Promoting brand engagement behaviors and loyalty through perceived service value and innovativeness

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Abstract

Purpose – The purpose of this study is to investigate the role of perceived value and innovativeness (service concept newness and relative advantage) in promoting customer brand engagement behaviors (CBEBs) and brand loyalty.

Design/methodology/approach – The conceptual model was empirically tested using nationwide survey data from 430 customers of Uber in Australia. The data were analyzed using structural equation modeling.

Findings – The results of this study show that collecting brand information is positively influenced by perceived value, service concept newness and relative advantage. Participating in brand marketing activities is positively influenced by service concept newness and relative advantage. Interacting with others is positively influenced by perceived value and service concept newness. Subsequently, brand loyalty is positively influenced by participating in brand marketing activities and interacting with others. The direct impacts of perceived value and relative advantage on brand loyalty are also established.

Research limitations/implications – This study only collected data from Uber customers. Another limitation of this study is the use of cross-sectional data.

Practical implications – To promote brand loyalty, service innovation needs to have both the right characteristics (i.e. perceived value, service concept newness and relative advantage) and practices that foster customer brand engagement behaviors.

Originality/value – Although service-dominant logic (SDL) is a theoretical lens used by research in the areas of service innovation and customer engagement, empirical studies that integrate the two areas remain limited. The findings of this study suggest a new mechanism in which service innovation can increase loyalty through increased CBEBs.

Keywords Brand loyalty, Customer value, Relative advantage, Consumer brand engagement behavior, Service concept newness

Paper type Research paper

1. Introduction

Both service innovation and customer engagement have received research attention in recent years, but the integration of the two research streams remain sparse. Prior studies (Jaakkola and Alexander, 2014; Ordanini and Parasuraman, 2011) have discussed the interrelationship between the two research streams through a service-dominant logic (SDL) lens and a service system perspective. SDL suggests that value is perceived and co-created by the beneficiary (customers) and all social and economic actors are resource integrators (Vargo and Lusch, 2016). A service system is a value creation configuration consisting of exchange parties (service firms and customers) and their networks (other institutions or stakeholders) that indirectly influence value co-creation (Edvardsson *et al.*, 2011). It is also considered a dynamic configuration that bring people, technology and organizations together in creating and delivering value (Agarwal and Selen, 2011). Thus, service firms accordingly need to design resource integration mechanisms within the service system that support all actors to enhance service innovation (Edvardsson and Tronvoll, 2013). Customer engagement offers one alternate way that customers participate in a new service process beyond transactions to influence service organization outcomes such as loyalty.

Loyalty is one of the intangible assets that underpin an organization's competitive advantage (Cossío-Silva *et al.*, 2016). In the context of service innovation, loyalty becomes even more critical, as prior studies have indicated that many new services do not succeed in the marketplace (Gourville, 2006). Different characteristics of service innovation (e.g. service concept newness

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and relative advantage) represent new ways that a service organization offers its value proposition. However, service innovation that is new and better than existing offers does not automatically guarantee its success. In some cases, service innovation characterized by newness and technological advancement can be associated with a certain level of anxiety and confusion among customers (Venkatesh, 2000). Thus, an interesting question is how a customer perceives, evaluates, as well as responds (behaves) towards this new service concept. In addition, service innovation (e.g. self-service technology) increasingly requires customer participation in the service production and delivery process. According to SDL, service innovation requires that customers are motivated to co-create value by learning and sharing knowledge with other actors (e.g. service employees and other customers) and that they integrate their resources with other actors by investing their specific operant and operand resources into brand interactions (Hollebeek *et al.*, 2016). Kandampully (2002) identifies customer engagement as one of the building blocks of service innovation, as it contributes to the service organization's ability to deliver elevated service offerings. Thus, understanding the customers' perception of these key characteristics of service innovation, which promote customer engagement and brand loyalty, is critical to service organizations.

Many service organizations have recognized the need to engage with current and potential customers in service innovation (Cheng *et al.*, 2012; Engström and Elg, 2015). However, there may be implementation challenges for service organizations, as the concept of customer engagement has had various conceptualizations in the extant literature because of considerable interest from academics and practitioners (Hollebeek *et al.*, 2016). These include customer engagement (Verhoef *et al.*, 2010), customer engagement behavior (Van Doorn *et al.*, 2010) and, recently, customer engagement marketing (Harmeling *et al.*, 2017). Research progress has been made to consolidate the literature on the concept of customer engagement (Harmeling *et al.*, 2017; Hollebeek *et al.*, 2016; Maslowska *et al.*, 2016; Pansari and Kumar, 2016). This current study focuses on customer brand engagement behaviors (CBEBs) which reflect customers' various individual-level brand-related activities (Keller, 2013). This operationalization is consistent with that of Jaakkola and Alexander (2014, p. 248), which focuses on "*behaviors through which customers make voluntary resource contributions that have a brand or firm focus but go beyond what is fundamental to the transaction*". Harmeling *et al.* (2017, p. 314) suggest that "*a behavioral conceptualization of customer engagement better captures its implicit and explicit meaning.*" Also, consistent with Hollebeek *et al.* (2016), this study focuses on customer behavioral engagement with the focal brand because a brand as an object of engagement is the most cited in marketing literature (Chandler and Lusch, 2015) and it represents a customer-based mental identification of focal offerings (Stern, 2006).

Although prior literature provides insights into the importance of customer engagement and service innovation, research on how service innovation promotes CBEBs and brand loyalty, especially the mechanism of how they interrelate, remains unexplored (Cheng *et al.*, 2012; Jaakkola and Alexander, 2014) suggesting the need for more empirical evidence. Thus, our study aims to answer the following research question:

RQ1. How do the characteristics of service innovation promote customer brand engagement behaviors and brand loyalty?

The purpose of this current study is, therefore, to investigate the roles of perceived value and innovativeness (service concept newness and relative advantage) as drivers of CBEBs and brand loyalty.

