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The impact of online customer experience on customer engagement behaviours: The roles of brand identification and brand love

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Abstract

With the penetration of the internet, companies and brands seek to shape a memorable customer experience throughout every channel online. However, the mechanism between online customer experience and customer engagement behaviours is still waiting to be explored. Drawn on the stimulus-organism-response (S-O-R) framework, this research aims to examine the relationship between these two key concepts and reveal the mediating roles of brand identification and brand love.

Data was gathered using a self-administered online survey, and 469 valid data were received from respondents with online brand experience.

The results indicated significant relations between the online customer experience and customer engagement behaviours with the mediation of brand identification and brand love, suggesting that online customer experience can potentially stimulate strong brand identification and brand love and further encourage more customer engagement behaviours, namely, purchases, referrals, influence, and knowledge.

Theoretically, this study enriches the literature on customer experience and engagement by uncovering the roles of brand identification and brand love. This study also provides insights for brand managers and marketers to shape memorable online experiences, build solid customer-brand relationships, and encourage customer engagement behaviours, enhancing firm performance.

Keywords: Online customer experience; Customer engagement behaviours; Brand identification; Brand love; S-O-R framework.

Resumo

Com a penetração da Internet, empresas e marcas buscam moldar uma experiência memorável ao consumidor em todos os canais online. No entanto, o mecanismo entre a experiência do consumidor online e os comportamentos de engajamento do consumidor ainda está à espera para serem explorados. Desenhado na estrutura do estímulo-organismo-resposta (S-O-R), esta pesquisa visa examinar a relação entre esses dois conceitos-chave e revelar os papéis mediadores da identificação e do amor da marca.

Os dados foram coletados usando uma pesquisa online autoadministrada e 469 dados válidos foram recebidos dos entrevistados com experiência na marca online.

Os resultados indicaram relações significativas entre a experiência online do consumidor e os comportamentos de engajamento do consumidor com a mediação da identificação e do amor da marca, sugerindo que a experiência online do consumidor pode potencialmente estimular a identificação forte da marca e o amor da marca e incentivar ainda mais comportamentos de engajamento do consumidor, mais especificamente, compras, referências, influência e conhecimento.

Teoricamente, este estudo enriquece a literatura sobre experiência e engajamento do consumidor, descobrindo os papéis da identificação e do amor da marca. Este estudo também fornece informações para os gerentes de marca e os profissionais de marketing moldarem experiências online memoráveis, criar relacionamentos sólidos para a marca do cliente e incentivar comportamentos de engajamento do consumidor, aprimorando o desempenho da empresa.

Palavras-chave: Experiência online do consumidor; Comportamentos de engajamento do consumidor; Identificação da marca; *Brand love*; *S-O-R Framework*.

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1 Introduction

Nowadays, the internet has become a vital part of an individual's daily life, significantly influencing both individual consumers and large economies. In 2023, the global internet user count has reached 5.18 billion, signifying that approximately two-thirds of the world's population is connected to the world wide web (Petrosyan, 2023). Correspondingly, companies and brands have been adapting the digital transformation and seeking more effective ways to connect with customers online. Shaping a memorable online customer experience has become a popular strategy because there is an increasing number of commoditised products and services in the economy (Choi & Kandampully, 2019). Thus, compared to the traditional strategy that only warps experiences around the offerings, this strategy emphasises "staging" the experience in the whole journey to create a long-term competitive advantage by differentiating and solidifying customer-brand relationships (Ahmad et al., 2022; Kohler et al., 2011).

Theoretically, Pine and Gilmore (1998) proposed experience economy as a marketing strategy and pointed out its essential role in both online and offline contexts. According to this, many researchers have investigated the drivers and outcomes of customer experience in different channels, e.g., branding in social media (Fernandes & Inverneiro, 2021; Jacobson et al., 2020), online retailing (Ertemel et al., 2021; Micu et al., 2019), website designing (Bleier et al., 2019; Friedrich et al., 2019) and so on. However, considering customers perceived the brand through the holistic experience of all the channels (e.g., brand-owned website/app, social media account and community, third-party online store, etc.), the present study aims to start from a more comprehensive perspective to uncover the impact of online customer experience.

Previous investigations have found that customer experience is a significant determinant of brand identification (Anshu et al., 2022; Kumar & Kaushik, 2018), brand love (Lin & Choe, 2022; Trivedi, 2019), and customer engagement (Ahmad et al., 2022; Mohd-Ramly & Omar, 2017; Tuguinay et al., 2022). Specifically, shaping an excellent experience allows the companies and brands to remain memorable to the customers and thus provide substance that leads to more customer engagement behaviours, which remain consistent with the existing literature of Joshi and Garg (2021), Mai Chi et al. (2022), and Junaid et al. (2019).

Regarding customer engagement, it is also an emerging and remarkable topic for both academics and industry practitioners (Beckers et al., 2018; So et al., 2020). It has been mainly conceptualised from a behavioural perspective (Ho et al., 2022; Kumar & Pansari, 2016; Obilo et al., 2021; van Doorn et al., 2010), a psychological perspective (Brodie et al., 2011; Thakur, 2018), and both behavioural and psychological perspective (Harrigan et al., 2017; Lourenço et al., 2022). Among them, the conceptualisation and construct of Kumar & Pansari (2016) caught attention because it captured four key engagement behaviours that directly contribute to firm performance: purchases, referrals, influence, and knowledge. Many researchers have used this construct to measure and identify the firm-oriented effect of the drivers (e.g., Choi et al., 2022; Junaid et al., 2020) as well as the current study because there was little attention on online customer experience and specific engagement behavioural outcomes compared to the emotional and cognitive ones in the existing literature.

Additionally, brand identification and brand love, as two main types of customer-brand relationships, have also been considered vital retinues to gain and maintain long-term satisfaction and loyalty of the customer (Batra et al., 2012; Fournier, 1998; Stokburger-Sauer et al., 2012). Brand identification, which reflects a psychological or emotional belongingness between the customer and the brand (Rather et al., 2018), was suggested being an important mediator between online customer experience and customer engagement behaviours (Mai Chi et al., 2022). Similarly, previous studies have found its correlation with customer experience (e.g., Kumar & Kaushik, 2020; Rather et al., 2022) and customer engagement behaviours (e.g., Agyei et al., 2021; Rather et al., 2018).

As for brand love, it emphasizes the various and deep emotional attachments toward the brand, and it has been examined widely as a mediator in many works of literature and different contexts (Arghashi et al., 2021; Bigne et al., 2020; Verma, 2021). Considering this special attachment is what the company seek to achieve by creating customer experience (Bae & Kim, 2023; Yadav et al., 2023), and it can further enhance customer engagement behaviours (Junaid et al., 2020), the present study also proposed brand love as another curial mediator between online customer experience and customer engagement behaviours. Moreover, this proposed relationship is aligned with the previous study of Junaid et al. (2019) and Sohaib et al. (2022).

Finally, according to the Mehrabian and Russell's (1974) S-O-R theory, online customer experience can be considered environmental stimuli (S). Then, how customers perceive such

stimuli can lead to a solid customer-brand relationship (i.e., brand identification and brand love) (O), in turn, further causes more customer engagement behaviours (R).

Hence, in light of the literature gaps and suggested positive routs above, the current study applies the S-O-R framework and aims to answer the following research questions:

1. What is the impact of online customer experience on customer engagement behaviours (purchases, referrals, influence, and knowledge)?
2. What is the mechanism of this relationship? Do brand identification and brand love act as the mediating roles in this relationship?

A comprehensive literature review in Chapter 2 indicates that this research is among the first to reveal the relationship between online customer experience and customer engagement behaviours via brand identification and brand love. Then, in Chapter 3, the main hypotheses of this study are formulated and proposed. Correspondingly, the research methodology and data collection process are introduced. Next, the research findings are presented and discussed in Chapter 4. Finally, in Chapter 5, general considerations, theoretical implications, managerial implications, and future studies will be summarized.

2 Literature Review

2.1 Theoretical Framework

According to the Stimulus-Organism-Response (S-O-R) model, S represent the material and social stimuli present in the external environment, O refers to the individual's internal state or organismic response to these stimuli (S), and R encompasses the behavioural responses to O. (Mehrabian & Russell, 1974). This model rooted in environmental psychology has been recognised as one of the earliest frameworks to explore the impact of environment and atmosphere on customer behaviour, and it continues to be extensively employed and valued in contemporary research (Choi & Kandampully, 2019). Correspondingly, it has been successfully applied in e-commerce and s-commerce for studying customer behaviours (e.g., Islam & Rahman, 2016; Kang et al., 2021).

Using the S-O-R framework as a theoretical foundation for the present study is advantageous for two reasons. First, this framework has been previously applied in the study of consumer behaviours to investigate how environmental stimuli influence customer engagement behaviours (e.g., willingness to suggest, word-of-mouth, consumption, contribution, creation, etc.) in both offline and online contexts (Choi & Kandampully, 2019; Kang et al., 2021). Second, considering the present study's objectives to reveal the role of the customer-brand relationship between online customer experience and customer engagement behaviours, the S-O-R framework allows to capture and uncover the whole mechanism and provides insights into enhancing particular customer engagement behaviour (i.e., purchases, referrals, influence, and knowledge) by shaping the online customer experience, brand identification, and brand love.

2.2 Online Customer Experience (S)

2.2.1 Customer Experience and Experience Economy Theory

Customer experience (CX) is a complex concept that has been defined differently depending on points of view (Bagdare & Jain, 2013; Barari & Furrer, 2018; Keyser et al., 2015). Among them, many researchers follow the definition proposed by Meyer and Schwager (2007) that customer experience is an individual's internal and subjective response to any direct or indirect interaction with a company's products, services, or brands. With conceptual

development, customer experience becomes a holistic concept (Rose et al., 2011). It is considered a mere response or reaction and a customer's active cognitive and affective goals (Kawaf & Tagg, 2017; Klaus & Maklan, 2013; Rose et al., 2012). Besides, Brakus et al. (2009) approached the concept according to four dimensions (sensory, affective, intellectual, and behavioural) to shape customer experience with the brands as a part of brand design. The experience economy theory, proposed by Pine and Gilmore (1998), has suggested that customer experience is related to customer participation and connection with the environment. Thus, shaping customer experience is essential in creating a competitive advantage that is difficult to imitate. Align with this, the studies of Kohler et al. (2011) and Füller et al. (2011) show that a compelling and qualified experience is delightful and leads to positive attitudes and behavioural intentions.

Past studies on customer experience have explored various perspectives, including psychology, consumer behaviour, and marketing, providing valuable insights into the complex nature of customer experience and shedding light on customer process information and the factors that can activate their consumption behaviours (Jain et al., 2017; Waqas et al., 2021).

2.2.2 Customer Experience in the Online Context

Customer experience has been dramatically influenced by the evolution of the internet, particularly with the emergence of Web 2.0 and its subsequent advancements, encompassing various technologies and functionalities such as HTML5, SEO, social media and so on (Bilgihan et al., 2014). These advancements have facilitated online social interaction, allowing customers to collaborate, communicate, share, and connect (Kaplan, 2015; Kaplan & Haenlein, 2010). The internet has become critical for maintaining customer relationships by providing transactional, informational, and interactional channels, offering timely information about services and facilities worldwide (Jung et al., 2018; Murphy et al., 2016).

Based on the experience economy theory (Pine & Gilmore, 1999, 2011), developing a distinctive customer experience is crucial both online and offline. Online customer experience plays a crucial role in shaping customer behaviour (e.g., satisfaction, trust, loyalty, etc.) and has been widely recognised in the previous literature (Coudounaris & Sthapit, 2017; Lemon & Verhoef, 2016; Slack et al., 2020). Pappas et al. (2014) suggest that online customer

experience is essential in forming customers' perceptions and expectations of online retailers. Hence, providing a memorable and engaging customer experience in today's competitive market has become essential for businesses. It is no longer sufficient to offer products or services; companies must strive to create meaningful interactions and emotional connections with their customers (Bilgihan et al., 2014; Klaus & Maklan, 2013). Join forces with it, online customer experience is shown to be an important aspect of a company's success (Khan & Rahman, 2015; Michaud Trevinal & Stenger, 2014; Rose et al., 2012; Varshneya et al., 2017). Moreover, managing online experience can affect the sustainability of a firm's competitive advantage (Klaus & Maklan, 2013; Lemon & Verhoef, 2016).

Therefore, numerous past research has investigated online customer experience from many perspectives, and most of them can be concluded as three types: online shopping and E-commerce, social media and S-commerce, and Website and App.

2.2.2.1 Online Shopping and E-commerce

Online shopping offers several advantages for both customers and companies. Customers benefit from access to product information, overcoming time and place limitations, and convenience (Beldad et al., 2010; Childers et al., 2001; Rose et al., 2011). For companies, E-commerce provides a direct and cost-effective channel to reach customers, reduces investment and maintenance costs, and has prompted businesses to shift their operations online (Crisafulli & Singh, 2017; Martin et al., 2015). The growth of online shopping has attracted interest from researchers and practitioners, focusing on understanding the dynamics and implications of this evolving trend (Lemon & Verhoef, 2016; Verleye, 2015).

Online shopping and E-commerce offer benefits such as product and service comparisons, which contribute to enhancing the customer experience (Ahmad et al., 2022). Lots of online retailers strive to provide compelling and seamless experiences to retain customers (Ertemel et al., 2021). The traditional approaches to attracting customers in brick & mortar commerce are not applicable in the online context. In contrast, interaction, participation, co-creation, immersion, engagement and emotional hook play more crucial roles (Bilgihan et al., 2014). Thus, further investigation into the relationship between online customer experience, its behavioural outcomes, and the mechanism is necessary for theoretical and practical development.

2.2.2.3 Social Media and S-commerce

Nowadays, social media has enabled companies to reach customers in infinite ways and quantities, and the rise of social media has transformed marketing practices and opened new avenues for efficient and up-to-date online management of marketing activities (Jacobson et al., 2020). Customer interaction and activities have been increasingly shifting to social media due to the popularisation of mobile devices (Thakur, 2018). Social media platforms like Facebook, Twitter, LinkedIn, etc., have become powerful tools for businesses across industries to build competitive strategies and engage with current and potential customers (Yasin et al., 2019). Hence, S-commerce is an upcoming trend empowered by Web 3.0, offering many-to-many interactions, enhancing the quality and quantity of social interaction related to the firm-customer, information searches, and product/service delivery (Dhaigude & Mohan, 2023).

