final assessment between the constructs provided evidence of discriminant validity by showing that none of the 95 percentiles confidence intervals of correlation between the two constructs included the value of 1 in either the lower or upper values (Anderson and Gerbing 1988).

6.6 Common Method Bias

Using the Eqla3 sample, the measurement items were subjected to a common method bias test. The extent of common method bias was examined by using Harman's single factor test (Podsakoff et al. 2003). Ten factors with their respective measures were entered in SPSS using exploratory factor analysis with an un-rotated approach. The results suggest that no single factor explained the majority of the variance. The results reveal that the first factor accounts for 28.39 per cent of the variance. Therefore, common method bias is not likely to be a threat to the analyses. The same procedure was applied to Apple Society sample and the Random Elqa3 sample. The results also show no single factor accounted for the majority of the variance. Moreover, the results showed that the first factor accounts for 32.45 for Apple Society sample, and 29.92 for the Random Eqla3 sample, thus suggesting no serious threat to the analyses.

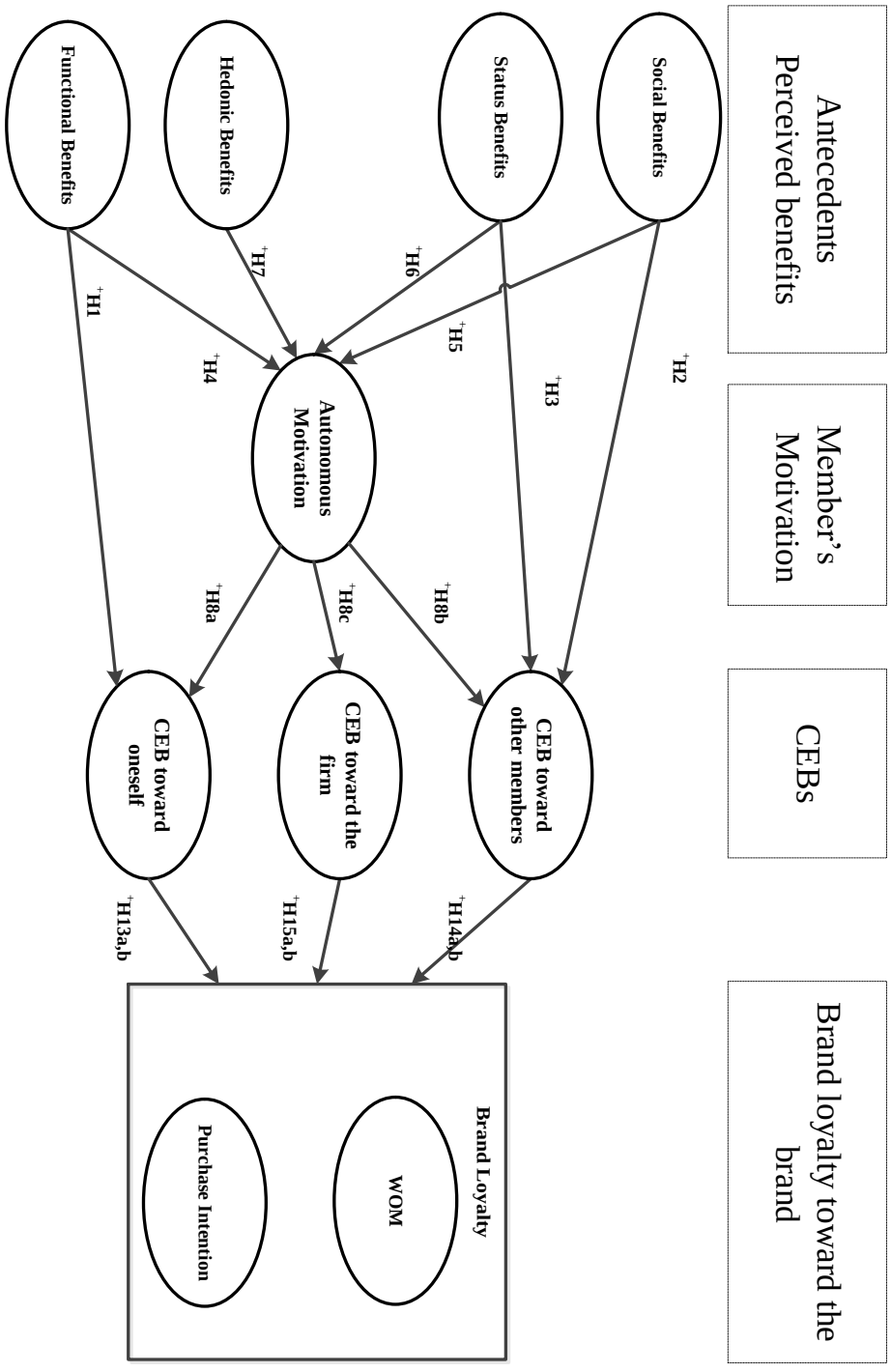
6.7 Structural Model

6.7.1 Hypotheses Testing Procedures and Results

A satisfactory fit was obtained for the measurement model, and therefore it could be regressed for testing the proposed research model. The aim of evaluating the structural model is to determine the theoretical relationships in the CEBs model (depicted in Figure 6.1) by testing whether or not the hypothesised relationships are supported by the data. The hypotheses testing results for the Eqla3 sample are reported first, followed by Apple Society sample, and then the random sample derived from the Eqla3 community to verify the results.

As shown in Figure 6.1, the proposed research model for CEBs in OBCs hypothesised that there is a direct positive relationship between social benefits and CEB toward other members, between status benefits and CEB toward other members, and between functional benefits and CEB toward oneself. Further, the perceived social, hedonic, status and functional benefits are hypothesised to relate positively to a member's autonomous motivation. In turn, a member's autonomous motivation is predicted to relate to the three types of CEB constructs. It is hypothesised that autonomous motivation mediates the relationships between benefits and the three types of CEBs. Further, it is hypothesised that the CEBs (CEB toward oneself, CEB toward other members and CEB toward the firm) has a positive effect on WOM and purchase intention.

Figure 6.1: Proposed Structural Model



Notes: H9a, b, c, H10a, b, c, H11a, b, c, H12 a, b, c propose that autonomous motivation mediates the relationships between the perceived benefits and the three types of CEB.
Note: Self-efficacy as a control variable path to autonomous motivation is not presented for the sake of clarity.

6.7.2 Structural Model Fit: Eqla3 Sample

SEM was employed to test the hypotheses for this study. The first stage of the hypotheses testing was to establish the mediated SEM model (i.e., without the direct paths). The initial test of the structural model produced an unacceptable fit (χ^2/df = 9.799, CFI = 0.858, TLI = 0.837). The examination of MIs for possible improvements to the model suggested a direct path from 'functional benefits' towards 'CEB toward oneself', which was part of the hypothesised relationships. As there is no significant relationship between functional benefits and autonomous motivation, this path was replaced with a path from functional benefits directly to CEB toward oneself. It also suggested that correlating residual errors between the constructs 'CEB toward oneself', 'CEB toward other members' and 'CEB toward the firm' would improve the model fit. Moreover, it suggested that correlating the residual errors between 'WOM' and 'purchase intention' would improve the model fit. This was due to the high correlation between these constructs. In line with the past studies (e.g., Marsh 1990), the residual errors were correlated. After correlating the residual errors, the goodness-of-fit tests showed a good fit to the data (χ^2/df = 4.476, RMSEA = 0.048, SRMR = 0.0443, CFI = 0.945, TLI = 0.936, IFI= 0.945, PCLOSE =0.891). As can be seen, the CFI, IFI, and TLI are all above the expected level of 0.90, while the RMSEA and SRMR are lower than the recommended level of 0.08.

6.7.3 Structural Model Fit: Apple Society

The mediated SEM model was also tested on the Apple Society sample. The structural model produced unacceptable fit results for some of the fit measures (TLI = 0.838, CFI= 0.860, IFI= 0.861), but for others (χ^2/df= 3.020 and RMSEA= 0.080) there was a good fit to the data. The MIs were examined for improvements to the model. They suggested that correlating residual errors between the 'CEB toward oneself', 'CEB toward other members' and 'CEB toward the firm' constructs would improve the model fit. As discussed earlier, this was due to the high correlation between the CEB constructs. It also suggested that correlating the residual errors between 'WOM' and 'purchase intention' would improve the model fit. As per previous studies, the residual errors were correlated (Marsh 1990). The MIs also suggested a direct path from 'functional benefits' towards 'CEB toward oneself', which was one of the hypothesised relationships. As there is no significant relationship between functional benefits and

autonomous motivation, this path was eliminated and placed directly to CEB toward oneself. After correlating the residual errors and adding the path from 'functional benefits' to 'CEB toward oneself', the goodness-of-fit tests showed a good fit to the data (χ^2/df = 2.020, RMSEA = 0.057, SRMR = 0.0547, CFI = 0.930, TLI = 0.919, IFI=0.931, PCLOSE =0.063). As can be seen, the CFI and TLI are both above the expected level of 0.90, while the RMSEA is 0.056, which is well below the recommended level of 0.08.

6.7.4 Structural Model Fit: Random Eqla3 sample (N=400)

Following the previous modifications (i.e., direct path from functional benefits towards CEB toward oneself, correlating residual errors between CEB constructs and between WOM and purchase intention), the structural model produced acceptable model fit to the data (χ^2/df = 1.859, RMSEA = 0.046, SRMR = 0.0508, CFI = 0.952, TLI = 0.945, IFI=0.953, PCLOSE =0.836). As is evident, the goodness-of-fit showed good fit to the data and therefore supported the previous results.

6.7.5 Nomological Validity of the Hypothesised Model

As evident in Table 6.8, the result of the hypothesised model across the three samples produced consistent results with the exception of the following relationships: CEB toward the firm and WOM and purchase intention ('CEB toward the firm and purchase intention', 'CEB toward the firm and WOM', and 'CEB toward other members and WOM'). More specifically, the effect of CEB toward the firm on purchase intention was positive and significant in the Eqla3 Sample and the Random Eqla3 sample but not for the Apple Society sample. Furthermore, the effect of CEB toward the firm on WOM was positive and significant in the Random Eqla3 sample and negative and insignificant for the other two samples.

Table 6.8: SEM results for the hypothesized model

Paths		Eqla3 Sample (N=1508)		Apple Society Sample (N=320)		Random sample (N=400)	
		P-value	β	P-value	β	P-value	β
	Functional benefits and CEB toward oneself		0.417	***	0.409	***	0.288
	Social benefits and autonomous motivation	***	0.391	***	0.388	***	0.387
	Status benefits and autonomous motivation	***	0.332	***	0.369	***	0.316
	Hedonic benefits and autonomous motivation	***	0.275	***	0.306	***	0.305
	Autonomous motivation and CEB toward oneself	***	0.207	***	0.409	***	0.344
	Autonomous motivation and CEB toward other members	***	0.496	***	0.673	***	0.519
	Autonomous motivation and CEB toward the firm	***	0.526	***	0.627	***	0.518
	CEB toward oneself and WOM	***	0.469	0.003	0.301	***	0.557
	CEB toward other members and WOM	0.225	ns -0.084	0.237	ns 0.158	0.070	ns -0.207
	CEB toward the firm and WOM	0.311	ns 0.053	0.486	ns -0.077	0.009	0.218
	CEB toward oneself and purchase intention	***	0.382	0.039	0.223	***	0.451
	CEB toward other members and purchase intention	0.075	ns -0.137	0.947	ns -0.010	0.097	ns -0.207
	CEB toward the firm and purchase intention	***	0.263	0.085	ns 0.210	***	0.376

Model Fit Indices: (Eqal3 sample = (χ^2/df = 4.476, RMSEA = 0.048, SRMR = 0.0443, CFI = 0.945, TLI = 0.936, IFI= 0.945, PCLOSE =0.891).
Model Fit Indices: (Apple Society Sample χ^2/df = 2.020, RMSEA = 0.057, SRMR = 0.0547, CFI = 0.930, TLI = 0.919, IFI=0.931, PCLOSE =0.063).
Model Fit Indices: (Random Sample = (χ^2/df = 1.859, RMSEA = 0.046, SRMR = 0.0508, CFI = 0.952, TLI = 0.945, IFI=0.953, PCLOSE =0.836).

As the three CEBs are highly correlated constructs, it is not appropriate to test their direct and mediating effects in a single model (Vivek 2009; Seo and Scammon 2014). This is due to multicollinearity, which refers to instances where a high correlation between the predictive constructs would cause biased estimate results (Rosenthal 2013). Multicollinearity is a common issue in the marketing literature and often occurs when a construct is either correlated due to its nature or it is comprised of multiple dimensions/components (Bagozzi and Yi 2012). In this study, the CEB towards the firm, CEB towards oneself, and CEB towards members represent dimensions of customer engagement behaviours in online brand communities.

A common outcome of multicollinearity is that a true positive (negative) effect turns out to be non-significant or even changes its sign from negative to positive (or vice versa) (Bagozzi and Yi 2012). The existing literature shows two considerations that can be used to overcome

problems with the efficiency of parameter estimates and avoid false inferences due to high correlation. According to Grewal et al. (2004) one way to avoid the associated problems with highly correlated constructs is to consider these correlated constructs as a second-order construct. Creating a second-order construct provides a way to address forms of multi-collinearity caused by high correlations between constructs that are part of an overarching multi-dimensional construct i.e., the three CEBs represent the multi-dimensional brand engagement behaviours construct (Bagozzi and Yi 2012; Grewal et al. 2004). The second consideration is to create 'separate structural models' for the correlated constructs (Currivan 1999). Recently, Vivek (2009) created two separate models for a main model entitled 'Consumer engagement: A multi-method approach to construct, theory and measure development', due to high correlation between the dependent constructs. Similarly, Seo and Scammon (2014) created two models or two equations due to high correlation between two predictor variables.

Based on the previous approaches addressing high correlation between constructs and how to overcome the biased estimates of the dependent constructs, two structural models were tested in this study. The first model was comprised of three components (CEB toward oneself, CEB toward other members and CEB toward the firm) as a second-order construct, as seen in Figures 6.2, 6.3 and 6.4. The second approach involved three separate models to test and evaluate hypotheses 1 through to 15. The first model is for CEB toward oneself (Figure 6.5), the second is for CEB toward other members (Figure 6.6), and the third is for CEB toward the firm (Figure 6.7). Below are the structural models and results that were regressed to test the hypotheses. The second-order CEB model results are presented first, followed by the results for the individual CEB models (i.e., separate models for each CEB construct).

According to Bagozzi and Yi (2012, 25) some forms of multicollinearity occur because some constructs are highly correlated by nature as they refer to "a common event or target or because they influence each other'. Bagozzi and Yi (2015) present 'cognitive', 'emotional' and 'evaluative' social identity as an example of highly correlated constructs. When these aspects of social identity function as predictors, the correlations among these aspects cause multicollinearity (Bagozzi and Yi 2012). This is also the case for the brand engagement construct recently developed by Hollebeek et al. (2014). The authors identify three dimensions including cognitive processing, affection, and activation as first order constructs in order to

capture consumer's brand engagement. The authors also report high correlations among these dimensions exceeding the value of 0.8. Despite these correlations, the construct validity of these dimensions of brand engagement was established (Hollebeek et al. 2014). A closer look at the work of Hollebeek et al. (2014) indicates that these three dimensions refer to interactive experiences related to brand interactions. Similarly, CEB constructs refer to a common theme of behavioural activities/manifestations in online brand communities. Thus, these components of CEB are expected to incur high correlation but they are theoretically and statistically distinct. Prior research also validates and supports the uni-dimensionality of CEB constructs (Yi and Gong 2013; Bove et al. 2009). Generally, these three CEB constructs have not been examined together in a single research study. For instance, Dholakia et al. (2009) examined two distinct types of CEB (toward other members and the brand in terms of seeking information). Their study shows that these constructs are conceptually and statistically distinct from each other. Nambisan and Baron (2010) also examined contribution to the community and the company as constructs in the context of online brand community. Verleye et al. (2014) supported both the conceptual level and the uni-dimensionality of CEB toward other customers and CEB toward the firm. In light of this evidence, the three types of correlated CEB constucts are assumed to be conceptually distinct from each other. Furthermore, the discriminant analysis results for these constructs reported in the preceding section show they are also statistically distinct.

The rationale of separating the hypothesised model into three separate SEM models (i.e., each model comprising a CEB construct) is to avoid problems with the standardized estimates due to multicollinearity among the three CEB constructs. As mentioned earlier, the main issue of the existence of multicollinearity among the predictors is the potential issue of inaccurate estimation of coefficients and standard errors (Grewal et al. 2004; Bagozzi and Yi 2012). The Eqal3 sample was examined for multicollinearity through the variance inflation factors (VIF) test. The results showed that the inflation between CEB toward other members and WOM (13.654), CEB toward the firm and purchase intention (11.507), CEB toward the firm and WOM (11.592), CEB toward oneself and purchase intention (14.098), CEB toward oneself and WOM (13.197) all exceeded the value of 10. A VIF of 10 and greater is considered a harmful sign of collinearity (Mason and Perreault 1991). As evident in Table 6.8, the stability of the SEM results of the hypothesised model in the following relationships 'CEB toward the firm and purchase intention', 'CEB toward the firm and WOM', and 'CEB toward other members and WOM' are not consistent in relation to the statistical significance and the sign direction

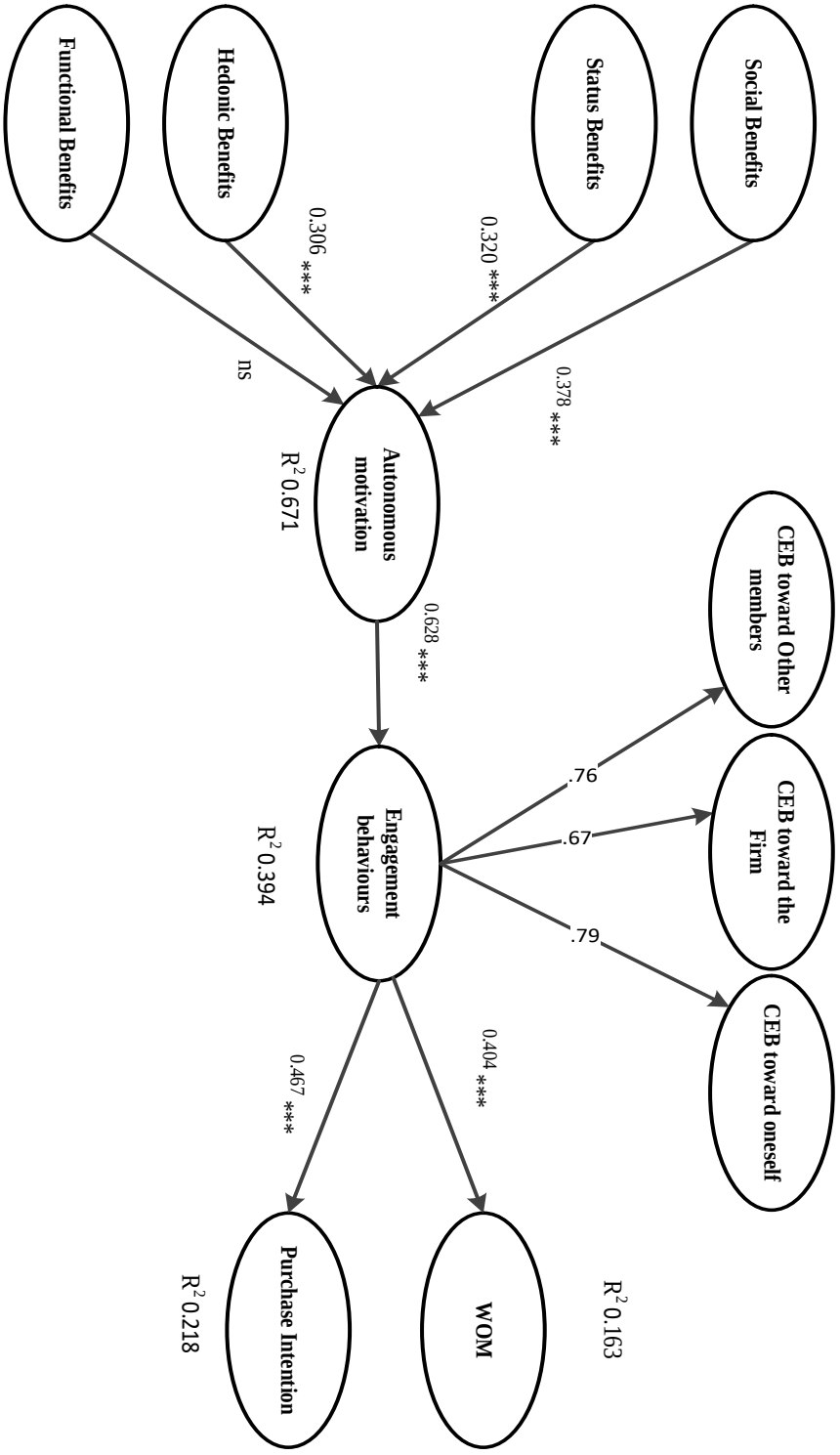
across the three samples. That is, both the VIF test and the inconsistency of SEM results suggest that there are multicollinearity issues.

In order to provide accurate interpretations of the research hypotheses, a second-order model and three separate SEM models were created as remedies of multicollinearity issues (Bagozzi and Yi 2012; Seo and Scammon 2014). Since one of the research objectives is to examine the impact of each CEB construct on purchase intention and WOM, a second-order model would not serve the research objective. Though, the results of the second-order models helped to provide consistent results across the three samples. Most importantly, the results of the second-order models confirm that there is a significant linkage between CEB constructs and purchase intention and WOM. In order to meet the research objective, three SEM models were created to test the individual impact of each CEB construct on purchase intention and WOM.

6.7.6 Second-order Structural Model Results

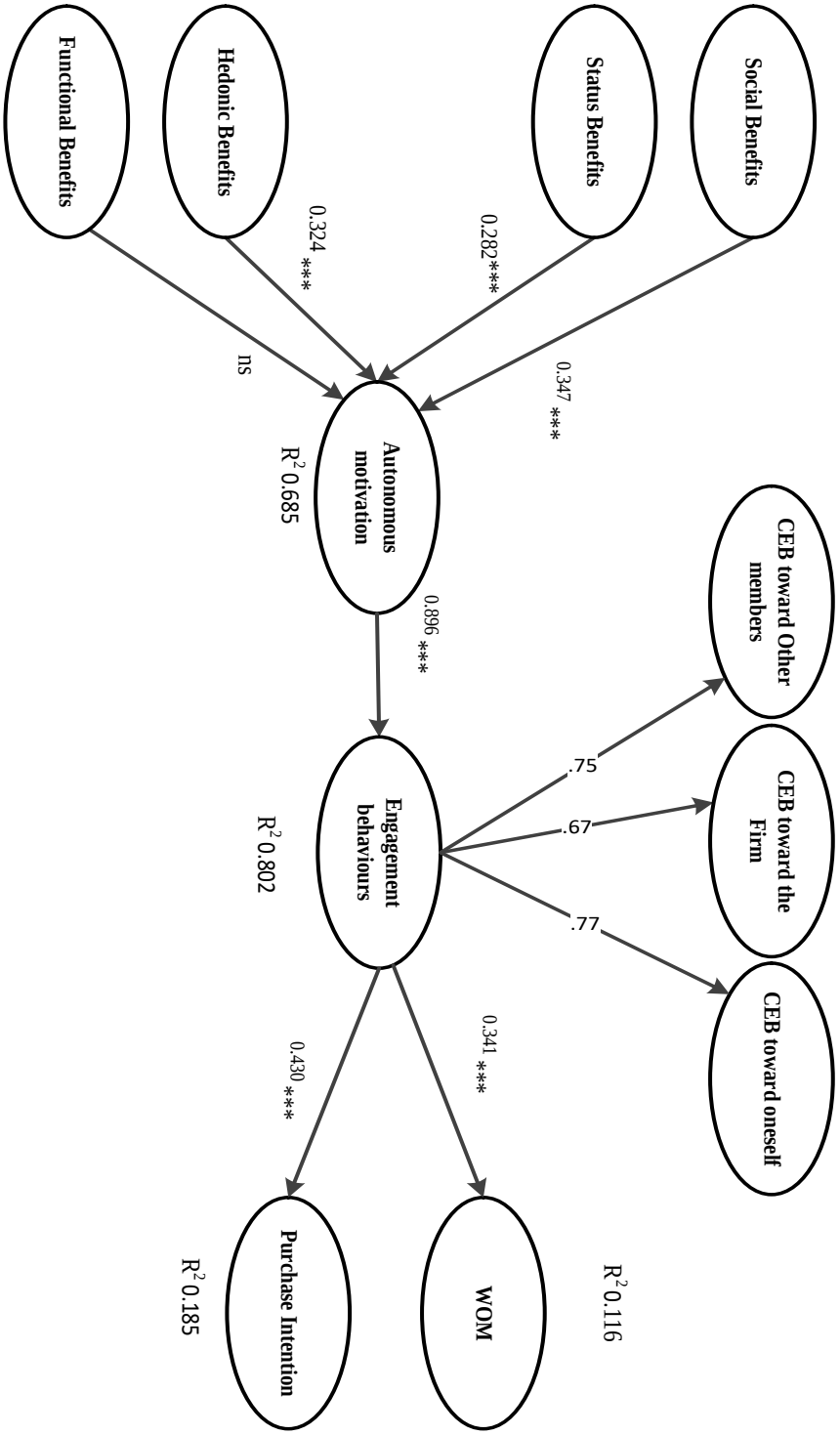
First, the results of the second-order model construct are presented followed by the results of the separate models. Figures 6.2, 6.3 and 6.4 are illustrations of the second-order structural models of CEB in OBCs for all samples. As evidenced by the model fit statistics listed below each figure, the second-order structural models produced an acceptable fit to the data for all samples.