This current study offers three main contributions. First, the current study integrates the literature in service innovation and customer engagement, thereby contributing to the current understanding and discussion on the scope of these concepts. Second, this study proposes and empirically tests a conceptual model based on the SDL perspective to better understand how service organizations can promote CBEBs by means of examining customer perception of the characteristics of service innovation. Finally, as brand loyalty underpins a competitive advantage and is a key for long-term business success of organizations, this study provides some suggestions on how service organizations can promote loyalty in the service innovation context. Empirically, this study tests the proposed model in a new service context, Uber – an innovative ride-sharing service that uses an internet-based smartphone application as an ordering and payment platform (Cramer and Krueger, 2016) offering services, such as Uber Ride and Uber Eat.

The article is organized as follows: First, existing literature on service innovation, customer brand engagement behaviors, perceived value and innovativeness is briefly discussed, leading to hypotheses development. Then, the research methodology including sample, data collection procedures and measures are presented. The subsequent sections report the findings of this study, followed by a discussion of the study, research limitations and avenues for future research.

2. Theoretical background

2.1 Service innovation

As the current study aims to examine how the characteristics of service innovation drive CBEBs and brand loyalty grounded on the SDL perspective, it is important to understand how the service innovation literature has evolved. This development in the literature started from the classification of services as an extension of product innovation (assimilation) to a specific categorization of service innovation (demarcation) and to a classification that all innovation is service innovation (synthesis). The current study focuses on the synthesis perspective that is based on the premise that service is the fundamental basis of exchange – a key fundamental proposition of SDL (Vargo and Lusch, 2004, 2008, 2016). The following paragraphs discuss existing literature on service innovation in relation to SDL.

Service innovation has been investigated from three perspectives: assimilation, demarcation and synthesis (Coombs and Miles, 2000; Witell *et al.*, 2016; Snyder *et al.*, 2016). From an assimilation perspective, service innovation involves an introduction of new technology and is often viewed as an extension from an orientation towards product innovation (Droege *et al.*, 2009). In this perspective, service innovation has

been conceptualized according to a goods-dominant logic (GDL) (Vargo and Lusch, 2004). The term value-in-exchange was used to indicate that value is created by a firm and a customer is a passive receiver of value. The service development process is seen as evolving in distinct, sequenced steps with value embedded in the unit of output or value-in-exchange (Edvardsson and Tronvoll, 2013). Proponents of this perspective have argued that the concepts developed in GDL can be easily applied in service contexts because of the similarities between goods and services (Nijssen *et al.*, 2006) and the services sector becoming technology-intensive (Gallouj and Savona, 2009). Thus, service innovation in this perspective primarily focuses on technological innovation in services, leading to the technological taxonomy of services (Miozzo and Soete, 2001). For example, Olsen and Sallis (2006) categorized service innovation into an incremental and discontinuous dichotomy.

Alternatively, the demarcation perspective recognizes the distinctiveness of service sectors and focuses mainly on non-technological forms of innovation (Sundbo *et al.*, 2007). Because of the specific characteristics of services (e.g. intangibility, heterogeneity, perishability and inseparability), proponents of this perspective have argued that service innovation should be separated from the GDL and focus on the service development process that make them unique (Fitzsimmons and Fitzsimmons, 2000). In addition, service innovation is complex, less radical and often incremental and an informal process (Edvardsson and Tronvoll, 2013). In this perspective, service innovation emphasizes the development of new procedures or processes, the need for customer integration and contribution of organization knowledge and non-technical elements such as frontline employees' skills (Hipp and Grupp, 2005; Nijssen *et al.*, 2006). Past studies attempted to categorize service innovation into different taxonomies (Ottenbacher and Harrington, 2010). For example, Berry *et al.* (2006) classified service innovation into four quadrants, namely, controllable convenience, flexible solution, comfortable gains and respectful access, while Avlonitis *et al.* (2001) examined the typology of innovativeness in the financial service sector.

Finally, a synthesis perspective posits that all innovations are service innovations (Hsieh *et al.*, 2013), as theories on service innovation are sufficiently broad to cover both services and manufacturing (Coombs and Miles, 2000). Also, such an integrated overarching service view covering both services and tangible goods is considered a better way to examine service innovation (Drejer, 2004; Edvardsson and Tronvoll, 2013). The latter perspective reflects the essence of service and when examined through the SDL lens, service innovation can be seen as a new and useful "*process of application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself*" (Vargo and Lusch, 2004, p. 2). In this view, service innovation focuses on the value proposition as a platform offered by a service organization to customers who can create value for themselves or their community (Skålén *et al.*, 2015). Examining service innovation using a SDL lens, researchers support the idea of the value-in-use and co-creation of value rather than value-in-exchange (Bitner *et al.*, 2008; Vargo and Lusch, 2004). Thus, in the current study, service innovation is defined as how actors in service systems integrate and act on available resources to create value for themselves and others, resulting in a new and better process that enhances their well-being or makes them better-off in some respect (Barrutia and Gilsanz, 2013; Edvardsson and Tronvoll, 2013).

2.2 Customer brand engagement behaviors

Within the broader engagement concept, customer brand engagement (CBE) has received increasing attention from researchers. Recently, Hollebeek *et al.* (2016, p. 7) proposed an integrative framework with the revised fundamental propositions that link CBE to SDL and define CBE as "*a customer's motivationally driven, volitional investment of focal operant resources (including cognitive, emotional, behavioral and social knowledge and skills), and operand resources (*e.g., *equipment) into brand interactions in service systems*". Despite various definitions and conceptualizations of CBE, there seems to be a consensus that they can be categorized into psychological state (Brodie *et al.*, 2011) and behavior (Van Doorn *et al.*, 2010). Drawing from the psychology domain, Hollebeek (2011, p. 790) describes CBE as "*the level of an individual customer's motivational, brand-related and context-dependent state of mind*". CBE has also been defined as a state of fulfilment that is characterized by vigor, dedication and absorption toward the focal brand (Dwivedi, 2015; Hsieh and Chang, 2016). Many other researchers also described the concept from a psychological point-of-view (Calder *et al.*, 2009; Gambetti *et al.*, 2012).