Compared to E-commerce, S-commerce 1) changed the way from a business-focused to a consumer-focused (Busalim & Hussin, 2016; Z. Huang & Benyoucef, 2013); 2) embraced more communication between the company/brand with the customer and encouraged more interaction (Jensen Schau & Gilly, 2003; Y. A. Kim & Srivastava, 2007). Thus, S-commerce can provide more immersive, virtual, and highly engaging customer experiences (Dhaigude & Mohan, 2023; Parise & Guinan, 2008). Therefore, in the S-commerce context, previous studies of online customer experience focus more on branding (e.g., Fernandes & Inverneiro, 2021) instead of retailing (e.g., Ahmad et al., 2022) in the E-commerce context.

2.2.2.2 Website and App

Since the shift from offline towards online customer experience, the website/app, as a technical tool or platform for both E-commerce and S-commerce, has been considered a main online environment to interact with customers dynamically (Lallemand et al., 2015; Nambisan & Watt, 2011). Dhaigude and Mohan (2023) argue that, regarding website design and technology, E-commerce is usually based on Web 1.0 as a traditional way of browsing, while S-commerce uses Web 2.0, which is the basis of social interaction like user-generated contact.

Correspondingly, related research has investigated the impact of a website's elements and functions on customer experience, thereby further influencing customer decision-making

(e.g., purchase intention, customer engagement behaviours) in both retailing and branding contexts. For instance, the research of Dennis et al. (2014) suggested that enhancing the online shopping environment (e.g., digital signage)'s sensory cue can evoke affective experience, strengthen experiential processing route, and enhance customer loyalty. More specifically, using an experimental design approach, Friedrich et al. (2019) explore the impact of website richness on website stickiness and reveal its further effects on building a more enjoyable, valuable, and trustable customer experience. Bleier et al. (2019) point out that providing an effective online customer experience via well-design web pages is critical. To reveal how such web pages should be, 16 experiences with 13 unique design elements were launched, and the results uncovered how different kinds of brands could create effective online customer experience through designing respective web elements.

To conclude, existing literature covered mainly online retailing in E-commerce, marketing and branding in S-commerce, and their respective technique (i.e., website or/and app). However, nowadays, companies and brands aim to build an omnichannel, which means they are marketing and branding in multiple channels. Correspondingly, customers' perception of a brand would be comprehensively through their experience in the brand-owned website/app, social media, third-party store and so on, although, by case, some customers are more familiar with one than others. Therefore, the present study aims to understand the holistic online customer experience with brands and view online customer experience as stimuli (S) to explore its impact on customer behaviours further.

2.2.3 Online Customer Experience Conceptualisation and Construct Development

Following the conceptions of customer experience, Klaus and Maklan (2013) and Rose et al. (2011) defined online customer experience as the customer's affective and cognitive assessment of direct or indirect interaction with a company. And the current study adopted a more recent and related definition from Anshu et al. (2022) and conceptualised that online customer experience refers to the customers' impression based on sensory data of the interactions with products, services, companies, and brands. Besides, researchers have identified some most used constructs and critical dimensions of online customer experience (See **Table 1**) according to the systematic literature review of Quiñones and Rojas (2023).

Table 1. Most used dimensions and respective definitions of customer experience

Authors	Dimensions	Definitions
Schmitt (1999)	Sense Feel Think Act Relate	"Experiences occur as a result of encountering, undergoing, or living through things. Experiences provide sensory, emotional, cognitive, behavioural, and relational values that replace functional values." p. 57
Gentile et al. (2007)	Sensorial Emotional Cognitive Pragmatic Lifestyle Relational	"The customer experience originates from a set of interactions between a customer and a product, a company, or part of its organization, which provoke a reaction. This experience is strictly personal and implies the customer's involvement at different levels (rational, emotional, sensorial physical and spiritual). Its evaluation depends on the comparison between a customer's expectations and the stimuli coming from the interaction with the company and its offering in correspondence of the different moments of contact or touchpoints." p. 397
Verhoef et al. (2009)	Social environment Service interface Retail atmosphere Assortment Price Promotions	"The customer experience construct is holistic in nature and involves the customer's cognitive, affective, emotional, social and physical responses to the retailer. This experience is created not only by those elements which the retailer can control, but also, by elements that are outside of the retailer's control. Customer experience encompasses the total experience, including the search, purchases, consumption, and after-sale phases of the experience, and may involve multiple retail channels." p. 32
Brakus et al. (2009)	Sensory Affective Intellectual Behavioural	According to customer there are not just product experience, service experience, and consumption experience, but also brand experience. It is conceptualised that "brand experience as subjective, internal consumer responses (sensation, feelings, and cognitive) and behavioural responses evoked by brand-related stimuli." p. 53

Among them, the dimensions raised by Verhoef et al. (2009) covered the main elements attached by the customer in the whole purchases process (namely, social environment, service interface, retail atmosphere, assortment, price, and promotions), which might not be suitable in the online context. Besides, Gentile et al. (2007) considered customer experience depends on comparing the individual's expectations and the interaction stimuli. Thus, the developed dimensions also encompassed the customer's personal aspect (e.g., lifestyle). Additionally, the dimensions of Brakus et al. (2009) and Schmitt (1999) show high similarity, i.e., Sense – Sensory; Think – Intellectual; Act – Behavioural; Feel – Affective, only the social-identity experience (Relate) is not matched. Specifically: 1) Sense/Sensory experience suggests the perceived aesthetics and sensory qualities; 2) Think/Intellectual experience indicates the convergent/analytical and divergent/imaginative thinking; 3) Act/Behavioural experience refers to motor actions; 4) Feel/Affective experience includes the individual's moods and emotions.

Comparing their conceptualisation and developing logic, Schmitt (1999) tended to cover the marketing processes, while Brakus et al. (2009) focused on branding that matches the present study's objectives. Furthermore, the construct of Brakus et al. (2009) has been widely adopted in online experience research (e.g., Khan & Rahman, 2015; Kumar & Kaushik, 2018; Mohd-Ramly & Omar, 2017), which suggests its adaptation and suitability in studying online customer experience with a brand. Thus, the scale of Brakus et al. (2019) was also considered to be adopted in this study.

2.3 Customer Engagement Behaviours (R)

2.3.1 Customer Engagement's Conceptualization

Customer engagement (CE) has emerged as a crucial topic in recent years, capturing the attention of both marketing academics and industry practitioners (Beckers et al., 2018; So et al., 2020). It refers to customer resource investment in brand interactions and has been shown to contribute to customer-firm relationships and firm performance (Brodie et al., 2011; Giakoumaki & Krepapa, 2020; Hollebeek et al., 2019). For example, it has been found to associate with not just positive customer-related outcomes such as satisfaction, trust, loyalty, purchase intention and word-of-mouth, but also firm-related outcomes such as customer lifetime value, customer referrals value, customer influencer value, and customer knowledge value (Ng et al., 2020). Consequently, customer engagement has become a key metric for managing customer relationships (Hollebeek et al., 2019; Pansari & Kumar, 2017; Sharma et al., 2022).

Hence, customer engagement has been examined from various perspectives. To date, it has been mainly conceptualised as a behavioural manifestation (e.g., van Doorn et al., 2010; Kumar & Pansari, 2016; Obilo et al., 2021; Ho et al., 2022), a psychological state (e.g., Brodie et al., 2011; Thakur, 2018), or both behavioural and psychological customer-brand interaction (e.g., Harrigean et al. 2017; Lourenco et al., 2022). Regarding the behavioural view, customer engagement behaviour was manifested as spontaneous behaviours in the s-commerce context (Dwivedi et al., 2019; Zhang et al., 2017). As for the psychological view, it is conceptualised as a mind that leads to frequent interaction with a brand or medium (Thakur, 2018). Moreover, given that customer engagement is the emotional, psychological, or physical investment that can be strengthened by repeated interactions between a customer

and an organisation (Harrigan et al., 2017), customer engagement also can be viewed both behaviourally and psychologically.

2.3.2 Customer Engagement's Constructs Development

Correspondingly, different constructs were proposed to measure customer engagement. According to the systematic review of Hollebeek et al. (2023), there are a total of 28 customer engagement scales. Among them, 13 were consumer/customer engagement (behaviours) scales. Considering the authority in the field, those with more than 300 citations are summarised in **Table 2**.

Table 2. Customer engagement's constructs development

Authors	Definition	Dimensionality
So et al. (2014)	"A customer's personal connection to a brand as manifested in cognitive, affective, and behavioural actions outside of the purchases situation." (p. 310–311)	Identification (E) Enthusiasm (E) Attention (C) Absorption (C) Interaction (B)
Hollebeek et al. (2014)	"A consumer's positively valanced brand-related cognitive, emotional and behavioural brand-related activity during, or related to, specific consumer/brand interactions." (p. 154)	Cognitive processing (C) Affective (E) Activation (B)
Vivek et al. (2014)	"The level of the customer's (or potential customer's) interactions and connections with the brand or firm's offerings or activities, often involving others in the social network created around the brand/offering/activity." (p.406)	Conscious attention (C) Enthused participation (E/B) Social connection (S)
Kumar and Pansari. (2016)	"The attitude, behaviour, the level of connectedness among customers, between customers and employees, and of customers and employees within a firm." (p. 498)	Purchases (B) Referrals (B) Influence (B) Knowledge (B)
Harrigan et al. (2017)	"Customer engagement is characterized by repeated interactions between a customer and an organization that strengthen the emotional, psychological or physical investment a customer has in the brand and the organization." (p. 598)	Identification (E) Absorption (C) Interaction (B)

Note: B = behavioural; C = cognitive; E = emotional; S = social.

So et al. (2014) developed a customer engagement scale based on a survey of hotel and airline customers, which demonstrated strong psychometric properties. Based on this scale, Harrigan et al. (2017) further proposed a scale that can be applied in both tourism and non-tourism contexts. Besides, Hollebeek et al. (2014) developed the customer brand engagement scale in a specific social media context, cooperating with three dimensions (cognitive processing, affection, and activation). Moreover, following the definition that customer engagement goes beyond purchases and is the level of interaction and connections between the customer and brand, Vivek et al. (2014) conceptualised another three-dimensional scale. Furthermore, Kumar and Pansari (2016) developed a framework of engagement with both customer engagement and employee engagement constructs. Between them, the customer engagement scale, capturing four behavioural dimensions, including purchases, referrals, influence, and knowledge, was validated with data from 120 companies over two periods and showed its positive effect on firm performance.

As the present study aims to reveal the mechanism of the impact of online customer experience on customer engagement that cooperates with behavioural responses contributing to the firm, the conceptualisation and construct of Kumar and Pansari (2016) were deemed the most appropriate choice among the prior mentioned five constructs. It emphasises the "customer attitude, behaviour, and level of connectedness among themselves and with the firm (Kumar & Pansari, 2016. P. 499)". Focusing on the behavioural aspects of customer engagement also aligns well with the proposed S-O-R framework, which views customer engagement behaviours as a response (R). Specifically, behavioural purchases that directly contribute to the firm value are highlighted as an essential aspect for firms and one of the crucial dimensions in customer engagement behaviours. Referrals, as an engaging form with customers, are also considered a vital dimension of customer engagement behaviours because they help attract potential customers. Besides, influence describes the impact that the current customer makes on social networks. Last but not least, knowledge indicates that the customer provides feedback and suggestions to help improve the company's product/service.

2.4 The Mediating Role of Brand Identification and Brand Love(O)

2.4.1 Brand Identification

Identification is a concept rooted in social identity theory, which posits that individuals categorise themselves into social groups to establish their self-definition (Tajfel & Turner, 1985). Initially, in an organisational context, identification is defined as "the perceived oneness with or belongingness to an organisation" (Bhattacharya et al., 1995, p. 46). Similarly, brand identification, extending this notion to the brand-consumer context, is most conceptualised from two stages. The first one aims to evaluate "the extent to which the consumer sees his or her own self-image as overlapping with the brand's image" (Bagozzi et al., 2006, p. 49; Algesheimer et al., 2005; Brown et al., 2005; Carlson et al., 2009), and the second one indicates the generation of "a psychological state of perceiving, feeling, and valuing his or her belongingness with a brand" (Lam et al., 2010, p. 129; Donavan et al., 2006; Lam, 2012). Nevertheless, it is argued that brand identification is an identity-based tie between the customer and the brand rather than a simple transformation from an organisational to a customer-brand context (Papista & Dimitriadis, 2012; Stokburger-Sauer et al., 2012). Besides, in line with the previous study that also considered brand identification and brand love as a customer-brand relationship (e.g., Choi et al., 2022; Dalman et al., 2019), the current study adopted the second perspective and defined brand identification as a psychological state of belongingness.

Previous studies have examined the antecedents and outcomes of brand identification. Among the antecedents, one of the significant factors is the customer's experience with a brand because such experience can effectively foster positive and seamless interactions, creating a solid connection between customers and the brand (Rather et al., 2022; Tuškej & Podnar, 2018). Moreover, its potential effects on customer engagement behaviours have been tested in brand love and attachment (Alnawas & Altarifi, 2016; Rather et al., 2022), (re)purchase intention (Grappi & Montanari, 2011; Tuškej et al., 2013), word-of-mouth (Popp & Woratschek, 2017; Qiao et al., 2021), customer engagement (Haverila et al., 2020; Kaur et al., 2020), and so on.

Furthermore, according to the social identity theory, the identity process happens when customers actively or passively evaluate the brand based on the external stimulus, identify the extent of similarity, and generate belongingness. Considering this is a series of mental processes that may further influence customer behaviours, brand identification should be viewed as the organism (O) in the present S-O-R framework.

2.4.2 Brand Love

Brand love is a concept derived from social psychology and has gained significant attention in consumer-brand relationships (Bagozzi et al., 2017; Hegner et al., 2017; Langner et al., 2016; Sarkar, 2014). According to Sternberg's triangular theory of love (1986), i.e., passion, intimacy, and commitment, researchers suggest that, in the field of marketing, 1) passion can represent consumers' zealous and enthusiastic attachment to the brand, capturing the emotional intensity and the longing for union with the brand; 2) intimacy can refer to the customer's closeness and emotional willingness to remain in touch with the brand; 3) commitment involves the cognitive decision to love the brand, which signifies the customer's intention of a long-term relationship with the brand (Albert & Merunka, 2013; Kohli et al., 2014; Sternberg, 1987). Scholars characterised it as a strong positive emotional tie, an overall positive attitude, and a sense of commitment and confidence (Bairrada et al., 2018; Batra et al., 2012; Fetscherin et al., 2021; Song & Kim, 2022). Yet the attachment theory proposed by Bowlby (1977) simplified it and emphasised the emotional bonds between the customer and the brand. And it is suggested that brand love encompasses various emotions such as passion, positive attitude, liking, attachment, and commitment (Albert et al., 2008; Batra et al., 2012; Carroll & Ahuvia, 2006). For the research objective and to be consistent with the recent research, the present study adopted the definitions and construct of Carroll and Ahuvia (2006) that brand love is the degree of passionate, emotional attachment a satisfied customer has for a particular brand.