Figure 6.2: Structural Model Second-order CEB Construct (Eqla3 Sample)



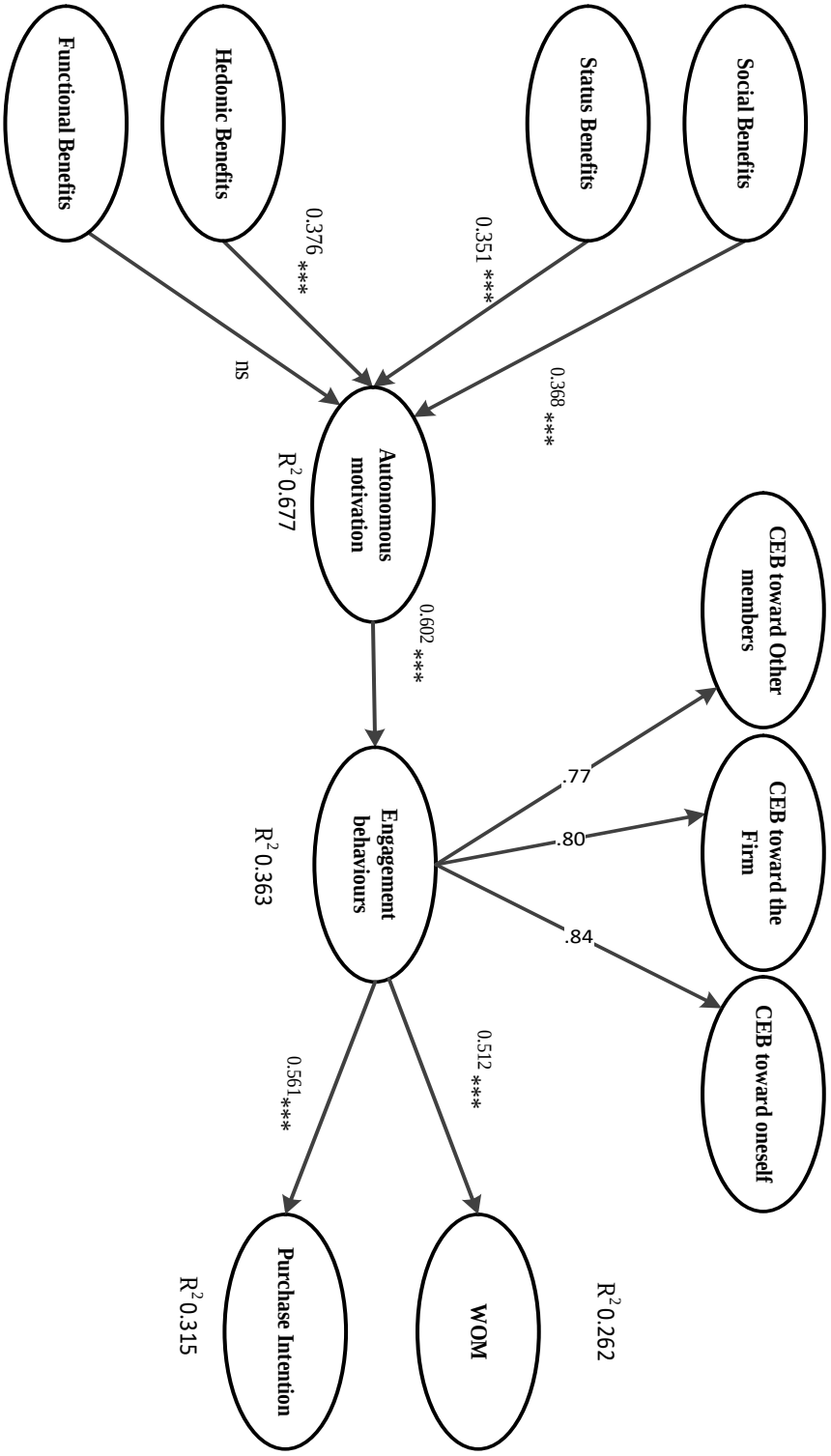
Model fit for the Eqla3 sample: $\chi^2/df = 5.178$, RMSEA = 0.053, SRMR = 0.0542, CFI = 0.933, TLI = 0.923; IFI= 0.933; PCLOSE= 0.044. Note: Values on the arrows are the standardised regression weights: *p < .0.05, **p < 0.01, ***p < 0.001. R^2 = (Squared Multiple Correlation). Factor loadings for CEBs are presented.

Figure 6.3: Structural Model Second-CEB Construct (Apple Society Sample)



Model fit for Apple Society sample: $\chi^2/df = 2.115$, RMSEA = 0.059, SRMR = 0.0571, CFI = 0.923, TLI = 0.911; IFI= 0.924; PCLOSE= 0.011. Note: Values on the arrows are the standardised regression weights: *p < .0.05, **p < 0.01, ***p < 0.001. R^2 = (Squared Multiple Correlation). Factor loadings for CEBs are presented.

Figure 6.4: Structural Model Second-CEB Construct (Random Eqla3 sample N= 400)



Model fit for Random Eqla3 sample: $\chi^2/df = 1.981$, RMSEA = 0.050, SRMR = 0.0593, CFI = 0.945, TLI = 0.937; IFI= 0.946; PCLOSE= 0.539. Note: Values on the arrows are the standardised regression weights: *p < .0.05, **p < 0.01, ***p < 0.001. R^2 = (Squared Multiple Correlation). Factor loadings for CEBs are presented.

As seen in Figures 6.2, 6.3 and 6.4, the standardised path coefficient results of the second-order structural model revealed that three of the perceived benefits (social benefits, hedonic benefits, and status benefits) positively and significantly impacted on members' autonomous motivation, while functional benefits had an insignificant relationship to member's autonomous motivation across all three samples. The results also show that autonomous motivation is positively and significantly related to CEB as a second-order construct. The paths from CEB to WOM and to purchase intention were both positive and significant for all three samples.

The squared multiple correlation data in Figures 6.2, 6.3, and 6.4 show the proportion of the variance in each of the endogenous constructs that is explained by the other constructs in the research model. For example, 62 per cent (Eqla3 sample) and 89 per cent (Apple Society sample) of the variance in the 'autonomous motivation' construct is explained by the perceived benefits constructs (social, hedonic, status, and functional benefits), while 40 per cent (Eqla3 sample) and 80 per cent (Apple Society sample) of the variance in the 'CEB' construct is explained by autonomous motivation. For all three samples, the engagement behaviours explained substantive proportions of variance in WOM (Eqla3 sample: 16 per cent, Apple Society sample: 11 per cent, Random Eqla3 sample: 26 per cent) and purchase intention (Eqla3 sample: 21 per cent, Apple Society sample: 18 per cent, Random Eqla3 sample: 32 per cent).

6.7.7 Three Separate Structural Models of CEB

As mentioned earlier, due to the multicollinearity between the CEB constructs, the next section reports the results for the three separate structural models that test the hypothesised relationships between perceived benefits and the three types of CEB, and the individual impact of each CEB on WOM and purchase intention.

A good model fit was achieved for the three separate structural models for all samples. The goodness-of-fit of the three structural models are presented below in Tables 6.9, 6.10, and 6.11. Next, the results for hypotheses H1 through to H15 will be reported based on the results for the second order CEB model (Figures 6.5, 6.6, and 6.7) and separate CEB models (Tables 6.9, 6.10, and 6.11)

Figure 6.5: Structural Model: CEB toward Oneself

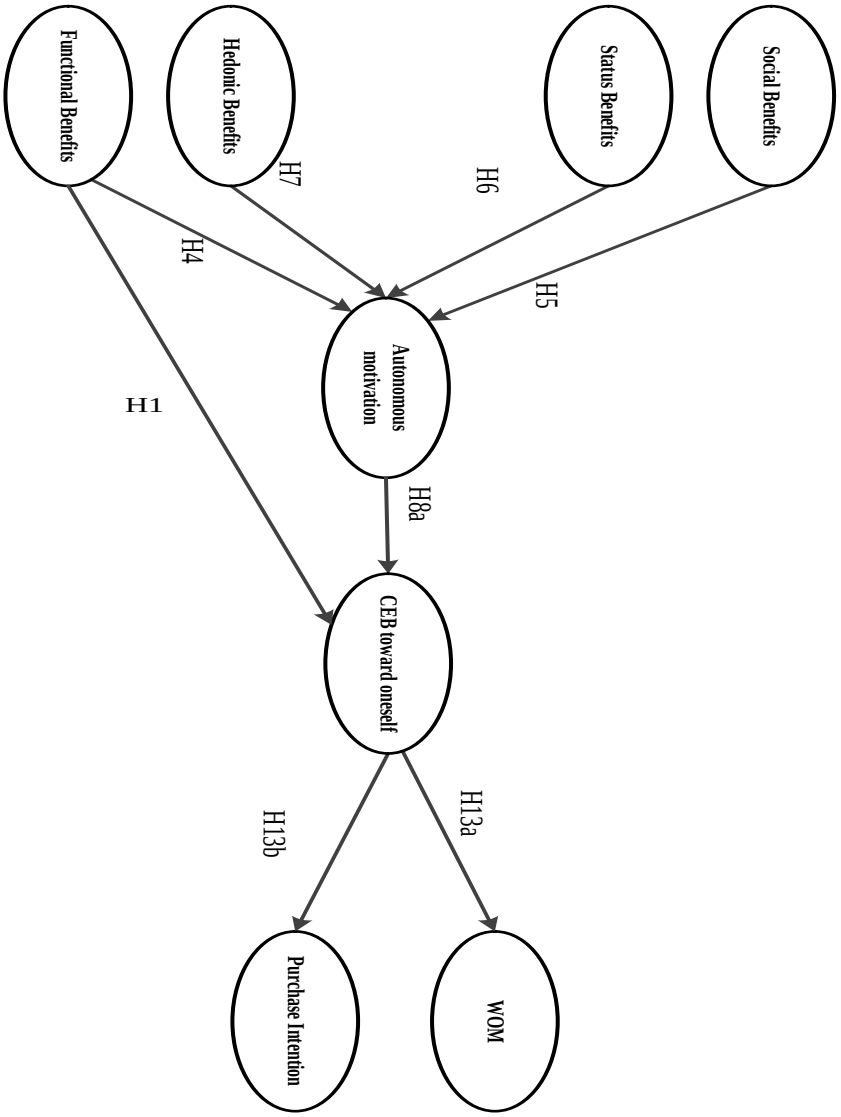


Table 6.9: Fit Indices for the Structural Model for CEB toward Oneself

	χ^2/df	RMSEA	SRMR	CFI	TLI	IFI	PCLOSE
Eqla3 sample	4.383	0.047	0.0432	0.952	0.943	0.952	0.905
Apple Society sample	1.970	0.055	0.0575	0.942	0.931	0.943	0.146
Random Eqla3 sample	1.836	0.046	0.0512	0.958	0.950	0.958	0.822

Figure 6.6: Structural Model: CEB toward Other Members

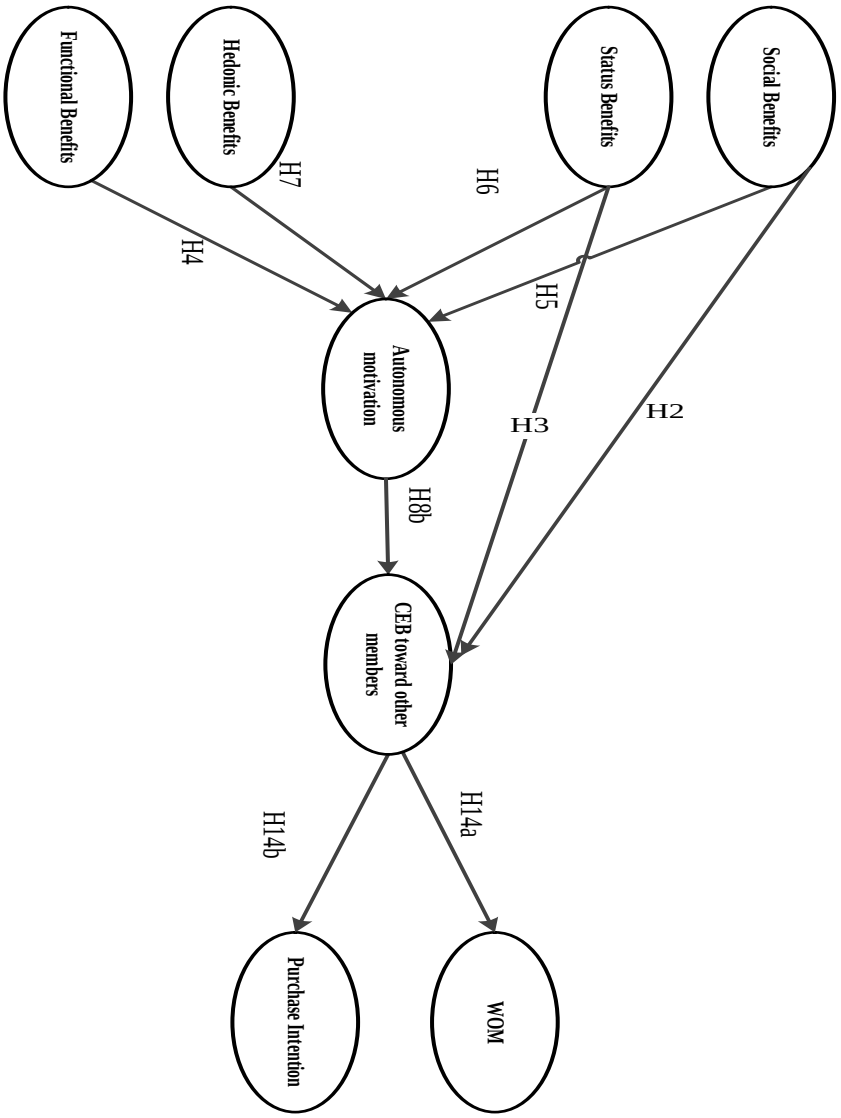


Table 6.10: Fit Indices for the Structural Model for CEB toward Other Members

	χ^2/df	RMSEA	SRMR	CFI	TLI	IFI	PCLOSE
Eqla3 sample	4.849	0.051	0.0543	0.951	0.941	0.951	0.391
Apple Society sample	1.951	0.055	0.0603	0.950	0.939	0.951	0.185
Random Eqla3 sample	1.1993	0.050	0.0629	0.955	0.945	0.955	0.498

Figure 6.7: Structural Model: CEB toward the Firm

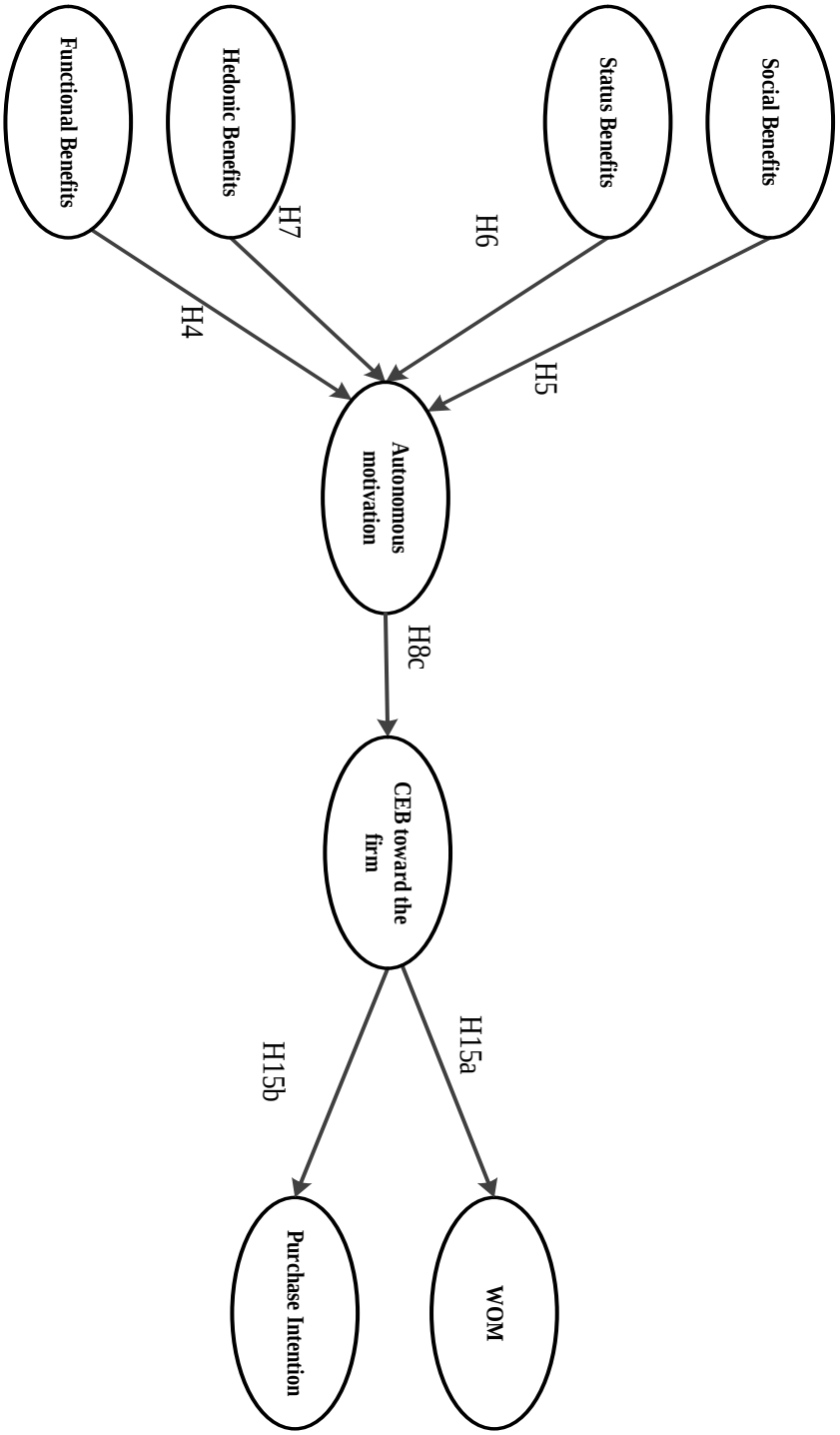


Table 6.11: Fit Indices for the Structural Model for CEB toward the Firm

	χ^2/df	RMSEA	SRMR	CFI	TLI	IFI	PCLOSE
Eqla3 sample	4.856	0.051	0.0590	0.949	0.939	0.949	0.377
Apple Society	2.048	0.057	0.0692	0.939	0.928	0.940	0.066
Random Eqla3 sample	1.986	0.050	0.0644	0.954	0.946	0.955	0.516

The first three hypotheses (shown in figure 6.5 and 6.6) tested the prediction that there are direct effects between 'functional benefits' and 'CEB toward oneself', between 'social benefits' and 'CEB toward other members' and between 'status benefits' and 'CEB toward other members'. These relationships are tested prior to the testing of autonomous motivation as a mediator of these relationships:

H1: Functional benefits positively influence CEB toward oneself.
H2: Social benefits positively influence CEB toward other members.
H3: Status benefits positively influence CEB toward other members.

Table 6.12 shows the results of the direct effects model for both samples (i.e., Eqla3 sample and Apple Society sample). It is important to note that the results presented on the Table 6.12 are derived from 'CEB toward oneself model' and 'CEB toward other members model' (as shown in Figure 6.5 and 6.6) without including the mediator in these models. As predicted, the standardised path coefficient for 'functional benefits' to 'CEB toward oneself' is positive and significant for both samples (Eqla3 sample = H1: $\beta = 0.387$, P-value ≤ 0.05; Apple Society sample = H1: $\beta = 0.338$, P-value ≤ 0.05). The results also show that there is a direct positive link from 'social benefits' to 'CEB toward other members' for both samples (Eqla3 sample = H2: $\beta = 0.242$, P-value ≤ 0.05; Apple Society sample = H2: $\beta = 0.288$, P-value ≤ 0.05). As predicted, the standardised path from 'status benefits' to 'CEB toward other members' was also positive and significant for both samples (Eqla3 sample = H3: $\beta = 0.328$, P-value ≤ 0.05; Apple Society sample = H3: $\beta = 0.279$, P-value ≤ 0.05. As shown in Table 6.12, the strongest effect is the relationship between 'functional benefits' to 'CEB toward oneself' for both samples.

The SEM results for the Random Eqla3 sample (direct effects) presented in Table 6.12 also confirm the direct effects. Specifically, the results reveal that there is a direct link between functional benefits and CEB toward oneself (Random sample = H1: $\beta = 0.296$, P-value ≤ 0.05). Further, the results also show that there is a direct positive link from 'social benefits' to 'CEB toward other members' (Random sample = H2: $\beta = 0.276$, P-value ≤ 0.05). Finally, the results find significant and positive relationships between status benefits and 'CEB toward other members' (Random sample = H3: $\beta = 0.272$, P-value ≤ 0.05).

Table 6.12: Results for H1–H3 (Direct Effects)

H	Paths	Eqla3 sample		
		P-value	β	Results
H1	Functional benefits and CEB toward oneself	***	0.387	Supported
H2	Social benefits and CEB toward other members	***	0.242	Supported
H3	Status benefits and CEB toward other members	***	0.328	Supported
		Apple Society sample		
H1	Functional benefits and CEB toward oneself	0.002	0.338	Supported
H2	Social benefits and CEB toward other members	0.002	0.288	Supported
H3	Status benefits and CEB toward other members	0.001	0.279	Supported
		Random Eqla3 sample		
H1	Functional benefits and CEB toward oneself	***	0.296	Supported
H2	Social benefits and CEB toward other members	0.003	0.276	Supported
H3	Status benefits and CEB toward other members	0.001	0.272	Supported

Note: *** indicates a p-value less than 0.001.

As can be seen from the research models depicted in Figures 6.5, 6.6, and 6.7, this study predicts that autonomous motivation mediates the relationship between the benefit constructs and the CEBs. Thus, it was hypothesised that perceived benefits in OBCs have a positive effect on autonomous motivation to engage in CEBs. In turn, autonomous motivation has a positive effect on the three types of CEB. The next section presents the results of the mediation effects.

H4: The perceived functional benefit of participating in an OBC is positively related to a customer's autonomous motivation to engage in the brand community.

H5: The perceived social benefit of participating in an OBC is positively related to a customer's autonomous motivation to engage in the brand community.

H6: The perceived status benefit of participating in an OBC is positively related to a customer's autonomous motivation to engage in the brand community.