While some authors (Brodie *et al.*, 2011; Hollebeek *et al.*, 2014) proposed that CBE consists of three dimensions (cognitive, emotional and behavioral dimensions), others focus solely on behavioral manifestation toward a brand. For example, Van Doorn *et al.* (2010, p. 254) posit that:

> [. . .] customer engagement behaviors go beyond transactions, and may be specifically defined as a customer's behavioral manifestations that have a brand or a firm focus, beyond purchase, resulting from motivational drivers.

Similarly, Jaakkola and Alexander (2014, p. 248) also focus on the behavioral manifestation of customer engagement and argue that:

> [. . .] customers make voluntary resource contributions that has a brand or firm focus but go beyond what is fundamental to transactions, occur in interactions between the focal object and/or other actors and result from motivational drivers.

Our study looks at CBE from the behavioral perspective and adapts the definitions and dimensions of CBEBs from Keller's (2013) Actual Brand Engagement framework. This framework offers a comprehensive repertoire of the customers' various individual-level brand-related actions. In particular, Dwivedi *et al.* (2016) have empirically tested Keller's (2013) CBEB framework including the scale's psychometric properties, its drivers and an outcome (willingness to pay a price premium) and found the scale to be reliable and valid. Thus, in our study, CBEBs encapsulate customer actions involving the collection of brand information, participation in brand marketing activities and interacting with others (Keller, 2013). These dimensions are somewhat similar to Maslowska *et al.*'s (2016) concept called brand dialogue behaviors, as they represent another way in which customers can engage with the focal brand including brand-related non-purchase behaviors.

The first dimension involves the collection of brand information and it represents the lowest level of CBEBs (Keller,

2013). Customers are generally passive and simply consume the brand generic marketing communication or expose themselves to brand-related stimuli (Maslowska *et al.*, 2016). Examples of collecting brand information include learning about the brand, reading news or articles about the brand both online and offline and reading online blogs about the focal brand. The second dimension reflects participating in the brand marketing activities. Customers are interested in the focal brand and its specific brand-related activities. Examples of such behaviors in this dimension include actively paying attention to brand marketing activities (e.g. an advertisement, sales promotion or a billboard). In particular, if customers receive an offer to try out one of the brand's new services, then they tend to try it out. The last dimension reflects more involving behaviors of interacting with others (Keller, 2013). In this level, customers interact with others by talking to people (family and friends, work colleagues and any other customers) about the focal brand. Customers become a pseudo marketer of the brand by voluntarily contributing their resources to the focal brand's marketing functions, for example, acquisition of potential customers (Harmeling *et al.*, 2017).

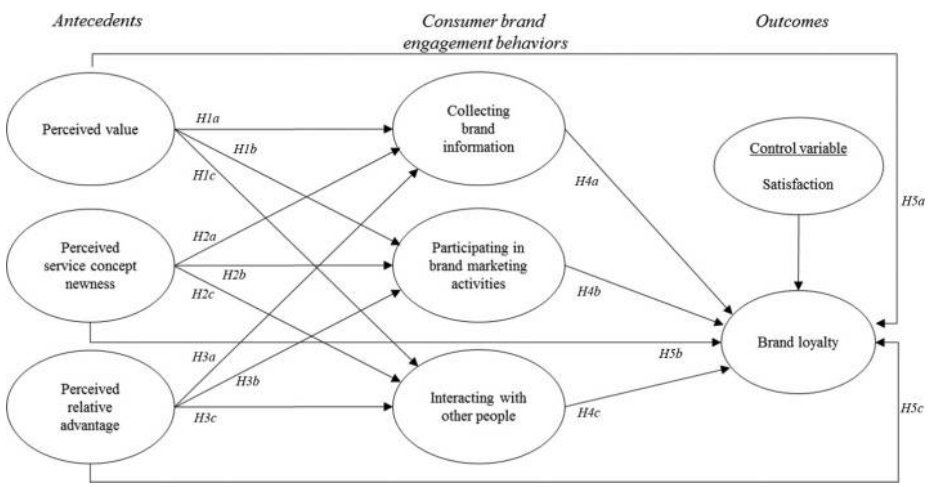
Therefore, grounded in the SDL view and the literature on services marketing as well as consumer behavior, our conceptual model examines the role of perceived value and innovativeness in promoting CBEBs and loyalty. According to Magnusson *et al.* (2014), uniqueness and value to customers are key criteria by which innovations are assessed and evaluated. Thus, as shown in Figure 1, this study investigates (i) how perceived value, perceived service concept newness and perceived relative advantage are all related to a) collecting brand information, b) participating in brand marketing activities, c) interacting with others and (ii) subsequently, to test the impact of these CBEBs on brand loyalty. Also, satisfaction with the service organization is included as a control variable, as past research has substantiated the relationship between satisfaction and loyalty (Coelho and Henseler, 2012).

2.3 Perceived value and innovativeness

Value has traditionally been conceptualized as a trade-off between benefits and sacrifices (Zeithaml, 1988). The focus was predominantly on a bundle of products or services exchanged for a price (Grönroos and Voima, 2013). From the GDL perspective, there was a clear separation between physical goods and services. The term value-in-exchange has been used to indicate that value (utility) is embedded in products, while services were treated as something added to enhance the value of goods (Vargo and Lusch, 2004) or something that is not a tangible good (Rathmell, 1966). However, with the introduction of SDL by Vargo and Lusch (2004), the concept of value has evolved from simply an exchange of utility embedded in products or services to a value co-creation process by actors (including customers as core beneficiaries) in service systems (Vargo and Lusch, 2008, 2016). SDL signifies the role of customers in value co-creation, and thus, a term such as value-in-use was introduced to underlie the importance of customer as a value creator during interaction with and integration of a set of resources (Vargo and Lusch, 2004).