Previous research has sought to find what factors contribute to building brand love feeling. For instance, some studies found that brand identification has a significant and positive impact on brand love (Albert & Merunka, 2013; Bergkvist & Bech-Larsen, 2010), while others have examined the influence of brand image and brand personality (Rageh Ismail & Spinelli, 2012), brand trust (Albert & Merunka, 2013), etc. Correspondingly, considering the managerial value of brand love, its potential consequences have also been explored, such as loyalty (Carroll & Ahuvia, 2006; Koo & Kim, 2013; Unal & Aydın, 2013), willingness to pay more (Albert & Merunka, 2013), word-of-mouth (Rageh Ismail & Spinelli, 2012), customer engagement (Bergkvist & Bech-Larsen, 2010) and so on. Additionally, brand love was widely investigated as a mediator in the existing literature (e.g., Bae & Kim, 2023; C.-C. Huang, 2017; Junaid et al., 2019; Yadav et al., 2023), as well as it would be considered as a mediator in this

study. Moreover, based on the inner-processing nature of love, brand love is also suitable to be viewed as the organism (O) in the present S-O-R framework.

To conclude, brand identification and brand love are distinct concepts within consumer-brand relationships. Brand identification emphasises the customer's perception of unity and affinity towards a brand, representing a cognitive affiliation based on fulfilling social identity-related needs (Rather & Hollebeek, 2019; Stokburger-Sauer et al., 2012). In contrast, brand love emphasises the intensely personal and emotional connection between customers and the brand, characterised by strong emotions such as passion, connection, and affection (C.-C. Huang, 2017; Thomson et al., 2005). Therefore, brand identification and brand love can be considered as two perspectives and levels of customer-brand relationships. As such, brand identification might represent the cognitive process, while brand love refers to the affective process. Besides, brand love indicates a deeper bond between the customer and the brand compared to brand identification.

2.5 Similar Study and Critical Analysis

Although customer experience and customer engagement have been prevalent topics that gained importance in the latest years, there is still a lack of studies that investigate how online customer experience via different channels (i.e., brand-owned website/app, social media, and third-party online store) impacts on customer engagement behaviours. As **Table 3** presented, previous studies only focused on one of the mentioned channels (e.g., only in the context of e-commerce, social media, or communities).

Besides, there needs to be more attention to customer engagement's comprehensive behavioural outcomes (namely, purchases, referrals, influence, and knowledge). For example, among the reported studies in **Table 3**, only Roy et al. (2022) investigated five dimensions of customer engagement behaviours (including compliance, cooperation, feedback, helping, and positive word-of-mouth) in the offline retailing context, and Mai Chi et al. (2022) explored co-developing, influencing, augmenting, and mobilising behaviours in Vietnam's beauty salons context.

Furthermore, the mechanism of the relationship between online customer experience and customer engagement behaviours was overlooked, particularly in terms of the mediating

effect of brand identification and brand love (a comprehensive literature overview can be viewed in **Appendix I**). For instance, only Mai Chi et al. (2022) revealed the mediator effect of brand identification. Similarly, a few studies uncovered the mediator effect of brand love (Junaid et al., 2019; Sohaib et al., 2022).

Hence, it is vital to examine the relationship between online customer experience and customer engagement behaviours in an online branding context, with the consideration of the mediating roles of brand identification and brand love.

Table 3. Overview of the previous study of customer experience and engagement

Authors	(O)CX as driver	CE(B) as outcome	Mediators	Moderators	Context
The present study	X	Behavioural	Brand identification; Brand love	-	Online branding
Ahmad et al. (2022)	X	Attitudinal & Behavioural	-	Value co-creation	E-commerce
Mai Chi et al. (2022)	X	Behavioural	Customer-company identification; customer-employee identification	Customer experience motivation	Beauty salons in Vietnam
Merdiaty & Aldrin. (2022)	X	Cognitive & emotional	Service quality	-	Online sellers to students
Sohaib et al. (2022)	X	Cognitive, emotional, & behavioural	Brand love	-	Case study of Apple
Tuguinay et al. (2022)	X	Cognitive, emotional, & behavioural	-	Social interaction	Casino
Roy et al. (2020)	X	Behavioural	Customer commitment	-	Offline retail
Junaid et al. (2019)	X	Unidimensional	Brand love	-	Smartphone
Yasin et al. (2019)	X	Unidimensional	-	-	Online banking in communities
Mohd-Ramly & Omar (2017)	X	Cognitive, Emotional/Behavioural, & Social	-	-	Offline retail
Loureiro et al. (2017)	X	Cognitive, emotional, & behavioural	-	-	Social media (Facebook)
Zhang et al. (2017)	X	Unidimensional	-	-	Smartphone communities

Note: CE(B) = customer engagement (behaviours), (O)CX = (online) customer experience.

3 Empirical Study

3.1 Research Objectives and Questions

"No man is an island. – John Donne", especially in the context of the development and popularisation of Web 2.0. Information can come from anywhere via websites, apps, social media, etc. From this point of view, in a way, the information that an individual attaches via the internet can generally shape his/her experience and perceptions of a brand/company at all times. As such, many firms consider shaping the online customer experience as a meaningful way to differentiate and building a long-term competitive advantage (Ahamd et al., 2022). Besides, online customer experience also gains lots of attention in academia since the rise of the experience economy (Pine & Gilmore, 1998). Many researchers have explored its antecedent and outcome variables in the context of E-commerce (e.g., Crisafulli & Singh, 2017; Ertemel et al., 2021), S-commerce (e.g., Fernandes & Inverneiro, 2021; Jacobson et al., 2020; Yasin et al., 2019), website/app techniques (e.g., Bleier et al., 2019; Friedrich et al., 2019), and so on.

Previous studies have pointed out that customer experience is a significant determinant of brand love (Lin & Choe, 2022; Trivedi, 2019), brand identification (Anshu et al., 2022; Kumar & Kaushik, 2018), customer engagement (Ahmad et al., 2022; Mohd-Ramly & Omar, 2017; Tuguinay et al., 2022). Yet customer engagement behaviours are still waiting to be and worthy of being explored because they visually display the contributions of online customer experience to the firms (Kumar & Pansari, 2016). However, up to my knowledge, there is a lack of literature so far that has examined the relationship between customer experience and customer engagement behaviours via customer-brand relationships (in specific, brand identification and brand love) in the online context.

Hence, dawning on the S-O-R model, the present study aims to answer the following research questions:

1) What is the impact of online customer experience (S) on customer engagement behaviours (purchases, referrals, influence, and knowledge) (R)?
2) What is the mechanism of this relationship? Do brand identification (O) and brand love (O) act as the mediating roles in this relationship?

3.2 Research Hypotheses and Conceptual Model

3.2.1 Online Customer Experience and Customer Engagement Behaviours

According to the social exchange theory, when customers find the service (e.g., the experience) that offer by the brand or company satisfying, they perceive that the brand or company is fulfilling its commitment to delivering exceptional service (Cropanzano & Mitchell, 2005), thus, customers feel motivated to engage back in extra-role behaviours, e.g., referring and influencing the brand (Bendapudi & Leone, 2003; Godey et al., 2016; Hayes & MacLeod, 2007). In line with this, many studies have recognised that customer experience can be one of the important antecedents of customer engagement (e.g., Bowden, 2009; Vivek et al., 2014). Roy et al. (2022) show that customer experience can positively affects customer engagement behaviours. Similarly, the findings of Tuguinay et al. (2022) reveal that casino customer automated game experience has a positive impact on customer engagement, which leads to positive behavioural loyalty (i.e., word-of-mouth and visiting frequency). Additionally, the result of Mode-Ramly and Omar (2017) reveals a strong relationship between customer experience and customer engagement.

In the online context, previous research has also found a positive association between online customer experience and customer engagement was also indicated. For example, Ahmad et al. (2022) suggest that antecedents of online customer experience impact customer engagement and further influence customer loyalty in the online shopping context. Another research, undergoing in online brand communities, also shows the effect of brand experience on customers' engagement behaviours(Yasin et al., 2019). Besides, the research of Loureiro et al. (2017) also indicates that online brand experience is one of the important drivers of online brand engagement.

Findings consistently show that both offline and online customer experience with brands is crucial to enhance customer engagement and respective behaviours. Considering the general online customer experience, in terms of via brand-owned website/app, social media, and third-party online store, has received little research attention. To address this shortcoming, the main focuses of this study are online customer experience and customer engagement behaviours.

Hence, the following hypothesis is proposed based on the existing literature.

H1. Online customer experience positively relates to customer engagement behaviours, namely, a) purchases; b) referrals; c) influence; d) knowledge.

3.2.2 Brand Identification as a Mediator

Brand identification is defined as a customer's perceived state of connection with a brand, which contributes to realising self-identification (Bergami & Bagozzi, 2000; Kumar & Kaushik, 2020; Stokburger-Sauer et al., 2012) and psychological belongingness with a brand (Lam et al., 2010). This perspective was rooted in social identity theory, which suggests that individuals tend to classify themselves into different social categories to firm their self-definition (Hogg & Turner, 1985). Consequently, when customers are exposed to a brand that provides quality experiences, their brand identification will likely increase. Moreover, this perceiving, feeling, and valuing of belongingness to the brand can potentially enhance customer engagement behaviours.

For example, the study by Kumar and Kaushik (2020) has examined brand identification's mediator's role between customer experience and consumer-brand relationship. Their findings support the notion that brand identification plays a crucial role in strengthening the connection between customer experience and the relationship they developed with a brand. Likewise, the work of Kaur et al. (2020) and Haverila et al. (2020) found that brand identification has a positive effect on customer engagement.

Based on the theoretical premises and the previous research, the following hypotheses are proposed for the present study:

H2. Brand identification mediates the positive relationship between online customer experience and customer engagement behaviours, namely, a) purchases; b) referrals; c) influence; d) knowledge.

3.2.3 Brand Love as a Mediator

Brand love is a concept that captures the emotional bond between the customer and brand, which is conceptualised as "the degree or passionate emotional attachment a satisfied

customer has for a particular trade name" (Carroll & Ahuvia, 2006, p. 81). This deep emotional connection has been recognised to have a strong association with online customer experience. For example, studies conducted by Trivedi (2019) and Lin and Choe (2022) have found evidence of this connection, indicating that customers who have positive online experiences with a brand are more likely to develop feelings of brand love. Besides, the previous literature has extensively explored the positive impact of brand love on customer engagement behaviours. Research conducted by Tran et al. (2021) and Rodrigues and Brandão (2021) has revealed that customers who have a strong emotional attachment and love for a brand are more engaged and actively participate in various brand-related activities, e.g., their customers exhibit higher levels of loyalty, brand advocacy, and positive word-of-mouth. Upon the existing literature, hypothesis 3 is developed.

In addition to brand love, brand identification plays a crucial role in fostering customer attachment and ultimately enhancing the feeling of brand love. According to the self-inclusion theory of love (Aron & Aron, 1986) in the marketing field, brand identification can lead the customer to develop a psychological attachment to a brand, which subsequently triggers the emotional bonds (Huber et al., 2015) and enhances their feeling of brand love (Bhattacharya & Sen, 2003). Supporting this notion, the past research has provided empirical evidence of the direct and positive impact of brand identification on brand love (Alnawas & Altarifi, 2016; Dalman et al., 2019; S.-H. Kim & Lee, 2020). This research suggests that when customers identify strongly with a brand and feel a sense of connection and belongingness, they are more likely to develop deep emotional attachments and feelings of love towards that brand. Based on these findings, hypothesis 4 is developed.

H3. Brand love mediates the positive relationship between online customer experience and customer engagement behaviours, namely, a) purchases; b) referrals; c) influence; d) knowledge.

H4. Brand identification positively relates to brand love, and correspondently, brand identification and brand love serial mediate the relationship between online customer experience and customer engagement behaviours, namely, a) purchases; b) referrals; c) influence; d) knowledge.

3.2.4 Proposed Model

Aiming to achieve the research objectives and examine the hypotheses, the present study proposes the model as follows (**Fig. 1**). As shown, online customer experience is considered a second-order construct that embraces the four first-order elements (sensory, intellectual, behavioural, and affective). The logic of the model is that the better online customer experience, the more customer engagement behaviours (namely, purchases, referrals, influence, and knowledge). Brand identification and brand love both independently mediate and serial mediate this relationship.

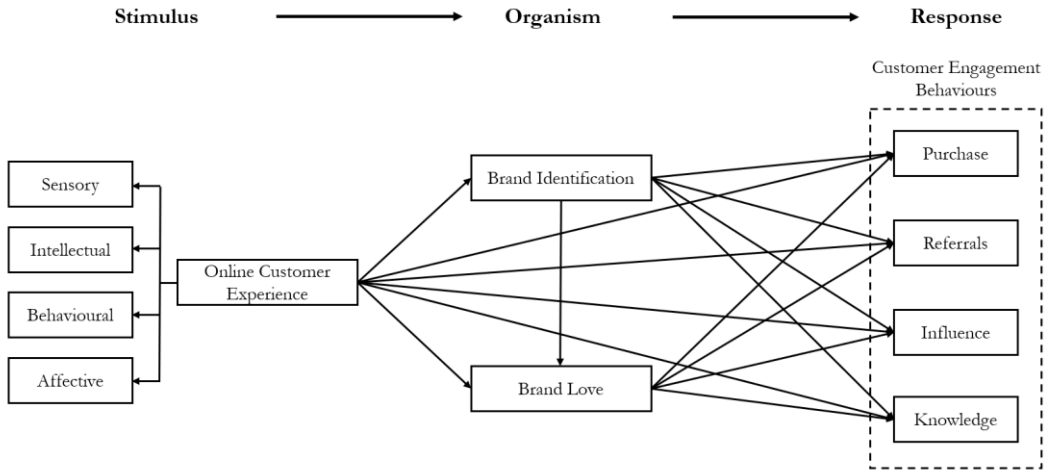


Fig. 1. Conceptual model

3.3 Research Methodology

3.3.1 Research Type

Various research strategies exist, and previous authors have emphasised that no particular type of research holds inherent superiority over others. The key consideration is to ensure that the chosen research type effectively addresses the research questions and aligns with the overarching goals (Johnson & Christensen, 2008).