H7: The perceived hedonic benefit of participating in an OBC is positively related to a customer's autonomous motivation to engage in the brand community.

H8a: Autonomous motivation to engage in an OBC has a positive influence on CEB toward oneself.

H8b: Autonomous motivation to engage in an OBC has a positive influence on CEB toward other members.

H8c: Autonomous motivation to engage in an OBC has a positive on CEB toward the firm.

Table 6.13 shows the results of the following hypotheses H4 through to H8a, 8b, and 8c. As shown in Table 6.13, the path from functional benefits to autonomous motivation (H4) was insignificant in the three SEM models for both samples. Therefore, H4 was not supported and the relationship between functional benefits and CEBs were not meditated by autonomous motivation (thus rejecting H9a, 9b, & 9c).

As predicted, the path between social benefits and autonomous motivation (H5) is positive and significant in the three SEM models for both samples, thereby supporting the contention that close relationships and friendships with community members are strongly associated with a member's autonomous motivation to engage in brand community activities. Further, the results in Table 6.13 support a positive and significant path from status benefits to autonomous motivation (H6) in the three SEM models, for both samples. These results underline the importance of status in driving a member's autonomous motivation to engage in the brand community. Further, the path of the hedonic benefits towards autonomous motivation (H7) was positive and significant in the three SEM models for both samples. This supports the important role of hedonic benefits as a strong predictor of members' autonomous motivation.

Thus, the results found support to H5, H6, and H7 of this study, which postulate that perceived social, status and hedonic benefits are positive and significant predictors of autonomous motivation to engage in both samples. However, the results do not support H4, which tested the positive impact of functional benefits on autonomous motivation.

The results of the first separate SEM model (CEB toward oneself) showed that the path from autonomous motivation to CEB toward oneself (H8a) was positive and significant for both samples. Similarly, the results of the second SEM model (CEB toward other members) showed that the path from autonomous motivation to CEB toward other members (H8b) was also positive and significant for both samples. Finally, the results of the third SEM model (CEB toward the firm) showed that the path from autonomous motivation to CEB toward the firm

(H8c) was also positive and significant for both samples. Therefore, it can be concluded that H8a, H8b, H8c are supported.

Table 6.13: Results for the H4, H5, H6, H7 to H8a, 8b, and 8c

		Eqla3 Sample		**Apple Society Sample**	
Hypotheses		**P-value**	**β**	**P-value**	**β**
CEB toward oneself Model					
H4	Functional benefits towards autonomous motivation	0.652 ns	-0.018	0.873 ns	0.016
H5	Social benefits towards autonomous motivation	***	0.367	***	0.393
H6	Status benefits towards autonomous motivation	***	0.307	0.008	0.209
H7	Hedonic towards autonomous motivation	***	0.332	***	0.348
H8a	Autonomous motivation towards CEB toward oneself	***	0.354	***	0.593
Model Fit Indices: (Eqla3 Sample = χ^2/df =5.110, RMSEA = 0.052, SRMR = 0.0575, CFI = 0.941, TLI = 0.931, IFI=0.942, PCLOSE= 0.124). Model Fit Indices: (Apple Society Sample = χ^2/df =2.070, RMSEA = 0.058, SRMR = 0.0610, CFI = 0.936, TLI = 0.924, IFI=0.937, PCLOSE= 0.052).					
CEB toward other members Model					
H4	Functional benefits towards autonomous motivation	0.625 ns	-0.018	0.705 ns	0.016
H5	Social benefits towards autonomous motivation	***	0.367	***	0.393
H6	Status benefits towards autonomous motivation	***	0.307	0.008	0.209
H7	Hedonic towards autonomous motivation	***	0.332	***	0.348
H8b	Autonomous motivation towards CEB other members	***	0.476	***	0.689
Model Fit Indices: (Eqla3 Sample = χ^2/df =5.080, RMSEA = 0.052, SRMR = 0.0570, CFI = 0.947, TLI = 0.937, IFI=0.948, PCLOSE= 0.158). Model Fit Indices: (Apple Society Sample = χ^2/df =1.949, RMSEA = 0.055, SRMR = 0.0615, CFI = 0.950, TLI = 0.940, IFI=0.950, PCLOSE= 0.188).					
CEB toward the Firm Model					
H4	Functional benefits towards autonomous motivation	0.561 ns	-0.018	0.762 ns	0.016
H5	Social benefits towards autonomous motivation	***	0.367	***	0.393
H6	Status benefits towards autonomous motivation	***	0.307	0.008	0.264
H7	Hedonic towards autonomous motivation	***	0.332	***	0.337
H8c	Autonomous motivation towards CEB toward the firm	***	0.516	***	0.634
Mode Fit Indices: (Eqla3 Sample = χ^2/df =4.856, RMSEA = 0.051, SRMR = 0.0590, CFI = 0.949, TLI = 0.939, IFI=0.949, PCLOSE= 0.377). Mode Fit Indices: (Apple Society Sample = χ^2/df =2.048, RMSEA = 0.057, SRMR = 0.0692, CFI = 0.939, TLI = 0.928, IFI=0.940, PCLOSE= 0.066).					

Note: *** indicates a P-value less than 0.001. ns refers to not significant.

As the path of functional benefits towards autonomous motivation was insignificant for both samples, H9a, H9b, H9c (which tests the relationships between functional benefits and the three types of CEBs) will not be included in the mediation analysis.

The role of autonomous motivation is hypothesised to be either a partial or full mediator of the relationship between the social, status and hedonic benefits, and the three types of CEB. Hypotheses H10b and H11b argue that autonomous motivation will partially mediate the relationships between social benefits and CEB towards other members, and the same relationship between status benefits and CEB towards other members. While H10a & c, H11a & c, and H12a, b & c argue for full mediation.

H10a: Autonomous motivation to engage in an OBC fully mediates the positive relationship between social benefits and CEB toward oneself.

H10b: Autonomous motivation to engage in an OBC partially mediates the positive relationship between social benefits and CEB toward other members.

H10c: Autonomous motivation to engage in an OBC fully mediates the positive relationship between social benefits and CEB toward the firm.

H11a: Autonomous motivation to engage in an OBC fully mediates the positive relationship between status benefits and CEB toward oneself.

H11b: Autonomous motivation to engage in an OBC partially mediates the positive relationship between status benefits and CEB toward other members.

H11c: Autonomous motivation to engage in an OBC fully mediates the positive relationship between status benefits and CEB toward the firm.

H12a: Autonomous motivation to engage in an OBC fully mediates the positive relationship between hedonic benefits and CEB toward oneself.

H12b: Autonomous motivation to engage in an OBC fully mediates the positive relationship between hedonic benefits and CEB toward other members.

H12c: Autonomous motivation to engage in an OBC fully mediates the positive relationship between hedonic benefits and CEB toward the firm.

Recently, Zhao et al. (2010) criticized Baron and Kenny's approach for mediation procedures. Therefore, the current study follows Zhao et al's. (2010) approach to mediation analysis. According to Zhao et al. (2010), the significance of the indirect effect of (a × b) is required to establish mediation. The authors classified three patterns of mediation based on the significance of the indirect effect (a × b). These patterns are as follows:

1. If the indirect effect is significant (a × b) and the direct effect (c) is also significant and all point at the same direction (i.e., positive), it refers to complementary mediation.

2. If the indirect effect is significant (a × b) and the direct effect (c) is also significant but they point in opposite direction, it refers to competitive mediation.

3. If the indirect effect is significant (a × b) but the direct effect (c) is not, it refers to indirect-only-mediation.

In order to run this type of mediation analysis, Zhao et al. (2010) recommended Preacher and Haye's (2008) macro for mediation with bootstrap sample of 5000 (95% confidence interval). Following the Zhao et al. (2010) approach, the findings of Apple Society sample (N=320) and the Eqal3 sample (N=1508) are presented in Table 6.14.

6.7.7.1 CEB toward Oneself Model results

The results showed that the indirect effect (a × b) of social benefits on CEB toward oneself through autonomous motivation was significant (Apple Society sample: β=0.4897, P=0.000, SE= 0.0469, 95% CI= .3974 to .5826, Eqal3 Sample: β=0.2473, P=0.000, SE= 0.0370, 95% CI= .17325 to .3212). However, the result of the direct effect (c) of social benefits on CEB toward oneself for Apple Society sample (H10a: β= -0.0364, P=0.4970) was insignificant,

indicating indirect-only mediation. The result of the same path was found significant for the Eqal3 Sample (H10a: β= 0.1973, P=0.000), indicating complementary mediation.

The results showed the existence of indirect effects (a × b) of status benefits on CEB toward oneself through autonomous motivation (Apple Society sample: β=0.2792, P=0.000, SE= 0.0318, 95% CI= .2219 to .3464, Eqal3 Sample: β=0.1968, P=0.000, SE= 0.0208, 95% CI= .1567 to .2375). The result of the direct effect (c) suggest significant effects for both samples (Apple Society sample: H11a: β= 0.1961, P=0.000; Eqal3 Sample: H11a: β= 0.0504, P=0.3281). Thus, the significance effects of these results suggest complementary mediation.

The indirect effect (a × b) of hedonic benefits on CEB toward oneself through autonomous motivation was significant (Apple society sample: β=0.4110, P=0.000, SE= 0.0603, 95% CI= .3009 to .5381, Eqal3 Sample: β=0.2151, P=0.000, SE= 0.0280, 95% CI= .1628 to .2720). The direct effect (c) of hedonic benefits on CEB toward oneself was also significant relationship for both samples (Apple society sample: H12a: β= 0.2161, P=0.0002, Eqal3sample: H12a: β= 0.3447, P=0.000), which suggests complementary mediation.

6.7.7.2 CEB toward Other Members Model Results

The results regarding CEB toward other members show that the indirect effects (a × b) of social benefits on CEB toward other members through autonomous motivation was significant (Apple society sample: β=0.8522, P=0.000, SE= 0.0629, 95% CI= .7371 to .9828, Eqal3 Sample: β=0.7583, P=0.000, SE= 0.0599, 95% CI= .6408 to.8777). The significance of the direct effect between social benefits and CEB toward other members in the Apple society sample (H10b: β= -0.2072, P= 0.0044) suggests a competitive mediation. While the insignificance of the same path in the Eqal3 sample (H10b: β= -0.0132, P=0.8342) suggests indirect-only mediation.

The existence of the indirect effects (a × b) of status benefits on CEB toward other members through autonomous motivation (Apple society sample: β=0.5378, P=0.000, SE= 0.0494, 95% CI= .4478 to .6393, Eqal3 Sample: β=0.3426, P=0.000, SE= 0.0322, 95% CI= .2820 to .4077). The result of the direct effect (c) was insignificant for Apple society sample (H11b: β= 0.0731, P=0.1831), suggesting indirect-only mediation. This is not the case with the Eqal3 sample

where it shows a significant direct effect (Eqal3 sample: H11b: β= 0.4292, P=0.000), indicating complementary mediation or partial mediation.

The results of the indirect effects (a × b) of hedonic benefits on CEB toward other members through autonomous motivation were significant (Apple society sample: β=1.1995, P=0.000, SE= 0.0923, 95% CI= 1.0327 to 1.3951, Eqal3 Sample: β=1.1225, P=0.000, SE= 0.0524, 95% CI= 1.0216 to 1.2269). The significance of the direct effects (c) of hedonic benefits on CEB toward other members for both samples (Apple society sample: H12b: β= -0.6219, P=0.000, Eqal3 sample: H12b: β= -0.6660, P=0.000), indicates competitive mediation.

6.7.7.3 CEB toward the Firm Model Results

The result of CEB toward the firm showed the existence of the indirect effects (a × b) of social benefits on CEB toward the firm through autonomous motivation (Apple society sample: β=0.7985, P=0.000, SE= 0.0586, 95% CI= .6714 to.9209, Eqal3 Sample: β=0.8316, P=0.000, SE= 0.0527, 95% CI= .7315 to .9396). However, the direct effect (c) of social benefits on CEB toward the firm was significant in the Apple society sample: H10c: β= -0.2550, P=0.0006), suggesting competitive mediation. The Eqal3 sample shows insignificant direct effect of the same path (Eqal3 sample: H10c: β= -0.0703 P=0.2313), which suggests indirect-only mediation.

The indirect effect (a × b) of status benefits on CEB toward the firm through autonomous motivation was significant (Apple society sample: β=0.4679, P=0.000, SE= 0.0506, 95% CI= .3796 to .5769, Eqal3Sample: β=0.4719, P=0.000, SE= 0.0321, 95% CI= .4107 to .5365). The results of the direct effects (c) were insignificant for Apple society sample: H11c: β= 0.0734, P=0.1933, and significant for the Eqal3 sample: H11c β= 0.2012, P=0.000). The findings suggest that the relationship between status benefits and CEB toward the firm is indirect-only mediation for Apple society, while it is a complementary mediation for the Eqal3 sample.

Finally, the indirect effect (a × b) of hedonic benefits on CEB toward the firm through autonomous motivation was significant (Apple society sample: β=1.0508, P=0.000, SE= 0.0940 95% CI= .8878 to 1.2562, Eqal3 Sample: β=1.1890, P=0.000, SE= 0.0507, 95% CI= 1.0932 to 1.2938). The direct effect (c) was also significant for both samples (Apple society

sample: H12c: β= -0.5416, P=0.000, Eqal3 sample: H12c: β= -0.7249, P=0.000), suggesting competitive mediation.

Table 6.14: Results for Zhao's approach Mediation Analysis patterns

Hypotheses		**Apple Society Sample (N=320)**			**Eqal3 Sample (N=1508)**		
Hypotheses for CEB toward Oneself Model							
Autonomous motivation fully mediates the relationship between perceived benefits constructs and three types of CEB.		P-value	β	Results	P-value	β	Results
H10a	Autonomous motivation to engage in an OBC mediates the positive relationship between social benefits CEB toward oneself.	0.4970	-0.0364	Indirect only mediation	0.000	0.1973	Complementary mediation
H11a	Autonomous motivation to engage in an OBC mediates the positive relationship between status benefits and CEB toward oneself.	0.000	0.1961	Complementary mediation	0.000	0.1689	Complementary mediation
H12a	Autonomous motivation to engage in an OBC mediates the positive relationship between hedonic benefits and CEB toward oneself.	0.0002	0.2161	Complementary mediation.	0.000	0.3447	Complementary mediation.
Hypotheses for CEB toward Other Members Model							
		P-value	β	Results	P-value	β	Results
H10b	Autonomous motivation to engage in an OBC partially mediates the positive relationship between social benefits and CEB toward other members.	0.0044	-0.2072	Competitive mediation	0.8342	-0.0132	Indirect-only mediation
H11b	Autonomous motivation to engage in an OBC partially mediates the positive relationship between status benefits and CEB toward other members.	0.1831	0.0731	Indirect only mediation	0.000	0.4292	Complementary mediation
H12b	Autonomous motivation to engage in an OBC mediates the positive relationship between hedonic benefits and CEB toward other members.	0.000	-0.6219	Competitive mediation	0.000	-0.6660	Competitive mediation

Hypotheses for CEB toward the Firm Model							
		P-value	β	Results	P-value	β	Results
H10c	Autonomous motivation to engage in an OBC mediates the positive relationship between social benefits and CEB toward the firm.	0.0006	-0.2550	Competitive mediation.	0.2313	-0.0703	Indirect-only mediation.
H11c	Autonomous motivation to engage in an OBC mediates the positive relationship between status benefits and CEB toward the firm.	0.1933	0.0734	Indirect only mediation	0.000	0.2012	Complementary mediation
H12c	Autonomous motivation to engage in an OBC mediates the positive relationship between hedonic benefits CEB toward the firm.	0.000	-0.5416	Competitive mediation.	0.000	-0.7249	Competitive mediation.

Note: the reported values of the indirect and direct effects are unstandardized effects.

As evident in in the mediation analysis, the results of the indirect effects (a × b) are all significant. According to Zhao et al. (2010), the significance of the indirect effects (a × b) is the main requirement of establishing mediation. Whilst the direct effects of Zhao et al.'s (2010) approach relate to the pattern of the mediation. More specifically, the following patterns: complementary mediation, competitive mediation, and indirect-only mediation have theoretical implications. For example, the theoretical implication of the indirect-only mediation means that the mediator is consistent with the hypothesised model and there is unlikely to be an omitted mediator from the hypothesized model. On the contrary, the implications of the complementary and competitive mediation suggest that the mediator is consistent with the hypothesized model but still there is likelihood that there are omitted mediators (Zhao et al. 2010). As shown in Table 6.14, the results of the mediation analysis revealed that autonomous motivation in some situations act both as a complementary and competitive mediation. As such, possible omitted mediator from the current research model could be studied in future research.

6.7.8 Control Variable: Self-Efficacy

As discussed earlier, this current study tests self-efficacy as a control variable in the research model. Self-efficacy was introduced into the theoretical research model as an important component of SDT. The theory suggests that autonomous motivation needs to be supported by competence and skills so that people can engage in CEBs. Accordingly, self-efficacy was included in the research model as a control variable that may influence members' autonomous motivation to engage in brand communities. In AMOS, self-efficacy was treated as an

exogenous construct and correlated with other exogenous constructs (i.e., benefits) to influence autonomous motivation. In other words, self-efficacy was used to as a predictor for autonomous motivation (i.e., correlated with other predictors) to capture the power of the effects. Therefore, self-efficacy was tested to control ones' autonomous motivation to engage in OBCs. More specifically, three structural models were tested to examine the influence of self-efficacy in the paths controlling members' autonomous motivation. Table 6.16 reports the model fit indices for three SEM.

Table 6.15: Model Fit Statistics for the Three Structural Models

Eqla3 Sample (N=1508)	χ^2/df	RMSEA	SRMR	CFI	TLI	IFI	PCLOSE
First model: CEB toward the firm	4.505	0.048	0.0553	0.947	0.938	0.947	0.846
Second model: CEB toward other members	4.672	0.049	0.0577	0.930	0.920	0.930	0.633
Third model: CEB toward oneself	4.645	0.049	0.0527	0.946	0.936	0.946	0.678
Apple Society Sample (N=320)							
First model: CEB toward the firm	2.134	0.060	0.0697	0.928	0.916	0.929	0.012
Second model: CEB toward other members	2.044	0.057	0.0619	0.939	0.927	0.939	0.054
Third model: CEB toward oneself	2.107	0.059	0.0635	0.927	0.915	0.928	0.018

6.7.8.1 First Model: CEB toward the Firm

Self-efficacy was found to be positively associated with members' autonomous motivation in both samples (Eqla3 sample: $\beta = 0.557$, P-value ≤ 0.05; Apple Society sample: $\beta = 0.804$, P-value ≤ 0.05). Notably, the proportion of the variance is increased after controlling for members' autonomous motivation. For example, 0.818 of the variance of the Eqla3 sample and 0.923 of variance of the Apple Society sample was explained by self-efficacy, along with the exogenous variables.

6.7.8.2 Second Model: CEB toward Other Members

The results revealed that self-efficacy was positively associated with members' autonomous motivation in both samples (Eqla3 sample: $\beta = 0.572$, P-value ≤ 0.05; Apple Society sample: $\beta = 0.826$, P-value ≤ 0.05). Similarly, the relationships explained 0.839 of the variance in autonomous motivation in the Eqla3 sample and 0.933 in the Apple Society sample.

6.7.8.3 Third Model: CEB toward Oneself

Self-efficacy was also found to be positively associated with members' autonomous motivation in both samples (Eqla3 sample: $\beta = 0.543$, P-value ≤ 0.05; Apple Society sample: $\beta = 0.703$, P-value ≤ 0.05). Similarly, the relationships explained variance for autonomous motivation is 0.847 of the Eqla3 sample and 0.922 per cent of the Apple Society sample.

The next section reports the findings for the hypotheses that test the impact of the CEB constructs on brand loyalty constructs.

6.7.9 CEBs and Brand Loyalty

This study predicts that CEB toward oneself, CEB toward other members and CEB toward the firm have a positive effect on WOM and purchase intention. The following hypotheses examine the individual effect of each CEBs construct on WOM and purchase intention:

H13a: CEB toward oneself in an OBC is positively related to positive WOM.

H13b: CEB toward oneself in an OBC is positively related to purchase intention.

H14a: CEB toward other members in an OBC is positively related to positive WOM.

H14b: CEB toward other members in an OBC is positively related to purchase intention.

H15a: CEB toward the firm in an OBC is positively related to positive WOM.

H15b: CEB toward the firm in an OBC is positively related to purchase intention.

Table 6.16 shows the results for all samples of these hypothesized relationships. It is important to note that the SEM results and model fit indices for the three SEM models were presented earlier in Figure 6.5, 6.6, and 6.7 (Table 6.9, 6.10 and 6.11).

6.7.9.1 Hypotheses 13a and 13b Findings

As seen in table 6.16, the path between ‘CEB toward oneself’ and ‘WOM’ was positive and significant for both samples (Eqla3 sample= H13a: β = 0.441, P-value ≤ 0.05; Apple Society sample= H13a: β = 0.364, P-value ≤ 0.05). As predicted, the results also showed that the path between ‘CEB toward oneself’ and purchase intention was positive and significant for both samples (Eqla3 sample= H13b: β = 0.415, P-value ≤ 0.05; Apple Society sample= H13b: β= 0.327, P-value ≤ 0.05). These results indicate that community members who ask questions on OBCs or follow the suggestions of other members are more likely to spread positive WOM about the brand and have a higher intention to purchase the brand in the future.

6.7.9.2 Hypotheses 14a and 14b Findings

The results regarding the hypothesised positive relationships between ‘CEB toward other members’ and ‘WOM’ showed positive significant relationships for both samples (Eqla3 sample= H14a: β = 0.300, P-value ≤ 0.05; Apple Society sample= H14a: β =0.312, P-value ≤ 0.05). Similarly, the path from ‘CEB toward other members’ towards purchase intention was positive and significant (Eqla3 sample = H14b: β = 0.341, P-value ≤ 0.05; Apple Society sample= H14b: β =0.318, P-value ≤ 0.05). These findings clearly support that CEB toward other members increases the likelihood of positive WOM and purchase intention.

6.7.9.3 Hypotheses 15a and 15b Findings

Finally, the results support the hypothesised positive relationship between CEB toward the firm and WOM for both samples (Eqla3 sample= H15a: β = 0.226, P-value ≤ 0.05; Apple Society samples= H15a: β = 0.208, P-value ≤ 0.05). Further, the path towards purchase intention was also positive and significant (Eqla3 sample= H15b: β = 0.349, P-value ≤ 0.05; Apple Society sample= H15b: β = 0.336, P-value ≤ 0.05). Thus, the results clearly show that members who co-create value for the firm through suggestions and ideas are more likely to engage in positive WOM and are more likely to intend to purchase.

As evident in Appendix I, the hypotheses H13 to H15 were examined using the random sample derived from Eqla3 sample. The results of the random sample also showed similar findings. This adds another confirmation and evaluation of the model stability.