With further evolution and extension, SDL proposes the term value-in-context in recognizing that value can be conceptualized in a more holistic and experiential nature within the context of customer experiences (Grönroos and Voima, 2013). According to the SDL perspective, customer value is viewed as being "*...idiosyncratic, experiential, contextual, and meaning-laden*" (Vargo and Lusch, 2008, p. 7). Some scholars extended this conceptualization further to include value in social systems (Edvardsson *et al.*, 2011). However, on a more general level, value co-creation is a context-linked process that promotes the customer's well-being or makes the customer better-off in some aspects (Vargo *et al.*, 2008). Past research offers an avenue to capture the assessment of value linked to the context of service innovation (Barrutia and Gilsanz, 2013; Harris and Goode, 2004). For example, in some contexts, service innovation provides new ways (e.g. technology-mediated connection or self-service technology) that customers interact with service organizations. These interactions can save customers time and costs and allow them to have more control of the service outcomes (Chen and Wang, 2016). The current study adopts these views and focuses on the customers' evaluation of the overall value of the services, feeling of being in control and value-for-money and effort.

Figure 1 Conceptual model



Customers are value co-creators and perceived value relates to customer experience and value-in-context (Helkkula *et al.*, 2012). Maslowska *et al.* (2016) propose that customer engagement behaviors can start at a low level ranging from observation to active interaction. Customers may passively receive information about the new service from media or other customers in their networks. At this instance, customers can construct potential service experience and, thus, value from their imagination (Meyer and Schwager, 2007). Upon the positive service experience, co-creation behaviors such as partaking in brand marketing activities can result, thereby leading to increased resources invested and interactivity with the brand (Maslowska *et al.*, 2016). In addition, once customers experience value, they tend to share these common experiences with others and among various social groups (Hennig-Thurau *et al.*, 2004). Hence, it is expected that value perception leads to higher CBEBs:

H1. Perceived value positively influences a) collecting brand information, b) participating in brand marketing activities and c) interacting with others.

Service concept refers to the way in which a service organization wishes to have its service perceived by various stakeholders (i.e. customers, employees and shareholders; Heskett, 1986). Edvardsson and Olsson (1996) define the service concept as the prototype for service, and it is a key component in designing services and the new service development process (Johnson *et al.*, 2000). Service innovation often involves the development of new concepts rather than new core technology (Preissl, 2000), and service concept newness provides a new detailed description of what is to be done for the customers in terms of current and latent needs and how these are to be achieved.

Past research suggests that newness is a source of stimulation and arousal, as it reflects certain properties such as novelty, surprise and change (Berlyne, 1960). Thus, it is plausible that service concept newness can spark the customers' curiosity in wanting to learn more about the new service of the focal brand (i.e. collecting brand information). According to the elaboration likelihood model (Petty and Brinol, 2008), if customers are motivated in the goal pursuit, then they tend to have higher levels of elaboration on brand information. For example, customers who participated in a brand contest were influenced by the amount of elaboration (Malthouse *et al.*, 2013). When customers find that a new service is unique and potentially addresses their latent needs, they tend to have deeper elaboration and, thus, lead to higher brand engagement behaviors such as writing a review of the new service or discussing with other customers about a new service. Thus:

H2. Service concept newness positively influences a) collecting brand information, b) participating in brand marketing activities and c) interacting with others.

Relative advantage refers to "*the degree to which an innovation is perceived as being better than its precursor*" (Moore and Benbasat, 1991, p. 195). It is a key innovation attribute and considered the best indicator for predicting the degree of innovation adoption (Rogers, 2003). It represents the total benefits perceived by the customer and is similar to the concept of perceived usefulness (Wang *et al.*, 2012). Relative advantage promotes higher intention to adopt new technology (Wang *et al.*, 2012). If a new service is perceived as better than the existing alternatives, then customers are more likely to become more aware from the exposure to mass media (Agarwal and Prasad, 1998). Mende *et al.* (2015) found that if the customers see that the service of an existing bank provides superior benefits than those of the competitors, then they are more likely to engage in word-of-mouth communication. Given this background, it is conceivable that if customers perceive the new service to have better benefits than the existing alternatives, then they are more likely to have higher levels of CBEBs. Thus:

H3. Relative advantage positively influences a) collecting brand information, b) participating in brand marketing activities and c) interacting with others.

2.4 Brand loyalty

Customer loyalty to a brand is a crucial factor for a service organization, as it indicates a long-term viability (Chen and Chen, 2010). Oliver (1997, p. 392) defined customer loyalty as a deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behavior. Following both behavioral and attitudinal aspects of loyalty, the current study defines loyalty as a customer's favorable attitude towards the service organization (a brand) that results in repeat buying behavior (Srinivasan *et al.*, 2002).

Recent studies on customer engagement shed some light on the relationship between CBEBs and loyalty. Maslowska *et al.* (2016) discuss brand dialogue behaviors (BDBs), which are similar to the CBEBs proposed by Van Doorn *et al.* (2010). These behaviors include viewing brand-related videos, joining/liking a brand profile on social network sites and publishing brand-related weblogs (see Maslowska *et al.*, 2016 for more detail). As customers are often in a networked environment, BDBs can affect customers' attitudes and behavior toward the focal brands as well as other customers in their networks. When a customer engages in BDBs such as writing a review about the focal brand, this behavior reinforces the customer's experience, purchases (Kim *et al.*, 2016; Malthouse *et al.*, 2016), consumption and loyalty (Maslowska *et al.*, 2016). This is because CBEBs are related to a customer's brand experience, which reflects how a customer interacts with the brand over time as a way of achieving personal goals (Calder *et al.*, 2015). If the customers' brand experiences are positive, then they are stored in their memory and affect satisfaction and loyalty (Oliver, 1997; Brodie *et al.*, 2013). Thus:

H4. Brand loyalty is positively influenced by a) collecting brand information, b) participating in brand marketing activities and c) interacting with others.