This study adopted a quantitative approach using a cross-sectional-design survey study to address the research objectives and test the conceptual model. This method offers the

advantages of capturing data efficiently at a single point in time and analysing the relationships between different variables. Thus, it has been widely used in consumer behaviour research (Hair et al., 2019). Specifically, a structured online questionnaire is designed based on the measurements from existing literature to ensure reliability and validity. Besides, it was prepared in English, later translated into Portuguese and Chinese, and reviewed by university professors and researchers to ensure uniformity and consistency.

Additionally, this study inquired about individuals who have online experience with brands. Such a survey method has been applied to more than 80% of the previous research on online customer experience, according to the systematic literature review of Dhaigude and Mochan (2023). Moreover, this method and research strategy are also consistent with prior studies of customer experience and customer engagement behaviours (e.g., Ahmad et al., 2022; Merdiaty & Aldrin, 2022). Therefore, this survey study is considered the most suitable and reliable research method for the present study.

3.3.2 Questionnaire Design

The questionnaire was organised into three parts. Initially, a brief explanatory introduction of the study was provided, and the respondents were asked to sign the informed consent prior to data collection. Respondents reserved the right to withdraw from the study at any time.

In the first part, there was a question: "Have you ever interacted online with any brand/company (e.g., browsing brand content online, through brand websites, social media, or online stores to either communicate and interact with brands, or enjoy brand online services, etc.)?". Those answering no were not endorsed to continue because they did not belong to the target sample. Then, the respondents were asked to select their most familiar brand and respective online interaction type. Eight brands were listed as examples (as specifically described in 3.3.2.1 Materials), and the respondents could choose one of them or write down another whose online activities they are most familiar with. After, a familiarity test asked the respondents to score the level of familiarity regarding the online activities of the chosen brand, from 1 (very unfamiliar) to 7 (very familiar). The score lowing than 4 were excluded from the final sample because they did not have sufficient online experience with the brands. Furthermore, two screening questions "How frequently do you interact with this

brand online?" and "When was the last time that you have interacted with this brand online?" were presented. Finally, the respondents would need to choose the most frequent and familiar online interaction type among the brand's website/app, social media, third-party, and others (written by the respondents).

The second part presented 31 statements referring to the constructs measured on a 7-point Likert scale, ranging from 1 "strongly disagree" to 7 "strongly agree". The respective adopted scales were explicitly described in 3.3.2.2 Measures. These 31 questions were intentionally randomised and presented in a mixed-up order to prevent respondents from experiencing a sense of repetition. This approach ensured that each variable, which was assessed by a set of closely related questions, received diverse and unbiased responses, avoiding any potential bias resulting from impulsive or repetitive answering patterns.

Finally, six sociodemographic questions were inserted in the last part, specifying each respondent's nationality, gender, age, level of education, occupation, and the average amount of online purchasing. To all the questions involved in this questionnaire, the answer was mandatory.

3.3.2.1 Materials

Those eight brands (including Tesla, Louis Vuitton, McDonald's, Coca-Cola, IKEA, Nike, LEGO, and Apple), listed in the first part, were adapted from the Best Global Grands Ranking of Interbrand (2022) according to three criteria: 1) One brand from each industry sector among automotive, beverage, FMCG (fast-moving consumer goods), luxury, restaurant, retail, sporting goods, and technology; 2) The businesses mainly focus on the B2C industry; 3) The brand can be in touch with via their own website/app, social media, and third-party online store.

3.3.2.2 Measures

All variables used in this study were adopted from previous studies. The independent variable online customer experience is measured as a second-order construct following the process adopted by Brakus et al.'s (2009), which is in line with most existing customer experience studies (e.g., Khan & Fatma, 2021; Mahd-Ramly et al., 2017; Kumar & Kaushik, 2018).

Besides, customer engagement behaviour, as the dependent variable, was measured by adopting the scale of Kumar and Pansari (2016). Additionally, the scales of Tuškej et al. (2013), Carroll and Ahuvia (2006), as well as Bergkvist and Bech-Larsen (2010) were adopted to assess brand identification and brand love, which aligns with the research of Rather et al. (2018), Attiq et al. (2022), and Choi et al. (2022). Modifications ware made to the item wording to align with the specific context of the present study, while maintaining the reliability and validity of the survey instrument. The adopted scales and corresponding items can be found in **Table 4**.

Table 4. Measurement constructs, sources, question number, and items

Variables	Sources	No.	Items
Online customer experience			
D1: Sensory	(Brakus et al., 2009; Khan & Fatma, 2021)	Q7	To some of my senses (visual/auditory), the online experience with the brand is attractive to me. (OCXS1)
		Q9	The online interaction with the brand offers me a positive sensorial experience (visual/auditory). (OCXS2)
		Q18	Overall, I have a satisfying sensory experience with the brand online. (OCXS3)
D2: Intellectual		Q8	This online experience stimulates my curiosity about the brand. (OCXI1)
		Q12	The online experience motivates me to learn more about the brand. (OCXI2)
		Q14	The online experience makes me think or reflect on the brand. (OCXI3)
D3: Behavioural		Q11	The online experience with the brand transmits activity and vitality to me. (OCXB1)
		Q17	The online experience with the brand transmits force and energy to me. (OCXB2)
		Q13	The online experience with the brand transmits comfort and well-being to me. (OCXB3)
D4: Affective		Q15	The online experience with the brand induces feelings and sentiments in me. (OCXA1)
		Q10	I experience pleasant feelings and emotions toward the brand online. (OCXA2)
		Q16	The online experience produces positive emotions toward the brand for me. (OCXA3)
Brand Identification	(Tuškej et al., 2013)	Q20	I identify with the brand. (BI1)
		Q21	I feel that my personality and the personality of the brand are very similar. (BI2)
		Q24	I have a lot in common with others who use the brand. (BI3)

Brand love	(Carroll & Ahuvia, 2006; Bergkvist & Bech-Larsen, 2010)	Q19	This is a wonderful brand. (BL1)
		Q23	I love this brand! (BL2)
		Q25	I will miss this brand if it is no longer available. (BL3)
		Q22	I am very attached to the brand. (BL4)
Customer engagement behaviours			
D1: Purchases	(Kumar & Pansari, 2016)	Q37	I will continue buying the products/services of this brand in the near future. (CEBP1)
		Q26	My purchases with the brand make me content. (CEBP2)
		Q29	Owning the products/services of this brand makes me happy. (CEBP3)
D2: Referrals		Q35	I will promote the brand even if I have only used some of the products. (CEBR1)
		Q28	I enjoy referring the brand. (CEBR2)
		Q32	Given that I am using/used this brand, I will refer my friends and relatives. (CEBR3)
D3: Influence		Q31	I love talking about my brand experience. (CEBI1)
		Q34	I discuss the benefits that I get from this brand with others. (CEBI2)
		Q30	I am a part of this brand and mention it in my conversations. (CEBI3)
D4: Knowledge		Q27	I am willing to provide feedback about my experiences with the brand to the firm. (CEBK1)
		Q36	I would like to provide suggestions/feedback about the new products/services of the brand. (CEBK2)
		Q33	I can provide feedback/suggestions for developing new products/services for this brand. (CEBK3)

3.3.3 Pilot-Test

A pilot test was conducted before data collection, following the recommendations of Saunders and Lewis (2017). This trial aimed to ensure that respondents comprehended the questions and were able to provide answers quickly. Conducting a pilot test is crucial as it helps identify and rectify any potential errors or misunderstandings in the survey instrument. Additionally, it assesses the validity and reliability of the questions, ensuring their operational effectiveness when administered to a large audience of respondents.

Hence, a pilot study with a sample of 24 PhD and Master level students was conducted through the same instruments and procedures to evaluate the understanding concerning all the presented questions in the research instrument and assess and enforce the quality of the

questionnaire. As this study aims to reach different nationalities to gather diverse points of view, questionnaires in English, Chinese, and Portuguese were prepared and tested in this stage. Then, further modifications were made regarding the identified inconsistencies.

3.3.4 Data Collection and Sample

Considering the target sample was individuals who have online brand experience, and the number of online customers was not known precisely, the aim of this study was to achieve the maximum number possible of respondents while avoiding high costs, time constraints, and some potential personal privacy issues. Therefore, the data collection process of this study was performed through a non-probability convenience sampling technique, where respondents were randomly selected.

At the formal study stage, the questionnaire was available in the Google Forms application and WJX. It was disseminated by e-mail (via FEP Newsletter and Inqueritos U.Porto, powered by the University of Porto) and social networks (LinkedIn, Facebook, WhatsApp, WeChat, etc.) in order to obtain as many responses as possible. Because the respondents were recruited by convenience sampling, to prevent the bias that might be introduced, efforts were concerted to expand the network by asking the first level of acquaintances to introduce their friends, families, and acquaintances.

Data collection took place from April to May 2021, and 696 responses were received. Of this total, the answers of 5 respondents who disagreed with the informed consent, 139 respondents who declared that they do not have online experience with brands, and 50 respondents who were not familiar with the brand's online activity were excluded. Then, by calculating the Mahalanobis Distance and applying relevant R code, outliers and the low-quality answer (i.e., the continuous identical answer) were detected and subsequently removed from the dataset (The details of data processing can be found in **Table 5**). This comprehensive data processing approach ensured the robustness and reliability of the final dataset for subsequent analysis. Finally, 469 data (n = 208 Orientals and n = 261 Westerners) were considered valid answers and used in the SPSS and SmartPLS 4 analysis.

Table 5. Data Processing

	Raw data	Disagree with the informed consent	No online brand experience	Familiarity test (scores < 4)	Outliers and low-quality answers	Final sample
Orientals (mainly Chinese)	364	0	106	23	27	208
Westerners (mainly Portuguese)	332	5	33	27	6	261
Total	696	5	139	50	33	469

3.3.5 Data Analytical Plan

Initially, the sample's demographic details were analysed. Then, a descriptive analysis was performed as a preliminary analysis of the data. Continually, the partial least square-based structural equation modelling (PLS-SEM) was applied, which is one of the prominent data analysis tools in the marketing field (Guenther et al., 2023; Rigdon, 2012; Shmueli et al., 2016), e.g., online shopping (Alanadoly & Salem, 2022). To analyse the conceptual model, the study applied a two-stage approach. First, the measurement model was analysed by factor analysis. Second, the relationship between latent variables and their corresponding effects was tested in the structural model.

4 Research Findings

4.1 Sample Characterization

The respondents' demographics are summarised and reported in **Table 6**. In the Orientals sample, 76% of respondents were female, and 24% were male. As for age, 56.3% were aged between 18 and 25 years, 33.7% between 26 and 35 years, 4.3% between 36 and 45 years, 5.3% between 46 between 55 years, and 0.5% between 56 and 65 years. Most respondents (63.9%) had completed a bachelor's degree, and 52.9% were employed. Among the brands, McDonald's (51.4%) was chosen the most, followed by Apple (22.6%). Besides, as for the interaction types, most respondents connect with the brands via the brand's website/app (45.7%), followed by social media (28.8%), third-party online store (17.8%), and others (e.g., WeChat Mini Program, 7.7%).

The Westerners sample consisted of 63.2% female, 36% male, and 0.8% nonbinary. Regarding age, 72.8% were aged between 18 and 25 years, 18.8% between 26 and 35 years, 4.6% between 36 and 45 years, 3.4% between 46 between 55 years, and 0.4% over 65 years. Most respondents (45.6%) had completed a bachelor's degree, followed by high school (36.8%). Among the brands, McDonald's (26.4%) was also chosen the most, followed by Nike (22.2%). In addition, for the interaction types, most respondents also connect with the brands via the brand's website/app (75.1%), followed by social media (17.8%), third-party online store (6.5%), and others (e.g., YouTube, 0.8%).

Table 6. Demographic Details (n = 469)

Characteristics	**Respondents**		χ^2 (*df*)	*p-value*
	Orientals (208)	**Westerners (261)**		
Gender			9.731 (2)	0.008
Female	76% (158)	63.2% (165)		
Male	24% (50)	36% (94)		
Non-binary	0% (0)	0.8% (2)		
Age			17.932 (5)	0.003
18-25 year	56.3% (117)	72.8% (190)		
26-35 year	33.7% (70)	18.8% (49)		
36-45 year	4.3% (9)	4.6% (12)		

46-55 year	5.3% (11)	3.4% (9)		
56-65 year	0.5% (1)	0% (0)		
>65 year	0% (0)	0.4% (1)		
Educational qualification			55.560 (4)	< 0.001
Basic education	1% (2)	0.8% (2)		
High school	7.7% (16)	36.8% (96)		
Graduation	63.9% (133)	45.6% (119)		
Master	26% (3)	14.9% (39)		
Doctoral	1.4% (3)	1.9% (5)		
Occupation status			90.600 (4)	< 0.001
Student	32.7% (68)	75.9% (198)		
Employed	52.9% (110)	19.9% (52)		
Self-employed	11.5% (24)	2.3% (6)		
Unemployed	1.9% (4)	1.5% (4)		
Retired	1% (2)	0.4% (1)		
Selected brand			74.566 (8)	< 0.001
Tesla	1.9% (4)	1.9% (5)		
Louis Vuitton	1.4% (3)	1.1% (3)		
McDonald's	51.4% (107)	26.4% (69)		
Coca-Cola	7.2% (15)	3.4% (9)		
IKEA	4.3% (9)	18% (47)		
Nike	5.3% (11)	22.2% (58)		
LEGO	1.4% (3)	3.1% (8)		
Apple	22.6% (47)	13.8 (36)		
Others	4.3% (9)	10% (26)		
Selected interaction types			49.848 (3)	< 0.001
Brand's website/app	45.7% (95)	75.1% (196)		
Social media	28.8% (60)	17.8% (46)		
Third-party online store	17.8% (37)	6.5% (17)		
Others	7.7% (16)	0.8% (2)		
Online interactions frequency			13.645 (5)	0.018
Rarely	12.5% (26)	6.5% (17)		
Occasionally	35.1% (73)	30.7% (80)		
Sometimes	28.4% (59)	29.1% (76)		
Often	18.8% (39)	24.9% (65)		
Very often	5.3% (11)	5.7% (15)		
Daily	0% (0)	3.1% (8)		
Time duration since interacting with brand online			4.855 (2)	0.088

Less than 1 month	46.6% (97)	55.9% (146)		
1-3 month	27.4% (57)	25.3% (66)		
More than 3 months	26% (54)	18.8% (49)		
Monthly average spends on online purchasing			155.093 (4)	< 0.001
Less than 50 €	15.4% (32)	65.1% (170)		
50-100 €	30.3% (63)	26.4% (69)		
101-200 €	26.4% (55)	4.6% (12)		
201-300 €	10.6% (22)	3.1% (8)		
More than 300 €	17.3% (36)	0.8% (2)		

Overall, the gender profile is shown in **Fig. 2** that 323 (68.9%) were female and 144 (30.7%) were male among 469 global respondents.

