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The Role of Customer Engagement with E-Banking

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Abstract

Nowadays, E-banking assumes an increased importance. Thus, this paper aims to identify as determinants of E-banking loyalty not only the interactivity that customers establish with the bank's website and their satisfaction with the E-banking but also the engagement between customers and E-banking. In total, 207 valid questionnaires were collected from Portuguese consumers. Structural equation modeling was used to test the proposed hypotheses. This research shows that in E-banking, website interactivity positively influences customer engagement, customer satisfaction and customer loyalty to the bank. Finally, customer satisfaction with E-banking as well as customer engagement with E-banking will lead to loyalty to the bank.

Keywords: E-Banking; Customer Engagement; Interactivity; E-Satisfaction; E-Loyalty.

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1. Introduction

In the digital era, and particularly in the aftermath of the COVID-19 pandemic, more bank customers are using digital banking as their main platform for banking services (Naeem & Ozuem, 2021). The development of e-banking has gathered increasing attention, especially now since the COVID-19 pandemic has accelerated the transition from "physical" banks to "virtual" banks (Zhang, Yi, & Zhou, 2022). In turn, banking service providers are gradually locking down or reducing their offline branches and relying primarily on online services (He et al., 2019). These trends suggest that the strategic concept of establishing positive relationships between service providers and customers, and ultimately "emotionally connecting" with customers in hope of ensuring a lifetime of profitable loyalty, is increasingly more dependent on the digital platform and customer engagement with the online delivered content (Khan, Rahman, & Fatma, 2016; Islam et al., 2020; Levy, 2022).

The financial services business has witnessed significant technological advancement in the recent years. Information technology and money are more closely linked than ever. In the banking sector, traditional banks are downsizing, and digital means are becoming increasingly popular. Today, people are more inclined toward electronic banking channels. The term "electronic banking (e-banking)" refers to the use of electronic media to perform banking transactions (Rehman & Waheed, 2012). Since the mid-1990s, e-banking has evolved from the provision of automated teller machines (ATMs) and automatic bill payments to include online banking, telephone banking, mobile banking, PC banking, and other self-service banking services that use electronic service equipment and the Internet (Kolodinsky, Hogarth, & Hilgert, 2004).

On one hand, e-banking enables clients to conduct many business activities at low cost and at all times. On the other hand, the Internet provides people with more and better options, while also increasing competition among financial organizations (Zhang et al., 2016). Consequently, building online customer loyalty has become a critical component of e-banking business strategies. Scientific research in different countries and regions has confirmed this conclusion (Amin, 2016; Shankar & Jebarajakirthy, 2019; Zhang, Yi, & Zhou, 2022).

Therefore, in the last few decades, a shift has occurred from transactional to relationship marketing, with the latter stressing the importance of long-term, value-laden customer interactions and relationships (Thakur, 2018; Islam et al., 2019). In line with this shifting perspective, new concepts have emerged, including customer engagement (Vivek et al., 2014; Islam & Rahman, 2016). With its core centering on customers' cognitive, emotional, and behavioral investments in interactions (Kumar et al., 2019), customer engagement offers insight into the dynamics characterizing consumer/brand interactions that existing relational concepts, such as involvement or commitment, have failed to fully capture (Brodie et al., 2011). Consequently, customer engagement has gained significant traction in the last decade, particularly in the service subsector given its centrality of customer/firm interactions that is also common to customer engagement (Kumar & Pansari, 2016; Prentice & Loureiro, 2018).

Internet banking has unique features compared to traditional banking. For example, internet banking enables customers to carry out a wide range of banking activities at any time and at a low cost (Amin, 2016). Although the internet provides many advantages for users, it is like a double-edged sword as it lacks the human elements of financial institutions. As in physical environments, social relationships are closer and longer and businesses can guarantee customer loyalty by relying on how to provide services corresponding to their customers' characteristics and needs, as well as by promoting the quality of the relationship between employees and customers. However, in the online environment, the role of human elements in service delivery is greatly reduced or eliminated and getting customer loyalty is challenged (Brun, Rajaobelina, & Ricard, 2014).

Therefore, nowadays getting the loyalty of online customer has become a key element in business strategy and identifying the factors affecting it is of paramount importance. In this study, we consider customer engagement, website interactivity and customer satisfaction as key determinants of e-banking loyalty.

