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Brand Trust and Brand Loyalty: A Moderation and Mediation Perspective

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Authors' contributions

This work was carried out in collaboration among all authors. Author SKSS designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors FEA and RB managed the analyses of the study. Author KOA managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

This study aims to empirically test the effect of brand trust on brand commitment and brand loyalty while examining the mediating and moderating roles of brand commitment and brand reputation respectively. To achieve this aim, data is collected from 412 smartphone users in South Korea. The hypotheses advanced to achieve this aim are tested through the structural equations modeling technique. The results of the study reveal that brand trust and brand commitment positively and significantly influence brand loyalty. The study further finds that brand trust is positively and significantly related to brand commitment, while the latter mediates the relationship between brand trust and brand loyalty. Equally, the study finds support for the moderating role of brand reputation on the relationship between brand trust and brand commitment. The study provides managerial and theoretical illuminations into comprehending brand trust, brand commitment, brand reputation, and brand loyalty.

Keywords: Brand trust; brand commitment; brand reputation; brand loyalty.

1. INTRODUCTION

The strategic and theoretical relevance of relationship marketing has been well seeded in extant literature [1,2,3,4,5,6]. transactional marketing which is anchored on single and short-term customer transactions, relationship marketing has its conceptual and theoretical roots pivoted on creating and sustaining long-term profitable relationships with customers [7,8,9]. However, in light of the validation of the brand personality construct (Garbarino & Johnson, 1999), recent research has sought to extend relationship marketing research to consumer products, especially at the brand level. For instance, Fournier's [10] conceptualization of brand relationship quality is a palpable analogue to principles of relationship quality in the interpersonal field and suggests that the relationships that customers have with brands have qualities consistent with those of relationships. human In Fournier's conceptual framework, the brand is treated as an active, contributing member of a relationship nexus that links the consumer and the brand. Fournier [10] further proposes that all the marketing mix strategies and brand management decisions can be construed as behaviors enacted on the part of the brand. This brings into a proper perspective the concepts of brand trust. brand commitment, brand loyalty and brand reputation which form the crust of this research.

Nonetheless, in spite of the flourishing state of branding studies, some key deficiencies exist in the extant literature. First, the majority of the research involving trust have modeled trust either as an outcome, mediator or moderator variable [11,12,13]. Very few studies have modeled brand trust as the main predictor of brand loyalty (especially using brand commitment as a mediator) (see for instance [14,15,16,4,17]. Secondly, empirical studies on brand trust and brand loyalty have paid relatively little attention to the moderating role of brand reputation in the same relationship. Furthermore, from a South Korean context, there appears to be a paucity of research on the subjects under study. The foregoing gaps represent critical limitations in the branding literature. Consequently, the current research sets out to progress knowledge by empirically assessing the effect of brand trust on brand loyalty while evaluating the mediating and moderating roles of brand commitment and brand reputation respectively among South

Korean smartphone users. Considering how smartphone consumers are attached to their smartphone brands, the relevance of brand trust, brand commitment and brand reputation in determining their loyalty to smartphone brands can't be overemphasized.

2. THEORETICAL BACKGROUND

2.1 The Commitment-trust Theory

Morgan and Hunt [18] argue that what is central in any relationship marketing endeavor is whatever differentiates productive, effective relational exchanges from unproductive ones. Even though there are contextual factors that contribute to the success and otherwise of relationship efforts, it has been aroued that the presence of relationship commitment and trust is a sine qua non to successful relationship marketing. Commitment and trust inspire marketers to ensure the preservation of relationship investments through cooperation with investment partners. It also ensures that marketers resist attractive short-term alternatives in favor of expected long-term benefits of staying with existing partners and view potentially highrisk actions as being prudent due to the belief that their partners will not act opportunistically. Consequently, in the presence of both commitment and trust (not just one or the other), they produce outcomes that promote efficiency, productivity, and effectiveness (Morgan & Hunt, [18]. Accordingly, commitment and trust lead cooperative behaviors directly to are conducive to relational success. This theory is relevant to the subject under study and is therefore adopted to provide a theoretical

3. THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

3.1 Brand Trust

There have been several conceptualizations of brand trust in the extant branding literature. For instance, Delgado-ballester et al. [19] operationalize brand trust as a state of feeling secure while interacting with a brand based on the perception that the brand will remain reliable and responsible to satisfy the customer. Other scholars also view brand trust as consumers' willingness to rely on a brand [20], Mobiman et

al., 1993). From the view of [21] brand trust is assessed from the perspectives of the reasons for reliance on the brand as capacity and intensions to fulfill its promises to consumers. Drawing from Naggar and Bendary [13], brand trust is highlighted as perceptions expectations that are based on beliefs that a brand has specific features and traits that are consistent, competent and credible. Similarly, trust has been classified as a key mediator for long-term relationships that lead to brand lovalty [12,13]. To this end, Garbine and Johnson [11] suggest that brand trust is an outcome of previous experiences and interactions and it mirrors the process of learning over time. This position is a corroboration of Krishnan's [22] stance that brand experience is the most relevant and important source of brand trust. In their view, Morgan and Hunt [18] describe brand trust as an important factor in building loyalty as it establishes relationships that are considered with high value.

Ndubisi et al. [23] and Lewis and Soureli [24] in lending credence to the foregoing, reckon that trust has an essential role in building long-term relationships with customers. Brand trust is regarded as a calculative phenomenon based on the ability of the brand to continuously meet its obligations and on the estimation related to the rewards of remaining in the relationship [12]. Brand trust is the confident expectations of the brand's reliability and intention in situations entailing risk to the customer [19]. Consequently, high levels of trust in a brand enable customers to reduce perceived risk and facilitate repeat patronage of the brand [25]. The overarching effect of brand trust as can be adduced from the preceding conceptualizations is to enhance consumer commitment and loyalty.

3.2 Dimensions of Brand Trust

Brand trust has been recognized in the extant literature as the central element involved in the development and maintenance of the relationship between two exchange partners in diverse contexts [26,27] Verhoef et al. [28]. Consumer interests rest on the idea of reciprocity, which is fundamental in the paradigm of exchange-defined as the moral obligation to give something in return for the good one has received [29]. Three key dimensions of brand trust as have been proposed in the extant literature are credibility, integrity, and benevolence. The next section throws some light on these dimensions.

3.2.1 Brand credibility

Brand credibility refers to the brand's ability to meet the terms of exchange relative to expected performance. This dimension is grounded on the consumer's attribution to the brand of a certain degree of expertise resulting from the consumer's functional expectations for the satisfaction of his/her needs. In the views of Moorman et al. [30] and Rempel et al. [31], credibility reflects the willingness of the customer to rely on the competence and reliability of the brand.

3.2.2 Brand integrity

Brands are recognized as part of consumers' daily lives and are essential to how they identify products [32]. Previous research has suggested that brands have a direct interface with consumers and are particularly valuable to the companies that own them. As a consequence, consumers depend on and use them as a benchmark for making product choices, amplifying their trust in it [32]. This justifies the need for brand integrity, which dimension refers to the attribution of loyal motivations to the brand concerning its promises involving the terms of the exchange. Integrity is also conceptualized as a type of commitment to certain principles [33] which identify and differentiate the brand from the competition. By implication, the credo of brand integrity is that brand delivery should be consistent with the brand promise.

3.2.3 Brand benevolence

Benevolence has been described as the attribution of a durable, consumer-oriented character to the brand as well as a policy that takes into account consumer interest, ahead of brand interest in the short term [34,35]. This consciousness enables customers to envisage a reduced insecure future since what is being offered is the durability of the terms captured in any form of fair exchange. Benevolence as a dimension of a brand also reflects the motives and intentions of the partner of the exchange as well as qualities [27].

3.3 Brand Commitment

Social psychologists have argued that commitment is a central relationship-specific motive, and emotions of commitment consistently promote pro-relational cognitions, motivations, and behaviors [36,37]. According to Rusbult [37],

commitment level represents a psychological state that globally epitomizes the experience of attachment to a partner and an aspiration to maintain the relationship. Equally, commitment is conceptualized as a critical characteristic in the relationship marketing study. Relationship marketing is operationalized as an enduring yearning to maintain a valued relationship [30]. Accordingly, Morgan and Hunt [18] describe both commitment and trust as 'key variables' that encourage the exchange parties to work at preserving the relationship, avoid alternative relations with other partners and lessen the perception of risk in the environment.