Prior studies have empirically substantiated the link between perceived value and loyalty (Caruana and Ewing, 2010; Sirdeshmukh *et al.*, 2002). However, as past studies have defined and operationalized perceived value differently, it is important to investigate and validate the relationship of perceived value and loyalty in the current study. Given that the

service concept pertains to "*the description of customers' needs and how these are to be satisfied*" (Agarwal and Selen, 2011, p. 1170), service concept newness can be seen as a new way that services can meet customers' needs and requirements. Service concept newness can potentially address the latent needs or provide solutions to existing problems that the existing services cannot fulfil. This can result in positive outcomes and experiences and, thus, increase customers' satisfaction and loyalty (Goldstein *et al.*, 2002). Similarly, if a service innovation offers relative advantage or benefits over the other existing services, then customers are more likely to become satisfied and loyal to the new service concept. Thus:

H5. Brand loyalty is positively influenced by a) perceived value, b) service concept newness and c) relative advantage.

3. Methodology

3.1 Sample and data collection

Data were collected from a sample of Uber customers using an online survey. This study used the services of a reputable panel database company who has access to a nationwide sampling frame of Australian consumers. As the demographic profiles of the respondents were known by the panel database company, a random sample was drawn from the company's database to match the national distribution of age, gender and geographic location. To qualify the respondents, the first filter question asked the respondents whether they use mobile phone applications to purchase the following services (i.e. Uber Ride, Uber Eat, hotel, flight or none of the above). This question was a multiple response question and was randomly ordered. Only respondents who selected Uber Ride or Uber Eat were then invited to fill-out the online survey and those who did not qualify received a thank you message and the survey was terminated. If the respondents selected both Uber Ride and Uber Eat, then they were then randomly assigned to one of the services for the purpose of this study.

Respondents were offered a non-monetary incentive in the form of reward points by the research firm and the survey had no missing data because of its forced response nature. A total of 430 respondents completed the survey with 189 males (44.0 per cent), 238 females (55.3 per cent) and 3 other (0.7 per cent). In terms of age, 14.0 per cent were in the 19-24 years old age group, 25-34 years old (21.95 per cent), 35-44 years old (21.6 per cent), 45-54 years old (19.1 per cent) and 55-64 years old (13.3 per cent) and 65 years and older (10.2 per cent). Most had a Bachelor's education degree (35.3 per cent), some diploma (26.3 per cent), high school (18.4 per cent), postgraduate degree (19.3 per cent) and other (0.7 per cent). Most respondents (334) used Uber Ride, whereas 96 respondents used Uber Eat.

3.2 Measures

Multi-item measures, using a seven-point scale anchored on '1' = extremely disagree to '7' = extremely agree were adapted from prior studies and modified to suit the study's context. Content validity in the form of face validity was established through academic experts to assess how well the instruments represented the constructs under study. Also, before the final launch of the survey, a pretest was undertaken with 50 respondents. We conducted some preliminary checks such as sample demographics and no significant issues were identified, thus indicating data validity.

In measuring CBEBs, we adopted Keller's (2013) three dimensions (*collecting brand information, participating in brand marketing activities* and *interacting with others*). Collecting brand information was measured using five items; participating in marketing activities consisted of four items and interacting with others had four items. *Perceived value* was assessed using three items adapted from Barrutia and Gilsanz (2013) and Harris and Goode (2004) that reflect the overall value of the services, feeling of being in control and value-for-money and effort. Next, we measured *perceived service concept newness* with Lowe and Alpert's (2015) four-item scale to capture the overall novelty of the idea manifested in the offered services. *Perceived relative advantage* was assessed using four items adapted from Lowe and Alpert (2015) that captured "*the degree to which an innovation is perceived as superior to the idea it supersedes*" (Rijsdijk and Hultink, 2009, p. 27). Finally, we operationalized *brand loyalty* to capture the overall attitudinal loyalty to a specific brand that results in repeat purchase behavior. Thus, four items from Srinivasan *et al.* (2002) were adapted to measure brand loyalty.

We also included a control variable, namely, *satisfaction with the service organization* (Uber). *Satisfaction* was measured with three items from Dong *et al.* (2015) to capture overall satisfaction, outcome satisfaction and process satisfaction. The measurement items and psychometric properties for all constructs are provided in Table I.

4. Findings

4.1 Preliminary analysis

Before analyzing data, we first conducted some preliminary checks such as normality, unidimensionality and outlier tests and no significant issues were identified, thus indicating data validity. The standardized factor loadings (SFLs) and Cronbach's alpha (α) estimates shown in Table I revealed that all SFLs are above the cut-off of 0.50, suggesting adequate item reliability (Hair *et al.*, 2010). The Cronbach's alpha scores ranged between 0.884 and 0.927, indicating adequate convergence (Hair *et al.*, 2010). To further check for internal consistency of the constructs, we used two measures namely (i) composite reliability (CR) and (ii) average variance extracted (AVE) (Fornell and Larcker, 1981). CR estimates greater than 0.70 and AVE values above 0.50 are considered to support internal consistency (Bagozzi and Yi, 1988; Hair *et al.*, 2010). Table II shows that all estimates are above the specified criteria supporting internal consistency.

Next, we assessed convergent validity, and as noted above, the SFLs were all above 0.60, and in conjunction with higher scores of construct reliability (>0.70), this evidence indicates convergent validity (Hair *et al.*, 2010). In assessing discriminant validity, we utilized the average variance extracted (AVE) measures recommended by Fornell and Larcker (1981). As can be seen in Table II, the square root of the AVE estimates for each construct were all greater than the correlations of all other constructs, providing support for discriminant validity (Fornell and Larcker, 1981).