The remainder of this paper is structured as follows. First, a thorough literature review helps to clarify the link between research variables. Then, a conceptual model and research hypotheses are proposed. Posteriorly, we describe the adopted methodology and discuss the empirical results.

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2. Theoretical Framework and Research Hypotheses

2.1. Concept Review

2.1.1. Customer Engagement

Customer engagement research has gained increasing importance in the last years. while the first studies were published in 2005 (Sawhney, Verona, & Prandelli, 2005). From 2010, this topic has experienced escalating interest in marketing research (van Doorn et al., 2010; Brodie et al., 2011), with several reviews of the literature once being published in the last few years (Hollebeek et al., 2022; Lim et al., 2022). For a few decades, it has been noted that a new shift emerged from transactional to relationship marketing. Therefore, building long-term relationships through customer relationships and interactions became the focus of the companies (Islam et al., 2019; Ting, Abbasi, & Ahmed, 2021). Within the non-transactional behavior, customer engagement is one of the new concepts that have gained significant attention in academic research and industry, in particular technological environments (Pansari & Kumar, 2017; Hollebeek, Srivastava, & Chen, 2019; Islam et al., 2019), making it one of the most growing research areas in recent times (Moliner-Tena, Monferrer-Tirado, & Estrada-Guillén, 2019; Ting, Abbasi, & Ahmed, 2021; Sallaku & Vigolo, 2022). The principal objective of engagement marketing is to encourage customers to actively participate in and contribute to the firm's marketing functions (Harmeling et al., 2017; Bruneau, Swaen, & Zidda, 2018). Customer engagement enables firms to create customer interaction and participation, thereby cultivating a deep and meaningful connection between the company and the customer (Khan, Rahman, & Fatma, 2016; Braun, Hadwich, & Bruhn, 2017). Preceding studies have realized the critical role of customer engagement in developing an enduring relationship between organizations and customers. According to Kumar et al. (2010), customer engagement is interpreted as "the creation of a deeper, more meaningful connection between the company and the customer."

Customer engagement is a psychological state of mind that leads to frequent interaction with the focal object (e.g., a brand or a medium). Customer engagement is a long-term relationship that arrives out of emotional as well as utilitarian motivational drivers. Emerging literature in the domain indicates that customer engagement may lead to several favourable outcomes for brands and firms beyond repurchase intentions (Thakur, 2018). Already Vivek, Beatty, and Morgan (2012, p. 128) have defined engagement as "the intensity of an individual's participation and connection with the organization's offerings and activities initiated by either the customer or the firm". Customer engagement is understood as "the creation of a deeper, more meaningful connection between the company and the customer" (Kumar et al. 2010, p. 297). Studies have stated the need to understand customer engagement in relation with the brands which are the most typical engagement objects in literature (Brodie et al., 2011). In response to this research call, Hollebeek (2011, p. 565) explored the customer-brand engagement concept and defined it as "the level of an individual customer's motivational, brand-related and context-dependent state of mind characterized by specific levels of cognitive, emotional and behavioral activity in direct brand interactions".

Within this emerging relational research stream (Vivek et al., 2014), customer engagement's conceptualization and dimensionality are key topics of debate. Rooted in differing theoretical perspectives, some authors propose customer engagement to comprise both in-role and extra-role customer cognitions, emotions, and behaviors (Harrigan et al., 2018; Kumar et al., 2019). Differing customer engagement conceptualizations and dimensionalities have been proposed. For example, Van Doorn et al. (2010, p. 254) describe customer engagement as uni-dimensional and conceptualize it as "the customer's behavioral manifestation toward a brand or firm, beyond purchase, resulting from motivational drivers." Similarly, Jaakkola and Alexander (2014, p. 248) consider customer engagement as a uni-dimensional construct and define it as "behaviors through which customers make voluntary resource contributions that have a brand or firm focus but go beyond what is fundamental to transactions, occur in interactions between the focal object and/or other actors, and result from motivational drivers." By contrast, most existing research has conceptualized customer engagement as a multi-dimensional construct encompassing cognitive, affective, and behavioral dimensions (Hollebeek, 2011; Hollebeek, Glynn, & Brodie, 2014; Bowden et al., 2017; Claffey & Brady, 2017). For instance, Hollebeek, Srivastava, & Chen (2019, p. 167) define customer engagement as a