Table 6.16: Results of Testing H13 a, b to H15 a, b CEB and WOM/Purchase Intention

Hypotheses		**Eqla3 Sample (N=1508)**			**Apple Society Sample (N=320)**		
		P-value	β	Results	P-value	β	Results
H13a	CEB toward oneself in an OBC is positively related to WOM.	***	0.441	Supported	***	0.364	Supported
H13b	CEB toward oneself in an OBC is positively related to purchase intention.	***	0.415	Supported	***	0.327	Supported
H14a	CEB toward other members in an OBC is positively related to WOM.	***	0.300	Supported	***	0.312	Supported
H14b	CEB toward other members in an OBC is positively related to purchase intention.	***	0.341	Supported	***	0.318	Supported
H15a	CEB toward the firm in an OBC is positively related to WOM.	***	0.226	Supported	***	0.208	Supported
H15b	CEB toward the firm in an OBC is positively related to purchase intention.	***	0.349	Supported	***	0.336	Supported

Table 6.17 summarises the support for hypotheses H1 through to H15, and also indicates the outcomes of the hypothesized direct effects based on the outcome of the mediation analysis. It is important to note that mediation analysis determines the outcomes for H1–H3. In other words, the findings supported the direct effect between functional benefits and CEB toward oneself (H1). This is because the results indicated that functional benefits had no effect on autonomous motivation and therefore H1 was supported. Regarding H2, the findings revealed that the path of social benefits towards CEB toward other members is completely mediated by autonomous motivation. Based on this outcome, the direct effect of social benefits on CEB toward other members was rejected (e.g., Eqla3 Sample). In other words, the path between social benefits and CEB toward other members is mediated. Further, the outcome of the mediation analysis regarding the path of status benefits and CEB toward other members (H3) showed partial mediation (i.e., complementary mediation) and therefore partial acceptance to the direct effect of status benefits towards CEB other members (e.g., Eqla3 Sample)

Table 6.17: Summary of the Hypothesis Testing Results

	Hypotheses	**Outcome: Eqla3 Sample**	**Notes**	**Outcome: Apple Society Sample**	**Notes**
H1	Functional benefits positively influence CEB toward oneself.	Supported		Supported	
H2	Social benefits positively influence CEB toward other members.	Rejected	Indirect-only mediation (Please see H10b)	Supported	Competitive mediation (Please see H10b)
H3	Status benefits positively influence CEB toward other members.	Supported	Complementary mediation (Please see H11b)	Rejected	Indirect only mediation (Please see H11b)
H4	The perceived functional benefits of participating in an OBC are positively related to a customer's autonomous motivation to engage in the brand community.	Rejected		Rejected	
H5	The perceived social benefits of participating in an OBC are positively related to a customer's autonomous motivation to engage in the brand community.	Supported		Supported	
H6	The perceived status benefits of participating in an OBC are positively related to a customer's autonomous motivation to engage in the brand community.	Supported		Supported	
H7	The perceived hedonic benefits of participating in an OBC are positively related to a customer's autonomous motivation to engage in the brand community.	Supported		Supported	
H8a, b, c	Autonomous motivation to engage in an OBC has a positive influence on CEB (CEB toward oneself, CEB toward other members, and CEB toward the firm).	Supported		Supported	

H9a	Autonomous motivation to engage in an OBC partially mediates the positive relationship between functional benefits and CEB toward oneself.	Rejected: Functional benefits failed to affect autonomous motivation.
H9b	Autonomous motivation to engage in an OBC fully mediates the positive relationship between functional benefits and CEB toward other members.	Rejected: Functional benefits failed to affect autonomous motivation.
H9c	Autonomous motivation to engage in an OBC fully mediates the positive relationship between functional benefits and CEB toward the firm.	Rejected: Functional benefits failed to affect autonomous motivation.

H10a	Autonomous motivation to engage in an OBC fully mediates the positive relationship between social benefits and CEB toward oneself.	Partially Supported	Complementary mediation	Supported	Indirect only mediation
H10 b	Autonomous motivation to engage in an OBC partially mediates the positive relationship between social benefits and CEB toward other members.	Partially Supported	Indirect-only mediation	Supported	Competitive mediation
H10c	Autonomous motivation to engage in an OBC fully mediates the positive relationship between social benefits and CEB toward the firm.	Supported	Indirect-only mediation.	Partially Supported	Competitive mediation.
H11a	Autonomous motivation to engage in an OBC fully mediates the positive relationship between status benefits and CEB toward oneself.	Partially Supported	Complementary mediation	Partially Supported	Complementary mediation
H11 b	Autonomous motivation to engage in an OBC partially mediates the positive relationship between status benefits and CEB toward other members.	Supported	Complementary mediation	Partially Supported	Indirect only mediation
H11c	Autonomous motivation to engage in an OBC fully mediates the positive relationship between status benefits and CEB toward the firm.	Partially Supported	Complementary mediation	Supported	Indirect only mediation
H12a	Autonomous motivation to engage in an OBC fully mediates the positive relationship between hedonic benefits and CEB toward oneself.	Partially Supported	Complementary mediation	PartiallyS upported	Complementary mediation
H12 b	Autonomous motivation to engage in an OBC fully mediates the positive relationship between hedonic benefits and CEB toward other members.	Partially Supported	Competitive mediation	Partially Supported	Competitive mediation
H12c	Autonomous motivation to engage in an OBC fully mediates the positive relationship between hedonic benefits and CEB toward the firm.	Partially Supported	Competitive mediation.	Partially Supported	Competitive mediation.
H13a	CEB toward oneself in an OBC is positively related to WOM.	Supported		Supported	
H13 b	CEB toward oneself in an OBC is positively related to purchase intention.	Supported		Supported	
H14a	CEB toward other members in an OBC is positively related to WOM.	Supported		Supported	
H14 B	CEB toward other members in an OBC is positively related to purchase intention.	Supported		Supported	
H15a	CEB toward the firm in an OBC is positively related to WOM.	Supported		Supported	
H15 b	CEB toward the firm in an OBC is positively related to purchase intention.	Supported		Supported	

Note: 'ns' refers to not significant relationship.

6.8. Alternative Model

The extant literature recommends the use of competing model as a way of contributing to the research objectivity in evaluating the hypothesised model (Armstrong, Parsons, and Brodie

2001). Accordingly, a competing model that included autonomous motivation and the four benefits as antecedents to the second order CEB construct, which in turn lead to the WOM and purchase intention constructs (as shown in Figure 6.8), was tested. As justified earlier, due to multicollinearity issue among the three types of CEB, a second-order CEB construct is used for the alternative model.

6.8.1 Alterative Model: Eqla3 sample

The goodness-of-fit of the competing model showed an acceptable fit to the data (χ^2/df = 5.063, RMSEA = 0.052, SRMR = 0.0496, CFI = 0.936, TLI = 0.925, IFI=0.936, PCLOSE =0.1091). However, the standardised regression pathways were mostly significant except for the following relationships: hedonic benefits to CEB. As shown Table 6.26, the direct effect of social benefits on CEB (β= 0.113, P-value 0.037) was significant. Similarly, the direct effect of status benefits on CEB (β= 0.117, P-value 0.017) was significant. Whilst the relationship between hedonic benefits and CEB (β= -0.048, P-value 0.360) was not significant. Surprisingly, the results showed that functional benefits had significant effect on CEB as a second-order construct (β= 0.221, P-value 0.000). Furthermore, the direct effect of autonomous motivation on CEB was positive and significant (β= 0.349, P-value 0.000).

The results regarding the CEB on WOM and purchase intention were as follows. The standardised regression paths of CEB on WOM (β= 0.422, P-value 0.000) and purchase intention (β= 0.470, P-value 0.000) were both positive and significant. The squared multiple correlation were as follows: CEB = 0.396, WOM= 0.178, and purchase intention=0.221.

6.8.2 Alternative Model: Apple Society sample

The results including the model fit statistics for the competing model are presented in Table 6.19. The results of the Apple society sample also obtained similar results with the exception of the relationships between social benefits and CEB, and between functional benefits and CEB (as shown in Table 6.19). The squared multiple correlations were as follows: CEBs as a second-order construct =0.791, WOM= 0.120, and purchase intention=0.184.

It is apparent that there are some discrepancies in the SEM results between these samples (as shown in table 6.19). Nevertheless, overall a comparison of the results of the hypothesised mediated model in Figures (6.2, 6.3, and 6.4) and the alternative model (Figure 6.8 and Table 6.19) shows strong support for the hypothesised model. In other words, the hypothesized model give support to the theoretical basis of the current study's hypotheses. Therefore, the hypothesized model (i.e., mediated model) performed well and supported the theoretical ground for the SDT from which the hypotheses were developed.

Figure 6.8: Alternative model

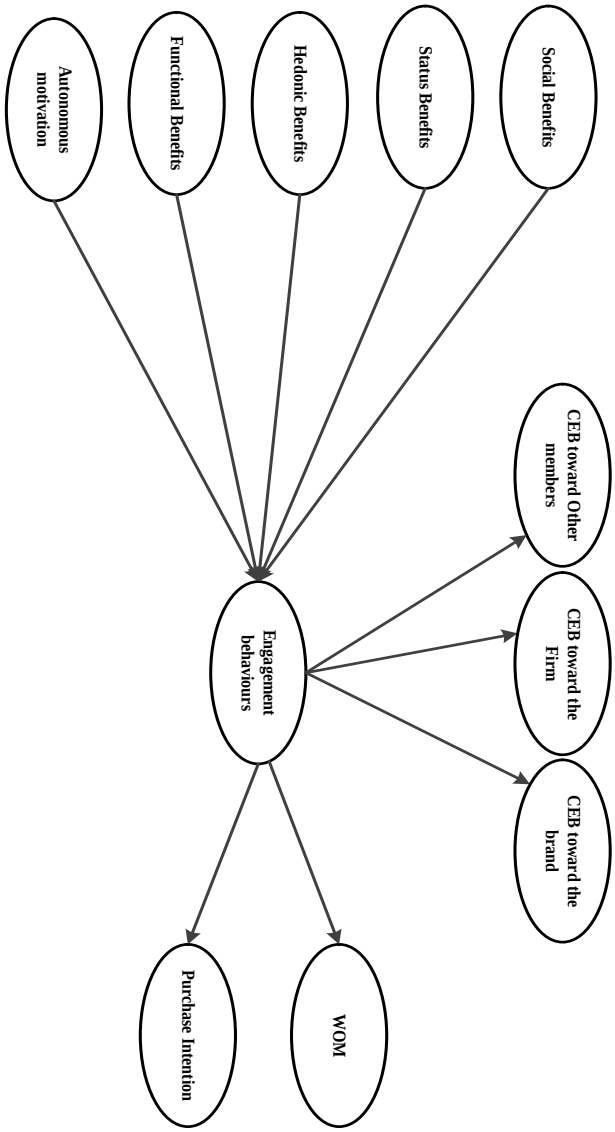


Table 6.18: Summary of the Alternative Model Findings

Competing model	Eqla3 Sample (N=1508)			Apple Society Sample (N=320)		
	P-value	B	Results	P-value	B	Results
Social benefits and CEBs construct	0.037	0.113	sig	0.463	-0.086	ns
Status benefits and CEBs construct	0.017	0.117	sig	0.010	0.240	sig
Hedonic benefits and CEBs construct	0.360	-0.048	ns	0.710	-0.043	ns
Functional benefits and CEBs construct	0.000	0.221	sig	0.343	0.104	ns
Autonomous motivation and CEBs construct	0.000	0.349	sig	0.000	0.749	sig
CEBs construct and WOM	0.000	0.422	sig	0.000	0.347	sig
CEBs construct and purchase intention	0.000	0.470	sig	0.000	0.428	sig

Note: 'ns' refers to not significant relationship. Sig refers to significant relationship.

Model fit for Eqla3 Sample: (χ^2/df = 5.063, RMSEA = 0.052, SRMR = 0.0496, CFI = 0.936, TLI = 0.925, IFI=0.936, PCLOSE =0.1091).
Model fit for Apple society sample: (χ^2/df = 2.107, RMSEA = 0.059, SRMR = 0.0557, CFI = 0.924, TLI = 0.912, IFI=0.925, PCLOSE =0.012).

6.9 Concluding Remarks

To sum up this chapter, a two-step modelling approach was used involving measurement and structural models across three samples. Convergent, discriminant validity and common method bias were confirmed for all samples. The structural model produced a good fit to the data. However, multicollinearity issues amongst the CEB constructs required these constructs to be analysed separately and as a second order construct. This process is in line with past studies in the marketing literature that have confronted similar issues. The results for the second-order models showed that with the exception of the relationship between functional benefits and autonomous motivation, all benefits had a significant positive influence on autonomous motivation, which in-turn had a significant positive influence on CEBs (as a second-order construct). In addition, CEB as a second-order construct had a significant effect on both WOM and purchase intention.

To test the hypothesized model for each CEB types (CEB toward oneself, CEB other members, and CEB toward the firm), three separate SEMs were created. These models were used to test the research hypotheses, including the direct effects, mediating effects, and the relationships between engagement behaviours and WOM and purchase intention. The results showed that as expected functional benefits positively and significantly relate to CEB toward oneself (H1) but contrary to the hypothesised relationship were not mediated by autonomous motivation (H9).

The results for the mediation analysis revealed that autonomous motivation is a significant mediator in the hypothesized model. The findings of the mediation analysis were slightly inconsistent regarding the nature of the mediation (partial/complementary versus full/only-indirect). Furthermore, the results did support the hypotheses that all of the CEB constructs were positively related to WOM and to purchase intention. These findings offer several theoretical and managerial contributions to the marketing literature. The next chapter discusses these findings in detail and sheds light on the potential benefits of these findings.

Chapter Seven: Discussion and Conclusion

This chapter provides a discussion of the findings of the current study particularly in relation to the research objectives and hypothesised relationships. The first section highlights the findings of the second-order CEB models. The second section discusses the three separate models of CEBs (CEB toward oneself, CEB toward other members, and CEB toward the firm) in relation to the hypothesised relationships of the direct effects, mediating effects and the outcomes of CEBs. The third section provides theoretical and managerial implications along with future research for CEBs in online brand communities. The chapter finishes with brief concluding remarks.

This study provides a comprehensive research model for CEBs in OBCs based on SDT (Gagné and Deci 2005), SET (Emerson 1976), and S-D logic (Vargo and Lusch 2008), Consistent with conceptualisations of engagement behaviours, this research model includes three types of CEBs (CEB toward oneself, CEB toward other members, and CEB toward the firm/brand) that are central to the concept of value co-creation. It also includes two drivers of engagement behaviours: the benefits derived from CEB and autonomous motivation to perform different types of CEBs. This study extends much of the current literature, which only considers benefit based motivation (Ye, Feng, and Choi 2015; Franzak, Makarem, and Jae 2014; Madupu and Cooley 2010; Gruen, Osmonbekov, and Czaplewski 2007). Furthermore, the research model of this study links each type of CEB to two important measures of brand loyalty. The next section discusses the findings specific to the second-order model.

7.1 Discussion of the Results: Second-order CEB Model Results

The results of the second-order CEB model contribute to the marketing literature in two major ways. First, the findings reveal that CEB is a multi-dimensional construct manifested by three behavioural variables: i) CEB toward oneself, ii) CEB toward other members, and iii) CEB toward the firm. Thus, this study shows that CEB relates to broader domains of activities within OBCs, and therefore should be treated and measured as multidimensional construct with three underlying behavioural dimensions.

Second, the results for the second-order model hypotheses demonstrate that social benefits, hedonic benefits, and status benefits positively and significantly influence autonomous motivation (in all three samples). However, the relationship between functional benefits and autonomous motivation was consistently insignificant. As evident in Figures 6.2, 6.3 and 6.4, the standardized coefficient for the other three benefits are of similar strength (around 0.3) as are the overall squared multiple correlation results (around 0.7) The findings of the second-order models are similar to the findings of the three separate models (discussed in the next section).

The causal path between autonomous motivation and CEB as a second-order construct was positive and significant in all three samples. As evident from the results in Figures 6.1, 6.2 and 6.3, the effect of the standardized estimates of this path for the Eqla3 and the Random Eqla3 sample were very similar, and strongest for the Apple Society sample (Eqla3 sample: $\beta = 0.628$, Random Eqla3 sample: $\beta = 0.602$, Apple Society sample: $\beta = 0.896$). The differences in the strength of the relationship suggests that the impact of autonomous motivation may be stronger for certain types of OBCs.

The second-order model also supports a positive and significant relationship between CEB (as a second-order construct) and WOM; and between CEB and purchase intention for all three samples. Moreover, the findings demonstrate that the standardized effects of CEB towards WOM (Eqla3 sample: $\beta = 0.404$, Random Eqla3 sample: $\beta = 0.512$ Apple Society sample: $\beta = 0.341$) and purchase intention (Eqla3 sample: $\beta = 0.467$, Random Eqla3 sample: $\beta = 0.561$ Apple Society sample: $\beta = 0.430$) are relatively consistent across the samples.

As evidenced from the results in Table 6.8, the nomological validity of the hypothesized model was not consistent across samples particularly for the following relationships: CEB toward the firm and purchase intention', 'CEB toward the firm and WOM', and 'CEB toward other members and WOM'. This inconsistency maybe in-part due to multicollinearity between the CEB constructs (Bagozzi and Yi 2012). Overall, the findings of the second-order models provide a better understanding of the hypothesised relationships proposed in the research model. The findings of the second-order models served to validate the findings of the three SEMs models discussed in the following section.

7. 2 Discussion of the Results: Separate SEMs for each type of CEB

7. 2.1 Discussion of CEB toward Oneself Model Results

The findings from the first individual model (CEB toward oneself) provide support for the hypothesized relationships except for the relationship between functional benefits and autonomous motivation. Specifically, the findings of this model (in Tables 6.12 and 6.13) demonstrate that functional benefits derived from OBCs positively influence CEB toward oneself (H1) but not autonomous motivation (H4). As shown in Table 6.12, the standardized coefficient path between functional benefits and CEB toward oneself had the strongest direct effect on CEB towards oneself of all of the benefits (Eqla3 sample: $\beta = 0.387$, Apple Society Sample: $\beta = 0.338$). Functional benefits relate to accessing valuable and practical information that enhance the usability of the brand, and are one of the core values that members gain when they interact with other brand community members or when they join OBCs. The importance of the linkage between functional benefits and CEB toward oneself is consistent with prior studies (Dholakia et al. 2009). Receiving functional benefits tends to lead to more self-centred engagement behaviours and serve as an investment in a customer's relationship with the brand (Park and Kim 2014). This relationship investment is the most common type of engagement behaviour according to Table 5.7, which revealed that 87.0 per cent of the Eqla3 sample and 74.4 per cent of the Apple Society sample had engaged in activities at least once, within these brand communities. This percentage is also consistent with prior studies that suggest the majority of community members are silent members i.e., only engage for their own benefit since they are not contributing to the discussion themselves (Thompson et al. 2014). The CEB toward oneself construct operationalized in this study is not a single item as per existing studies (Thompson et al. 2014) but rather it includes asking questions, following conversations, and searching for information about the use of the product/service of the brand. Hartmann, Wiertz, and Arnould (2015) suggested that CEB toward oneself should be described more comprehensively as it reflects consumptive moments of value co-creating practices.

The finding also highlights the essential role that OBCs play in enhancing brand engagement behaviours. CEB toward oneself represents active brand engagement behaviour as it involves actively collecting information and solutions about the product from OBCs. Customer's willingness to invest their time and energy and other resources to use/enhance the value they

derive from products beyond purchase contradicts the idea that CEB toward oneself in the context of online communities is a passive behaviour or lurking (Neelen and Fetter 2010). Rather, a number of recent studies suggest that this type of behaviour is active and represents a common performance practice that is part of community success (Stokburger-Sauer and Wiertz 2015; Sun, Rau, and Ma 2014). Accordingly, this finding comes to support the role of CEB toward oneself as a main component of relationship investment as well as a component of brand community success.

The rejection of the hypothesized relationship between functional benefits and autonomous motivation across all models is surprising – particularly for CEB toward oneself. It was expected that deriving knowledge from others (functional benefits) would be a key driver of autonomous motivation for these consumers but it appears that members do not derive autonomous motivation from functional benefits. This is perhaps more expected for those engaging in CEBs toward others or the firm because people who engage more actively in the online brand community consider themselves to be more knowledgeable. Thus, knowledge creation rather than knowledge acquisition is a key motivator for engaging in the online brand community.

Despite the fact that the findings of this study do not support the hypothesis that functional benefits lead to autonomous motivation to engage in OBCs, they do provide a new insight; namely, that functional benefits are only associated with CEB toward oneself (H1). This link between functional benefits and CEB toward oneself seems to be derived from direct functional benefits rather than being explained by autonomous motivation. This resonates with and supports the idea that functional benefits serve as a significant factor in maintaining relationship investment with the brand in OBCs (Park and Kim 2014). This finding is also in line with the recent studies that showed there is no linkage between up-to-date information and CEB in OBCs (Baldus, Voorhees, and Calantone 2015). Furthermore, according to SDT, some forms of extrinsic motives (e.g., functional benefits) need to occur in stages to be fully assimilated and become congruent with one's other values, and this takes time. Ryan and Deci (2000) suggest this integration process is not a continuum that progresses through a series of stages, but rather, it increases over time. This means that the real value of functional benefits needs to be developed over time.

The findings do support the hypothesized relationships between social benefits (H5), status benefits (H6), hedonic benefits (H7); and autonomous motivation. These findings are significant and consistent across the examined models. The findings suggest that members derive social, status and hedonic benefits from their interactions in OBCs and they in-turn shape and reinforce autonomous motivation. Examining the standardized coefficient paths in Table 6.13 shows that social benefits had a greater effect on autonomous motivation than status benefits or hedonic benefits. This effect is consistent across all of the samples examined. These findings indicate that social interactions, status enhancement from other members, and hedonic experiences derived from the brand community encourage members to engage in these activities. In theory, this is consistent with SDT, which postulates that social relatedness (social benefits), self-actualisation (personal status) and ego development (hedonic benefits) internalise and promote an individual's autonomous motivation, and this will result in engagement behaviours (Gagné 2003).

By establishing the effects of social benefits, personal status and hedonic benefits on autonomous motivation, this study contributes to the limited coverage in the marketing engagement and brand community literature (Porter et al., 2011). More specifically, this study shows that online brand communities should focus on encouraging social interactions that bring connection, recognition and provide stimulating experiences to their members to enhance their engagement. The role of autonomous motivation clarifies much of the existing literature which shows that behavioural engagement is only influenced by the extrinsic benefits that members derive from the interactions they have within a community (Park and Kim 2014; Zaglia 2013; Mathwick, Wiertz and De Ruyter 2008).

The results in Table 6.13 provide strong empirical support for the influence of autonomous motivation on all three CEBs: toward oneself (H8a); toward other members (H8b); and toward the firm (H8c). The findings contribute to the extant literature by supporting and validating the conceptual definition of customer engagement as a "behavioural manifestation towards a brand or firm, beyond purchase, resulting from motivational drivers" (Van Doorn et al. 2010, 254). The findings also validate SDT (Gagné and Deci 2005), where autonomous motivation is a positive predictor of engagement behaviours. It is interesting to note that the standardised coefficient estimates are generally stronger for the Apple Society sample. This suggests that

the type of OBC may influence the relative importance of autonomous motivation derived from the OBC.

Based on SDT, one's ability and confidence are important factors that enhance autonomous motivation to engage in behavioural activities (Gagné and Deci 2005). The finding of self-efficacy as a control variable to autonomous motivation supports this theory. When including self-efficacy as a control variable for autonomous motivation in this model, the result shows that self-efficacy is positively associated with members' autonomous motivation across samples, and the proportion of the variance increased (Eqla3 sample: 0.847, Apple Society sample: 0.922). The influence of self-efficacy on autonomous motivation is apparent from the change of the proportion of the explained variance. This means that one's ability and skills play a significant role in driving one's autonomous motivation for further brand engagement behaviours. This finding shows the importance of self-efficacy in promoting customer engagement behaviours. Previous community literature highlights that members do not contribute in online communities if they are not confident enough to phrase their ideas (Sun, Rau, and Ma 2014). Similarly, prior research also suggests that community members with high self-efficacy engage in engagement behaviours more than those with low self-efficacy (Hsu et al. 2007).

The findings regarding the outcome of the mediation analysis in this model provide new insights into the relationships between social, status and hedonic benefits and CEB toward oneself (H10a, H11a, and H12a). Specifically, the findings of this model (as shown in Table 6.14) demonstrate that autonomous motivation mediates the relationship between social, status, and hedonic benefits and CEB toward oneself. These findings imply that adding autonomous motivation mostly acts as a complementary mediator between the direct effects of social, status, hedonic benefits, and CEB toward oneself. The complementary mediation suggests that autonomous motivation is consistent with the hypothesized model but still there is likelihood that there are omitted mediators (Zhao et al. 2010). The mediation findings of this model contribute to theoretical development by identifying what makes community members engage toward the brand. The 'CEB toward oneself model' confirms that community members engage to co-create value for their brands through functional benefits and through their autonomous motivation creating value in terms of social, status and hedonic benefits. The theoretical

implications of the complementary mediation signify the role of autonomous motivation in the creation of value by customers in OBCs.