Table I Measurement items and standardized factor loadings

Constructs	SFLs
Perceived value (CR = 0.896, α = 0.895 and AVE = 0.713)	
Services I get from the Uber mobile phone application are excellent value	0.892
The Uber mobile phone application gives me a feeling of being in control	0.816
The overall value I get from the Uber mobile phone application is worth my money and effort	0.876
Perceived service concept newness (CR = 0.906, α = 0.904 and AVE = 0.707)	
Uber services are new	0.767
Uber services are different	0.901
Uber services are unique	0.843
Uber services are original	0.847
Perceived relative advantage (CR = 0.886, α = 0.884 and AVE = 0.660)	
Uber services offer unique benefits	0.780
Uber services have higher quality than the competition	0.869
Uber services solve problems I had with competitor services	0.811
Uber services replace a vastly inferior alternative	0.787
Collecting brand information (CR = 0.889, α = 0.891 and AVE = 0.615)	
I like learning about Uber	0.799
If Uber have any new products or services, I tend to notice it	0.751
If I see a newspaper or magazine article about Uber, I tend to read it	0.807
If I see a new story online about Uber, I tend to open and read it	0.811
I like to read online blogs about Uber	0.751
Participating in brand marketing activities (CR = 0.913, α = 0.918 and AVE = 0.726)	
If I notice an advertisement for Uber, I tend to pay attention to it	0.927
If I notice a sales promotion from Uber, I tend to pay attention to it	0.821
If I see a billboard or any outdoor type of advertisement for Uber, I tend to notice it	0.891
If I get to sample one of Uber's new services, I tend to try it	0.760
Interacting with others (CR = 0.928, α = 0.927 and AVE = 0.763)	
I like to talk to other people about Uber	0.939
I like to talk to people at work about Uber	0.847
I like to talk to my friends and family about Uber	0.899
I like to seek out others who use Uber	0.802
Brand loyalty (CR = 0.926, α = 0.925 and AVE = 0.758)	
When I need to use similar services that Uber offers, Uber will be my first choice	0.903
I believe Uber is my favorite company to buy the same kind of services	0.890
To me, Uber is the best company to do business with	0.849
As long as the present service continues, I doubt that I would switch to another company	0.838
Satisfaction (CR = 0.953, α = 0.953 and AVE = 0.871)	
I am satisfied with the Uber services	0.948
I am satisfied with the outcome of the Uber services	0.908
I am satisfied with the process of the Uber services	0.943

Notes: CR = Composite reliability, α = Cronbach's alpha coefficient, AVE = Average variance extracted, SFLs = standardized factor loadings

4.2 Measurement model

Exploratory factor analysis (EFA) was first conducted to identify how well the measurement items load on a certain construct in this specific context and all the items loaded well onto their respective constructs. Also, EFA results demonstrated that unidimensionality exists, that is, the measured variables were explained by only one underlying construct and this is important when more than two constructs are involved (Hair *et al.*, 2010). Next, a measurement model using confirmatory factor analysis (CFA) was tested. Measurement models are used to assess the overall model fit, and goodness-of-fit indices can be used to verify if the theoretical model fits the data (Schumacker and Lomax, 1996). A CFA measurement model with all eight latent constructs, and a total of 31 measures was developed and the model showed acceptable model fit (χ^2_{403} = 689.902, χ^2/df = 1.712, $p < 0.001$, Goodness-of-Fit index = 0.908, Normed Fit index (NFI) = 0.941, Tucker–Lewis index (TLI) = 0.970,

Table II Inter-construct correlations and discriminant validity

Constructs	Mean	SD	1	2	3	4	5	6	7	8
1. Perceived value	5.568	0.962	*0.862*							
2. Perceived service concept newness	5.611	1.013	0.538	*0.841*						
3. Perceived relative advantage	5.364	1.056	0.441	0.471	*0.813*					
4. Collecting brand information	4.427	1.272	0.340	0.362	0.316	*0.784*				
5. Participating in brand marketing activities	4.708	1.285	0.333	0.328	0.374	0.681	*0.852*			
6. Interacting with others	4.483	1.275	0.335	0.336	0.284	0.580	0.529	*0.873*		
7. Brand loyalty	5.577	1.091	0.612	0.496	0.538	0.395	0.447	0.407	*0.870*	
8. Satisfaction	5.947	0.935	0.640	0.548	0.485	0.295	0.319	0.293	0.661	*0.933*

Notes: All inter-construct correlations were significant at the 0.01 level (two-tailed); SD = Standard deviations and the square root of average variance extracted (AVE) values are the diagonal number in italic

Comparative Fit index (CFI) = 0.974, Root Mean Square Error of Approximation (RMSEA) = 0.041). Although the Chi-square was statistically significant as it is usually sensitive to large sample sizes (Bagozzi and Yi, 2012; Hair *et al.*, 2010), all the other indices are within their acceptable ranges in support of satisfactory model fit.

4.3 Common method variance

Because all the constructs of this study were measured from the same respondents via a self-administered survey, common method bias can be problematic and could inflate correlations among latent variables (Podsakoff *et al.*, 2003). First, to control for such bias, proactive efforts were made during questionnaire design to reduce ambiguity (Malhotra *et al.*, 2006). In addition, we conducted two tests to assess for common method variance (CMV). First, the Harman's single-factor test was used to check if the variance of the data is largely attributed to a single factor. To assess CMV, we developed a single-factor CFA model for all observed variables and then compared the single factor structure with the theoretically proposed factor structure (indicated above in Section 4.2). Relatively, this single-factor model showed poor fit ($\chi^2_{434} = 6225.902$, $\chi^2/df = 14.345$, $p < 0.001$, GFI = 0.384, NFI = 0.464, TLI = 0.443, CFI = 0.480, RMSEA = 0.176) suggesting that CMV is unlikely to bias the study results. Second, we assessed CMV using a theoretically unrelated marker variable as recommended by Lindell and Whitney (2001). Using the more conservative bias estimate, the CMV-adjusted correlations were compared to the unadjusted matrix. The initially significant correlations remained unchanged after adjusting for CMV providing further evidence that CMV did not affect the results of this study.