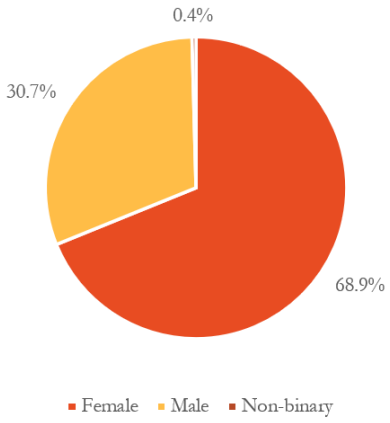


Fig. 2. Gender

Regarding age, respondents ranged from 18 years old to over 65 years old. As demonstrated in **Fig. 3**. the dominant group with 307 respondents (65.5%) aged between 18 and 25. The second major group comprises ages between 26 and 35 years old, with 119 respondents (25.4%), followed by 21 (4.5%) aged from 36 to 45, 20 (4.3%) aged from 46 to 50, 1 (0.2%) ageing from 56-65, and 1 (0.2%) ageing over 65.

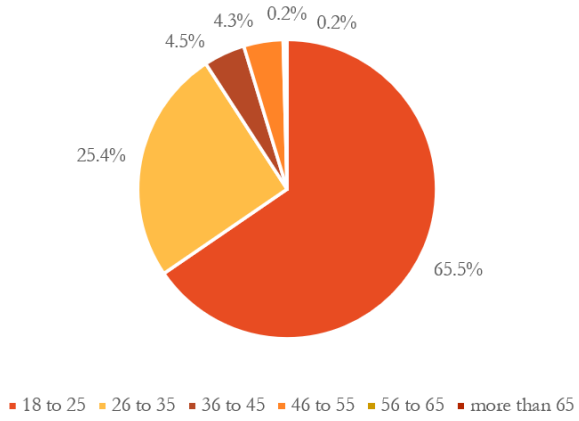


Fig. 3. Age

As for educational qualifications, **Fig. 4** shows that the majority of 252 respondents (53.7) have graduated, followed by 112 respondents (23.9%) who completed high school, 93 (19.8%) completed a master's degree, 8 (1.7%) completed the doctoral degree, and 4 (0.9%) completed the basic education.

Regarding the occupation of the sample, there is a predominance of students (56.7%), followed by the employed category (34.5%), self-category (6.4%), unemployed category (1.7%), and retired category (0.6%) as displayed in **Fig. 4**.

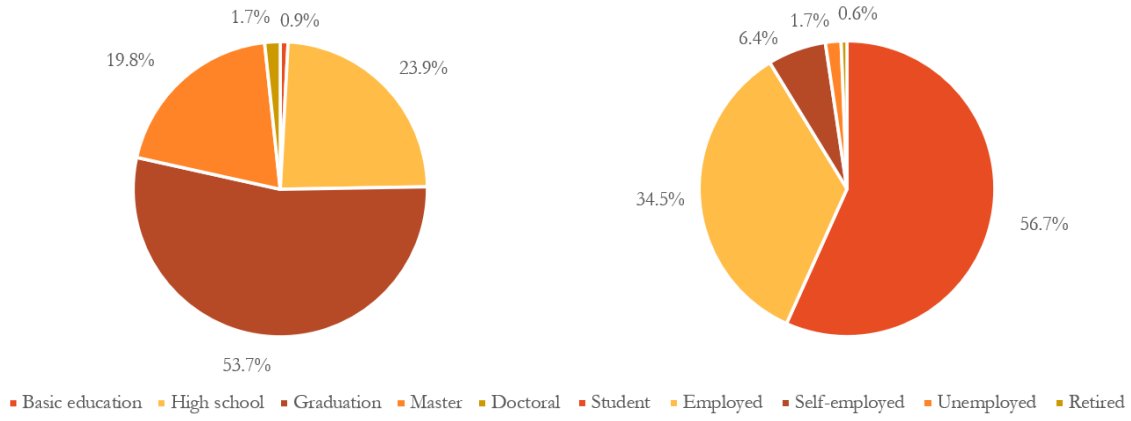


Fig. 4. Educational qualification and occupation status

Besides, in the brand and interaction type selection, the most selected brand was McDonald's (37.5%), followed by Apple (17.5%). More details can be found in **Fig. 5**. Additionally, according to the chosen brand, the majority of respondents consider their most frequent and

familiar interaction way is through brand-owned website/app (62%), followed by social media (22.6%), third-party store (11.5%), work (0.2%) and YouTube (0.2%) as it presented in **Fig. 6**.

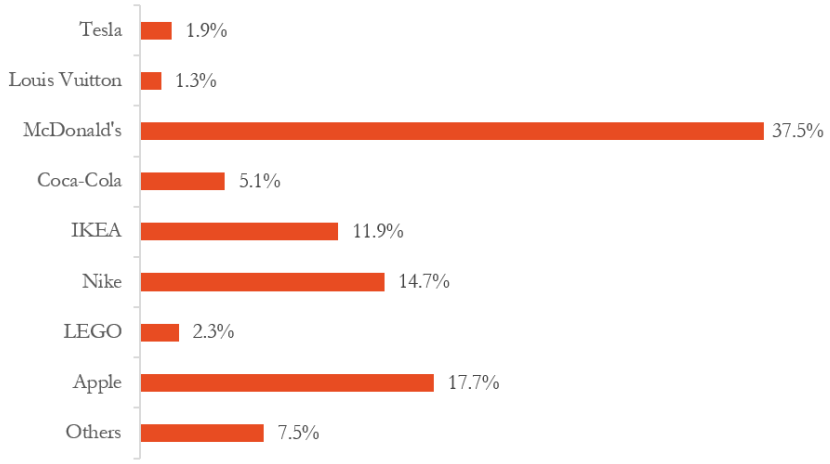


Fig. 5. Selected brand

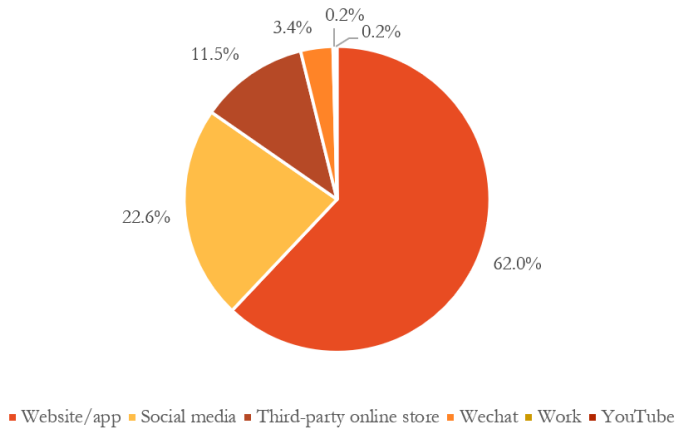


Fig. 6. Selected interaction type

As for the frequency, most respondents occasionally interact with the brand online (i.e., a few times a year; 32.6%). The second major category is "sometimes (once a month or so)" (28.8%), followed by "Often (a few times a month)" (22.2%). More details are presented in **Fig. 7**. Besides, regarding the time duration from the last interaction, more than half of the respondents (51.8%) interacted with the chosen brands less than 1 month ago, 123

respondents (26.2%) interacted 1-3 months ago, and 103 respondents (22%) interacted more than 3 months ago.

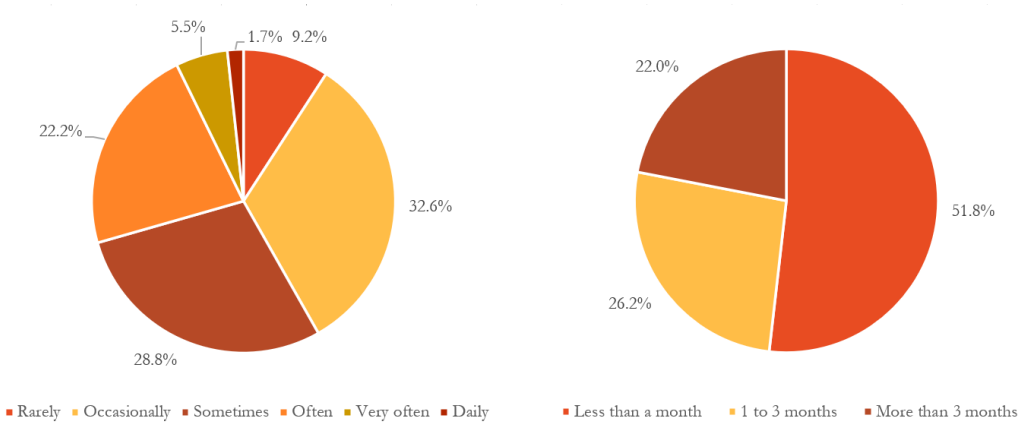


Fig. 7. Online interaction frequency and time duration from the last interaction

Finally, the average monthly spending was also collected, which showed that the majority of 202 respondents (43.1%) spent less than 50€, followed by 50-100€ (28.1%), 101-200€ (6.4%), and so on (see **Fig. 8**).

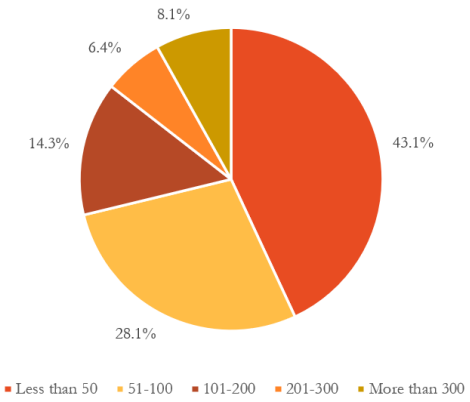


Fig. 8. Monthly average spends on online purchasing (in euros)

4.2 Descriptive Analysis of the Study Variables

Table 7 shows the results of the descriptive analysis of the items of each variable presented in the conceptual model previously: Online Customer Experience (including dimensions of sensory, intellectual, behavioural, and affective), Brand Identification, Brand Love, and Customer Engagement Behaviours (i.e., Purchases, Referrals, Influence, and Knowledge).

Regarding the means, the respondents seem to agree with the affirmations of the questionnaire because all of them are higher than 4 (in the range from 1 to 7). Among them, five items' means show the respondents only slightly agreed with them, which are BI2 "I feel that my personality and the personality of the brand are very similar." (4.24), CEBI3 "I am a part of this brand and mention it in my conversations." (4.33), OCXB2 "The online experience with the brand transmits force and energy to me." (4.40), CEBI1 "I love talking about my brand experience." (4.42), BL4 "I am very attached to the brand." (4.47), and OCXI3 "The online experience makes me think or reflect on the brand." (4.48).

In contrast, CEBP2 "My purchases with the brand make me content." (5.64), CEP1 "I will continue buying the products/services of this brand in the near future." (5.62), and BL3 "I will miss this brand if it is no longer available." (5.50) indicate the high level of agree from the respondents. Moreover, the rest of the affirmations gathered means from 4.58 to 5.43, proving the respondents' general agreement level, as presented in **Table 7**.

As for the standard deviation, the values are from 1.17 to 1.67, which are not very discrepant between the different items. Specifically, CEBR1 "I will promote the brand even if I have only used some of the products." (1.67), CEBI2 "I discuss the benefits that I get from this brand with others." (1.67), and CEBI3 "I am a part of this brand and mention it in my conversations." (1.67) suggest slightly more discrepancies in the score given by the respondents. On the other hand, OCXS3 "Overall, I have a satisfying sensory experience with the brand online." (1.17) shows a respectively lower standard deviation.

Table 7. Descriptive analysis of the study variables

Codes	Items	M	SD
Online Customer Experience D1: Sensory (OCXS)			
OCXS1	To some of my senses (visual/auditory), the online experience with the brand is attractive to me.	5.27	1.20
OCXS2	The online interaction with the brand offers me a positive sensorial experience (visual/auditory).	5.09	1.29
OCXS3	Overall, I have a satisfying sensory experience with the brand online.	5.25	1.17
Online Customer Experience D2: Intellectual (OCXI)			
OCXI1	This online experience stimulates my curiosity about the brand.	5.04	1.37
OCXI2	The online experience motivates me to learn more about the brand.	4.84	1.54
OCXI3	The online experience makes me think or reflect on the brand.	4.48	1.51

Online Customer Experience D3: Behavioural (OCXB)			
OCXB1	The online experience with the brand transmits activity and vitality to me.	4.78	1.47
OCXB2	The online experience with the brand transmits force and energy to me.	4.40	1.55
OCXB3	The online experience with the brand transmits comfort and well-being to me.	4.90	1.37
Online Customer Experience D4: Affective (OCXA)			
OCXA1	The online experience with the brand induces feelings and sentiments in me.	4.60	1.48
OCXA2	I experience pleasant feelings and emotions toward the brand online.	5.22	1.22
OCXA3	The online experience produces positive emotions toward the brand for me.	5.05	1.26
Brand Identification (BI)			
BI1	I identify with the brand.	5.01	1.35
BI2	I feel that my personality and the personality of the brand are very similar.	4.24	1.54
BI3	I have a lot in common with others who use the brand.	4.62	1.42
Brand Love (BL)			
BL1	This is a wonderful brand.	5.43	1.22
BL2	I love this brand!	5.29	1.30
BL3	I will miss this brand if it is no longer available.	5.50	1.47
BL4	I am very attached to the brand.	4.47	1.50
Customer engagement behaviours: Purchases (CEBP)			
CEBP1	I will continue buying the products/services of this brand in the near future.	5.62	1.24
CEBP2	My purchases with the brand make me content.	5.64	1.12
CEBP3	Owning the products/services of this brand makes me happy.	5.43	1.26
Customer engagement behaviours: Referrals (CEBR)			
CEBR1	I will promote the brand even if I have only used some of the products.	4.62	1.67
CEBR2	I enjoy referring the brand.	5.04	1.42
CEBR3	Given that I am using/used this brand, I will refer my friends and relatives.	5.22	1.43
Customer engagement behaviours: Influence (CEBI)			
CEBI1	I love talking about my brand experience.	4.42	1.63
CEBI2	I discuss the benefits that I get from this brand with others.	4.60	1.67
CEBI3	I am a part of this brand and mention it in my conversations.	4.33	1.67
Customer engagement behaviours: Knowledge (CEBK)			
CEBK1	I am willing to provide feedback about my experiences with the brand to the firm.	5.22	1.39
CEBK2	I would like to provide suggestions/feedback about the new products/services of the brand.	4.58	1.61
CEBK3	I can provide feedback/suggestions for developing new products/services for this brand.	4.69	1.59

Note: Sample size n = 469. M = Means; SD = Standard deviation.