The findings of this study (as shown in Table 6.16) demonstrate that CEB toward oneself significantly affects spreading positive WOM and purchase intention (H13a and H13b). They illustrate that by creating value for themselves by engaging in the OBC, members are more likely to purchase the brand and advocate for it. The findings support the contention that positive information has an influential and positive impact on buying behaviours since customers come to OBCs to learn about brands or products (Adjei, Noble, and Noble 2010). The findings also augment existing studies that have demonstrated that observational learning (reading posts and threads) in online communities significantly increases sales and positive WOM (Chen, Wang, and Xie 2011). The current findings also extend the existing literature by operationalising CEB toward oneself in multiple items: observing community threads, asking questions in the community, and reading community threads which can have the potential to brand loyalty manifested by purchase intention and positive WOM.

CEB toward oneself is generally considered a lower form of engagement in the brand community (Madupu and Cooley 2010); however, this study provides evidence that that they still lead to positive recommendations about the brand outside the brand community. This finding in particular adds empirical evidence to a recent conceptual study that suggests active 'lurkers' spread information about products derived from the online communities to other people outside the online context (Sun, Rau, and Ma 2014). Furthermore, as can be seen from the standardized regression weight in Table 6.17, the paths from CEB toward oneself and WOM (Eqla3 sample: H13a: $\beta = 0.441$, Apple Society sample: H13a: $\beta = 0.364$) and purchase intention (Eqla3 sample: H13b: $\beta = 0.415$, Apple Society sample: H13b: $\beta = 0.327$) are stronger than these same outcomes for CEB toward other members (Eqla3 sample: H14a: $\beta = 0.300$, Apple Society sample: H14a: $\beta = 0.312$, Eqla3 sample: H14b: $\beta = 0.341$, Apple Society sample: H14b: $\beta = 0.318$) and CEB toward the firm (Eqla3 sample: H15a: $\beta = 0.226$, Apple Society sample: H15a: $\beta = 0.208$, Eqla3 sample: H15b: $\beta = 0.349$, Apple Society sample: H15b: $\beta = 0.336$). These findings highlight the managerial significance of CEB toward oneself in OBCs and its major effect on brand loyalty.

7. 2.2 Discussion of CEB toward Other Members Model Results

This section discusses the direct and mediated relationships between the benefits derived from OBCs and CEB toward other members in the community. The mediation analysis, conducted separately for CEB toward other members, included assessment of the relationships between benefits constructs and autonomous motivation (H4, H5, H6, and H7) and the hypothesised path between autonomous motivation and CEB toward other members (H8b), as well as the outcomes of the mediation analysis (H10b, H11b, and H12b). This section also discusses the effect of CEB toward other members on WOM (H14a) and purchase intention (H14b).

Online brand communities are attractive platforms for many people to demonstrate their knowledge and expertise to develop social relationships and enhance their status as product experts. The first finding of this model (as shown in Table 6.12) supported a positive direct relationship between social benefits and CEB toward other members (H2). The finding suggests that networking, personal relationships, and social interactions with other members are desirable aspects that lead members to spend time and effort to assist and co-create value for other members in the community. This finding also suggests that the probability of being helped is higher when there is an existing relationship bond. This finding is consistent with other studies, and suggests that these social benefits encourage members to reciprocate by performing CEB toward other members (Dholakia et al. 2009) and by actively contributing in these communities (Nambisan and Baron 2009).

The initial findings also support a direct and positive link between status benefits and CEB toward other members (H3). This finding means that members are actively engaged in OBCs for the sake of reinforcing their status and reputation as brand experts. In the context of brand communities, it is hard to establish one's status without sacrificing time and effort. Seeking, and then earning, respect and self-esteem in the community requires one to be active and engage toward other members in the community. This can be an important source for the co-creation of value for a brand. This path of personal status on CEB toward other members is central to social exchange, and reciprocal rewards. The findings of this path also correspond to prior studies which suggest that members contribute their time and effort to the community to shape their personal status and obtain recognition (Nambisan and Baron 2010). Thus, personal

status shapes member engagement behaviours due to the expectation of gaining personal status and recognition.

The direct effects of social and status benefits (H2 and H3) found in this study are consistent with SET theory. They are in line with the view that perceived social relationships in online communities exert a significant direct effect on reciprocity (Chan and Li 2010). CEB toward other members is associated with receiving both social benefits and status benefits, which in turn generates reciprocation by active engagement behaviours. These findings are consistent with the central premise of SET. That is, community members reciprocate the perceived benefits derived from engaging with their communities by providing contribution to the community (i.e., CEB toward other members).

However the reciprocation derived through engagement behaviours, underestimates the autonomous motivation of community members who engage in behavioural activities with no expectation of returns (Yen, Hsu and Chun-Yao 2011; Gagné 2009). Based on SDT, autonomous motivation is proposed as another determinant of CEBs. Based upon past findings, the current study hypothesised that these relationships are only partially mediated by autonomous motivation. The findings of this study (as shown in Table 6.14) show social benefits are fully mediated (Eqla3 sample) and partially mediated (Apple Society sample). This suggests the presence of autonomous motivation is a requirement for these relationships. As shown in Table 6.14, the findings of this study demonstrate that the influence of status benefits on CEB toward other members (H3) is fully (i.e., indirect only mediation) mediated (Apple Society sample) and partially (i.e., complementary mediation) mediated (Eqla3 sample) by autonomous motivation. Overall, the findings clearly demonstrate autonomous motivation is an important mediator for the relationship between social and status benefits and CEB towards other members.

To establish the meditating effect of autonomous motivation, it was necessary that all perceived benefits positively affect autonomous motivation (H4–7) and that autonomous motivation influences CEB toward other members (H8b). The findings of CEB toward other member's model (as shown in Table 6.13) supported most of the hypothesized relationships with exception to the relationship between functional benefits and autonomous motivation (H4). Similar to the findings of the CEB toward oneself model, the path from functional benefits to

autonomous motivation for the CEB towards other members model was not significant (H4). This strengthens the notion that seeking and obtaining functional benefits does not lead to autonomous motivation to engage. Recently, Baldus, Voorhees, and Calantone (2015) show a negative relationship between the need for information and community contribution. It makes intuitive sense that knowledgeable members (i.e., who have less need for information) are more able to contribute to the OBC. As suggested earlier, the underlying motivation may be for members to create knowledge rather than acquire knowledge.

The results for the CEB towards other members (Table 6.13) support a positive relationship between social benefits (H5), status benefits (H6) and hedonic benefits (H7) to autonomous motivation. These findings are in line with Porter et al's (2011) qualitative findings. Furthermore, the standardised estimates demonstrate that social benefits towards autonomous motivation (Eqla3 sample: H5: $\beta = 0.367$, Apple Society sample: H5: $\beta = 0.393$) appear to have a stronger effect than status benefits and hedonic benefits. Thus, the findings confirm the idea that the social context of the community fulfils psychological needs, which leads members to experience greater autonomy in displaying behavioural manifestations (Ryan and Deci 2000).

The results also provided strong support that autonomous motivation positively influenced CEB toward other members (H8b). As evident in Table 6.13, the standardized estimates of this path of autonomous motivation to CEB toward other members are consistently strong (Eqla3 sample: H8b: $\beta = 0.476$, Apple Society sample: H8b: $\beta = 0.689$). Clearly, these findings reinforce the notion that CEB is driven by motivational state (Van Doorn et al. 2010) in OBCs. These findings also extend previous studies that have examined the limited role of motivation in relation to sharing knowledge (Gruen, Osmonbekov, and Czaplewski 2007) and knowledge contribution (Ray, Kim, and Morris 2014). The current findings contribute to the extant literature and offer support for SDT by establishing autonomous motivation as a mediating variable that explains why some customers engage in displaying engagement behaviours (Baldus, Voorhees, and Calantone 2015).

The self-efficacy construct was included as a control variable for autonomous motivation based on the belief that community members and their autonomous motivation need to be supported by competency (Gagné and Deci 2005). Self-efficacy was positively associated with members' autonomous motivation and the respective explained variance for autonomous motivation

increased to 0.839 per cent of the Eqla3 sample and 0.933 per cent of the Apple Society sample. This finding suggests that community members are more motivated to perform CEBs toward other members if they feel they have the ability and expertise to provide knowledge. This finding has been validated in prior research showing that community engagement behaviours and their contribution need to be supported by self-efficacy (Ray, Kim, and Morris 2014). Thus, both autonomous motivation and self-efficacy should be considered as essential constructs for examining CEBs in OBCs.

The mediating analysis of this model provides interesting insights particularly for the relationships between social benefits and CEB toward other members and status benefits and CEB toward other members. Consistent with the premise of SET—the greater the perception of social benefits and personal recognition, the more the member will feel obliged to engage toward other members (Ye, Feng, and Choi 2015; Dholakia et al. 2009; Nambisan and Baron 2007). However, the mediation analysis contradicts the direct effects by showing that autonomous motivation mediates these paths. This mediation may explain why prior research has found an insignificant relationship between social benefits and community contribution in online contexts (Benedikt and Werner 2012).

The mediation findings do not fit with SET to some extent, which takes the view that a member's engagement behaviours is only due to the effects of social benefits. However it is consistent with past community literature, which elaborates on reciprocity by suggesting that active members are more motivated by intrinsic motivation while 'lurkers' are more encouraged by reciprocity (Fan et al. 2009). Thus, the findings resonate more with SDT and extend prior studies (Dholakia et al. 2009) by including autonomous motivation as an explanatory antecedent, to CEB toward other members in the context of online brand communities.

The mediation analysis (as shown in Table 6.14) indicates that autonomous motivation acts as an indirect-only mediation between social benefits and CEB toward others (H10b) in the Eqla3 sample. This is not the case with the Apple Society sample where competitive mediation was found for the same path (H10b). Similarly, the relationship between status benefits and CEB toward other members (H11b) were inconsistent across samples. Complementary mediation and indirect-only mediation effects were found across samples. This indicates that even though

status benefits are an important factor for engagement behaviours, a large number of community members engage in behavioural activities not only for the sake of peer recognition, but also because the community's activities touch their interests and values. This supports prior research that shows if community members feel a lack of receiving personal recognition from social exchange, they stop contributing and posting (Nonnecke et al. 2004).

As evident in Table 6.14, the results regarding the final mediation effect (H12b) suggest that autonomous motivation acts as a competitive mediation between hedonic benefits and CEB toward other members. As discussed earlier, the competitive mediation indicates that the mediator is consistent with the hypothesised model; however, potential mediator (s) might be missed from the research model.

Similar to the CEB toward oneself model, the findings of CEB toward others model confirms that CEB toward other members in OBCs positively influences positive WOM (H14a) and intention to purchase the brand (H14b). The finding (as shown in Table 6.17) suggests that community members who engage to help others are more likely to advocate the brand outside of the OBC and are likely to purchase the brand in the future. The findings are in agreement with previous conclusive studies that examined the positive effect of members sharing knowledge on brand loyalty (Gruen, Osmonbekov and Czaplewski 2007). Further, the findings support a recent ethnographic study that showed that engaging in sharing behaviours with other brand community members would potentially lead to brand loyalty (Brodie et al. 2013).

7. 2.3 Discussion of CEB toward the Firm Model Results

OBCs serve as an essential and significant source for firms to gain insight into customer needs in terms of current and future products and services (Kim, Bae, and Kang 2008). This section discusses the findings of the CEB toward the firm models tested in this study.

As evident in Table 6.13, the finding for H4 shows that the relationship between functional benefits and CEB toward the firm is not mediated by autonomous motivation. In contrast to the functional benefits, the causal paths of social benefits (H5), status benefits (H6), and hedonic benefits (H7) toward autonomous motivation are significant. These findings validate the notion that community members are incorporating the social and hedonic benefits that come from

brand communities into autonomous motivation, which in turn explains their engagement behaviours in the brand community (Fournier and Lee 2009). The findings are consistent with the logic of SDT, as they demonstrate the mediating influence of autonomous motivation (Gagné and Deci 2005). The current study extends the previous literature by finding that social, status and hedonic benefits rather than functional benefits derived from OBCs increase members' autonomous motivation and their subsequent engagement behaviours to help the firm. Whilst functional benefits do not enhance autonomous motivation, they do enhance CEB towards the firm. The information/knowledge provided by the online brand community (i.e., functional benefits) encourages members to provide their own suggestions for improvement to the firm (i.e., engage in CEB towards the firm).

Similar to the preceding results of 'CEB toward oneself model and CEB toward other members model', the findings of this model also demonstrate that autonomous motivation positively influence CEB toward the firm, thus providing support for H8c. The theoretical reason to explain why autonomous motivation is a prevailing predictor for community members to engage in behavioural activities toward the firm is because these activities toward the firm are intrinsically rewarding and tap into their interest and values. This finding validates that CEB (customer engaging in behaviours to help the firm) results from motivational drivers (Van Doorn et al. 2010). The present finding is also consistent with prior studies that embrace the role of autonomous motivation in predicting CEB toward the firm (Wirtz et al. 2013; Fuller 2006) and community contribution (Ray, Kim, and Morris 2014). Consistent with SDT, the findings of this study clearly demonstrate that autonomous motivation is a significant factor in predicting CEB toward the firm.

This study also provides evidence (as shown in Section 6.7.8.1) that self-efficacy is positively associated with members' autonomous motivation in both samples. Notably, the proportion of the variance explained by self-efficacy, along with the exogenous variables increased to 0.818 per cent for the Eqla3 sample and 0.923 per cent for the Apple Society sample. The finding suggests that the magnitude of their behavioural engagement toward the firm is based on how autonomously motivated and competent they are. The self-efficacy of consumers who engaged in CEB toward the firm was obvious in the exploratory study findings, which showed that customers mention highly technical issues that need to be improved to enhance product performance.

Prior studies have directly linked self-efficacy to community contribution (Sun, Rau, and Ma 2014; Hsu et al. 2007), but not as a primary source of one's autonomous motivation for behavioural engagement. The present finding is consistent with Ray, Kim, and Morris's (2014) study that self-efficacy is essential for autonomous motivation and hence community contribution. In addition, the present finding is also consistent with the overall notion that CEBs can be explained by the autonomous motivation and skills of members (Muniz and Schau 2011; Hoyer et al. 2010). As such, the findings of this study further validate SDT by suggesting that autonomous motivation, and self-efficacy, lead to positive engagement behaviours for the firm.

The mediation analysis findings demonstrate that the impact of social benefits on CEB toward the firm is fully (i.e., indirect-only mediation) mediated by autonomous motivation in the Eqla3 sample (H10c) but partially (i.e., competitive mediation) in the Apple society sample. Despite the inconsistent results between these samples, these findings imply that social benefits affect CEB toward the firm behaviours indirectly through autonomous motivation. The findings offer support the suggestion that engagement in behavioural activities is derived from the experience of the goal pursuit activity itself (Scholer and Higgins 2009). Furthermore, Scholer and Higgins' (2009) notion of engagement gives credence to the inclusion of the autonomous motivation construct in the CEB models (Algesheimer, Dholakia, and Herrmann 2005).

The brand community literature presents perceived social benefits as a main source of OBCs, and that it is sustained by active interactions among the admirers of a brand (Muniz and O'Guinn 2001). Prior research also demonstrates that social benefits increase the likelihood of community contribution (Dholakia et al. 2009). Recent research argues that the members of OBCs are more heterogeneous than homogeneous with a complex set of motives (Baldus, Voorhees, and Calantone 2015). In considering the heterogeneity among the community members, the present findings suggest that community members are not totally influenced by perceived social benefits as a main motive for CEB but engage due to other benefits and individual autonomous motivation.

The findings also demonstrate that autonomous motivation acts as indirect-only mediation and complementary mediation role in the relationship between status benefits and CEB toward the firm (H11c) across samples. Previous community literature shows status benefits derived from

OBCs have direct effects on community contribution (Chan and Li 2010; Nambisan and Baron 2009). This study suggests that this relationship can be better explained by the mediation of autonomous motivation.

The partial mediation (i.e., competitive mediation) results in Table 6.14 suggest that hedonic benefits still play a direct role in CEB toward the firm. The findings confirm that being stimulated and excited by the OBC (i.e., experiencing hedonic benefits) activates one's autonomous motivation to engage to help/contribute to the firm. Nonetheless, the finding suggests that CEB toward the firm via OBCs can be more understood from the autonomous motivation perspective along with other potential mediator(s) (Zhao et al. 2010). This finding supports the recent findings and conceptualizations of CEBs that suggest CEB is driven by a motivational state (Baldus, Voorhees, and Calantone 2015; Porter et al. 2011; Van Doorn et al. 2010; Scholer and Higgins 2009).

As discussed earlier, the role of OBCs in generating brand loyalty is not a new finding in the brand community literature (Matzler et al. 2011; Fournier and Lee, 2009). Previous research on OBCs mainly focused on the role of community commitment and its impact on brand loyalty (Jang et al. 2008) or brand commitment towards WOM promotion (Carlson, Suter and Brown 2008). However, few studies have examined the role of interactive engagement behaviours in increasing brand loyalty (Wirtz et al. 2013). Thus, the findings of this study contribute to this apparent gap by examining the effect of CEB towards the firm on brand loyalty.

As hypothesised, the results in Table 6.16 show that brand community members who engage by contributing to the firm are more likely to generate positive WOM (H15a) and have higher intention to purchase the brand (H15b). In examining the standardized effects in Table 6.16, it shows that CEB toward the firm has a stronger relationship with purchase intention (Eqla3 sample: H15b: $\beta = 0.349$, Apple Society sample: H15b: $\beta = 0.336$) than WOM (Eqla3 sample: H15a: $\beta = 0.226$, Apple Society sample: H15a: $\beta = 0.208$). Despite the slight difference in effects, the findings clearly show that community members' engagement in providing suggestions and identifying areas of improvement toward the firm in online brand communities has a significant impact on their brand loyalty. The context of an OBC provides a space for C2C interactions that allow customers to share and contribute their opinions and views about the brand. As a part of these interactions, members provide a large contribution that is directed

to the firm and its products, and is related to the development of the brand, improvement of the service, and enhancement of the performance of the brand. The real value of this CEB in OBCs is of significance to the firm as it provides insights about the desirable aspects of products and future improvements.

Few studies have given attention to the role of CEB toward the firm via OBCs (Gambetti and Graffigna 2014; O'Hern and Rindfleisch 2009; Kim, Bae, and Kang 2008). Thus, the present findings extend previous studies by establishing the link between CEB toward the firm and brand loyalty in terms of spreading positive WOM and purchasing the brand. The present findings also quantitatively validate Brodie et al's (2013) ethnographic study that suggests that co-creation toward the firm (i.e., co-developing) within OBCs enhances loyalty. Furthermore, these findings respond to the recent call to study social media communities and their effects on customer purchasing behaviours (MSI 2012; Libai et al. 2010).

7. 3 Research Implications, Limitations and Future Research

7. 3.1 Theoretical Implications

This current study provides a number of theoretical and academic contributions based on the objectives of this study. The findings of this research contribute to the theoretical foundation of CEBs by applying SDT and SET to explain behavioural engagement of customers in online brand communities. The next section outlines the research gaps examined in this study as well as it highlight specific theoretical contributions of this research. A summary of these theoretical contributions are as follows:

First, this research contributes to the concept of value co-creation in brand communities by identifying three types of CEBs. In this research, these CEBs can be defined as behavioural manifestations that are voluntary (i.e., outside of the customer's required role in service delivery and the service encounter), and intended to co-create value for themselves, other customers, or the firm. This conceptualisation is aligned with S-D logic, which argues that customer interactivity plays an important role in value co-creation with other stakeholders, including the firm, and/or other customers (Vargo and Lusch 2008). This study's definition of CEBs is distinct from the concept of in-role behaviours that have typically been defined as

customer participation within organisation-defined delivery processes (Bowen and Schneider 1995).

Second, drivers of CEBs include benefit based motivations and autonomous motivation. Unlike previous research, the findings demonstrate that the CEBs result from the interaction effects of perceived benefits on autonomous motivation and hence engagement behaviours. This is shown to be the case for all three types of CEBs. Thus, the current research extends previous work to the direct and indirect effect of benefits on the three types of CEBs: CEB toward oneself, CEB toward other members and CEB toward the firm. It demonstrates the role of autonomous motivation.

The first theoretical implication relates to the role of the CEBs that co-create value. In the early work in service marketing, a customer was viewed as a passive receiver of value (Bowen and Schneider 1995). However, the emergence of brand communities empowers customers to engage with customer communities and the firm. This interactivity of CEBs is a central element of the concept of value co-creation, as it represents deep engagement in the brand community context (Prahalad and Ramaswamy 2004). The evolution of S-D logic reinforces the idea that brand co-creation involves collaborative activities including firm, and other stakeholders. In this context, Merz, He, and Vargo (2009, 338) stated that, 'it is the dynamic interaction of the customers within the boundaries of the brand community that co-create brand value in these brand communities'.

Consistent with the conceptualisation of behavioural engagement and S-D logic (Van Doorn et al. 2010; Jaakkola and Alexander 2014; Vargo and Lusch 2008), the findings of both phases of this study (qualitative and quantitative) refine and operationalise the multiple facets of CEBs in OBCs, taking into account behaviours relating to the members themselves toward the brand, other members and firm. Apart from extending the S-D logic in C2C value co-creation to the online brand community context, the findings contribute to the customer engagement literature by identifying and defining three different types of CEB that involve the co-creation of value for themselves, other customers, and the firm.

As noted at the beginning of this section, this study's definition of CEB is distinct from the concept of in-role behaviours that have typically been defined as customer participation within

organisation-defined delivery processes (Bowen and Schneider 1995). It is also distinct from the concept of OCB that mainly focus on the effect of employee actions on the organization (Organ 1988). In contrast, this study's definition of CEB entails extra-role behaviours that go beyond the defined delivery process (Bolton and Saxena-Iyer 2009). Thus, the operationalisation of this definition contributes to the customer engagement literature in two ways: first, it focuses on the behavioural manifestations of the engagement concept (Van Doorn et al., 2010) and then extends these manifestations to three types of engagement behaviours that co-create value beyond purchase (Pervan and Bove 2011). This is the first research study to examine three types of behavioural constructs instead of a single construct such as participation, sharing or contribution, as has been the case with most studies (e.g., Franzak, Makarem, and Jae 2014; Park et al. 2014; Benedikt and Werner 2012; Nambisan and Baron 2007; Nambisan and Baron 2010). Second, this study closes a significant gap regarding CEBs by exploring behaviours beyond the expected roles of customers (Dessart et al. 2015; Pervan and Bove 2011).

This study operationalises CEBs only in terms of behavioural manifestations (e.g., Porter et al. 2011; Van Doorn et al. 2010; Jaakkola and Alexander 2014). The reasoning for this is two-fold. First, the engagement behaviour concept is still in its early stages and has not been well developed (Brodie et al., 2013; Gummerus et al. 2012), thus, more research is warranted to determine the underlying behavioural dimensions. The second reason for embracing the behavioural perspective is because the present study is built on the behavioural manifestations derived through a content analysis of an online brand community. Future research could employ different research methods to integrate the cognitive and emotional dimensions of customer engagement identified by other studies (e.g., Hollebeek 2011a; Groeger, Moroko, and Hollebeek 2016).

More research is needed to identify other forms of CEBs. It is important to acknowledge that the three identified types of CEBs: CEB toward oneself, CEB other members and CEB the firm are specific to the online brand community platform. Other social media contexts such as blogging, YouTube, Facebook, twitter, online review websites etc. may reveal different kinds of behaviours. For example, other sub-forms of CEB toward other members can be displayed in writing reviews, blogging, and uploading videos about the brand. Customers who engage in reading, creating experience, observing, and watching user generated content across these

different social media can also be considered as sub-forms of CEB toward oneself. More research that is comprehensive is required to operationalise measures that capture different sub-forms of CEB. More specifically, research on this area is required to identify the sub-forms of behaviours of each focal object (i.e., oneself, other members, and firm).