There is considerable consensus in the extant literature that commitment is a mediating construct engineered by factors such as trust and satisfaction and has subsequent effects on customer behavioral dispositions [38]. Brand commitment is distinct from brand lovalty. From a consumer-brand relationship context, Fournier [10] conceptualizes brand commitment as a psychological or emotional attachment to a brand within a product class. Similarly, brand commitment has been described as an average customer's long-term behavioral and attitudinal inclination towards a relational brand [7,39,40,41]. Whiles brand loyalty implies a behavioral concept, brand commitment suggests an attitudinal concept (Warrington & Shim, 2000). Brand commitment has been argued to help attenuate uncertainty and save the consumer the cost of seeking new relational interactions with alternative brands [40].

3.4 Brand Loyalty

The concept of brand loyalty has intrigued researchers for at least three decades, and a substantial body of literature has evolved. The most elaborate conceptualization of brand loyalty was the one presented by Jacoby et al. [42] when they referred to it as a biased (nonrandom) behavioral response, expressed over time by some decision-making unit, with respect to one or more alternative brands out of a set of such brands, and is a function of psychological processes. Generally, building strong and positive brands leads to a preference for a particular brand among customers, which might lead to brand loyalty over time. Loyalty is made up of a high degree of bonding between a customer and a brand. Moreso, loyal customers are those who are unwilling to switch brands and prefer to stick with a brand they feel satisfied and comfortable with [43,44]. Brand loyal customers

are less sensitive to price and open to pay a higher price for a particular brand as opposed to other options, since customers may have a perception of unique value in the brand. Companies with brand-loyal customers stand the advantage of market benefits.

Additionally, firms get trade leverage and do not need to advertise as much as companies without loyal customers do [45,20]. Brand loyalty can also inure to marketing advantages in the form of enhanced word of mouth among brand loyal customers and result in higher profitability [46,20]. Jacoby and Kyner (1973) contend for whether or not consumers are brand loyal or if they only have repeated purchase behaviors. They maintain that consumers who only purchase a brand because it is cheaper compared to consumers who buy brands due to satisfaction are quintessential of different types of brand loyalty (Jacoby & Kyner, 1973). To this end, Mittal and Kamakura [47] aver that consumers who have repeated purchase behavior are less sensitive if there would be changes in satisfaction as compared to brand-loyal consumers. Consumers who are committed to a brand are referred to as brand loyal customers while those who lack attachment to the brand are called spurious consumers. Spurious brand loyal customers can easily change brands if there is a better option or if it would be more comfortable to buy another brand [48,49]. Prior research [50,10,40] has emphasized that trust and commitment are two of the pillars for building brand loyalty.

3.5 Brand Reputation

To become profitable and successful, brands have to develop a positive reputation [34,51,52,53,54]. Brand names can often be repositories for a firm's reputation (i.e. highquality performance on one product can often be transferred to another product through the brand name) [55,56]. A brand's reputation is regarded as the estimation of the consistency over time of an attribute of an entity [54]. Reputable brands are strong assets, which benefit from a high degree of loyalty and stability of future sales. The reputation of a brand is a source of lasting attractiveness and demand, the image of superior quality and added value justifies a premium price. Kapferer [57] argues that for brands with high reputations, the ultimate goal must be to enhance their image and to examine which traits the loyal customers attribute to the brand (Aperia et al., 2004).