4.3 Measurement Model

In order to validate the measurement model, factor analysis was applied via the PLS algorithm. The specific measurement model is presented in **Fig. 9**.

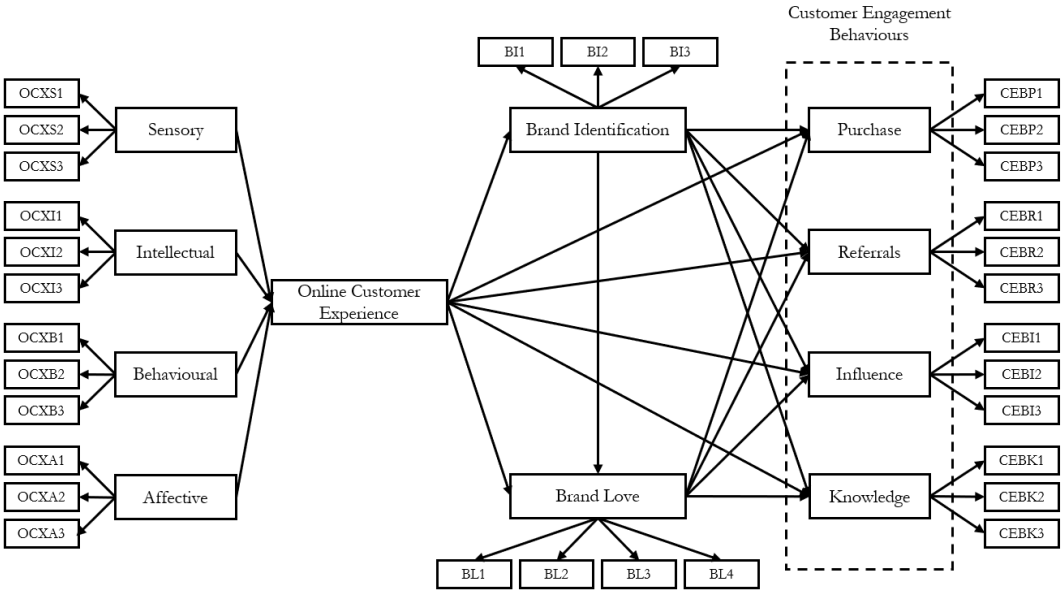


Fig. 9. The measurement model

As the detailed results presented in **Table 8**, all the construct items loading surpassed the benchmark of 0.70. Besides, the values of Cronbach's alpha are above 0.70, and the composite reliabilities (CR) are higher than 0.80, proving them adequate. Furthermore, the average variance extracted (AVE) value all surpasses 0.50. Hence, it is indicated that the measurement model used in this study has a high construct validity and reliability (Hair et al., 2019).

Table 8. Convergent validity and internal consistency reliability

Variables	Items	Loading	α [1]	CR [2]	AVE [3]
Online customer experience					
Sensory	To some of my senses (visual/auditory), the online experience with the brand is attractive to me.	0.84	0.81	0.81	0.72

	The online interaction with the brand offers me a positive sensorial experience (visual/auditory).	0.88			
	Overall, I have a satisfying sensory experience with the brand online.	0.83			
Intellectual	This online experience stimulates my curiosity about the brand.	0.80	0.72	0.73	0.64
	The online experience motivates me to learn more about the brand.	0.84			
	The online experience makes me think or reflect on the brand.	0.76			
Behavioural	The online experience with the brand transmits activity and vitality to me.	0.89	0.83	0.83	0.74
	The online experience with the brand transmits force and energy to me.	0.84			
	The online experience with the brand transmits comfort and well-being to me.	0.85			
Affective	The online experience with the brand induces feelings and sentiments in me.	0.81	0.79	0.79	0.71
	I experience pleasant feelings and emotions toward the brand online.	0.85			
	The online experience produces positive emotions toward the brand for me.	0.86			
Brand Identification	I identify with the brand.	0.87	0.79	0.80	0.71
	I feel that my personality and the personality of the brand are very similar.	0.88			
	I have a lot in common with others who use the brand.	0.78			
Brand love	This is a wonderful brand.	0.81	0.83	0.83	0.66
	I love this brand!	0.90			
	I will miss this brand if it is no longer available.	0.75			
	I am very attached to the brand.	0.79			
Customer engagement behaviours					
Purchases	I will continue buying the products/services of this brand in the near future.	0.81	0.82	0.83	0.73
	My purchases with the brand make me content.	0.87			
	Owning the products/services of this brand makes me happy.	0.89			
Referrals	I will promote the brand even if I have only used some of the products.	0.87	0.83	0.83	0.75
	I enjoy referring the brand.	0.87			
	Given that I am using/used this brand, I will refer my friends and relatives.	0.86			
Influence	I love talking about my brand experience.	0.92	0.85	0.86	0.77
	I discuss the benefits that I get from this brand with others.	0.82			

	I am a part of this brand and mention it in my conversations.	0.88			
Knowledge	I am willing to provide feedback about my experiences with the brand to the firm.	0.78	0.79	0.79	0.70
	I would like to provide suggestions/feedback about the new products/services of the brand.	0.86			
	I can provide feedback/suggestions for developing new products/services for this brand.	0.87			

Note: 1) Cronbach's alpha; 2) Composite Reliability; 3) Average Variance Extracted.

Next, the discriminant validity was tested by applying the Fornell-Larcker criterion. Square root values of the AVE were calculated for each construct and reported in the diagonal of the correlation matrix, as shown in **Table 9**. As the square root of AVE reflects the shared between a construct and its measures, it should be higher than the variance shared between the construct and other constructs (Fornell & Larcker, 1981). According to the discriminant validity, a) estimated correlations between the key variables did not exceed 0.85 and were significant ($p < 0.01$) (Bagozzi et al., 1998); b) the diagonal elements are higher than all the off-diagonal constructs. Thus, the measures used in this study do not significantly threaten the overall reliability and validity in general.

Table 9. Descriptive and correlations analysis and discriminant validity

	M	SD	1	2	3	4	5	6	7	8	9	10
1 OCXS	5.20	1.04	***0.85***									
2 OCXI	4.79	1.18	0.65**	***0.80***								
3 OCXB	4.69	1.26	0.65**	0.71**	***0.86***							
4 OCXA	4.96	1.11	0.76**	0.73**	0.79**	***0.84***						
5 CEBP	5.57	1.03	0.53**	0.40**	0.43**	0.46**	***0.86***					
6 CEBR	4.96	1.30	0.56**	0.57**	0.63**	0.58**	0.67**	***0.87***				
7 CEBI	4.45	1.45	0.47**	0.54**	0.62**	0.55**	0.51**	0.81**	***0.88***			
8 CEBK	4.83	1.28	0.43**	0.48**	0.54**	0.50**	0.50**	0.69**	0.73**	***0.84***		
9 BI	4.62	1.21	0.49**	0.56**	0.61**	0.53**	0.52**	0.71**	0.67**	0.52**	***0.84***	
10 BL	5.17	1.11	0.51**	0.50**	0.58**	0.55**	0.73**	0.78**	0.69**	0.58**	0.75**	***0.81***

Note: Sample size n = 469. $^{*}p < 0.05$, $^{**}p < 0.01$. M = Means; SD = Standard deviation. OCXS = Sensory experience; OCXSI = Intellectual experience; OCXB = Behavioural experience; OCXA = Affective experience; CEBP = Purchases; CEBR = Referrals; CEBI = Influence; CEBK = Knowledge; BI = Brand identification; BL = Brand love. The square root of AVE on the diagonal.

Additionally, the descriptive and correlational analysis revealed that all the key variables significantly correlate with each other. Besides, gender significantly correlates with purchases ($p < 0.01$), referrals ($p < 0.05$), and knowledge ($p < 0.05$). Age significantly correlates with purchases ($p < 0.05$). Nationality significantly correlates with all the key variables ($p < 0.01$) except for sensory experience and purchases. Selected brand correlates with sensory experience ($p < 0.01$), intellectual experience ($p < 0.05$), purchases ($p < 0.05$), referrals ($p < 0.05$), brand love ($p < 0.05$), and perceived interactivity ($p < 0.05$). Therefore, they would be turned into the model as control variables.

After confirming the reliability and psychometric properties of the scales underlying the model, the presence of multicollinearity among the dimensions of online customer experience (i.e., sensory, intellectual, behavioural, and affective) was investigated according to the recommendation for formative measurement constructs. Excessive multicollinearity among the formative indicators can render the higher-order construct unsuitable (Diamantopoulos & Winklhofer, 2001). Hence, the variance inflation factor (VIF) was calculated for each indicator. The obtained VIF varied from 1 to 2.941, below the common cut-off threshold of 3, as Hair et al. (2019) recommended. Thus, it is indicated that there are no excessive correlations between these factors, and it is possible to maintain the online customer experience's four dimensions in the measurement model (**Fig. 9**).

Furthermore, the weights for sensory (0.28), intellectual (0.25), behavioural (0.32), and affective (0.29) dimensions of online customer experience were found to be positive and significant ($p < 0.001$, $t = 24.21$, 25.66, 33.22, and 33.08, respectively). These findings, in accordance with the recent research on online customer experience (e.g., Kumar & Kaushik, 2018), confirmed the significance of the dimensions in constructing the formative higher-order construct (Hair et al., 2019). Therefore, it is possible to conceptualise online customer experience as multidimensional formative higher-order constructs that comprise four dimensions (sensory, intellectual, behavioural, and affective).

4.4 Structural Model

4.4.1 Hypothesis Testing

According to the PLS-SEM analysis, the results of hypotheses 1 to 4 are listed in **Table 10**. Analysis of direct effect (H1) suggests that the positive impact of online experience on purchases (β = 0.16, t = 3.48, p < 0.001), referrals (β = 0.25, t = 5.83, p < 0.001), influence (β = 0.25, t = 5.62, p < 0.001), and knowledge (β = 0.30, t = 5.74, p < 0.001) are significant. Therefore, H1 was supported.

Table 10. Result of the H1 to H4 testing

H.	Path	CEBP (outcome)		CEBR (outcome)		CEBI (outcome)		CEBK (outcome)		Results
		β	*t*-value	β	*t*-value	β	*t*-value	β	*t*-value	
H1	OCX →	**0.16*** **	**3.48**	**0.25*** **	**5.83**	**0.25*** **	**5.62**	**0.30*** **	**5.74**	Supported
H2	OCX → BI →	-0.06	1.68	**0.10** **	**2.72**	**0.13*** **	**3.69**	0.04	0.88	Partially supported
H3	OCX → BL →	**0.16*** **	**5.51**	**0.11*** **	**5.42**	**0.08*** **	**4.67**	**0.08*** **	**3.95**	Supported
H4	OCX → BI → BL →	**0.26*** **	**8.21**	**0.19*** **	**7.73**	**0.13*** **	**6.32**	**0.12*** **	**4.93**	Supported

Note: *p < 0.05, **p < 0.01, ***p < 0.001. OCX = Online customer experience; BI = Brand identification; BL = Brand love; CEBP = Purchases; CEBR = Referrals; CEBI = Influence; CEBK = Knowledge. Control variables = Gender; Selected brand; Nationality. The significant results are in bold.

Regarding the analysis of the mediating effect of brand identification (H2), brand identification only mediated the association between online customer experience and referrals (β = 0.10, t = 2.72, p < 0.01), influence (β = 0.13, t = 3.69, p < 0.001), but not purchases (β = -0.06, t = 1.68, p = 0.092), knowledge (β = 0.04, t = 0.88, p = 0.379). Thus, H2 was only partially supported.

Nevertheless, according to the analysis of mediation of brand love, the online customer experience was found to significantly relate to purchases (β = 0.16, t = 5.51, p < 0.001); referrals (β = 0.11, t = 5.42, p < 0.001); influence (β = 0.08, t = 4.67, p < 0.001); knowledge (β = 0.08, t = 3.95, p < 0.001), i.e., all the dimensions of customer engagement behaviours via brand love. Hence, H3 was supported.

Furthermore, based on the analysis of the serial mediating effect, brand identification and brand love significantly serial mediates the relationship between online customer experience

and customer engagement behaviours: purchases (β = 0.26, t = 8.21, p < 0.001), referrals (β = 0.19, t = 7.73, p < 0.001), influence (β = 0.13, t = 6.32, p < 0.001), and knowledge (β = 0.0.12, t = 4.93, p < 0.001). So, H4 was also supported.

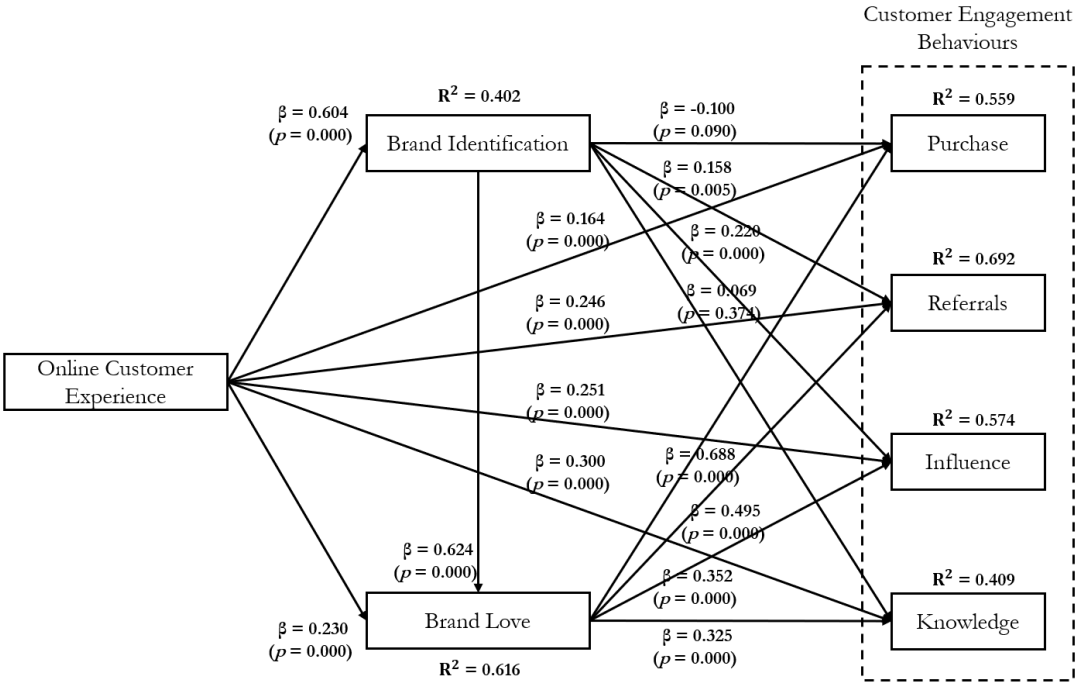


Fig. 10. Result of the conceptual model. *Note(s):* Control variables = Gender; Age; Nationality; Selected brand.