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consumer's "investment of cognitive, emotional, behavioral, and social operant, and operand resources in their brand interactions," thereby exhibiting alignment with Kumar et al. (2019). Hollebeek, Glynn, and Brodie (2014) already defined consumer-brand engagement as a consumer's positively valenced brand-related cognitive, emotional and behavioral activity during or related to focal consumer/brand interactions. Similarly, Brodie et al. (2013, p. 107) view customer engagement as "a multidimensional concept comprising cognitive, emotional, and/ or behavioral dimensions [that] plays a central role in the process of relational exchange." In line with this perspective, these authors adopt customer engagements widely used three-dimensional (i.e., cognitive, emotional, behavioral) view. Given its interactive nature, customer engagement has particular relevance in the service context that is characterized by high customer/brand interactivity (Hollebeek, Juric, & Tang, 2017; Kumar et al., 2019).

2.1.2. Interactivity

Interactivity can be explained as the degree to which a dialogue can be established between a firm and its customers online, through information sharing (Fang, 2012). There are four main aspects of interactivity, namely: reciprocity, responsiveness, non-verbal information, and speed of response (Yoo, Kim, & Sanders, 2015). Although Fang (2012) noted that due to the spatial and temporal separation between firms and their customers online, all these aspects of interactivity are relatively complicated to achieve. Interactivity drives current technologies, especially information technology and communication, and is a fundamental component of successful marketing (Fan et al., 2017). Interactivity is a communication term that refers to the media's receptiveness to assess the user's reaction and to measure the effectiveness of a message based on previous contacts (Violante, Vezzeti, & Piazzolla, 2019). When people are exposed to the virtual environment, they tend to act as if they are interacting with another person. Therefore, the better the characteristics of the interface, the greater the user interaction (Adhikari & Panda, 2019; Violante, Vezzetti, & Piazzolla, 2019), increasing customer engagement with the brand (Hollebeek, Srivastava, & Chen, 2019). Interactivity has a multidimensional nature – active control, bidirectional communication, and synchronicity (Fang, 2017; Adhikari & Panda, 2019). The rapid expansion of virtual environments and their technologies highlights the importance of understanding the potential of interactivity as a relational tool between companies and customers (Barreda et al., 2016). Engagement is social and interactive (Dessart, Veloutsou, & Morgan-Thomas, 2016), therefore interactivity and engagement with the brand are related constructs (Algharabat et al., 2018). In the digital environment, engagement is an affective commitment to an active relationship with technology and is the state of consumer involvement formed during the interaction process (Fan et al., 2017).

2.1.3. E-satisfaction

Customer satisfaction refers to customers' overall subjective postpurchase assessment about a service or product, according to their expectation of pre-purchase and experience with a particular organisation (kim & Lee, 2011). It is a vital determinant of and strongly impacts on behavioural intentions (Westaby, 2005).

Oliver (1980) explained that customer satisfaction refers to meeting the customer's expectation on the products and services. If the perceived performance matches or even exceeds the customers' expectations of services, they are satisfied. If it does not, the customers are dissatisfied (Oliver, 1993; Sharifi & Esfidani, 2014; Fullerton & Taylor, 2015). Under this theory, consumers obviously will prefer positive disconfirmation than negative disconfirmation. This conclusion is relative because the assessment is a comparative process between the subjective experience and an initial reference or standard of comparison (Bressolles, Durrieu, & Deans, 2015).

In turn, there is no consensus in marketing literature in defining customer satisfaction, whether it is transactional or cumulative (Boulding et al., 1993; Cronin and Taylor, 1994; Mittal, Kumar, & Tsiros, 1999; Liébana-Cabanillas, Muñoz-Leiva, & Rejón-Guardia, 2013). The cumulative satisfaction is determined by satisfying and dissatisfying the customer with a product or service over time (Zeithaml, Berry, & Parasuraman, 1993; Parasuram, Zeithaml, & Berry, 1994a, 1994b; Sharma, Niedrich, & Dobbins, 1999; Brun, Rajaobelina, & Ricard, 2014), and the transactional is defined with a product or service in a single transaction (Oliver, 1993;

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Cronin & Taylor, 1994; Boshoff, 1999, 2005; Høst & Knie-Andersen, 2004; Homburg, Koschate, & Hoyer, 2006).