Table 1. Previous research on brand trust

Author	Title	Summary
Richard Ramirez and Dwight Merunka [2]	Brand experience effects on brand attachment: The role of brand trust, age, and income.	 Brand experience is positively related to brand attachment, and the more so for younger consumers. This relationship holds for both hedonic and utilitarian brands. Partial mediation of brand trust in this relationship, especially for utilitarian brands, and with a weaker indirect relationship for high-income consumers.
Manu Bhandari and Shelly Rodgers (2018)	What does the brand say? Effects of brand feedback to negative eWOM on brand trust and purchase intentions	 Brand feedback has a simultaneous positive and negative effect on purchase intentions, whereby brand trust mediates the positive effect. Attribution of the product's problem does not significantly change this effect.
Azize ùahin, Cemal Zehir, and Hakan Kitapçı(2011)	The Effects of Brand Experiences, Trust and Satisfaction on Building Brand Loyalty; An Empirical Research On Global Brands	The study proposes the effects of brand experiences to build long-lasting brand and customer relationship with brand trust, satisfaction, and loyalty.
Jon D. Reast (2005)	Brand trust and brand extension acceptance: the relationship.	 The study finds support for a significant association between the variables, comparable in strength with that between media weight and brand share, and greater than that delivered by the perceived quality level of the parent brand.
Enrique P. Becerra and Vishag Badrinarayanan [4]	The influence of brand trust and brand identification on brand evangelism.	 The findings reveal that consumer-brand relationships influence brand evangelism, albeit in different ways. Whereas brand trust influences purchase intentions and positive referrals,
		 brand identification influences positive and oppositional brand referrals. Overall, the findings reveal the power of consumer-brand relationships in engendering brand evangelism, relative to other factors such as extraversion, gender, and brand experience.
Kevin Filo and Daniel C. Funk (2008)	Exploring the role of brand trust in the relationship between brand associations and brand loyalty in sport and fitness.	 Results reveal that brand trust mediates the link between brand loyalty and the management and popularity of the brand across both samples. For the managed sport brands, the links between brand loyalty and both nostalgia and vicarious achievement were also mediated. The authors propose that brand managers work to leverage brand trust through social responsibility, consumer satisfaction and quality customer service in an
		effort to increase consumer brand loyalty.

Brand reputation has also been described from a firm's perspective as a pivotal construct which reflects how likely a customer will be able to switch to other brands, especially when the brand makes a change, either in price or in product features (Aaker, 1991). It also signifies an extrinsic cue, that is an attribute relatable to the product [6], but not of the physical make-up of the brand. A brand's reputation evolves all the time and is essentially developed through the flow of information from one user to the other [54]. reputation embodies the aeneric estimation in which a firm is held by suppliers, customers, employees, competitors, distributors, and the general public. Consequently, firms compete for brand reputation with the consciousness that those with a strong reputation across their brands can leverage on high sales prices, and thus being more powerful compared to the competition [58]. Hence, Walsh and Beatty [59] suggest that to capture the perception of consumers about the reputation of a brand, it should be premised on their overall evaluation of a firm based on their reactions to the company's goods, services, interactions and communication with the firm and constituencies. Reputation has been noted to be a driver of emotional brand attachment, trust, commitment and loyalty [60,61,51].

4. HYPOTHESES DEVELOPMENTS

4.1 Brand Trust and Brand Loyalty

Brand trust and brand loyalty have been classified as central aspects of brand management (Chaudhuri & Holbrook, 2001). Brand trust has been operationalized severally in the extant literature. For instance, Delgadoballester et al. [10] view brand trust as a state of feeling secure while interacting with a brand based on the discernment that the brand will remain dependable and responsible to satisfy the customer. Brand trust is also viewed as consumers' inclination to rely on a brand (Chaudhri & Holbrook, 2001; Mobiman et al., 1993). Additionally, brand trust is perceived as expectations that are based on beliefs that a brand has specific features and traits that are consistent, competent and credible [13,12].

From the view of Garbine and Johnson [11], brand trust is an outcome of previous experiences and interactions and it mirrors the process of learning over time. This position is a corroboration of Keller and Krishnan's [22] position that brand involvement is an essential

source of brand trust. Additionally, Morgan and Hunt [18] note that trust is an important factor in building loyalty as it establishes relationships that are considered with high value. In line with the foregoing, Kumar and Advani [25] intimate that high levels of trust in a brand enable customers to reduce perceived risk and facilitate repeat patronage of the brand which leads to loyalty. Consequent to these arguments, it stands to reason that consumers' trust in a brand has a positive effect on consumer's loyalty to the brand and therefore we argue that brand trust will positively and significantly predict brand loyalty. Thus, the following hypothesis is advanced:

H1: There is a positive and significant effect of brand trust on brand loyalty.