The second contribution contributes to theory by demonstrating SDT is superior in explaining CEBs compared to SET. The underlying assumption of SET is that members expect to gain some benefits from their participation and that these anticipated benefits in turn can strongly influence their future engagement behaviours in the OBCs. SDT challenges the sole function of reciprocity embedded in SET in predicting CEBs and suggests the need to incorporate autonomous motivation to better predict CEBs. In contrast to earlier studies that focused on only one set of antecedents of CEBs (perceived benefits or autonomous motivation) (as per Nambisan and Baron 2010; Nambisan and Baron 2007; Dholakia et al. 2009), this study theoretically and empirically integrates the two sets of antecedents into the proposed research model and then demonstrates the influence of the interactions between these antecedents on CEBs in OBCs. With the exception of functional benefits, detachment of these two sets of motivations (i.e., focusing only on one set) can have a negative impact on CEBs. As the mediation findings demonstrate, the centrality of engagement behaviours is based upon the interaction effects of perceived benefits on autonomous motivation and hence engagement behaviours. In other words, community members derive benefits from OBCs that strengthen their willingness and autonomy to engage in behavioural activities. Therefore, this study provides a robust theoretical explanation (via SDT) (Gagné and Deci 2005) of how two sets of antecedents lead to engagement behaviours and how they integrate and affect engagement behaviours. In this respect, the findings of this study respond to Porter et al.'s (2011) call by explaining the theoretical grounds underlying the interactions between perceived benefits and autonomous motivation.

So far, a substantial body of research has examined the perceived benefits derived from online communities in promoting engagement behaviours through the lens of SET, and mainly from the perspective of reciprocity (Jin, Yong, and Hye-Shin 2010; Nambisan and Baron 2010; Bove et al. 2009; Gagné 2009). According to Nambisan and Baron (2009), the underlying assumption of SET is that members expect to gain some benefit from their participation and that these anticipated benefits in turn can strongly influence their future engagement behaviours in the

OBCs. However, recent findings investigating factors influencing members' contributing behaviour in online communities showed that the norm of reciprocity did not have a significant impact on members' contributing behaviours (Chen and Hung 2010; Gagné 2009). This evidence supports the findings of this study that CEBs are not entirely driven by the norm of reciprocity.

SET does not take into account the role of autonomous motivation, as embedded within SDT, in explaining the different types of CEBs. As operationalised in the research model, autonomous motivation is an intrinsic motivation that involves individuals undertaking an activity because they find it interesting and derive spontaneous satisfaction (e.g., achieving personal goals, feeling better afterwards and enjoying creating value for others) from the activity itself (Gagné and Deci 2005). The findings of this study empirically support the main premise of SDT, in which autonomous motivation leads to more positive engagement behaviours than controlled motivation (i.e., expectations of benefits).

More specifically, the findings of this study for the mediation analyses demonstrate that autonomous motivation plays a significant role in the relationship between social benefits, hedonic benefits and status benefits and CEB toward oneself, CEB toward other members and CEB toward the firm. The interaction effects between benefits and autonomous motivation help to explain why prior research did not find a significant relationship between psychological benefits (a sense of affiliations to the community) and contribution to the community (Wang and Fesenmaier 2004), and between social benefits and community participation (Benedikt and Werner 2012; Tsai, Huang and Chiu 2012). This might be because engaging in different types of CEB is more intrinsically motivated rather than directly derived from an expectation of benefits. Community members participate and contribute in OBCs because these benefits enhance their autonomous motivation to engage. There is one important exception. This is not the case for functional benefits examined in this study, as have been shown to impact only directly on CEBs. Thus, it appears SET theory is more relevant to explain the impact of functional benefits on CEBs, whereas SDT theory is more applicable for the other types of benefits.

7.3.2. Limitations of this Study and Suggestions for Future Research

In addition to SET and SDT, there are other theories future CEBs studies could apply. For example, regulatory engagement theory (Scholer and Higgins 2009) or social engagement theory (Green and Clark 2015) could offer further insights on what shapes customer engagement behaviours.

The findings of this study are limited to the members of the OBCs, while lurkers and visitors were excluded from the survey. The inclusion of both members and non-members (visitors/lurkers) in future research would allow researchers to explore differences between these two groups. As discussed earlier, members who engage primarily in CEB toward oneself and lurkers have commonalities, but they are distinct in terms of the extent of their contribution to the community. For example, members engaging in CEB toward themselves participate by asking questions and by monitoring conversations and searching for information, whereas lurkers only consume information and choose not to participate in a dialogue with the community. Prior research showed that lurkers are not selfish, as is commonly believed. There are unselfish reasons for why they do not participate, such as shyness, fear of rejection, browsing being enough for them, and wanting to remain anonymous (Preece, Nonnecke and Andrews 2004). Since the findings of this study show that CEB toward oneself has a positive and significant impact on purchase intention and positive WOM, future research could also explore the differences between those members who help themselves only and lurkers in relation to purchase intention and WOM, as this has important managerial implications for marketers.

The scope of this study is limited by the sample from which the data was collected. One reason for choosing the convenience sample used in this study was due to the applicability and accessibility of online communities (Ridings and Gefen 2004). The practical restriction of random sampling is that online communities' owners/administers will not allow access to, or provide, a list of their members' emails due to privacy concerns. This method also did not allow the findings to be followed up through interviews with community members. Future research could extend the current study by enabling more dialogue with the surveyed members. Furthermore, as this study involved samples from Saudi Arabia, which is considered to be a

collectivist culture (c.f., http://geert-hofstede.com/china.html), some of the results may not be the same for brand community members from countries with individualistic cultures.

A further limitation of this study is the issue of multicollinearity among the CEB constructs as predictors of brand loyalty. As explained earlier, multicollinearity occurs when there is a high degree of correlation among the exogenous constructs that are used to predict endogenous constructs (Rosenthal 2013). The high correlation between the CEB constructs may result in misleading or uninterpretable results (Bagozzi and Yi 2012). The current study recognises this issue and the issue has been dealt with by following two methods that have previously been used in the literature. First, a second-order construct was created for the CEBs construct to test the structural model. Since the second-order structural model would not allow an evaluation of the causal paths between the three types of CEBs and purchase intention and WOM individually, three separate structural models were created to test and evaluate these relationships. Thus, caution must be taken when making a comparison between the individual models.

7. 3.3 Managerial Implications

Several managerial implications can be derived from this study for brand managers and community administrators. There is a need to understand the social exchanges in the community and what factors play a critical role in this social exchange. This is important due to the increasing number of brand communities. Thus, developing an understanding of brand community effectiveness and members' experiences is increasingly imperative. Brand manager efforts in this respect play an important role to promote the community's effectiveness and hence brand loyalty.

The findings highlight the importance of the four types of perceived benefits in relation to CEBs. The following aspects of these benefits: personal status, recognition (i.e., status benefits), personal relationships, friendships (social benefits), practical information, learning (functional benefits), fun, pleasure, idea generation, and problem-solving (hedonic benefits), were all found to be significant factors in shaping CEBs. To activate and support the autonomy among members, strategies to recognise the status of important contributors should be put in place, as this is significant for encouraging the creation of value for other community members.

For instance, most OBCs recognise the status of contributors by allocating them titles to reflect their number of contributions or by rating their contributions. This approach is consistent across most types of social media that allocate personal status/recognition to enhance users' experiences and interactions (Hudson et al. 2014).

To foster and sustain CEBs, it is important for brand managers to support the content creation by focusing on material that encourages customers to report their experiences and enhances their relatedness to the brand community. For example, members' evaluation of the functional benefits derived from the OBC (potential causes of problems, practical solutions, and general information on product usage) are directly linked to CEB towards themselves (e.g., seeking information from other members, posting questions). Support and investment in providing quality of information for members to share on OBCs (i.e., functional benefits) can be an effective means to make members more active in brand communities whilst also enhancing brand loyalty. Furthermore, evidence is emerging which suggests that consumer engagement behaviours with the brand and its community can be negatively impacted when they perceive the brand devotes less effort (e.g., lack of information, poor management, etc.) (Gambetti and Graffigna 2014).

Further, providing content such as video, photos and other material related to the brand that have functional and hedonic value can motivate members to engage in engagement behaviours. Dholakia et al. (2009) demonstrated that the functionality and the design features of the community site play a key role not only in increasing users' knowledge, but also by strengthening their identification with the community. Further, several studies have indicated that support and enhancement of these benefits can be achieved by enhancing the breadth and depth of product-related content and making content more accessible to customers (Nambisan and Baron 2009; Verleye 2015). Further enhancements include technology interfaces or visualisation tools that enable customers to visualise the patterns in the customer conversations, and navigate towards the content part of the conversation (Nambisan and Baron 2009). Enhancing accessibility and visualisation will facilitate the benefits and lead to more interactive behaviours in the brand community.

The findings from this study demonstrate that the more members perceive social, status and hedonic benefits, the more they feel autonomously motivated to engage. Thus, in order to

enhance autonomous motivation for engagement behaviours, the support of the social context is important. Most of these perceived benefits can be enhanced or improved by brand managers over time through interactive technology interfaces and visual material.

From a managerial standpoint, all three types of CEBs are of significance to the success and growth of the brand community and the brand. The extent to which customers are willing to engage in conversations with other customers as well as the firm can significantly influence a firm's value, especially as this affects what customers are prepared to tell others, and what insights they are willing to provide firms regarding product development and enhancement (Kumar et al. 2010). The importance of the managerial aspects of these three engagement behaviours not only leads to the success of the community but also reflects the success of the brand itself.

The role of CEB toward the firm as a co-creator of value has been highlighted in service marketing as customers are partners in service delivery, where they contribute to service quality through their roles as promoters of the firm, co-producers of the firm's service and consultants to the organisation (Bettencourt 1997). CEB toward the firm in brand communities, on the other hand, goes beyond the service encounter and influences every part of the firm's business (Prahalad and Ramaswamy 2004). One of the aspects of engagement behaviour is where customers contribute ideas, identify their needs and offer suggestions that will enhance and improve existing and future products/services. This type of engagement behaviour is especially important for products/services that are technical and complex in nature, and these crucial inputs can be a valuable source of new ideas for business strategies and support for customers. The context of OBCs is also significant for firms to obtain a clearer picture of customer evaluations of the product/brand, the product's performance and other issues related to the product or service. According to (Porter et al. 2011, 101) 'managers know engagement when they see it: when members participate and cooperate within the virtual community and go the extra mile to create value for themselves and for the firm'.

From the brand community perspective, the most important type of CEBs is CEB toward other members, as this helps keep the brand community supplied with knowledge and valuable information for both community members and visitors. The exploratory findings of this research present several examples where customers actively discuss and provide specific and

complex information about a product or service that would be unfamiliar to average customers. Both the exploratory and explanatory findings demonstrate that this type of engagement behaviour involves consumers that are well equipped with skills and knowledge about various products/issues related to the brand. This content and information about the brand and its products that they contribute to the community is essential to the success and development of the brand community (Gummerus et al. 2012).

The managerial aspect of CEB toward other members and CEB toward oneself is crucial for firms, as this represents free service support beyond purchase. Firms supporting brand communities can achieve a reduction in the cost of service delivery support (Dholakia et al. 2009; Pongsakornrungsilp and Schroeder 2011). For example, CEB toward oneself is also important for the firm because the value that consumers co-create for themselves can be considered as free service delivery support delivered by skilled experts within the community. The role of brand managers is central to this type of self co-creation taking place in these OBCs if they set strategies to target non-participant members. According to Thompson et al. (2014), brand managers can take advantage of non-participants who are actively seeking specific information through customising marketing messages that appeal to their interests.

Further, the findings of this study also show that all CEBs are significant predictors for purchase intention and a positive WOM. These findings have two main managerial implications. First, providing support for customers to interact with the brand in OBCs is an effective marketing strategy to achieve desired outcomes, as OBCs are an effective platform for enhancing brand loyalty. This is consistent with the recent findings that suggest fostering brand communities is an effective means to increase sales and advocate the brand (Laroche et al. 2012).

Second, compared with CEB toward other members and CEB toward the firm, CEB toward oneself is most closely associated with purchase intention and positive WOM. In fact, the managerial value of CEB toward oneself is overlooked in the extant studies. This is because most of the brand community literature concentrates on the importance of active members and their potential value to the firm (Thompson et al. 2014). The present findings add to the brand community literature by demonstrating that CEB toward oneself has a strong impact on brand loyalty in terms of a positive WOM and purchase intention. Accordingly, brand managers need

to address this type of engagement behaviour by implementing strategies that encourage customers to seek information from OBCs. For example, this could be done by recognising and rewarding individuals for asking a "great" question. Evidence is emerging which shows Microsoft and other firms have recently established new positions, such as community managers and customer liaison managers to coordinate their OBC activities (Nambisan and Baron 2009). This study reinforces the need for these positions and highlights the different benefits and behavioural outcomes they need to address.

It must be recognised that behavioural manifestations of CE toward the firm or the brand on OBCs are not always positive. Generally, community members or customers across different social media platforms may engage in anti-brand behaviours including comments, posts, ratings, negative product reviews or negative e-WOM that may decrease customers' attitude, brand image, and purchase intention (McWilliam 2000; Lee et al. 2008; Karakaya and Barnes 2010; Wirtz et al. 2013). These behaviours are not desirable for firms and represent a potential management challenge. In addition to that, this kind of engagement behaviour is not aligned with the objective of OBCs in terms of creating ideas for product improvement, improving the company culture, improving brand image or increasing sales (Wirtz et al. 2013). Whilst managing the negative side of CEB is a challenging area (Wirtz et al. 2013) negative behaviour can be mitigated by response strategies for social media platforms (Chen and Xie 2008). Future research is needed to explain negative CEB and identify strategies to deal with negative CEB across different social media platforms.

Recent research has highlighted the need to examine how negatively-valenced consumer engagement expressions might influence customer engagement outcomes, such as loyalty and WOM (Hollebeek and Chen 2014). Accordingly, future research might explore the psychological dimensions of customer engagement in negatively-valenced criticism to the brand/firm, and whether or not customers are resilient to this type of information. This is because recent research suggests that OBCs are effective in influencing sales (Adjei, Noble, and Noble 2010); therefore, examining the impact of both positive and negative information and its effects on purchasing behaviours (e.g., purchasing intention, cross-buying) may be a fruitful area for research in the OBC context. Based on the relative paucity of research on the impact of negatively/positively valenced consumer expressions on consumer attitudes and

behaviours, research in this area would provide a greater level of understanding of the emerging concept of customer brand engagement (Hollebeek and Chen 2014).

From the firm's perspective, OBCs constitute a platform that not only facilitate product improvement and enhance brand image but also increase sales. A recent study (Manchanda et al. 2015) explored the return on investment for firm-sponsored online communities. Their findings show that firms derive "social dollars" (i.e., frequent orders with the firm) from online brand communities. Specifically, the findings suggest that firms sponsoring online communities observe an increase in revenue. Their findings also show that community members who engage in posting "tend to exhibit high[er] social dollar" outcomes than less active members (lurkers). This current study shows that the three types of CEBs in OBCs drive purchase intentions. This suggests that brand managers should consider sponsoring active online brand communities. Kozinets (2014) also suggests firms need to encourage and reward active members in order to influence other members in the community to purchase or use more of the brands' products. In addition to that, investigating other contexts, such as tech blogs and other social media platforms would be appropriate to broaden and generalise the effect of the three types of CEBs on purchase intention and ROI outcomes.

Finally, the brands investigated in this study were popular smartphones (iPhone and Galaxy). The reason for choosing these brands is that communities generally form around brands that have a strong image and rich history (Muniz and O'Guinn 2001). Therefore, an investigation of less established and resourced brands may reveal different OBC engagement behaviours, drivers, and outcomes.

7.4 Conclusion

The emergence of OBCs has revitalised the concept of social interactions, and the CEB (Brodie et al. 2011) has emerged as central concept to understanding the interactive experience and the social exchange of operant resources (i.e., knowledge and skills) (Vargo and Lusch 2008). Brand value and how customers experience is not only restricted to firm resources and efforts, but extends to involve the active role of OBCs in facilitating this value (Laroche et al. 2012). Online social communities not only connect customers to each other, but also connect them to the firm. This brings a new shift in relationships away from the traditional one-way interaction

to two-way interactions (Porter et al. 2011). The increasing number and presence of OBCs supports customers to play active and interactive roles in seeking and obtaining a more personalised experience and in value co-creation (Wirtz et al. 2013; Muniz and Schau 2011; Prahalad and Ramaswamy 2004).

This study has explored the concept of CEB in OBCs. By examining the brand community literature, the predominant topics explored include the factors that drive community identification (Algesheimer, Dholakia and Herrmann 2005; Carlson, Suter and Brown 2008), community commitment (Hur, Ahn and Kim 2011; Kuo and Feng 2013), brand commitment, brand attachment (Zhoua et al. 2012), brand trust (Habibi, Laroche and Richard 2014), satisfaction (Ray, Kim and Morris 2014) and brand loyalty (Algesheimer, Dholakia and Herrmann 2005). Nonetheless, very few studies have examined the engagement behaviours and how these behaviours contribute to value co-creation (Pongsakornrungsilp and Schroeder 2011; Schau, Muñiz and Arnould 2009; Nambisan and Baron 2009). Examining CEBs that co-create value in OBCs is central to this study.

CEBs have recently emerged as an important concept in the marketing literature (Verleye et al. 2014; Jaakkola and Alexander 2014). Researchers in this area conceptualise customer/brand engagement as a multi-dimensional concept that includes cognitive, emotional and behavioural activity related to customer/brand interactions (Hollebeek and Chen 2014). This current study makes a strong contribution to the behavioural activities of customer engagement in OBCs, and confirms the significant advantages these behaviours bring to a firm and its customers (Porter et al. 2011; Jin Yong and Hye-Shin 2010).

Based on a comprehensive literature review including the brand community literature, and customer engagement literature, this study utilises the existing conceptualisation of CEB and the logic of S-D to explain the engagement concept and to operationalise the behavioural aspects of CEB (Porter et al. 2011; Van Doorn et al. 2010). More specifically, based on the key themes of the CEB conceptualisation, this study has operationalised three facets of CEBs that co-creat value in OBCs: CEB toward oneself, CEB toward other members and CEB toward the firm.

To understand CEBs and how they contribute to value co-creation, an exploratory study using netnographic approach was conducted (as per Brodie et al. 2013). The findings provide more understanding of CEBs that co-create value within online brand community contexts. Briefly, the findings identified three types of CEBs, which are reflected by multiple engagement themes. These themes were grouped into three types of value co-creation: CEB toward themselves i.e., co-creating value by seeking information; CEB toward other members i.e., co-creating value by providing information to members; and CEB toward the firm i.e., co-creating value by providing suggestions to improve the brand. As such, the findings support the conceptualisations of CEBs that were identified in the literature and developed in the conceptual research model. As well, the results helped to refine and operationalise the constructs that were subsequently tested in the second phase of this study. Finally, the exploratory phase contributes to brand community and CEB literature by identifying a range of indicators which operationalise the three types of value co-creation behaviours specific to the online community context.

To develop the proposed research model of this study, attention was given to what makes customers engage in these behaviours. This is consistent with the idea that engagement behaviours in these communities is a consumption phenomenon and can be explored from a benefits and motivation perspective (Porter et al. 2011). Thus, this study builds on the theoretical grounds of both SET and SDT to explain the roles of reciprocity and autonomous motivation in CEBs. Accordingly, four perceived benefits: social, status, hedonic and functional, that are relevant to the context of brand communities were included in the model. Based on the premises of SDT, autonomous motivation acts as a mediator construct between these perceived benefits and three types of CEBs. The interactions of the antecedents and outcomes were outlined in direct and indirect hypotheses. The research framework considers the consequences of the engagement behaviours taking place in brand communities by examining how CEBs influence brand loyalty behaviours.

Specifically, the findings detail how perceived benefits and autonomous motivation interacts, influence each other, and influence CEBs. As the findings reveal, functional was the only benefit construct that was not mediated by autonomous motivation. Status benefits, social benefits and hedonic benefits were all partially or fully mediated by autonomous motivation. This finding provides a valuable implication that reciprocity norms (i.e., SET) only explain the

impact of functional benefits on CEBs. The other three benefit constructs offer strong support for SDT, as the impact of each on CEBs is mediated by autonomous motivation. Finally, the mediation analysis shows that autonomous motivation is a significant predictor of all three types of engagement behaviours and provides further support for STD.

The findings make a strong contribution to brand community literature by demonstrating the interaction between the four benefit constructs, autonomous motivation and the three CEB types. This study advances the understanding of brand community engagement by revealing how the various motivational drivers affect CEBs. The findings show that functional benefits directly drive CEBs in OBCs. However, the mediating role of autonomous motivation revealed for the other three perceived benefit constructs suggests that benefits have an indirect effect on CEBs. This finding addresses the objective of this study to assess the impact of the different types of perceived benefits on members' autonomous motivation and their relative effect on CEBs. In line with STD, the study also shows that self-efficacy moderates the effect autonomous motivation has on CEBs. In other words, the effect is stronger for members who feel they are competent and possess the skills to contribute to the online brand community.

After validating three distinct types of CEBs relevant to OBCs, this study further examined the effect of each of these engagement behaviour types on brand loyalty. The findings show that all three types of engagement behaviours have a significant and positive impact on brand loyalty in terms of purchase intention and WOM. Providing and validating a conceptual research model that outlines the types of CEBs, what motivates customers to engage in these behaviours, and how these different types of CEBs relate to brand loyalty is a significant step towards closing the theoretical gap in the brand community literature (Dessart et al. 2015; Muniz and Schau 2011; Porter et al. 2011; Gummetus et al. 2012). The findings of this study respond to the call from a special issue of the Journal of Strategic Marketing to identify types of CEBs outside the roles required to enable service delivery (Pervan and Bove 2011). Finally, this study contributes to the marketing literature as it illustrates and validates how CEBs in online brand communities generate marketing value (MSI 2012). Strategies that firms can use to encourage CEBs in OBCs have been provided in the managerial implication section of this chapter.

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Appendix A: Survey in English

Dear Participant,

My name is Meshaal Alotaibi. I am a PhD student at the School of Marketing, Curtin University, Western Australia. I am currently conducting a survey on customer engagement in online brand communities. The survey is a part of the PhD degree requirements.

I truly appreciate your participation and assure you that the survey will only take ten minutes of your valuable time. I would also like to assure you that all the information provided by you will be **strictly confidential,** will only be used in aggregate form and will not be linked to you in any way. Furthermore, the data collected will be stored in a secure place at the University for five years and will only be accessible to the relevant researcher and supervisors for educational purposes and may be published in proceedings of national/international conferences and/or academic journals.

Your participation in this survey is **completely voluntary** and you may withdraw from participation at any time.

An ethical clearance has been granted for this survey (No. SOM2012034). If you have further questions, concerns, or enquiries please do not hesitate to contact me on +61422105936 (m.alotaibi5@postgrad.curtin.edu.au) or my supervisors at School of Marketing: Dr. Robyn Ouschan on +61892667288 (Robyn.Ouschan@cbs.curtin.edu.au) and Dr. Graham Ferguson on +61 8 9266 3140 (Graham.Ferguson@cbs.curtin.edu.au).

If you have any concerns over your rights as a participant and wish to talk to an independent person, you may contact the Secretary Human Research Ethics Committee at the following address:

Office of Research and Development
Curtin University of Technology
Level 1, Building 100,
Bentley WA , Australia.
Tel: +61 8 9266 2784, E-mail: hrec@curtin.edu.au

Customer Engagement Survey

GENERAL INFORMATION AND INSTRUCTIONS

1) These statements are designed to examine factors influencing your engagement in online brand communities. For the purpose of this survey, please answer all questions in relation to this online brand community (Name of the community).