2.1.4. E-LOYALTY

Customer loyalty is one of the key concerns for firms to deliver competitive advantage in today's business environment and in the near-saturated banking industry in particular (Rahman & Ramli, 2016). In this competitive business environment, it is cheaper to serve an existing customer than to attract and serve a new one (Ndubisi, 2007). Loyal customers remain with the service provider, recommend the service to family and friends, and serve as referrals (Rauyruen & Miller, 2007). According to Amin, Isa, and Fontaine (2011), friends and family members have a great influence on prospective customers when it comes to making decisions to patronize a financial institution. In addition, they emphasize that a loyal customer will not only return to repeat purchases but will also bring their friends and family with them.

Loyalty is the highest level of commitment, which represents the previous step of purchase action from a favourable tendency to a repurchase commitment (Oliver, 2014). Customer loyalty, involving both attitudinal and behavioural dimensions, has four key stages: conative loyalty, affective loyalty, cognitive loyalty, and behaviour loyalty (Oliver, 2014). Attitudinal loyalty goes through the first three stages (conative, affective, and cognitive), while behavioural loyalty is considered to be the result of this process (Oliver, 2014). Price, quality, and loyalty programmes are regarded as conative loyalty, which has the weakest connection with loyalty (Lee et al., 2018). These elements are easy for a competitor to surpass, and affective loyalty is considered to be the beginning phase of real loyalty since emotional ties are constructed between the customer and company in this phase that rivals find difficult to break (Moliner et al., 2007)

Focusing on e-customer loyalty is important for internet banking in order to maintain the relationship with their customers. In this context, the customers with high loyalty will frequently visit and recommend to others (Jeong & Lee, 2010; Amin, Isa, & Fontaine, 2013), and this leads to high commitment to repurchase of a services or products consistently in the future (Anderson & Swaminathan, 2011; Ladhari, Ladhari, & Morales, 2011; Fraering & Minor, 2013; Kandampully, Zhang, & Bilgihan, 2015; Melnyk & Bijmolt, 2015), and prevent them to create negative word-of-mouth (WOM) and convey their negative impression to other customers (Caruana, 2002; Amin, Isa, & Fontaine, 2011; Kaur, Sharma, & Mahajan, 2012). Therefore, in the e-banking context, customer loyalty could be defined as consumer tendency to frequently visit the bank's website, regularly avail e-banking services and spread a positive word of mouth about e-banking services (Kaur, Sharma, & Mahajan, 2012; Amin, 2016). Lam et al. (2004) had already defined customer loyalty as the repeated patronage of a service provider and the recommendations of the service provider to other customers. In recent years, customer loyalty to bank services has become a focal point for marketers and researchers. This is so because the ability of the banks to attract customers and retain them on a long-term basis is strongly related to their profitability (Keisidou et al., 2013). Therefore, the banks need to put in place customer loyalty programs.

2.2. RESEARCH HYPOTHESES

2.2.1. THE INFLUENCE OF INTERACTIVITY ON E-SATISFACTION

In the context of the web, there is also some empirical evidence to suggest that web site interactivity is related to various measures of satisfaction (Devaraj, Fan, & Kohli, 2002). Various authors suggested that interactivity is an antecedent of e-satisfaction (Ballantine, 2005; Zhao & Lu, 2012; Kim et al., 2015; Ohk, Park, & Hong, 2015; Li, Mao, & Zhou, 2021). Thus, we hypothesized that:

H1: Interactivity positively influences e-satisfaction.

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2.2.2. The influence of interactivity on customer engagement

Abundant studies on customer engagement have been conducted in a variety of contexts. In the banking sector, Sahoo and Pillai (2017) argued that bank-engaged customers tend to interact and participate in different financial services. They often spend more time connecting with banks. Some studies found that the website attributes of banks, such as website interactivity, customization, and ease of use, could help to increase customer engagement (Demangeot & Broderick, 2016; Islam et al., 2020).

Although there is no apparent evidence of empirical measurement of brand interactivity as an antecedent of brand engagement, strong conceptual foundations and theoretical reasoning provide confidence that brand interactivity could play a significant role in customer-brand engagement.

Case study analysis demonstrates that a brand which is perceived to have a high level of interactivity presents itself as open to more personalised relationships (Sawhney, Verona, & Prandelli, 2005). When the customer perceives the brand as interactive, they feel welcomed and encouraged to engage with the brand (France, Merrilees, & Miller, 2016).