4.2 The Role of Brand Commitment in the Relationship between Brand Trust and Brand Loyalty

Brand commitment has been argued to play a significant role as it serves as a major turning point for relationship marketing models [62]. In the current era of business, customer satisfaction is no more sufficient, and firms must not suffice in gaining customer satisfaction, but strive towards getting loyalty as well (Pakdel et al., 2011). Commitment has been regarded as the main predictor of consequences in relationship marketing (Salciuviene et al., 2011). Vazifedouist and Omidzadeh [63] note that commitment is a clear and explicit obligation to continue the relationship between interacting Accordingly, Panahivanani and Sha'bani (2014) suggest that commitment is the perpetual tendency to maintain a valuable relationship.

Evidence from Morgan and Hunt (2000) as well as Vazifedouist and Omidzadeh [63] underscore the fact that commitment is formed when parties believe the relationship is important and do their best to maintain or improve it. Commitment thrives on the tendency of recurrent purchase and price analysis by customers and the fact that increasing customer loyalty leads to the guarantee of future revenues from the existing pool of customers. This solidifies the position that customer loyalty is the ultimate goal for every firm [64], Evans et al., 2009. The practical implication is that firms with a larger pool of committed customers profit from an increase in selling price, lower customer switching, positive word of mouth, higher purchasing power, customer lifetime value, among others [63]. It stands therefore to reason that customers'

development of trust in brands is a sine qua non to their commitment to the brand and as they become more committed, they start displaying actions consistent with loyal customers. We argue therefore that brand commitment mediates the relationship between brand trust and brand loyalty. Thus the following hypotheses are considered:

- H2: There is a positive and significant effect of brand trust on brand commitment
- H3: There is a positive and significant effect of brand commitment on brand loyalty.
- H4: Brand commitment mediates the relationship between brand trust and brand loyalty.

4.3 The Role of Brand Reputation

Previous research describes brand reputation as an extrinsic variable-an attribute related to the product but not of the physical composition of the product [65]. Herbig and Melewicz [54] opine that brand reputation evolves all the time and is created mainly by the flow of information from one user to another. Similarly, Fombrun and Shanley (1990) report that brand reputation embodies the general assessment in which a company is held by employees, suppliers, competitors, and customers, among others. As a result, companies compete for brand reputation knowing that those with a strong reputation across their products can leverage on the highest sales prices and become more powerful than

their competitors [58,51]. Equally, Walsh and Beatty [59] intimate that in order to capture the perception of the consumer about the reputation of the brand, it should involve the total evaluation of a firm by a customer, based on his/her reactions of the firm's goods, communication activities, services, interactions with the firm and its representatives or publics (i.e. management, employees and customers). Consequently, we argue that apart from customers' trust and commitment towards a brand, there is the need for the brand to possess higher levels of reputation (relative to competitors') to trigger customer's loyalty towards the brand. In light of the above discussion, we suggest that:

- H5: Brand reputation will moderate the relationship between brand trust and brand commitment.
- H6: Brand reputation will moderate the relationship between brand trust and brand loyalty.

This is represented in Fig. 1. We proposed a research model as shown in Fig. 1 and tested the hypotheses. In the model we hypothesized that brand trust has a positive and significant effect on brand commitment (H1), and brand loyalty (H2). Brand commitment positively and significantly affects brand loyalty (H3). We further argue that brand reputation moderates the relationship between brand trust and brand commitment (H4) as well as the relationship between brand trust and loyalty (H5).