4.4.2 Explanatory Power and Predictive Relevance

The coefficient of determination (R^2) refers to the explanatory power of the predictors on the outcomes. They were reported in **Fig.10**. Online customer experience explains 40.2% of the variance in brand identification and 61.6% of brand love. Online customer experience, brand identification, and brand love together explain 55.9% of purchase behaviour, 69.2% of referral behaviour, 57.4% of influence behaviour, and 40.9% of knowledge behaviour.

In addition, the predictive relevance (Stone-Geisser's Q^2), indicating the ability of the model to determine each latent endogenous variable's indicators (GEISSER, 1974; Stone, 1974), was also calculated by the blindfolding procedure in SmartPLS 4. A Q^2 greater than 0 indicate that the model has predictive relevance. In the present study, Q^2 for brand identification, brand love, purchases, referrals, influence, and knowledge were 0.40, 0.38, 0.29, 0.45, 0.41,

and 0.31, respectively. Since most of them are above 0.35, a great predictive relevance is indicated (Hair et al., 2019).

4.5 Discussion of the Research Findings

Table 11. Summarise the hypotheses and results

Hypotheses	Results
H1. Online customer experience positively relates to customer engagement behaviours, namely, a) purchases; b) referrals; c) influence; d) knowledge.	Confirmed
H2. Brand identification mediates the positive relationship between online customer experience and customer engagement behaviours, namely, a) purchases; b) referrals; c) influence; d) knowledge.	Partially confirmed
H3. Brand love mediates the positive relationship between online customer experience and customer engagement behaviours, namely, a) purchases; b) referrals; c) influence; d) knowledge.	Confirmed
H4. Brand identification positively relates to brand love, and correspondently, brand identification and brand love serial mediate the relationship between online customer experience and customer engagement behaviours, namely, a) purchases; b) referrals; c) influence; d) knowledge.	Confirmed

4.5.1 Online Customer Experience and Customer Engagement Behaviours (H1)

Hypothesis 1 testing "Online customer experience positively related with customer engagement behaviours, namely, a) purchases; b) referrals; c) influence; d) knowledge", which was supported by the results and confirmed. This finding is consistent with the conceptual framework of Grewal et al. (2017) and the empirical studies of Roy et al. (2022) and Mohd-Ramly and Omar (2017) in the offline retailing context, Ahmad et al. (2022) in online shopping, Mai Chi et al. (2022) in the beauty salon' service context, Yasin et al. (2019) in the online community, Loureiro et al. (2017) in social media (Facebook), and Sohaib et al. (2022) in the case of Apple's brand perception in China. Specifically, the result shows that online customer experience has a significant positive association with customer engagement behaviours, which suggests that customers who have a positive and satisfactory online experience with a brand are more likely to exhibit higher levels of engagement and are more willing to respond in behaviours such as purchasing the product/service, referring to people around, sharing the brand experience, and helping the brand to create better product/service.

Therefore, the significance of the association between online customer experience and customer engagement was proven.

4.5.2 The Mediating Effect of Brand Identification (H2)

Hypothesis 2 stated as "Brand identification mediates the positive relationship between online customer experience and customer engagement behaviours, namely, a) purchases; b) referrals; c) influence; d) knowledge", was only partially supported. Specifically, the result demonstrated that brand identification was significantly related to only b) referrals and c) influence but not a) purchases and d) knowledge. Thus, it is suggested that customers who strongly identify with a brand are more likely to engage in activities such as referring the brand to others and exerting influence, but their purchasing and knowledge behaviours may be influenced by other factors beyond brand identification. This highlights the need for businesses to understand and target specific engagement behaviours through different mechanisms, considering the varying effects of brand identification.

Compared to the mediating roles of customer-company identification and customer-employee identification in the research of Mai Chi et al. (2022), which successfully mediated the relationship between customer experience and all the dimensions of customer engagement behaviours, the current study only partially reproduces the result. Notably, the nonsignificant paths lie between brand identification and purchase/knowledge. The results of the present study corroborated the suggestion of Zhang et al. (2020) that brand identification may not always have a direct impact on purchase intention and knowledge behaviour. One possible reason might be that brand identification is not a powerful enough bond between the customer and brand, compared to brand love. Supportively, a previous study found that the relationship between brand identification and purchase intension can be moditated by credibility (Lee, 2021). Nevertheless, the mediating role of brand identification is partially confirmed.

4.5.3 The Mediating Effect of Brand Love (H3)

Hypothesis 3 testing "Brand love mediates the positive relationship between online customer experience and customer engagement behaviours, namely, a) purchases; b) referrals; c)

influence; d) knowledge" is also supported by the result and confirmed. The result shows that brand love significantly mediated the relationship between online customer experience and customer engagement behaviours, which indicates that online customer experience can influence brand love and further customer engagement behaviours. In other words, when a customer has a positive and satisfied online experience with a brand, it enhances their emotional connection and attachment to the brand, resulting in increased engagement behaviours such as (re)purchasing product/service, referring to their friends and family, sharing their experience around, and provide more knowledge to the company to develop the product/service. The findings emphasise the importance of fostering solid emotional connections with customers through exceptional online experiences, as it can lead to higher levels of engagement. Similarly, the findings of Junaid et al. (2019) and Sohaib et al. (2022) also supported the mediating role of brand love in the relationship between customer engagement. While Junaid et al. (2019) focused on the consumption experience, Sohaib et al. (2022) paid more attention to the brand perception of Apple in China.

Interestingly, according to the result, brand love led to all four dimensions of customer engagement behaviours, but brand identification only led to two. This difference indicates that compared to brand identification, brand love seems to represent a deeper customer-brand relationship, which is aligned with the work of Thomson et al. (2005). Correspondingly, Huang et al. (2017) also argued that brand love is related to more enthusiastic emotions like passion, connection, and affection. And this emotional attachment might be essential in driving customer engagement behaviours. As such, brand love significantly mediated the association between online customer experience and customer engagement behaviours, and hypothesis 3 was proven.

4.5.4 The Serial Mediating Effect of Both Brand Identification and Brand Love (H4)

Hypothesis 4 "Brand identification positively relates with brand love, and correspondently, brand identification and brand love serial mediate the relationship between online customer experience and customer engagement behaviours, namely, a) purchases; b) referrals; c) influence; d) knowledge" was also confirmed. Because the result displayed that brand identification and brand love significantly serial mediated the association between online customer experience and all the dimensions of customer engagement behaviours. This

finding means that a positive online customer experience not only directly influences engagement behaviours but also indirectly affects them through the mediating effects of brand identification and brand love. Customers with a strong sense of identification with the brand and who feel a deep emotional attachment are more likely to engage actively, advocate for the brand, make purchases, and participate in various brand-related activities. This finding highlights the importance of nurturing brand identification and brand love as critical drivers of customer engagement in the online context.

It is worth noting that brand identification is only mediated in the relationship between online customer experience and two dimensions of customer engagement behaviours, but it works together with brand love as the serial mediator in all four behavioural dimensions. Aligned with what has been discussed in Chapter 2, it might be because brand identification and brand love are two levels of the customer-brand relationship. Brand identification has a lighter effect on the customer's decision-making processes than brand love. And only when the customer-brand relationship turns to a deeper bond (e.g., love), a customer would be willing to engage more with the brand and show more engagement behaviours. This finding is also verified the suggestion of Bhattacharya and Sen (2003) and Huber et al. (2015) and aligned with the findings of Kim and Lee (2020) and Choi et al. (2022). In sum, as proposed, brand identification and brand love combined serial mediated the relationship between online customer experience and customer engagement behaviour. Thus, hypothesis 4 was confirmed.

5 Conclusion

5.1 General Considerations

Nowadays, social media has enabled companies to reach customers in infinite ways and quantities and interact with various activities (Jacobson et al., 2020). Online customer experience might play an important role in digital marketing evolution because it has become a crucial source of retailers' long-term competitive advantage via differentiation (Ahmad et al., 2022). With the internet has become a part of life, companies and brands are seeking to create a memorable experience and build a strong relationship with customers throughout every channel, e.g., brand-owned websites/app, social media, third-party stores, etc. (Bleier et al., 2019; Ahmad et al., 2022; Dhaigude & Mohan, 2023). However, very few empirical studies comprehensively revealed the mechanism between online customer experience and customer engagement behaviours, and the current study intended to add insights to the existing literature on customer experience and customer engagement and contribute to building marketing and branding strategies.

According to the S-O-R framework, the main objective of this study was to examine the relationship between online customer experience (S) and customer engagement behaviours (R) and reveal the mechanism of the mediating effects of brand identification (O) and brand love (O). Online customer experience was considered a multidimensional concept with four dimensions (sensory, intellectual, behavioural, and affective), whose suitability has been validated and confirmed in the present study. Additionally, customer engagement behaviours were presented in four specific behaviours as purchases, referrals, influence, and knowledge.

The present study was conducted using a quantitative approach methodology based on the proposed S-O-R framework. An online survey was launched and adopted scales from the previous literature to measure each variable. Then, partial least square-based structural equation modelling (PLS-SEM) was applied in SmartPLS 4 to analyse the 469 valid data.

The findings were aligned with the research objectives and successfully answered two research questions. First, it is shown that online customer experience had a significant positive association with customer engagement behaviours, which suggests the positive impact of online customer experience (S) on customer engagement behaviours (R). Specifically, customers' memorable and satisfied online experience with brands can lead to

more purchases, referrals, social influence, and knowledge sharing. Therefore, the first research question has been addressed.

Second, the mechanism of the relationship above, i.e., the mediating roles of brand identification (O) and brand love (O), was revealed. It indicates that online customer experience can also foster brand identification and brand love, encouraging customers to purchase products/services, refer the brand to others, share their brand experience, and help develop products/services. In addition, interestingly, customers' brand identification and belongingness feeling only lead to referrals and influence but not purchases and knowledge, while brand love does. Moreover, brand identification can foster this emotional attachment and bond. Henceforth, the second research question also has been addressed.

5.2 Theoretical Contributions

The findings of this study contribute to the existing body of literature by providing a better understanding of online customer experience and its impact on customer engagement behaviours, namely, purchases, referrals, influence, and knowledge. Furthermore, the mechanisms of the mediating roles of brand identification and brand love were revealed in the S-O-R framework.

From the theoretical viewpoint, first, this study extended the concept and findings of customer experience in the online context. It verified the suggestion of Brakus et al. (2009) that customer experience exerts both direct and indirect effects on customer behaviour in both online and offline settings. Second, in this study, customer engagement behaviours were measured by adopting the scale of Kumar and Pansari (2016). Among the existing customer engagement scales that pay more attention to various dimensions (e.g., emotional, social, and cognitive), this scale focuses on only behavioural ones and aims to demonstrate a comprehensive view of engagement behaviours (Hollebeek et al., 2023). On this basis, the present study also enriches the existing research in customer engagement behaviours. Third, according to the S-O-R theory, the current study conceptual a framework to describe and reveal the relationship among online customer experience, brand identification, brand love, and customer engagement behaviours. Furthermore, this framework can serve as a platform for researchers interested in studying the relationships between the concepts of "experience" and "engagement". Moreover, this mechanism contributes to understanding the mediating

roles of brand identification and brand love, which could bring valuable insights into marketing literature.

5.3 Managerial Contributions

The current study's findings also have some practical implications for managers and marketers. First, by investigating the link between online customer experience and customer engagement behaviours, this study provides valuable insights for businesses in designing effective strategies to foster customer-brand relationships and enhance customer engagement. For instance, building sensory, intellectual, behavioural, and affective online experience is crucial to encourage more customer engagement behaviours, such as (re)purchasing product/service, referring the brand to their friends and family, sharing their brand experience online or offline, and helping to develop the product/service.

Second, companies and brands should focus on creating a positive and memorable online customer experience to cultivate and foster a sense of belonging and emotional connection, further enhancing customer engagement behaviours. By focusing on the mechanism of brand identification and brand love, businesses can maximise the customer engagement level, ultimately leading to long-term success in the online marketplace.

Third, the mediation effects of brand identification and brand love indicate that striving for a strong identification of belongingness might not be enough for the customer purchase and knowledge behaviours, thereby further cultivating strong emotional connections and attachment (i.e., brand love) is the success "secret". However, to achieve this, a comprehensive strategy and approach for both brand identification and brand love would be needed.

To conclude, this research can help managers and marketers better understand the factors that drive customer engagement behaviours and inform decision-making processes from the overall online customer experience to the actions that happened.

5.4 Limitation and Future Research

This work has certain limitations that should be acknowledged. Firstly, the study's generalizability may be limited because the sample mainly clusters in two particular nations (i.e., China and Portugal). To address this, future research could duplicate the study on a larger sample size encompassing diverse online customers from various countries to ensure the findings can be more widely applicable.

Secondly, the current study design employed a cross-sectional approach with a one-time survey, primarily due to cost and time restrictions. To overcome this limitation and gain a deeper understanding of the relationships examined, future research could consider conducting long-term longitudinal studies that track participants' experiences and engagement behaviours over an extended period.

Furthermore, the current study focused on a general mechanism between online customer experience and customer engagement and opinions in terms of, mainly, brand-owned website/app, social media, and third-party online store were collected. Future studies can explore the specific mechanisms for each channel and compare the differences among them to build different kinds of customer engagement behaviours more efficiently and better understand the complex dynamics between online customer experience and customer engagement behaviours. Especially in the brand-owed website/app context, since the finding showed this is the most used interaction way.

By addressing these limitations and exploring the suggested areas for future research, scholars can further enrich the understanding of online customer experience and its impact on customer engagement behaviours, leading to more comprehensive and robust insights in the marketing field.