4.3 Hypothesis testing results

To examine the effects of the proposed antecedent variables (perceived value, perceived service concept newness and perceived relative advantage) on customer brand engagement behaviors (collecting brand information, participating in brand marketing activities and interacting with others) that ultimately drives brand loyalty, a structural model was estimated. The SEM approach has the potential for theory development and testing as well as validating constructs (Anderson and Gerbing, 1988). This technique was also chosen, as it allows the examination of multiple interrelated relationships in a single model, thereby reducing standard errors (Hair *et al.*, 2010; Iacobucci *et al.*, 2007). The structural model showed acceptable fit ($\chi^2_{496} = 985.582$, $\chi^2/df = 2.410$, $p < 0.001$, GFI = 0.880, NFI = 0.915, TLI = 0.941, CFI = 0.948, RMSEA = 0.057). The results are shown in Table III.

Table III shows that *H1*, which hypothesized a positive link between *perceived value* and CBEB dimensions, was partially supported. This is because *perceived value* was found to have a statistically significant effect on *collecting brand information* ($\beta = 0.237$, $t = 2.631$) and *interacting with others* ($\beta = 0.279$, $t = 3.274$). However, *perceived value* showed no significant impact on *participating in brand marketing activities* ($\beta = 0.150$, $t = 1.682$). In support of *H2*, the results showed that *perceived service concept newness* positively influences *collecting brand information* ($\beta = 0.309$, $t = 3.491$), *participating in brand marketing activities* ($\beta = 0.218$, $t = 2.484$) as well as *interacting with others* ($\beta = 0.262$, $t = 3.141$). The study further hypothesized a positive relationship between *perceived relative advantage* and the CBEB dimensions (*H3*), and this hypothesis was partially supported, as it emerged that *perceived relative advantage* significantly impacts *collecting brand information* ($\beta = 0.186$, $t = 2.408$) and *participating in brand marketing activities* ($\beta = 0.308$, $t = 3.978$), while it does not impact *interacting with others* ($\beta = 0.141$, $t = 1.945$). In addition, although *brand loyalty* is influenced by *participating in brand marketing activities* ($\beta = 0.124$, $t = 2.515$) and *interacting with others* ($\beta = 0.089$, $t = 2.183$), the results found that *collecting brand information* does not influence *brand loyalty* ($\beta = -0.017$, $t = -0.299$). Hence, *H4* was partially supported. Finally, the hypothesized direct effects (*H5*) were also partially supported as *brand loyalty* is significantly influenced by *perceived value* ($\beta = 0.309$, $t = 5.627$) and *perceived relative advantage* ($\beta = 0.214$, $t = 4.526$), yet this was not the case with *perceived service concept newness* ($\beta = -0.027$, $t = -0.517$). With regard to the control variable in this study, *satisfaction with the service organization* positively affects *brand loyalty* ($\beta = 0.428$, $t = 10.017$).

5. Discussion

This study empirically examined how the characteristics of service innovation (perceived value, service concept newness and relative advantage) promote CBEBs and brand loyalty. The findings of our study suggest that the proposed drivers influence each dimension of the CBEBs differently. For example, *collecting brand information* is positively influenced by value, service concept newness and relative advantage. *Participating in brand marketing activities* is positively influenced

Table III Results of the structural model

Hypothesized relationships	Estimate	*t*	*p*	Result
H1a. Perceived value → Collecting brand information	0.237	2.631	0.009	Supported
H1b. Perceived value → Participating in brand marketing activities	0.150	1.682	0.093	Not supported
H1c. Perceived value → Interacting with others	0.279	3.274	0.001	Supported
H2a. Perceived service concept newness → Collecting brand information	0.309	3.491	***	Supported
H2b. Perceived service concept newness → Participating in brand marketing activities	0.218	2.484	0.013	Supported
H2c. Perceived service concept newness → Interacting with others	0.262	3.141	0.002	Supported
H3a. Perceived relative advantage → Collecting brand information	0.186	2.408	0.016	Supported
H3b. Perceived relative advantage → Participating in brand marketing activities	0.308	3.987	***	Supported
H3c. Perceived relative advantage → Interacting with others	0.141	1.945	0.052	Not supported
H4a. Collecting brand information → Brand loyalty	−0.017	−0.299	0.765	Not supported
H4b. Participating in brand marketing activities → Brand loyalty	0.124	2.515	0.012	Supported
H4c. Interacting with others → Brand loyalty	0.089	2.183	0.029	Supported
H5a. Perceived value → Brand loyalty	0.309	5.627	***	Supported
H5b. Perceived service concept newness → Brand loyalty	−0.027	−0.517	0.605	Not supported
H5c. Perceived relative advantage → Brand loyalty	0.214	4.526	***	Supported
Satisfaction → Brand loyalty	0.428	10.017	***	Significant

Notes: Significant at ***$p < 0.001$ (two-tailed test); β = unstandardized path coefficients; Satisfaction is a control variable

by service concept newness and relative advantage. *Interacting with others* is positively influenced by value and service concept newness. It is surprising that perceived value does not influence *participating in brand marketing activities*. Perhaps, while customers may perceive value from service innovation, they initially invest cognitive efforts in actively paying attention to brand marketing activities and time to upload the mobile phone application to try out new services. Thus, a large initial investment of their resources may influence customer experience as well as value perception with the service innovation. It is also unexpected that relative advantage does not influence *interacting with others*. In other words, when compared to perceived value and service concept newness, the customers' expectation that the service innovation involves some degree of advantage over competitors' offerings does not influence their interaction with other customers. This suggests that customers are reluctant to talk to other people about the focal brand when the topic involves competing innovations. Future research is encouraged to explore this link and provide specific explanations that can be generalizable to other contexts.

Second, the results of our study suggest that brand loyalty is positively influenced by *participating in brand marketing activities* and *interacting with others*. Our finding did not support the relationship between *collecting information* and brand loyalty. There are two possible explanations. It is possible that customers do not expend their resources (i.e. economic, social and psychological) in collecting information about the focal brand and this results in a low level of commitment and loyalty towards the brand. In other words, less loyal customers tend to spend less resources. It is also plausible that customers are generally passive and simply consume the generic brand information. These actions can result in increased awareness and knowledge about the focal brand, but they are not sufficient to generate trial or repurchase intentions.