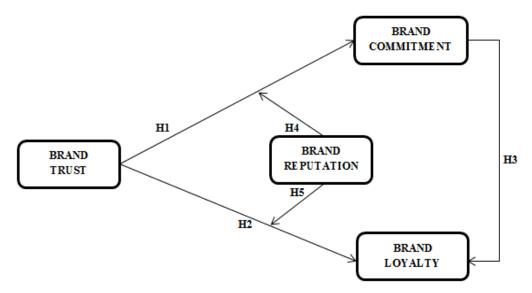


Fig. 1. Conceptual Framework

5. EMPIRICAL RESULTS

5.1 Measurement of Variables

To test the hypotheses developed in this study, a quantitative survey approach adopting structured questionnaires was deployed on the empirical data to allow actual measures to be calculated for the responses obtained from the respondents. Variables in the questionnaire encapsulated measures on brand trust, brand commitment, brand lovalty, and brand reputation. Except for the demographic information, all the constructs were assessed through five-point Likert type scales, premised on "1=strongly disagree" to "5=strongly agree" with "3=neutral". All directional (dependent and independent constructs variables) were conceptualized with reflective measures. Relative to the operationalization of the independent variables, we took inspiration from the work of Gurviez and Korchia [35] for the measures of trust (i.e. brand credibility, brand integrity and brand benevolence). We derived the measures for brand reputation from Fombrun and Shanley (1990). Concerning commitment, the measures were adapted from Gustaffson et al. (2006) while items for brand loyalty were derived from Nam and Ekinci [61]. The second part of the questionnaire centered on the demographic profile of the respondents (age, gender, education, and the number of years using the current phone). The measurement items were all refined through the adoption of scale generation and purification techniques and procedures recommended by scholars [66,67], predominantly through confirmatory analysis. To evaluate the various hypotheses proposed in the current study, we employed the structural equation modeling technique. This technique, according to Bagozzi and Yi [68] is a preferred approach since it affords researchers the latitude to control for measurement error. provides information on the degree of fit of the tested model, as well as the ability to test multiple relationships [69].

5.2 Samples and Data Collection

Data for the current research was accessed from smartphone users in South Korea. The respondents were sampled purposively after they indicated their willingness to partake in the study. A total of 450 smartphone users were sampled for the current study. Prior to the questionnaire administration, we carried out an adequate assessment of the psychometric properties of the measurement items via testing for face and

content validity using academic faculty and branding consultants [70]. Out of the 450 questionnaires handed out, 423 were returned, out of which eleven had anomalies and had to be withdrawn. Accordingly, we made use of 412 valid and fully filled questionnaires with enough adequacy for the intended analysis. In effect, the final usable data represented a response rate of 91.6%.

5.3 Profile of Respondents

The results for the distribution of the demographic characteristics of the respondents reveal that the sample had representative adequacy. From the operational data, as shown in Table 2, a profiling of the respondents reveals that majority (59.5%) are males while 40.5% are females. The results further reveal that the majority of the respondents (53.2%) are between 26-35 years, 26.7% are between 18- 25 years, 12.4% are between 36-45 years, while 7.8% are at least 45 years old. Moreover, the data shows that 57.8% of the respondents have a bachelors' degree as their highest level of education, 28.6% had a masters' degree, 10.7% had a high school certificate, while 2.9% indicated they have doctorate degrees as their highest level of education. In effect, the data shows that each of the respondents has at least a senior high education (a basic form of education). With respect to the number of years they have been using their current smartphones, a majority (53.4%) indicated they have been using their phones for 1-3 years, 28.2% indicated 4-6 years, while 18.4% indicated at least 6 years. The foregoing implies that each respondent has been using a smartphone for at least a year, which qualifies them to take part in the current research.

5.4 Reliability and Validity Analysis of Variables

Because the measurement items were adapted from previous research, we adopted a confirmatory factor analysis (CFA) in validating them. In relation to internal consistency, the Cronbach's alpha values for the constructs ranged from 0.838 to 0.920. The factor loadings also ranged between 0.627 and 0.962, indicative that the theoretical constructs exhibited acceptable psychometric reliability in the current research [70]. Based on the need of the model as part of the hypothesis construct; a second order construct "Brand Trust" was constructed from the three existing variables, namely Brand

Competence, Brand Integrity and Brand Benevolence. These variables were imputed together during the process in the measurement model. Then the model fitness was assessed via the use of the normed chi-square index (x²/df), good of fit index (GFI) and the comparative fit index (CFI). This was subsequently, followed by the Tucker-Lewis index (TLI), root mean squared residual (RMR), and the root mean square error

of approximation index (RMSEA) as underscored by Anderson and Gerbing (1988). Through the adoption of these fit indices, the CFA occasioned the following fit indices: x²/df=2.733, RMR=.054, GFI=.932, NFI=.942, RFI=.927, IFI=.962, TLI=.952, CFI=.962, RMSEA=.065. These outcomes emphasize the unidimensionality of each of the constructs adopted in this study. The CFA results are presented in Table 3.