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Appendix

Appendix I. Literature overview

Authors	CE	OCX	BI	BL	Context	Main Related Findings
The present study	X	X	X	X	Online branding	
Ahmad et al. (2022)	X	X			Online shopping	Online customer (shopping environment, shopping procedure, staff service experience, and product experience) substantially influenced customer engagement.
Tuguinay et al. (2022)	X	X			Casino	Customer experience with some features of automated games had a positive and significant impact on customer engagement with the casino.
Roy et al. (2022)	X	X			Offline retail	Customer experience positively affects customer commitment, which in turn positively affects customer engagement behaviours
Yasin et al. (2019)	X	X			Islamic online banking	Brand experience stimulates strong brand community engagement.
Mohd-Ramly & Omar (2017)	X	X			Offline store retail	Customer experience is significantly and positively related to customer engagement.
Loureiro et al. (2017)	X	X		(X)	Social media (Facebook)	Involvement and online brand experience are the important drivers of online brand engagement.
Zhang et al. (2017)	X	X			Smartphone communities	Customer experience promotes community engagement, and further enhances word-of-mouth intention.
Huang (2017)		X	X	X	Mobile phone brand	Brand love and brand trust have the mediating effects on the relationships between brand experience and brand loyalty.
Rather er al. (2022)	X	X	X		Tourism	Experience exercise significant positive effects on customers' brand identification, which, in turn, impact their brand advocacy, attachment, and loyalty. Further, brand engagement is shown to moderate the association of these factors.
Kumar & Kaushik. (2020)		X	X		Product and service brand	Brand identification mediates the relationship between various dimensions of brand experience and customer-brand relationship (two-way communications and emotional exchange).
Rather et al. (2020)		X	X		Tourism	Brand experience exert effects on destination brand identification.
Shin et al. (2020)		X	X		Hotel brand	The three loyalty program experiences (i.e., member-to-member similarity, memorable loyalty program experience and loyalty program social benefits) positively effect on customer-brand identification.
Qiao et al. (2019)		X	X		Virtual brand community	Virtual brand community experiences (with the exception of interactive experience) have a significant impact on brand identification, and brand identification distinctively affect the different types of eWOM behaviours.
Kumar & Kaushik. (2017)		X	X		Tourism	Various dimensions of destination brand identification have influence on destination brand identification, and destination brand identification emerges as an important mediator.
Mai Chi et al. (2022)		X	X		Beauty salons in Vietnam	Customer experience positively influences customer engagement behaviour as mediated by customer-company and customer-employee identification.
Agyei et al. (2021)	X		X		Life insurance companies	Customer brand identification plays a key mediating effect in the relationship between corporate social responsibility and customer engagement.

Haverila et al. (2020)	X		X		Brand community	Segment one has a stronger relationship between brand community identification and other outcomes (e.g., brand community engagement) than segment two.
Kaur et al. (2020)	X		X		Brand community	Brand community identification positively effects on consumer brand engagement.
Rather et al. (2018)	X		X		Hospitality brands	Customer brand identification act as a significant predictor of customer brand engagement.
Tuskej & Podnar (2018)	X		X		Social media	Customer brand identification positively affects consumers' active engagement and fully mediates the effect of brand prestige and brand anthropomorphism on consumers-brand engagement with corporate brands.
Bae & Kim (2023)		X		X	Smartphone in Korea	Brand love mediates the relationship between brand experiences and brand loyalty.
Pabla & Soch (2023)		X		X	Aviation industry	brand love partially mediates the relationship between brand experience and brand satisfaction in the aviation sector.
Yadav et al. (2023)		X		X	Nation brand	International visitors' sensory and affective nation brand experiences significantly enhance brand love for a nation, leading to national brand loyalty and positive WOM among them.
Lee et al. (2022)		X		X	Low-cost carrier (LCC) in Aviation industry	Service experience positively affects both brand love and reuse intention.
Lin et al. (2022)		X		X	Luxury hotel	Customer experience value contribute to the development of brand satisfaction and positively influences brand love.
Safeer et al. (2020)		X		X	Global brand in Asia	Sensory and affective experiences have direct significant impacts on brand love, while intellectual and behavioural experiences have nonsignificant impacts on brand love.
Trivedi (2019)		X		X	New technology platform (banking chatbots)	The information quality, system quality and service quality significantly affect customer experience and further influence brand love.
Ferreira et al. (2019)		X		X	Fashion brand retail store	Brand experience influences brand love, with a higher incidence of sensory and affective dimensions. Brand love, in turn, influences customer loyalty.
Nikhashemi et al. (2019)		X		X	Apparel-retailing	With respect to the moderating role of brand love, it enhances the influence of both retail brand experience and word of mouth communication on willingness to pay more.
Joshi & Garg (2020)	X	X		X	Fashion apparel	Online customers experience moderate the relationship between brand trust, brand image and brand love. Besides, brand love positively impacts on brand engagement and further impact on loyalty intention.
Junaid et al. (2019)	X	X		X	smartphone	Brand love mediates the relationship between consumption experience and customer engagement.
Sohaib et al., 2013	X	X		X	Case study of Apple	Brand love demonstrates a significant mediating role between brand experience and brand engagement.
Attiq et al. (2022)	X	X		X	Smart gadgets	Brand love have positive impact on brand engagement.
Junaid et al. (2020)	X			X	Smartphone	Brand love has a significant impact on all dimensions of customer engagement (buying, referrals, influence, and feedback).
Gomez-Suarez (2019)	X			X	General brand	Brand love takes part in customer engagement (long-term relationship).
Islam & Rahman (2016)	X			X	Fashion apparel	Brand love significantly influence customer engagement. Brand love was also found to act as a

					mediator between brand image and customer engagement.
Choi et al. (2022)	X	X	X	Product and service brand	Customer identification and brand love mediated customer-based corporate reputation and customer engagement behaviours.
Dalman et al. (2019)		X	X	Unethical context	Brand love mediates the brand identification and consumers' ethical judgment following extremely unethical events.
Alnawa & Altarifi (2015)		X	X	Hotel industry	Customer hotel brand identification appears to influence brand loyalty only via brand love.

Note: CE = customer engagement (behaviours), OCX = (online) customer experience, BI = brand identification, BL = brand love.

Appendix II. Questionnaire sample in English

Hello! Welcome to this investigation, conducted in the context of the elaboration of a dissertation of the Master of Management of the Faculty of Economics, University of Porto. This research aims to have a better understanding of customers' experience and feelings online about brands.

This questionnaire is implemented in a Google account covered by the license subscribed by the University of Porto. During the survey, you will not be asked for information that may allow you to be identified. The data collected will be kept strictly confidential and will only be used for academic purposes. There are no right or wrong answers, thus, please provide your degree of agreement with the statements, sincerely and following the instructions indicated.

Approximately, this questionnaire takes 5 minutes to complete. Besides, the questionnaire must be completed independently without any external interference.

If you have any doubts, please contact Jiyao Guan: up202100496@edu.fep.up.pt

Once again, we appreciate you taking the time to share your thoughts and opinions with us! Now, Let's start!

Informed Consent

I declare that I am over 18 years old, that I have read and understood all the information provided, and have had the opportunity to raise any doubts. My participation in the survey is voluntary and I can withdraw at any time without reason.

If you agree and recognize the above content, please click the "Agree" button below to start answering the questionnaire. If you do not agree with the above content, please click the "Disagree" button below to interrupt this survey study.

O Agree

O Disagree

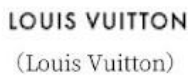
1. Have you ever interacted online with any brand/company (e.g., browsing brand content online, through brand websites, social media, or online stores to either communicate and interact with brands, or enjoy brand online services, etc.)?

O Yes

O No

Select your most familiar brand and respective online interaction type


(Tesla)


(Louis Vuitton)


(McDonald's)


(Coca-Cola)


(IKEA)


(Nike)


(LEGO)


(Apple)

2. Considering the 8 brands above, please choose the one with which you interact more online (e.g., browsing the brand content online, through brand websites, social media, or online stores to either communicate and interact with brands, or enjoy brand online services, etc.): (You can also choose "Other" and write down the brand that you prefer)

O Tesla

O Louis Vuitton

O McDonald's

O Coca-Cola

O IKEA

O Nike

O LEGO

O Apple

O Other: _____

3. Please score your level of familiarity regarding the online activities of your chosen brand, from 1 (very unfamiliar) to 7 (very familiar):

Very unfamiliar O O O O O O O Very familiar

4. How frequently do you interact with this brand online?

O Rarely (once a year or less)

O Occasionally (a few times a year)

O Sometimes (once a month or so)

O Often (a few times a month)

O Very often (once a week or more)

O Daily (every day)

5. When was the last time that you have interacted with this brand online?

O Less than a month ago

O 1 to 3 months ago

O More than 3 months ago

6. Considering **the chosen brand**, which is your most frequent and familiar online interaction type?

O Brand's website/app

O Social media (e.g., Instagram, TikTok, Facebook, etc.)

O Third-party online store (e.g., in Amazon, etc.)

O Other: _____

Section 1 (Scale of online customer experience)

Now, according to **your chosen brand**, **your chosen interaction type with it**, and **your past online experience**, answer the questions as follows, from 1 (strongly disagree) to 7 (strongly agree).

7. To some of my senses (visual/auditory), the online experience with the brand is attractive to me.

Strongly Disagree O O O O O O O Strongly agree

8. This online experience stimulates my curiosity about the brand.

Strongly Disagree O O O O O O O Strongly agree

9. The online interaction with the brand offers me a positive sensorial experience (visual/auditory).

Strongly Disagree O O O O O O O Strongly agree

10. I experience pleasant feelings and emotions toward the brand online.

Strongly Disagree O O O O O O O Strongly agree

11. The online experience with the brand transmits activity and vitality to me.

Strongly Disagree O O O O O O O Strongly agree

12. The online experience motivates me to learn more about the brand.

Strongly Disagree O O O O O O O Strongly agree

13. The online experience with the brand transmits comfort and well-being to me.

Strongly Disagree O O O O O O O Strongly agree

14. The online experience makes me think or reflect on the brand.

Strongly Disagree O O O O O O O Strongly agree

15. The online experience with the brand induces feelings and sentiments in me.

Strongly Disagree O O O O O O O Strongly agree

16. The online experience produces positive emotions toward the brand for me.

Strongly Disagree O O O O O O O Strongly agree

17. The online experience with the brand transmits force and energy to me.

Strongly Disagree O O O O O O O Strongly agree

18. Overall, I have a satisfying sensory experience with the brand online.

Strongly Disagree O O O O O O O Strongly agree

Section 2 (Scales of brand identification, brand love, and perceived interactivity)

Considering **your chosen brand**, how much do you agree with the following statements from 1 (strongly disagree) to 7 (strongly agree)?

19. This is a wonderful brand.

Strongly Disagree O O O O O O O Strongly agree

20. I identify with the brand.

Strongly Disagree O O O O O O O Strongly agree

21. I feel that my personality and the personality of the brand are very similar.

Strongly Disagree O O O O O O O Strongly agree

22. I am very attached to the brand.

Strongly Disagree O O O O O O O Strongly agree

23. I love this brand!

Strongly Disagree O O O O O O O Strongly agree

24. I have a lot in common with others who use the brand.

Strongly Disagree O O O O O O O Strongly agree

25. I will miss this brand if it is no longer available.

Strongly Disagree O O O O O O O Strongly agree

Section 3 (Scale of customer engagement behaviours)

Considering **your chosen brand**, how much do you agree with the following statements from 1 (strongly disagree) to 7 (strongly agree)?

26. My purchases with the brand make me content.

Strongly Disagree O O O O O O O Strongly agree

27. I am willing to provide feedback about my experiences with the brand to the firm.

Strongly Disagree O O O O O O O Strongly agree

28. I enjoy referring the brand.

Strongly Disagree O O O O O O O Strongly agree

29. Owning the products/services of this brand makes me happy.

Strongly Disagree O O O O O O O Strongly agree

30. I am a part of this brand and mention it in my conversations.

Strongly Disagree O O O O O O O Strongly agree

31. I love talking about my brand experience.

Strongly Disagree O O O O O O O Strongly agree

32. Given that I am using/used this brand, I will refer my friends and relatives.

Strongly Disagree O O O O O O O Strongly agree

33. I can provide feedback/suggestions for developing new products/services for this brand.

Strongly Disagree O O O O O O O Strongly agree

34. I discuss the benefits that I get from this brand with others.

Strongly Disagree O O O O O O O Strongly agree

35. I will promote the brand even if I have only used some of the products.

Strongly Disagree O O O O O O O Strongly agree

36. I would like to provide suggestions/feedback about the new products/services of the brand.

Strongly Disagree O O O O O O O Strongly agree

37. I will continue buying the products/services of this brand in the near future.

Strongly Disagree O O O O O O O Strongly agree

38. What is your nationality? _____

39. What is your gender?

O Female

O Male

O Other: _____

40. What is your age?

O 18-25 years old

O 26-35 years old

O 36-45 years old

O 46-55 years old

O 56-65 years old

O > 65 years old

41. What is the highest degree you have completed?

O Basic education

O High School

O Bachelor's degree

O Master's degree

O Ph.D.

42. Which of the following best describes your current occupation?

O Student

O Employed

O Self-employed

O Unemployed

O Retired

43. How much do you spend on online purchasing each month on average?

O ≤ 50€

O 51€ to 100€

O 101€ to 200€

O 201€ to 300€

O > 300€

Thank you!

Here is the end of the survey, please click "send" to submit.

Thank you very much for taking the time to complete the questionnaire and we are grateful for your valuable input! Wish you a nice day!

(**Thank you!**

Thank you very much for your participation!

However, we would like to kindly remind you that this research focuses on online experiences and it's a mandatory requirement for participants to have experience in this field. We hope you will consider participating in future studies that are more aligned with your expertise.

Once again, thank you very much for your time. Have a great day!)

Appendix III. Survey poster

Consumer's Experience

A Experiência dos Consumidores

Olá! Sou Jiyao, uma aluna da Faculdade de Economia (FEP) da Universidade do Porto em Portugal. Este projeto da tese tenta explorar principalmente:
A Experiência Online dos Consumidores com as Marcas

Os seus pensamentos e sentimentos são muito importantes para nosso estudo e esperamos a sua participação! !

Hi! I am Jiyao, a student studying at the Faculty of Economics (FEP) of University of Porto in Portugal. This dissertation project mainly tries to explore:
Online customer experience with brands

Your thoughts and feelings are very important to our research, and we look forward to your participation! !



~5 mins

Digitalize o código QR,
Preencha o nosso questionário!

Scan QR code,
Fill out our questionnaire!

Versão em Português
Link:
https://forms.gle/ipdxBiioTV9bfKdK8

English Version
Link:
https://forms.gle/v2UPrAGihvvwpwya9

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