While some authors argue that website interactivity positively influences customer engagement (Shin et al., 2016; Fan et al., 2017; Adhikari & Panda, 2019; Read et al., 2019; Islam et al., 2020; Garzaro, Varotto, & Pedro, 2021; Shao & Chen, 2021; Sallaku & Vigolo, 2022; Samarah et al., 2022), others advocate the opposite effect (Boateng, 2019). Therefore, we hypothesized that:

H2: Interactivity positively influences customer engagement.

2.2.3. The influence of interactivity on e-loyalty

The studies of Shin et al. (2016), Yang et al. (2017), Boateng (2019) and Sallaku and Vigolo (2022) have demonstrated that interactivity is an antecedent of e-loyalty, Thus, we hypothesized that:

H3: Interactivity positively influences e-loyalty.

2.2.4. The influence of e-satisfaction on e-loyalty

Satisfied customers will be more likely to stay and recommend their respective banks to their acquaintances (Amin, 2016, Omoregie et al., 2019; Haq & Awan, 2020; Raza et al., 2020, Islam et al., 2021; Mulia, Usman, & Parwanto, 2021). In fact, Zeithaml, Berry and Parasuraman (1996) study had already confirmed this relationship. Many studies have provided empirical evidence to support the statement that customer satisfaction has positive relationship on repurchase intention and customer loyalty (Hamouda, 2019; Garespasha et al., 2021; Garzaro, Varotto, & Pedro, 2021; Malnaad et al., 2022; Tegambwage & Kasoga, 2022; Chandra, 2023). Consequently, we hypothesized that:

H4: E-satisfaction positively influences e-loyalty.

2.2.5. The influence of Customer engagement on e-loyalty

The relationship between customer engagement and brand loyalty has been much discussed in service marketing (Gummerus et al., 2012). Firms encourage customers to engage in their services because this interaction could improve emotional bonds and promotes loyalty between the brand and customers. Customers with high engagement could improve brand loyalty based on the persisting psychological connection and enduring interactive experiences (Dessart, Veloutsou, & Morgan-Thomas, 2015). In online brand communities, it has been found that customers tend to become more loyal when they deeply engage in a brand (Gummerus et al., 2012).

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Varios studies demonstrated that customer engagement is an antecedent of e-loyalty (France, Merrilees, & Miller, 2016; Adhikari & Panda, 2019; Monferrer, Moliner, & Estrada 2019; Rather, 2019; Alalwan et al., 2020; Aziz & Ahmed, 2021; Khan et al. 2022; Sallaku & Vigolo, 2022; Samarah et al., 2022; Rather et al., 2023a, 2023b; Xuan, Truong, & Quang, 2023). Therefore, we hypothesized that:

H5: Customer engagement positively influences e-loyalty.

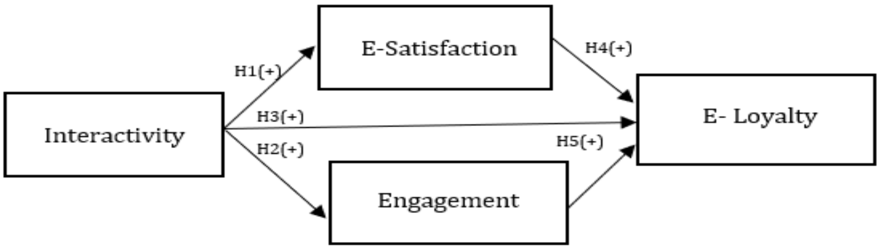

Figure 1 – Proposed Conceptual Model

3. Research Methodology

The conceptual model proposed in the present study is depicted in Figure 1. This research model investigates website interactivity as an antecedent of customer engagement and customer satisfaction in the context of electronic banking. Finally, website interactivity, customer engagement and customer satisfaction are crucial determinants of e-banking loyalty. For this purpose, we will test a model of partial mediation, where customer engagement and customer satisfaction are the mediating variables between website interactivity and e-banking loyalty.

3.1. Sample selection and data collection

This research study used a structured and self-administered questionnaire that addressed all the information needed. A sample of convenient elements was obtained by using a non-probabilistic convenience sample. The survey was developed in an online format. For the present research, 207 responses were obtained. As to gender, we obtained answers from both genders, i.e., 39.6% were male and 60.4% female. Regarding age, there was a higher number of answers in the 18-24 age group, which represents 32.4%, and, immediately afterwards, in the 25-34 age group, which represents 30.9%. Regarding to academic qualifications, the most representative respondents (38.2%) have a university degree and the high school (29%).