Table 2. Profile of respondents

Classification		Frequency Percentage		Classifi	cation	Frequency Percentag	
Age	18-25			Education	High Schoo	144	10.7
	years 26-35	219	53.2		Bachelors	238	57.8
	years 36-45	51	12.4		Masters	118	28.6
	years Above 45 years	32	7.8		Doctorate	12	2.9
Gender	Male	245	59.5	Number of	1-3 years	220	53.4
				years using	4-6 years	116	28.2
	Female	167	40.5	current phone	Above 6 years	76	18.4
				Total		412	100.0

Table 3. Measurement model

Item	Construct	ß Estimate	Std. Err.	t-Value	Р	Cronbach's Alpha
BCOM1	Brand	.627	.069	10.854	***	0.838
BCOM3	Commitment	.821				
BCOM4		.742	.081	11.707	***	
BL1	Brand Loyalty	.845	.042	20.934	***	0.894
BL2	, ,	.879				
BL3		.856	.044	21.259	***	
BB1	Second Order	.904	.043	23.106	***	0.902
BB2	Construct	.855				
BB3		.854	.048	21.569	***	
BI1	Brand Trust	.962	.051	23.544	***	0.920
BI2		.919	.051	22.653	***	
BI3		.800				
BC1		.825				0.849
BC2		.851	.061	17.503	***	
BC3		.749	.060	15.768	***	

(Model fit: x²/df=2.733, RMR=.054, GFI=.932, NFI=.942, RFI=.927, IFI=.962, TLI=.952, CFI=.962, RMSEA=.065)
Note: BCOM - Brand Commitment, BL - Brand Loyalty, BB- Brand Benevolence, BI - Brand Integrity, BC Brand Competence

Table 4. Descriptive statistics and inter-construct correlation

Construct Name	Mean	St.D	1	2	3
Brand Loyalty (1)	3.1793	.58317	0.860		
Brand Commitment (2)	2.6461	.70430	0.321***	0.735	
Brand Trust (3)	2.9119	.58317	0.300***	0.179**	0.708

Note: Significance of Correlations: † p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001

In line with the foregoing, discriminant validity was established by comparing the shared AVE values between pairs of variables with their squared phi correlations. In all instances, the values of the AVE were greater than the shared squared phi correlations connected with each pair of variables, signifying the discriminant validity of the constructs (Fornell & Larcker, 1981). The correlation coefficients ranged from 0.179 to 0.321 with AVE's also ranging from 0.708 to 0.860. Table 4 presents the outcome of the discriminant validity (indicative of the fact that the constructs are distinct from one another) as it displays the descriptive statistics and interconstruct correlations with the shared average variance extracted. As mentioned above Table 3 shows the second order construct Brand Trust carried all measures from the three variables (Brand Competence, Brand Integrity and Brand Benevolence) that were imputed in the measurement model.

5.5 Model Fit and Hypothesis Test

As Table 5 represents, the parameter estimates show the final results which effectively elucidates the findings of the study in consonance with the hypotheses submitted early on. The model fit indices for the structural model adduce proof of a model fit $(x^2/df=2.733, RMR=.054,$ good NFI=.942, GFI=.932, RFI=.927, IFI=.962. TLI=.952, CFI=.962, RMSEA=.065). The first hypothesis states that brand trust has a positive and significant effect on brand commitment. Relative to this hypothesis, the structural equations modeling results revealed a positive and significant effect of brand trust on brand commitment (β = .204, t= 4.253, P < 0.05).