A	**Based on your feelings about the engagement with this online <u>brand community</u> (Name of the community) please indicate the extent to which you agree or disagree with the following statements.** (Please circle one number ranging from "strongly disagree" = 1 to "strongly agree" =7 for each statement)	*Strongly Disagree*						*Strongly Agree*
1.	The friendship aspect of my relationship with the members of this community is important to me.	1	2	3	4	5	6	7
2.	I enhance my knowledge of the product and its usage from this community.	1	2	3	4	5	6	7
3.	I value the convenience this community provides me.	1	2	3	4	5	6	7
4.	I value the close personal relationship that I have with the members of this community.	1	2	3	4	5	6	7
5.	I derive enjoyment from problem solving, and generating ideas within this community.	1	2	3	4	5	6	7
6.	I value the information this community provides me.	1	2	3	4	5	6	7
7.	I enhance my status/reputation as a product expert in the community.	1	2	3	4	5	6	7
8.	I reinforce my product-related credibility/authority in the community.	1	2	3	4	5	6	7
9.	I make better purchase decisions because of this community.	1	2	3	4	5	6	7
10.	I enjoy spending time with members of this community.	1	2	3	4	5	6	7
11.	I enhance my knowledge about advances in product, related products, and technology from this community.	1	2	3	4	5	6	7
12.	I am motivated to participate in the community's activities because I am able to create value for other members.	1	2	3	4	5	6	7
13.	I obtain solutions to specific product usage- related problems from this community.	1	2	3	4	5	6	7
14.	I entertain myself and stimulate my mind in this community.	1	2	3	4	5	6	7
15.	I value the time this community saves me.	1	2	3	4	5	6	7
16.	I derive fun and pleasure from this community.	1	2	3	4	5	6	7
17.	I derive satisfaction from influencing the design and development of products through this community.	1	2	3	4	5	6	7
18.	I am motivated to participate in the community's activities because I feel better afterwards.	1	2	3	4	5	6	7
19.	I derive satisfaction from influencing product usage by other community members.	1	2	3	4	5	6	7
20.	I have confidence in my ability to provide knowledge that other members in this community consider valuable.	1	2	3	4	5	6	7
21.	I spend some enjoyable and relaxing time at this community.	1	2	3	4	5	6	7
22.	I benefit from following the community's rules.	1	2	3	4	5	6	7
23.	I have the expertise, experiences and insights to provide knowledge valuable for other members in this community.	1	2	3	4	5	6	7
24.	I am motivated to participate in the community's activities because I am able to reach personal goals.	1	2	3	4	5	6	7

25.	I have confidence in responding or adding comments to messages in this community.	1	2	3	4	5	6	7

B	**In regard to your contribution in this online brand community (Name of the community), please show the extent to which you agree or disagree with the following statements.** Please circle one number for each statement ranging from "strongly disagree" = 1 to "strongly agree" =7 for each statement).	*Strongly Disagree*						*Strongly Agree*
1.	I give advice to other members.	1	2	3	4	5	6	7
2.	I ask other members for information related to my iPhone.	1	2	3	4	5	6	7
3.	I assist other members if they need my help.	1	2	3	4	5	6	7
4.	I make suggestions to improve the iPhone.	1	2	3	4	5	6	7
5.	I share my opinions if I feel they will benefit the iPhone.	1	2	3	4	5	6	7
6.	I pay attention to other members' interactions regarding iPhone usage.	1	2	3	4	5	6	7
7.	I teach other members to use the iPhone correctly.	1	2	3	4	5	6	7
8.	I let Apple know of ways to better serve my needs about the iPhone.	1	2	3	4	5	6	7
9.	I help other members if they seem to have problems with their iPhone.	1	2	3	4	5	6	7
10.	I contribute ideas that could improve the iPhone.	1	2	3	4	5	6	7
11.	I search for information on this community about issues related to my iPhone.	1	2	3	4	5	6	7

C	**Regarding your feelings <u>about the iPhone brand</u>, please indicate the extent to which you agree or disagree with the following statements.** (Please circle one number for each statement) ranging from "strongly disagree" = 1 to "strongly agree" =7 for each statement).	*Strongly Disagree*						*Strongly Agree*
1.	I refer my acquaintances to the iPhone.	1	2	3	4	5	6	7
2.	I intend to buy the iPhone the next time I buy.	1	2	3	4	5	6	7
3.	I encourage friends to try the iPhone.	1	2	3	4	5	6	7
4.	I would actively search for the iPhone in order to buy it.	1	2	3	4	5	6	7
5.	I intend to buy other products of the iPhone brand.	1	2	3	4	5	6	7
6.	I recommend the iPhone brand to anyone who seeks my advice.	1	2	3	4	5	6	7
7.	I say positive things about the iPhone brand to other people.	1	2	3	4	5	6	7

D	**How long have you been a member of this community (Name of the community)?** (Please circle one answer only).		
1.	Not a member of this community	4.	More than 2 years but less than 4 years
2.	Less than 1 year	5.	4 to 6 years
3.	1 to 2 years	6.	Over 6 years

E	**How often have you participated in the following activities in this online brand community (Name of the community) within the last three months?** (Please circle one answer only).	*Never*	*One to three times*	*Four to six times*	*Seven to nine times*	*Ten or more times*
1.	Helping members (e.g., answering queries).	1	2	3	4	5
2.	Helping the firm (e.g., suggesting ways to improve the brand).	1	2	3	4	5

3.	Helping yourself (e.g., seeking information, asking questions).	1	2	3	4	5

This section covers additional information about you. As stated in the cover sheet, the information will not be used for identification, but used only for establishing broad demographic categories. Please answer all questions.

F	**What is your gender?** (Please circle one answer only).		
1.	Male	2.	Female

G	**What is your age?** (Please circle one answer only).		
1.	20 years or less	4.	41 - 50
2.	21 - 30	5.	51-60
3.	31 - 40	6.	61- or older

H	**What is the highest level of education you have completed?** (Please circle one answer only).		
1.	Less than High School	4.	Bachelor degree
2.	High School	5.	Master's or Doctoral Degree
3.	Diploma	6.	Others. Please specify: _____

**********End of Survey – Thank you for participating **********

Note: this is the English version that has been translated into Arabic.

Appendix B: Survey in Arabic

عزيزي المشارك,

أنا مشعل العتيبي طالب دكتوراه بجامعة كرتين غرب ستراليا. أقوم حاليا بعمل استبيان حول مشاركة وارتباط الأعضاء في المنتديات المتخصصة التي تحمل علامة تجارية. ويعد هذا الاستبيان جزء من متطلبات حصولي على درجة الدكتوراه.

أقدر كثيرا مشاركتك مع التأكيد على أن هذا الاستبيان لن يستغرق سوى سبع دقائق فقط من وقتك الثمين. كما أود التأكيد أيضا على إحاطة جميع ما ستذكره من معلومات **بالسرية التامة**.

إن مشاركتك في هذا الاستبيان **تطوعية تماما** ولك كل الحرية في الانسحاب من المشاركة في أي وقت.

حصل هذا الاستبيان على التصريح الأخلاقي (رقم SOM2012034). أرجوا عدم التردد عند وجود المزيد من الأسئلة أو الاستفسارات بالاتصال بي على

+966509747512 (m.alotaibi5@postgrad.curtin.edu.au) أو الاتصال على المشرف الخاص بي في كلية التسويق: د/ روبين أوشن على +61892667288 (Robyn.Ouschan@cbs.curtin.edu.au) و د/ جراهام فيرجسون على +61892663140 (Graham.ferguson@cbs.curtin.edu.au).

معلومات وإرشادات عامة 1) يهدف هذا الاستبيان إلى معرفة العوامل المؤثرة على مشاركتك و أرتباطك بمنتديات الاقلاع. لإتمام هذا البحث, نرجو منك التكرم بالإجابة على جميع الأسئلة المتعلقة بمنتديات الاقلاع.								
1 أ	**أستناداً على ماتشعر به حيال مدى ارتباطك بمنتديات الاقلاع, فضلا حدد الى أي حد تتفق او تعارض البيانات التالية** فضلا ضع دائرة حول احد الارقام ,حيث ان 1 اعترض بشدة و 7 اوافق بشدة, لكل من البيانات التاليةا	**أرفض بشدة**						**أوافق بشدة**
.1	الجانب الودي في علاقتي مع أعضاء منتديات الاقلاع هام بالنسبة لي.	1	2	3	4	5	6	7
.2	أعزز معرفتي بالمنتج واستخدمه من خلال هذا المنتدى.	1	2	3	4	5	6	7
.3	أثمن سهولة الوصول الى المعلومة التي يقدمها هذا المنتدى لي.	1	2	3	4	5	6	7
.4	أثمن العلاقة الوثيقة والشخصية التي امتلكها مع أعضاءهذا المنتدى.	1	2	3	4	5	6	7
.5	أستمتع بحل المشكلات و خلق افكار مستمدة من هذا المنتدى.	1	2	3	4	5	6	7
.6	أثمن المعلومات التي يوفرها لي هذا المنتدى.	1	2	3	4	5	6	7
.7	أقوم بتعزيز مكانتي كخبير بالمنتج في هذا المنتدى.	1	2	3	4	5	6	7
.8	أقوم بتعزيز مصداقيتي في مسائل متعلقة بالمنتج في هذا المنتدى.	1	2	3	4	5	6	7
.9	أقوم باتخاذ قرارات شراء أفضل بسبب هذا المنتدى.	1	2	3	4	5	6	7
.10	أستمتع بقضاء وقتي مع اعضاء هذا المنتدى.	1	2	3	4	5	6	7

.11	أنمي معرفتي حول تطورات المنتج و السلع والتكنولوجيا المتعلقة به من خلال هذا المنتدى.	1	2	3	4	5	6	7
.12	لدي حافز للمشاركة في المنتدى لأنني قادر على مساعدة الآخرين.	1	2	3	4	5	6	7
.13	أجد حلول للمشاكل ذات الصلة باستخدام منتج معين من خلال هذا المنتدى.	1	2	3	4	5	6	7
.14	أجد الترفية و تحفيز الذهن في هذا المنتدى.	1	2	3	4	5	6	7
.15	أملك ثقة في الرد على المشاركات المطروحة في هذا المنتدى او اضافة تعليقات عليها.	1	2	3	4	5	6	7

1 ب	**أستناداً على ماتشعر به حيال مدى ارتباطك بمنتديات الاقلاع , فضلا حدد الى أي حد تتفق او تعارض البيانات التالية** فضلا ضع دائرة حول احد الارقام ,حيث ان 1 اعترض بشدة و 7 اوافق بشدة, لكل من البيانات التالية	**أرفض بشدة**						**أوافق بشدة**
.16	أقدر الوقت الذي يوفره لي هذا المنتدى.	1	2	3	4	5	6	7
.17	أجد المرح و المتعة في هذا المنتدى.	1	2	3	4	5	6	7
.18	أشعر بالرضا عن التصاميم المؤثرة و التطويرات المقدمة من هذا المنتدى.	1	2	3	4	5	6	7
.19	لدي حافز للمشاركة في هذا المنتدى بسبب ينتابني شعور أفضل لاحقا.	1	2	3	4	5	6	7
.20	ينتابني شعور بالرضا بعد تاثيري على أعضاء المنتدى لاستخدام المنتج.	1	2	3	4	5	6	7
.21	لدي ثقة في قدرتي على تقديم معلومات يعتبرها أعضاء المنتدى قيمة.	1	2	3	4	5	6	7
.22	أقضي بعض الوقت الممتع والمريح في هذا المنتدى.	1	2	3	4	5	6	7
.23	أستفيد من اتباعي لقوانين هذا المنتدى.	1	2	3	4	5	6	7
.24	لدي الخبرة و التجربة و المعرفة التي تؤهلني لتقديم المعلومات القيمة لأعضاء المنتدى.	1	2	3	4	5	6	7
.25	لدي حافز للمشاركة في هذا المنتدى لأنني قادر على الوصول للأهداف الشخصية.	1	2	3	4	5	6	7

2 أ	**فيما يتعلق بمدى مشاركتك في منتديات الاقلاع** فضلا ضع دائرة حول احد الارقام ,حيث ان 1 اعترض بشدة و 7 اوافق بشدة, لكل من البيانات التالية	**أرفض بشدة**						**أوافق بشدة**
.1	اقدم النصائح للأعضاء.	1	2	3	4	5	6	7
.2	أستفسر عن معلومات تتعلق بـجهاز الآيفون الخاص بي من أعضاء هذا المنتدى.	1	2	3	4	5	6	7
.3	أساعد الأعضاء الاخرين إن احتاجوا مساعدتي.	1	2	3	4	5	6	7
.4	أطرح اقتراحات لتطوير جهاز الآيفون.	1	2	3	4	5	6	7
.5	أساهم بأرائي إن كانت ذات فائدة لجهاز الآيفون.	1	2	3	4	5	6	7
.6	أعير انتباهي لمشاركات الاخرين فيما يتعلق باستخدام جهاز الآيفون.	1	2	3	4	5	6	7
.7	أشرح للأعضاء الآخرين كيفية استخدام جهاز الآيفون بطريقة صحيحة.	1	2	3	4	5	6	7
.8	ابلغ شركة ابل بطرق تلبي احتياجاتي بشكل أفضل فيما يتعلق بجهاز الآيفون.	1	2	3	4	5	6	7
.9	أقدم المساعدة للأعضاء الاخرين إن واجهوا صعوبات فيما يتعلق بجهاز الآيفون.	1	2	3	4	5	6	7
.10	اساهم بأفكار قد تطور من جهاز الآيفون.	1	2	3	4	5	6	7
.11	أبحث عن معلومات في هذا المنتدى تختص بأمور تتعلق بجهاز الآيفون الخاص بي.	1	2	3	4	5	6	7

2 ب	**فيما يتعلق بشعورك حول جهاز الآيفون** فضلا ضع دائرة حول احد الارقام ,حيث ان 1 اعترض بشدة و 7 اوافق بشدة, لكل من البيانات التالية	**أرفض بشدة**	**أوافق بشدة**

	فضلا ضع دائرة حول احد الارقام ,حيث ان 1 اعترض بشدة و 7 اوافق بشدة, لكل من البيانات التالية							
.1	أنصح معارفي باستخدام جهاز الآيفون	1	2	3	4	5	6	7
.2	أنوي شراء جهاز الآيفون في المرة المقبلة إن اردت ترقية جهازي.	1	2	3	4	5	6	7
.3	أشجع اصدقائي على تجربة جهاز الآيفون.	1	2	3	4	5	6	7
.4	أبحث عن جهاز الآيفون باجتهاد لغرض شرائه.	1	2	3	4	5	6	7
.5	أنوي شراء منتجات اخرى من علامة ابل.	1	2	3	4	5	6	7
.6	أوصي أي شخص يطلب النصيحة بشراء الآيفون.	1	2	3	4	5	6	7
.7	أذكر أشياء إيجابية عن الآيفون للأشخاص الآخرين.	1	2	3	4	5	6	7

3 أ	كم مضى على عضويتك في منتديات الاقلاع؟		
.1	لست عضواً	.4	أكثر من عامين و أقل من 4 أعوام
.2	اقل من عام	.5	4-6 أعوام
.3	1-2 أعوام	.6	أكثر من 6 أعوام

3 ب	كم مرة سبق لك المشاركة في الأنشطة التالية في منتديات الاقلاع خلال الثلاثة أشهر الماضية؟ فضلا ضع دائرة على إجابة واحدة	لم اشارك مطلقاً	مرة الى ثلاث مرات	اربع الى ست مرات	سبع الى تسع مرات	عشرة مرات فأكثر
.1	مساعدة الأعضاء (مثلاً: الرد على الاستفسارات)	1	2	3	4	5
.2	مساعدة الشركة (مثلاً: اقتراح طرق لتطوير المنتج)	1	2	3	4	5
.3	مساعدة نفسك (مثلاً: طرح الأسئلة او البحث عن المعلومات)	1	2	3	4	5

	يغطي هذا القسم المعلومات الإضافية المتعلقة بالفئات الديموغرافية. فضلاً أجب عن جميع الأسئلة

4	ماهو جنسك ؟ فضلاً ضع دائرة حول إجابة واحدة فقط		
.1	ذكر	.2	أنثى

5	كم عمرك ؟ فضلاً ضع دائرة حول إجابة واحدة فقط		
.1	20 عاماً او أقل	.4	41-50
.2	20-30	.5	51-60
.3	31-40	.6	61 سنة فأكثر

6	**ما هي أعلى درجة علمية حصلت عليها؟** (برجاء وضع دائرة على إجابة واحدة فقط)		
.1	أقل من الثانوية العامة	.4	درجة البكالوريوس
.2	الثانوية العامة	.5	درجة الماجستير أو الدكتوراه
.3	دبلوم		

Appendix C: exploratory factor analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.661	51.461	51.461	5.661	51.461	51.461
2	1.344	12.222	63.682	1.344	12.222	63.682
3	1.009	9.170	72.853	1.009	9.170	72.853
4	.704	6.400	79.253			
5	.466	4.236	83.489			
6	.426	3.877	87.366			
7	.399	3.628	90.993			
8	.333	3.028	94.021			
9	.253	2.298	96.319			
10	.223	2.031	98.350			
11	.182	1.650	100.000			

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.885
Bartlett's Test of Sphericity	Approx. Chi-Square	2575.020
	df	55
	Sig.	.000

Extraction Method: Principal Component Analysis.

Note: based on the random sample (400)

Appendix D: EFA

Rotated Component Matrix[a]

	Component		
	1	2	3
FIRM3_Let the company know of ways to better serve my needs about the brand	.864	.090	.143
FIRM4_Contribute ideas that could improve the brand	.855	.130	.141
FIRM1_Make suggestions to improve the brand	.843	.152	.179
FIRM2_Share my opinions if I feel they will benefit the brand	.709	.425	.182
OTHERS3_Teach other members to use the brand correctly	.672	.352	.306
OTHERS4_Help other members if they seem to have problems	.582	.483	.324
ONE3_Search for information on this community about issues related to my brand	.128	.853	.114
ONE2_Pay attention to other member's interactions regarding the brand	.396	.760	.044
ONE1_Ask other members for information related to my brand	.103	.730	.254
OTHERS1_I give advice to other members	.267	.077	.843
OTHERS2-Assist other members if they need my help	.176	.283	.801

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Note: based on the random sample (400)

Appendix E: Convergent Validity Results for Random Sample

Constructs/items		AVE	Cronbach's alpha	CR	Standardized regression weights
	Social benefits	0.507	0.747	0.754	
1	The friendship aspect of my relationships with the members of this online community is important to me.				0.737
2	I value the close personal relationships that I have with the members of this online community.				0.752
3	I enjoy spending time with the members of this online community.				0.641
	Hedonic benefits	0.524	0.758	0.768	
2	I entertain myself and stimulate my mind in this community.				0.707
3	I derive fun and pleasure from this community.				0.756
4	I spend some enjoyable and relaxing time at this community.				0.708
	Status benefits	0.601	0.744	0.750	
1	I enhance my status/reputation as product expert in the community.				0.830
2	I reinforce my product-related credibility/authority in the community.				0.716
	Functional benefits	0.511	0.755	0.858	
4	I make better purchase decisions because of this community.				0.739
5	I enhance my knowledge about advances in product, related products and technology from this community.				0.723
6	I obtain solutions to specific product usage-related problems from this community.				0.682
	Autonomous Motivation	0.520	0.764	0.765	
1	I am motivated to participate in the community's activities because I feel better afterwards.				0.740
2	I am motivated to participate in the community's activities because I am able to create value for other members.				0.7676
4	I am motivated to participate in the community's activities because I am able to reach personal goals.				0.740
	CEB toward the firm	0.736	0.891	0.893	
1	I make suggestions to improve the iPhone.				0.809
3	I let Apple know of ways to better serve my needs about the iPhone.				0.882
4	I contribute ideas to my firm that could improve the iPhone.				0.881
	CEB toward other members	0.756	0.860	0.861	
3	I teach other members to use their iPhone correctly.				0.851
4	I help other members if they seem to have problems with their iPhone.				0.888

	CEB toward oneself	0.546	0.782	0.781	
1	I ask other members for information related to my iPhone.				0.641
2	I search for information on this community about issues related to my iPhone.				0.798
3	I pay attention to other members' interactions regarding iPhone usage.				0.7768
	WOM	0.782	0.913	0.915	
1	I refer my acquaintances to the iPhone.				0.845
2	I encourage friends to try the iPhone.				0.925
3	I recommend the iPhone to anyone who seeks my advice.				0.881
	Purchase intention	0.625	0.769	0.769	
2	I would actively search for this brand in order to buy it.				0.805
3	I intend to buy other products of this brand.				0.776

Notes: (-)a The first path for each construct was set at 1, therefore, no t-values are provided during the CFA. P-value < 0.05 for all items. For the Random sample N =400.

Appendix F: Discriminant Validity for all Constructs: AVE and Squared Correlation

constructs	SD	1	2	3	4	5	6	7	8	9	10
Functional benefits	0.080	**0.511**	0.147	0.159	0.192	0.101	0.056	0.053	0.181	0.077	0.049
Social benefits	0.080	0.384	**0.507**	0.306	0.283	0.501	0.166	0.183	0.146	0.063	0.043
Hedonic benefits	0.047	0.399	0.553	**0.524**	0.048	0.391	0.034	0.037	0.155	0.073	0.043
Status benefits	0.111	0.438	0.532	0.220	**0.601**	0.321	0.182	0.174	0.088	0.013	0.026
Autonomous motivation	0.113	0.318	0.708	0.625	0.567	**0.520**	0.258	0.251	0.173	0.094	0.107
CEB toward other members	0.162	0.236	0.407	0.185	0.427	0.508	**0.756**	0.534	0.493	0.123	0.151
CEB toward the firm	0.146	0.231	0.428	0.193	0.417	0.501	0.731	**0.736**	0.263	0.121	0.205
CEB toward oneself	0.046	0.425	0.382	0.394	0.296	0.416	0.702	0.513	**0.546**	0.262	0.244
WOM	0.140	0.277	0.251	0.270	0.113	0.307	0.351	0.348	0.512	**0.782**	0.812
Purchase intention	0.188	0.221	0.263	0.207	0.162	0.327	0.389	0.453	0.494	0.901	**0.625**

Note: Correlations are below the diagonal, squared correlations are above the diagonal, and AVE estimates are presented on the diagonal. Based on the CFA analysis for the Random sample N = 400.