3.2. Measurement scales

The measurement scales of the constructs were based on the literature and adapted from academic literature on the topic. All variables, presented in Table 1 and 3, were measured on a seven-point Likert scale, ranging from 1-strongly disagree to 7-strongly agree.

The interactivity measures were adapted Boateng (2019). The customer brand engagement was adapted from Islam et al. (2020). The e-satisfaction measures were adapted from Khan, Rahman, and Fatma (2016) and Hammoud, Bizri, and El Baba (2018), The e-loyalty was measured using Prasadah (2018) scale.

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4. Analysis and results

4.1. Measurement model

An initial screening of each scale was conducted using item-total correlations, and exploratory factor analysis (EFA) using SPSS 26.0. Following the two-step approach (Anderson & Gerbing, 1998), a measurement model was estimated before testing the hypotheses, using a structural model. The data analysis was realized through confirmatory factor analysis (CFA) and structural equation modeling (SEM) using the statistical software AMOS (Analysis of Moment Structures) version 26.0. Maximum likelihood estimation procedures were used since these afford more security in samples that might not present multivariate normality.

Measurement model fits the data well. To test a model's fit, the chi-square (X^2) test statistic concerning degrees of freedom (df) can be used. If the X^2/df value is less than 3, the model is considered a good fit. The chi-square (X^2) was 290.727 with 147 degrees of freedom at $p<0.01$ ($X^2/df=1.99$). Because the chi-square is sensitive to sample size, we also assessed additional fit indices: (1) normed fit index (NFI), (2) incremental fit index (IFI), (3) Tucker–Lewis coefficient (TLI) and (4) comparative fit index (CFI). All of these fit indices are higher than 0.9 (NFI=0.93, IFI=0.96, TLI=0.95 and CFI=0.96). Because fit indices can be improved by allowing more terms to be freely estimated, we also assessed the RMSEA, which is 0.069.

CFA enables the performance of tests regarding the convergent validity, discriminant validity and reliability of the study constructs. A commonly used method for estimating convergent validity examines the factor loadings of the measured variables (Anderson & Gerbing, 1998). Factor loadings greater than 0.5 are considered very significant (Hair et al., 2014). Also, we used the AVE to contrast convergent validity. Adequately convergent valid measures should contain less than 50% error variance (AVE should be 0.5 or above) (Fornell & Larcker, 1981). Convergent validity was achieved in this study because all the factor loadings exceeded 0.5 and all AVEs were greater than 0.5. Next, CFA was used to assess discriminant validity. If the AVE is larger than the squared correlation between any two constructs, the discriminant validity of the constructs is supported (Fornelll & Larcker, 1981). This test demonstrated that discriminant validity is present in this study. To assess reliability, the composite reliability (CR) for each construct was generated from the CFA. The CR of each scale must exceed the 0.7 thresholds (Bagozzi, 1981). As Table 1 shows, the composite reliability coefficients of all the constructs are excellent, being equal or larger than 0.9. Cronbach's alpha indicator was also used to assess the initial reliability of the scales, considering a minimum value of 0.7 (Cronbach, 1970). In Table 1, coefficient alpha values are all equal or over 0.9, exhibiting high reliability. Table 1 also shows the AVE for each construct and a correlation matrix of constructs. In Table 2, is observed the standardized loadings and t-value of all scale items.

Table 1 – Factor Correlation matrix and measurement information

Construct	CR	AVE	X_1	X_2	X_3	X_4
Interactivity (X_1)	.92	.77	*.92*			
Engagement (X_2)	.91	.68	.58	*.91*		
E-Satisfaction (X_3)	.97	.71	.76	.31	*.97*	
E-Loyalty (X_4)	.89	.81	.78	.58	.75	*.89*

Note: In diagonal entries (italic) are Cronbach's alpha coefficients; AVE, average variance extracted; CR, composite reliability.