Finally, our results found significant direct effects of perceived value and relative advantage on loyalty. Our results are consistent with prior research on the link between perceived value and loyalty (Caruana and Ewing, 2010). In particular, relative advantage is a key outcome of customer acceptance of innovation (Rogers, 2003). The findings of our study suggest that there is no direct relationship between service concept newness and loyalty. This result implies that the customers' perception of service concept newness indirectly influence their loyalty to the focal brand via CBEBs. The literature on innovation acceptance sheds some light on these results. While service concept newness represents novelty that can potentially stimulate interest among customers, it can create anxiety among customers (Venkatesh, 2000). For example, service innovation (e.g. self-service technology) increasingly requires customers' participation in the service production and delivery process and can result in unintended outcomes such as customer frustration (Fredrickson, 2001). However, when customer engagement with the focal brand involves taking actions such as learning about the focal brand, possibly trying out new services, and discussing about the focal brand with other customers, these actions allow customers to learn about new services. Moreover, these actions potentially alleviate some perceived uncertainty relating to new services. Thus, customers are more likely to have favorable attitude toward the focal brand and use the new services again in the future.

5.1 Theoretical and managerial contributions

Our study offers several contributions in terms of theory and practice. First, the framework proposed in this study is grounded in SDL. Although SDL is a theoretical lens used by research in the areas of service innovation (Jaakkola and Alexander, 2014; Ordanini and Parasuraman, 2011) and customer engagement (Hollebeek *et al.*, 2016), empirical studies that integrate the two areas remain limited. Our findings suggest a new mechanism in which service innovation can increase loyalty through increased CBEBs. These findings contribute to the limited research on the relationship between service innovation and customer brand engagement. In addition, this study focuses on the characteristics of service

innovation, namely perceived value, service concept newness and relative advantage, which represent a new value proposition offered by a service organization (Skålén *et al.*, 2015). However, according to SDL, value propositions must be assessed and evaluated from the perspective of the customers' value co-creation (Vargo and Lusch, 2004, 2008, 2016). Our findings suggest that perceived value and relative advantage directly affect brand loyalty and indirectly influence brand loyalty via CBEBs. For perceived service concept newness to promote loyalty, customers must engage with the brand by taking actions (participating in brand marketing activities and interacting with others). Overall, this current study offers empirical support to the SDL view of service innovation and contribute to the growing literature on customer brand engagement.

Although researchers and practitioners recognize the benefits of customer brand engagement, it is not easy to effectively engage customers in service innovation (Trott, 2001). Successful service innovation is not only contingent on having the right value proposition in terms of perceived value, service concept newness and relative advantage, attractive practices of motivating customer engagement are also paramount to promoting brand loyalty among customers. Our findings suggest that *participating in brand marketing activities* and *interacting with others* positively influence brand loyalty. Service organizations can design appropriate structures that actors (e.g. customers and employees) within the service system can contribute their resources to enhance the outcomes of service innovation. For instance, many companies such as Microsoft have promoted online user communities and/or online forums. The benefits of these communities include an ability to test prototypes of new software and acquire feedback to refine their offerings (Randhawa and Scerri, 2015) as well as allowing admirers of the brand to discuss ways to improve service experience.

The findings of our study are particularly useful for services firms who are introducing service innovations (e.g. self-services or mobile phone applications) and, thus, require customers' participation in the service delivery process. In particular, our findings suggest that service concept newness impacts brand loyalty indirectly via CBEBs. Therefore, service organizations need to develop strategies that can nurture customer engagement. It is plausible that actions taken by customers to learn more about the new services through either trial or communication with other customers are more likely to reduce perceived uncertainty associated with newness of the services. Hence, to understand how customers perceive and evaluate newness, it is recommended that customers be part of the service development process for services with high novelty (Bessant and Tidd, 2007).

Finally, brand loyalty is a critical outcome to any organization, particularly service firms. Our findings suggest that different characteristics of service innovation influence loyalty differently. For example, our findings support the importance of perceived value and relative advantage of service innovation in directly driving brand loyalty. Thus, service organizations can design the service process that makes it easy for the customers to co-create value by offering them opportunities to have more control over service delivery or save time. With technological advancement, customers can use mobile phone applications or internet-based tools to order and pay for services. Thus, service organizations must ensure that the technology interfaces are easy to use, interactive, highly responsive and of high quality. In addition, service organizations must be proactive in the anticipation of latent needs when designing service innovation to ensure that their offerings are superior to existing offers.

5.2 Limitations and future research directions

Despite the theoretical contributions and managerial implications discussed above, our research is not without certain limitations and, thus, provides opportunities for future research. First, the findings of our study may pertain only to the service organization evaluated in this study – Uber, so further research should examine the generalizability with other service organizations and contexts. By collecting data from different service contexts, future research can advance the framework and propositions offered in our study. Another limitation of our study is the use of cross-sectional data. In particular, Dwivedi *et al.* (2016) proposed and tested loyalty as part of overall brand equity and an antecedent to CBEBs, whereas our study examined brand loyalty as an organizational outcome. A longitudinal study can be further conducted to tease out the causal relationships of these variables. Finally, our study proposed and tested a limited set of drivers and outcomes. Many other aspects of service innovation such as interface quality as well as other innovation diffusion variables (Rogers, 2003) such as complexity, and customer inputs such as participation can be further considered. Future study can include more organizational outcomes such as adoption acceptance. In particular, future research can include some boundary conditions such as usage experience and relationship length as moderators in the model. It is possible that value perception is more likely to be stable across time, but service concept newness and relative advantage are more likely to decrease as the time passes. The concept of novelty is also likely to decay overtime, whereas perceived relative advantage may decline when competitors enter the market with new and improved services.

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