Appendix G: Discriminant Validity for all Constructs: 95 Per cent CI of Correlation

Paths			Corr	Bias-corrected Percentile Method			Percentile Method		
Parameter			Est	Low	Upp	P	Low	Upp	P
CEB toward other members	<-->	CEB toward the Firm	.731	.631	.803	.012	.637	.803	.010
CEB toward other members	<-->	CEB toward oneself	.720	.594	.798	.012	.600	.801	.010
Others	<-->	WOM	.351	.238	.459	.011	.239	.465	.010
CEB toward other members	<-->	Purchase intention	.389	.266	.517	.012	.267	.518	.010
CEB toward other members	<-->	Social benefits	.407	.282	.512	.011	.284	.515	.010
CEB toward other members	<-->	Hedonic benefits	.185	.081	.317	.007	.067	.312	.010
CEB toward other members	<-->	Status benefits	.427	.331	.544	.009	.330	.542	.010
CEB toward other members	<-->	Functional benefits	.236	.123	.387	.006	.097	.370	.010
CEB toward other members	<-->	Autonomous Motivation	.508	.383	.609	.015	.400	.610	.010
CEB toward the Firm	<-->	CEB toward oneself	.513	.400	.615	.005	.394	.590	.010
CEB toward the Firm	<-->	WOM	.348	.263	.456	.007	.242	.451	.010
CEB toward the Firm	<-->	Purchase intention	.453	.324	.565	.010	.324	.565	.010
CEB toward the Firm	<-->	Social benefits	.428	.321	.539	.012	.322	.540	.010
CEB toward the Firm	<-->	Hedonic benefits	.193	.072	.308	.016	.077	.320	.010
CEB toward the Firm	<-->	Status benefits	.417	.290	.529	.012	.290	.531	.010
Firm	<-->	Functional	.231	.105	.346	.006	.077	.330	.010
CEB toward the Firm	<-->	Autonomous Motivation	.501	.402	.606	.009	.402	.605	.010
CEB toward oneself	<-->	WOM	.512	.420	.606	.009	.419	.604	.010
CEB toward oneself	<-->	Purchase intention	.494	.397	.603	.009	.395	.599	.010
CEB toward oneself	<-->	Social benefits	.382	.246	.480	.019	.276	.505	.010
CEB toward oneself	<-->	Hedonic benefits	.394	.272	.507	.014	.273	.511	.010
CEB toward oneself	<-->	Status benefits	.296	.181	.399	.007	.171	.397	.010
CEB toward oneself	<-->	Functional benefits	.425	.273	.565	.009	.271	.563	.010
CEB toward oneself	<-->	Autonomous Motivation	.416	.308	.553	.007	.297	.545	.010
WOM	<-->	Purchase intention	.901	.836	.946	.025	.855	.956	.010
WOM	<-->	Social benefits	.251	.135	.401	.008	.131	.396	.010
WOM	<-->	Hedonic benefits	.270	.167	.400	.009	.167	.400	.010
WOM	<-->	Status benefits	.113	-.012	.230	.070	-.021	.218	.087
WOM	<-->	Functional benefits	.277	.107	.368	.023	.142	.394	.010
WOM	<-->	Autonomous Motivation	.307	.169	.416	.020	.177	.426	.010
Purchase intention	<-->	Social benefits	.263	.138	.411	.011	.138	.413	.010
Purchase intention	<-->	Hedonic benefits	.207	.101	.359	.007	.099	.356	.010
Purchase intention	<-->	Status benefits	.162	.050	.322	.018	.025	.314	.035
Purchase intention	<-->	Functional benefits	.221	.069	.341	.013	.087	.358	.010
Purchase intention	<-->	Autonomous Motivation	.327	.168	.444	.020	.186	.457	.010
Social benefits	<-->	Hedonic benefits	.553	.354	.685	.026	.376	.721	.010
Social benefits	<-->	Status benefits	.532	.409	.638	.016	.413	.644	.010
Social benefits	<-->	Functional benefits	.384	.246	.510	.010	.246	.510	.010
Social benefits	<-->	Autonomous Motivation	.708	.583	.794	.023	.593	.806	.010
Hedonic benefits	<-->	Status benefits	.220	.062	.351	.021	.083	.369	.014
Hedonic benefits	<-->	Functional benefits	.399	.248	.518	.013	.250	.526	.010
Hedonic benefits	<-->	Autonomous Motivation	.625	.516	.768	.005	.496	.755	.010
Status benefits	<-->	Functional benefit	.438	.266	.609	.007	.245	.597	.010
Status benefits	<-->	Autonomous Motivation	.567	.433	.701	.011	.433	.705	.010
Functional benefits	<-->	Autonomous Motivation	.318	.175	.494	.009	.170	.485	.010

Based on the CFA analysis for the Random sample N = 400.

Appendix I: Results of Testing H13 a, b to H15 a, b CEB and WOM/Purchase Intention

Hypotheses		Random Sample (N=400)		
		P-value	β	Results
H13a	CEB toward oneself in an OBC is positively related to WOM.	***	0.533	Supported
H13b	CEB toward oneself in an OBC is positively related to purchase intention.	***	0.508	Supported
H14a	CEB toward other members in an OBC is positively related to WOM.	***	0.359	Supported
H14b	CEB toward other members in an OBC is positively related to purchase intention.	***	0.393	Supported
H15a	CEB toward the firm in an OBC is positively related to WOM.	***	0.356	Supported
H15b	CEB toward the firm in an OBC is positively related to purchase intention.	***	0.459	Supported

Note: these results derived from the Random sample.

Appendix J: Ethical approval

OFFICE OF RESEARCH AND DEVELOPMENT

HUMAN RESEARCH ETHICS COMMITTEE

Telephone 9266 2784
Facsimile 9266 3793
Email hrec@curtin.edu.au

To	«Meshaal Alotaibi», «School of Marketing»
From	Dr Isaac Cheah
Subject	Protocol Approval **«SOM2012034»**
Date	24 December 2016
Copy	«Dr. Robyn Oushan», « School of Marketing »

Thank you for your "Form C Application for Approval of Research with Low Risk (Ethical Requirements)" for the project titled *"«Customer engagement in online brand communities»"*. On behalf of the Human Research Ethics Committee, I am authorised to inform you that the project is approved.

Approval of this project is for a period of twelve months **«22/11/12»** to **«22/11/13»**.

The approval number for your project is **«SOM2012034»**. *Please quote this number in any future correspondence*. If at any time during the twelve months changes/amendments occur, or if a serious or unexpected adverse event occurs, please advise me immediately.

Dr Isaac Cheah

PhD(Marketing), BCom (Hons)

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Please Note: The following standard statement must be included in the information sheet to participants:
This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number «Approval_Number»). If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or hrec@curtin.edu.au

Appendix K: Complete scale measures used in this research

	Constructs/items	AVE	Alpha	CR	Std reg weights
	Social benefits	0.503	0.752	0.752	
1	The friendship aspect of my relationship with the members of this online community is important to me.				0.686
2	I value the close personal relationships that I have with the members of this online community.				0.733
3	I enjoy spending time with the members of this online community.				0.708
	Hedonic benefits	0.547	0.772	0.783	
2	I entertain myself and stimulate my mind in this community.				0.672
3	I derive fun and pleasure from this community.				0.779
4	I spend some enjoyable and relaxing time.				0.763
1	I derive enjoyment from problem solving, and generating ideas from this community (*).				
	Status benefits	0.590	0.740	0.742	
1	I enhance my status/reputation as product expert in the community.				0.792
2	I reinforce my product-related credibility/authority in the community.				0.743
3	I derive satisfaction from influencing the design and development of products through this community (*).				
4	I derive satisfaction from influencing product usage by other community's members (*).				
	Functional benefits	0.507	0.749	0.755	
4	I make better purchase decisions because of this community.				0.681
5	I enhance my knowledge about advances in product, related products and technology from this community.				0.786
6	I obtain solutions to specific product usage-related problems from this community.				0.743
1	I enhance my knowledge about the product and its usage from this community (*).				
2	I value the convenience this community provides me (*).				
3	I value the information this community provides me (*).				
7	I value the time this community saves me (*).				
	Autonomous Motivation	0.520	0.757	0.764	
1	I am motivated to participate in the community's activities because I feel better afterwards.				0.789
2	I am motivated to participate in the community's activities because I am able to create value for other members.				0.669
4	I am motivated to participate in the community's activities because I am able to reach personal goals.				0.700
3	I benefit from following the community's rules (*).				
	CEB toward the firm	0.676	0.861	0.862	Factor loading
1	I make suggestions to improve the iPhone.				0.797
3	I let Apple know of ways to better serve my needs about the iPhone.				0.803
4	I contribute ideas to my firm that could improve the iPhone.				0.864
2	I share my opinions if I fell they will benefit the brand (*).				
	CEB toward other members	0.716	0.834	0.834	
3	I teach other members to use their iPhone correctly.				0.839
4	I help other members if they seem to have problems with their iPhone.				0.853
1	I give advice to other members (*).				
2	I assist other members if they need my help (*).				
	CEB toward oneself	0.506	0.755	0.754	
1	I ask other members for information related to my iPhone.				0.651

2	I search for information on this community about issues related to my iPhone.				0.762
3	I pay attention to other members' interactions regarding iPhone usage.				0.717
	WOM	0.738	0.893	0.894	
1	I refer my acquaintances to the iPhone.				0.818
2	I encourage friends to try the iPhone.				0.904
3	I recommend the iPhone brand to anyone who seeks my advice.				0.853
4	I say positive things about this brand to other people (*).				
	Purchase intention	0.565	0.721	0.722	
1	I intend to buy the iPhone the next time I buy.				0.758
2	I would actively search for this brand in order to buy it.				0.745
3	I intend to buy other products of this brand (*).				

(*) Refers to deleted items. Based on the CFA analysis for the Eqal3sample N = 1508.

Appendix M: Selected qualitative data

How can I view contacts saved in Iphone backup? (2)

08-08-2012 03:39 PM #1

Join Date

Jun 2011

Janealams [OP]

How can I view contacts saved in Iphone backup?

Unfortunately I lost my iphone yesterday and even more unfortunate i'm not in a position to afford a new one. But I really need my contacts I have been using this phone for more than 2 years and all my contacts are saved in it. Is there anyway I can get into my backup and see those files?

Are there any apps any free apps that help you browse or export your contacts saved in backup?

Thanks

#1

08-08-2012 04:58 PM

Bula

Join Date

Aug 2012

There are a few programs that will allow you to access the backup data in iTunes...I like using iBackupBot

#2

What's next for the iPad screen? (8)

8/7/12 at 5:00am

Thread Starter

rockingeologist

Joined: Aug 2012

What comes after the Retina display for the iPad? Wondering what the community thinks the next improvement in display technology to make it to the iPad will look like...

#1

Tallest Skil

8/7/12 at 9:09am

Joined: Aug 2010

Location: 1 Geostationary Tower Plaza

Next improvement is either the lamination that they've done with the retina MacBook Pro (if they haven't already) or something with considerably less power draw (probably not any form of OLED).

#2

8/7/12 at 2:23pm

wizard69

Joined: Jul 2003

I was thinking a feature to turn off the screen when impossible to answer questions get asked.

#3

8/11/12 at 3:56am

Stoobs

Joined: Aug 2009

I could imagine more research into screen clarity in bright sunlight (It has gotten better, but there is still much room for improvement), on top of power consumption and the never ending quest to make it thinner.

I doubt there is much point in trying to increase resolution beyond what it is now.

#4

8/13/12 at 8:32pm

Junkyard Dawg

Joined: Nov 2001

Location: Tarantino's Van

Likely next screen, or desired next screen?

My desire is for Apple to implement wide gamut display technology across the lineup and add hooks to OS X to enable developers to easily support the wide gamut color space. LIkelyhood of that happening is about zero.

Otherwise the retina iPad is fine, no need to do much to the display except perhaps laminate the glass to it to reduce glare. More pressing is the need to boost iPad battery life and do something about the heat. Either make it run cooler, or add a feature to cook breakfast with it!

#5

IPhone 5: Give me a bigger screen and i'll be a happy camper (13)

IPhone 5: Give me a bigger screen and i'll be a happy camper

Aug 2, 2012, 01:02 PM
Evoken
macrumors 6502
Join Date: Apr 2007

I love the design of the iPhone 4/S, always have since the first real leaks came out. So if Apple were to keep this design for the new iPhone it would not really bother me. I mean I would definitely welcome a change in the design but it is not a must for me.

What I do want at this point is a bigger screen on my phone. Not just one that is elongated

while keeping the same width but one that is bigger on both sides. Devices like the SIII, Galaxy Nexus and the HTC One X have really raised the bar imo with their large and beautiful screens and using them really makes doing anything on them much better than in the small screen of the iPhone 4/S.

The new iPhone will be faster, have great battery life, a better camera, better chips, etc. All that stuff is a given and at this point not much of a factor for me to get it. A bigger screen however, even if it is 4.5 inches, would definitely win me over.

I really hope the success and positive reception of the SIII, Nexus and HTC One has nudged Apple the right way and that they are prepared to offer an iPhone with a bigger screen even if they decide to keep the current size as well.

If they unveil something like a 4.5 inch iPhone this Septemer, I would be making my reservation for it before Tim Cook is done with his keynote

If not, well...it is off to another Galaxy I guess.
#1

Aug 2, 2012, 01:03 PM
mattopotamus
macrumors 65816

Join Date: Jun 2012
I don't see apple doing anything over 4" for a while. That seems to be the perfect medium for people who still like the smaller screen and people who want a little bigger....4.2" tops!
#2

Aug 2, 2012, 01:12 PM
nuckinfutz
macrumors 68040
Join Date: Jul 2002
Location: Middle Earth
4" is the rumor. Perhaps in a generation or two the iPhone will setting in to a larger than 4" size.
#3

Aug 2, 2012, 01:36 PM
Wrathwitch
macrumors 6502a

Join Date: Dec 2009
Well if the rumours are true, longphone ftw.

I think you will just have to live with it for a while. It doesn't look like like they are in a hurry to give us anything over 4". LOL! That just seems funny when you read it!!
#4

Aug 2, 2012, 01:42 PM
NikeTalk
macrumors 6502a

Join Date: Apr 2010
It needs to be taller and wider. But here on MR allegedly everyone uses their phones in landscape mode so it doesn't matter about width
#5

Aug 2, 2012, 01:44 PM
mattopotamus
macrumors 65816

Join Date: Jun 2012
Originally Posted by NikeTalk
"It needs to be taller and wider. But here on MR allegedly everyone uses their phones in landscape mode so it doesn't matter about width"
QUOTE
you mean portrait mode? Landscape people would want wider....portrait...not so much. I'm in the portrait crowd so wide doesn't matter
#6

Aug 2, 2012, 02:10 PM
lazard
macrumors regular

Join Date: Jul 2012
4.3" would be ideal. Why bother upgrading from a 4S to get an elongated 4S.
#7

Aug 2, 2012, 02:18 PM
mattopotamus
macrumors 65816

Join Date: Jun 2012
Originally Posted by lazard
"4.3" would be ideal. Why bother upgrading from a 4S to get an elongated 4S".
QUOTE

LTE alone is worth it to me

#8

Aug 2, 2012, 02:21 PM

NikeTalk
macrumors 6502a

Join Date: Apr 2010

Originally Posted by mattopotamus
"you mean portrait mode? Landscape people would want wider....portrait...not so much. I'm in the portrait crowd so wide doesn't matter"

Quote

Nope, apparently "landscapers" just want taller so then it becomes wider when you turn it if that makes sense? They don't want wider when the phone is standing up. iPhone needs to be 4.3-4.5in to get back the #1 ranking from the S3 imo, 4in just doesn't really make sense.

#9

Aug 2, 2012, 03:17

Darthdingo
macrumors 6502a

Join Date: Dec 2010

There was an article last year, I can't find anymore, but it said that Apple made a major Billion $ deal with LG & Sharp to produce 4.3" screens for a future Apple product.

I will not be shocked one bit, if we do indeed see 4.3" on the iPhone5, that will still look like a small screen compared to all Android phones, with the going size now being 4.8", an the upcoming Galaxy Note 2 at 5.5", and next Nexus said to be going close to 5" screen.

#10

Aug 2, 2012, 03:23 PM

Evoken
Thread Starter
macrumors 6502

Join Date: Apr 2007

Originally Posted by NikeTalk
"Nope, apparently "landscapers" just want taller so then it becomes wider when you turn it if that makes sense? They don't want wider when the phone is standing up".

Quote

Yes but as it is, using the iPhone in landscape mode to, say, write an email or forum post, is ridiculous. The keyboard basically covers the whole screen and with the top toolbar you can see only two lines of what you are writting. Selecting text in this mode is very tedious too. Making the iPhone taller would not make a difference and will just give you a wider keyboard, would not give you more screen realstate. Doing the same in portrait mode is not that bad but in both cases a bigger screen would make it much better.

Quote

"iPhone needs to be 4.3-4.5in to get back the #1 ranking from the S3 imo, 4in just doesn't really make sense".

I agree, a taller 4inch iPhone that keeps the same width simply won't hold a candle to the S3 as far as screen realstate goes. But that said, the iPhone doesn't has to be 4.8inch to "dethrone" the

S3. If they make it 4.5inch, I think that it would be the sweet spot for it to gain the current adventages of the S3 while at the same time making the S3 feel "too big" by comparision.

#11

Aug 2, 2012, 03:31 PM

THE JUICEMAN
macrumors 6502

Join Date: Oct 2007

I feel like Apple is trying their best not to make the from factor any larger. They may feel like 4 in is as large as they can go to still keep the phone size reasonable. This is not necessarily my opinion though and just a guess as to Apple's thoughts.

Making the phone wider will definitely impact using the keyboard with one hand. I experienced that on my galaxy nexus.

#12

Aug 2, 2012, 03:34 PM

Evoken
Thread Starter
macrumors 6502

Join Date: Apr 2007

Originally Posted by Darthdingo

"I will not be shocked one bit, if we do indeed see 4.3" on the iPhone5, that will still look like a small screen compared to all Android phones, with the going size now being 4.8", an the upcoming Galaxy Note 2 at 5.5", and next Nexus said to be going close to 5" screen".

Quote

Well if the Galaxy Nexus 2 ends up being 5" I would not get it, that is just too big imo for a smarthphone. The SIII at 4.8 is already a tad big, but still feels good to use, I think the Nexus at 4.6 is ideal but 5" is just overkill.

A 4.3 iPhone would be a tad small by comparission but a great improvement over the current iPhone.

#13

Aug 2, 2012, 03:45 PM

Want300
macrumors 6502a

Join Date: Oct 2011
Location: St. Louis, MO

Originally Posted by lazard
"4.3" would be ideal. Why bother upgrading from a 4S to get an elongated 4S".

Quote

4.3" screen with 3:2 aspect ratio FTW
#14

Aug 2, 2012, 03:45 PM

OceanView
macrumors 6502a

Join Date: Sep 2005

If the rumors are true and the next phone is just the elongated 4" screen, then it would be 2 years before another form factor change.

To me it would be stupid of Apple to loose 2 years of sales from disappointed buyers. Yes there will be the fanboys still buying it but for people that have the blinders off and are able to see the value from having a larger screen, they will be leaving the iphone.

#15

Aug 2, 2012, 03:51 PM

nerdpov
macrumors Demi-God

Join Date: Aug 2010

Originally Posted by OceanView
"If the rumors are true and the next phone is just the elongated 4" screen, then it would be 2 years before another form factor change". To me it would be stupid of Apple to loose 2 years of sales from disappointed buyers. Yes there will be the fanboys still buying it but for people that have the blinders off and are able to see the value from having a larger screen, they will be leaving the iphone.

Quote

I don't think it's super hard to increase the size of the phone. They must not be doing it for a reason. The only reason I can come up with is that there are more people that prefer 4 inch as opposed to 4+.
#16

Aug 2, 2012, 03:57 PM

Evoken
Thread Starter
macrumors 6502

Join Date: Apr 2007

Originally Posted by nerdpov
"I don't think it's super hard to increase the size of the phone. They must not be doing it for a reason. The only reason I can come up with is that there are more people that prefer 4 inch as opposed to 4+".

Quote

I figured that they didnt want to increase the size due to apps and developers, to keep their one size one resolution thing going.

#17

Aug 2, 2012, 04:03 PM

SMIDG3T
macrumors member

Join Date: Apr 2012
Location: England

Originally Posted by Evoken
"I love the design of the iPhone 4/S, always have since the first real leaks came out. So if Apple were to keep this design for the new iPhone it would not really bother me. I mean I would definitely welcome a change in the design but it is not a must for me.

What I do want at this point is a bigger screen on my phone. Not just one that is elongated while keeping the same width but one that is bigger on both sides. Devices like the SIII, Galaxy Nexus and the HTC One X have really raised the bar imo with their large and beautiful screens and using them really makes doing anything on them much better than in the small screen of the iPhone 4/S.

The new iPhone will be faster, have great battery life, a better camera, better chips, etc. All

that stuff is a given and at this point not much of a factor for me to get it. A bigger screen however, even if it is 4.5 inches, would definitely win me over.

I really hope the success and positive reception of the SIII, Nexus and HTC One has nudged Apple the right way and that they are prepared to offer an iPhone with a bigger screen even if they decide to keep the current size as well.

If they unveil something like a 4.5 inch iPhone this Septemer, I would be making my reservation for it before Tim Cook is done with his keynote

If not, well...it is off to another Galaxy I guess".

Quote

http://www.macrumors.com/2012/08/02/sharp-president-confirms-shipments-of-displays-for-new-iphone-this-month/

You'll get a 4 inch screen.

#18

Aug 2, 2012, 04:06 PM
Evoken
Thread Starter
macrumors 6502
Join Date: Apr 2007

Originally Posted by SMIDG3T
"You'll get a 4 inch screen".

Quote

Nope, I won't

#19

Aug 2, 2012, 04:07 PM

BuckeyeMac
macrumors regular

Join Date: Jun 2012

Originally Posted by Want300
"4.3" screen with 3:2 aspect ratio FTW"

Quote

This x1000000

I drew out a 4.3" 3:2 screen last week, and it would be absolutely perfect. In fact, apple would only need to make the overall width of the phone slightly wider. The 4.3" screen could fit in the current iPhones height specs if they get rid of the huge black bezels. Or at the very worst make the phone slightly taller as well.

Boom. It's solved.

F this only taller phone. It looks disproportional and unappealing

#20

Aug 2, 2012, 04:14 PM

SMIDG3T
macrumors member

Join Date: Apr 2012
Location: England

Originally Posted by Evoken
"Nope, I won't"

Quote

You will. I'm not saying no more.

#21

Aug 2, 2012, 04:18 PM
lazard
macrumors regular

Join Date: Jul 2012

Originally Posted by SMIDG3T
"You will. I'm not saying no more".

Quote

I'll be getting a 4.8" screen

#22

Aug 2, 2012, 04:22 PM
SMIDG3T
macrumors member

Join Date: Apr 2012
Location: England

Originally Posted by lazard
"I'll be getting a 4.8" screen"

Quote

This was a iPhone thread so that's what I was referring too! Never mind.

#23

Aug 2, 2012, 04:25 PM

b166er
macrumors 65816

Join Date: Apr 2010
Location: Philly

screen size aside, these leaks are not anywhere near the same design as the 4/4S.

Different back, different band, different port, different speakers, something definitely different about that camera (the physical size), headphone jack moved (not really significant but still totally different from 4S).

And then yeah, the screen will be bigger.

The only thing staying the same is that god awful home button, and with it that god awfully huge bezel.
#24

Aug 2, 2012, 04:29 PM
Evoken
Thread Starter
macrumors 6502

Join Date: Apr 2007

Originally Posted by SMIDG3T
"This was a iPhone thread so that's what I was referring too! Never mind".

Quote

Yeah I know, was just messing around with you . But yeah, going by the rumors for the new iPhone and what we know about iOS 6 Im nearly sold on the Galaxy SIII.

Originally Posted by b166er

“The only thing staying the same is that god awful home button, and with it that god awfully huge bezel”.

Quote

The bezel is sacred, thou shalt not bash the bezel!

#25

Removing photographs from iDevices using Windows. (17)

07-14-2012 02:59 AM #1

KevinJS [OP]

Join Date

Mar 2012

Removing photographs from iDevices using Windows.

I've just posted this on iPadForums, but I thought I'd dump it here too, as it seems to be a common problem. Mods, if you feel it would be more useful in a different part of the forum, feel free to move it.

I know there have been several people who have been baffled by the seemingly impossible task of removing large amounts of photographs from iDevices, myself included, so I've done some digging.

This was tested on an iPhone 4 (stock) and a PC running Vista SP2 64 bit. Plug your iDevice into the PC using USB. In Windows Explorer, right click on the iDevice, and select "import pictures". A box will appear on the screen. Click on "options", then check "Always delete after importing". Click "Import".

The photographs and videos will be imported to your PC, and then Windows will delete the photographs from the iDevice. After the deletions, I needed to reboot my iPhone, but the pictures and videos had gone.

Hope this info is useful for other members.

#1

07-16-2012 12:15 PM #2

topgun80

Join Date

Feb 2011

what if I don't want the pics deleted off my iphone4, I just want to copy them onto my computer. I've looked at my device in mycomputer and it only lists what's in the "camera roll", no other pic folders are listed.

#2

07-16-2012 12:24 PM #3

KevinJS [OP]

Join Date

Mar 2012

Originally Posted by topgun80

"what if I don't want the pics deleted off my iphone4, I just want to copy them onto my computer. I've looked at my device in mycomputer and it only lists what's in the "camera roll", no other pic folders are listed".

Quote

Deselect the "delete after transfer" option. If you don't want to delete them you can simply select them in Windows Explorer and drag them to wherever you want them copied to.

The other folders won't show in Windows because the photographs in them are not image files, they are links to the image file in Camera Roll.

#3

07-17-2012 10:54 AM #4

topgun80

Join Date

Feb 2011

the pictures in the other folders are not in "camera roll". Windows only shows 1 folder and it contains ONLY what's in camera roll. Is there any way to access the othe pic folders? If I sync to my new computer will itunes copy all the pic folders to my hard drive?

#4

08-20-2012 06:58 PM #1

Junior Member

Join Date Aug 2012

The Calendar on my iPhone 4s shows many days multiple times when in List mode. In Month mode the problem does not occur. Any ideas?

#1

Appendix N: Screenshot of the online survey