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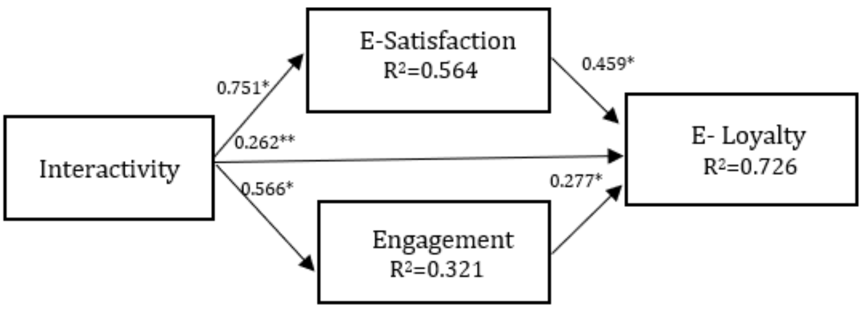
Table 2 - Measures, standardized parameter estimates results and measurement model t values

Measures	Standardized Loadings	t-Value
Interactivity		
INTE1	0.848	14.878
INTE2	0.834	14.496
INTE3	0.811	13.890
INTE4	0.765	12.733
INTE5	0.873	15.609
Engagement		
ENGA1	0.943	17.950
ENGA2	0.969	18.870
ENGA3	0.852	15.178
ENGA4	0.568	8.771
E-Satisfaction		
SATI1	0.939	17.958
SATI2	0.867	15.689
SATI3	0.963	18.827
SATI4	0.971	19.008
SATI5	0.778	13.296
SATI6	0.912	17.053
E-Loyalty		
LOYA1	0.840	14.540
LOYA2	0.741	12.086
LOYA3	0.877	15.557
LOYA4	0.794	13.335

4.2. STRUCTURAL MODEL

The structural model, depicted in Figure 2, fits the data well (X^2=300.956, df=147, p p<0.01 (X^2/df=2.05); NFI=0.93, IFI=0.96, TLI=0.96, CFI=0.96; RMSEA=0.071).



R^2=squared multiple correlations; *p<0.001.

Figure 2 – Structural Model

The results in Table 3 involve the analyses of the causal paths hypothesized in the structural model. The models support all the hypotheses. It is very important to analyze the effects of total effects (direct and indirect effects) because an examination of only the direct effects could be misleading (Bollen, 1989). The analysis of indirect effects highlights the importance of mediating variables in explaining the involvement with online purchase decision. Thus, in Table 4, we can observe the standardized direct, indirect and total effects.

Table 3 – Estimation results of the structural model

Path	Standardized coefficient	t-Value	Hypothesis
Interactivity → E-Satisfaction	0.751*	12.205	H1 (+): S
Interactivity → Engagement	0.566*	8.339	H2 (+): S
Interactivity → E-Loyalty	0.262**	3.120	H3 (+): S
E-Satisfaction → E-Loyalty	0.459*	6.139	H4 (+): S
Engagement → E-Loyalty	0.277*	4.822	H5 (+): S

Note: * p≤0.001; ** p≤0.01.

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Table 4 – Standardized direct, indirect and total effects

Paths	Direct effects	Indirect effects	Total effects
Interactivity → E-Satisfaction	0.751*	-	0.751*
Interactivity → Engagement	0.566*	-	0.566*
Interactivity → E-Loyalty	0.262***	0.501*	0.763*
E-Satisfaction → E-Loyalty	0.459*	-	0.459*
Engagement → E-Loyalty	0.277*	-	0.277*

Note: * p≤0.001; ** p≤0.01; *** p≤0.05.

We used the bootstrapping technique with a sample of 2.000 random observations generated from the original sample, and a confidence interval of 95% was also used in the estimation of the proposed model. This is because the analysis of total and indirect effects is only possible with the use of this method of estimation.

5. Discussion and conclusions

When we analyse the direct effects, we observe that interactivity is one variable with a strong impact on E-satisfaction. In relation with customer engagement, interactivity is also an essential variable, because the effect of interactivity on engagement is important. Regarding loyalty, although interactivity, e-satisfaction, and engagement have a significant effect on loyalty, e-satisfaction is the variable that has the strongest impact, followed by engagement and interactivity. As they pointed out Harimurti and Suryani (2019), customer engagement occurs on two parties who will be involved in a relationship with marketing are between consumers or companies. The occurrence of involvement between customers and companies is because there are dynamic relationships and emotional attachments in the transaction process. Therefore, the customer concept plays an important role in building customer loyalty to the brand. Interaction with companies, facilitate better business decisions and encourage customer loyalty.

However, we must look at both direct and indirect effects because the consideration of the total effects (direct and indirect) will give us a more rigorous assessment of the relationships between the variables under analysis. When we analyze the total effects (direct and indirect effects), the strongest total effect on loyalty comes from interactivity, due to its indirect effects. E-satisfaction has the second strong effect on E-loyalty, although the effect is only direct, followed by customer engagement, who has too only a direct effect.

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