Hypothesis two states that there is a positive and significant effect of brand trust on brand loyalty. Concerning this hypothesis, the SEM results showed a positive and significant effect of brand trust on brand loyalty (β = .306, t= 6.800,P < 0.05). Hypothesis three states that brand commitment has a significant positive relationship with brand loyalty. Consistently, the SEM results indicated a positive and significant effect of brand commitment on brand loyalty (β=.307,t=6.768, P<0.05). Hypothesis four states that brand commitment mediates the relationship between brand trust and brand loyalty. As Table 6 indicates, the indirect effect was positive and significant (β =.069***, P =0.001). The fifth hypothesis states that brand reputation moderates the relationship between brand trust and brand commitment. As Table 7 shows, the structural equation modeling results showed that brand reputation moderates the relationship between brand trust and brand commitment as both the direct and indirect relationships were significant. Specifically, since the $\boldsymbol{\beta}$ estimate for the interaction was positive, it can be posited that brand reputation strengthens the positive relationship between brand trust and brand commitment (β =.150, t=3.074, P =.002). In effect, the higher the reputation of the brand, the higher the effect of brand trust on brand commitment. Similarly, hypothesis six states that brand reputation moderates the relationship between brand trust and brand loyalty. Relative to this hypothesis, the results showed an insignificant $(\beta = -.073,$ t=1.592, P=.111). outcome Consequently, we can surmise that brand reputation does not moderate the relationship between brand trust and brand loyalty.

Table 5. Final structural model with and assessment results

Structural Relationships	ß Estimate	Std. Err.	t- value	Р	Decision
Brand Commitment ←Brand Trust	.204	.058	4.253	***	Supported
Brand Loyalty ←Brand Trust	.306	.085	6.800	***	Supported
Brand Loyalty ← Brand Commitment	.307	.071	6.768	***	Supported

(Model fit: x²=2.733, RMR=.054, GFI=.932, NFI=.942, RFI=.927, IFI=.962, TLI=.952, CFI=.962, RMSEA=.065)

Table 6. Mediation analysis

Indirect Path	Unstandardized Estimate	Lower	Upper	P- Value	Standardized Estimate	Decision
Brand Trust> Brand Commitment> Brand Loyalty	0.131	0.085	0.194	0.001	0.069***	Supported

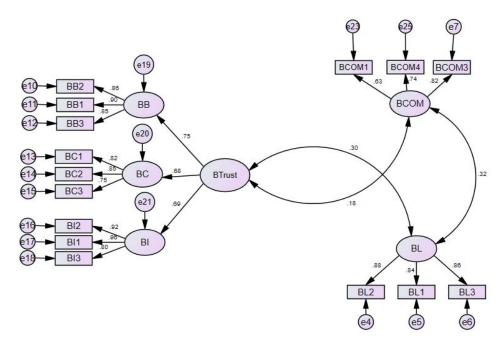


Fig. 2. Measurement Model

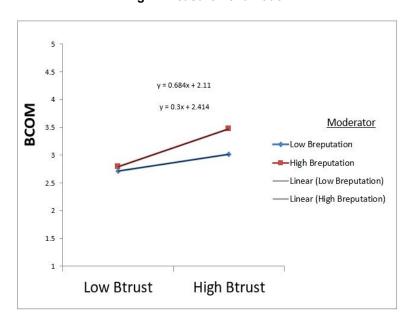


Fig. 3. Moderation Analysis

Table 7. Moderation Analysis

Structural Relationships	ß	Std.	t-	Р	Decision
	Estimate	Err.	value		
Brand Commitment ← Brand Reputation	.150	.045	3.039	.002	Supported
Brand Commitment ← Brand Reputation X Brand Trust	.150	.031	3.074	.002	
Brand Loyalty←Brand Reputation	073	.066	-1.592	.111	Not
Brand Loyalty ← Brand Reputation X Brand Trust	.051	.046	1.131	.258	Supported

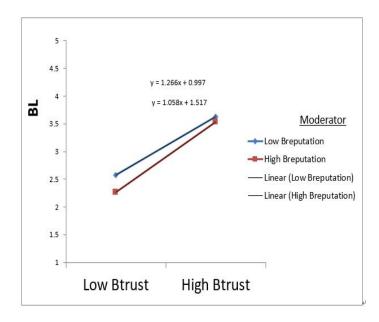


Fig. 4. Moderation Analysis

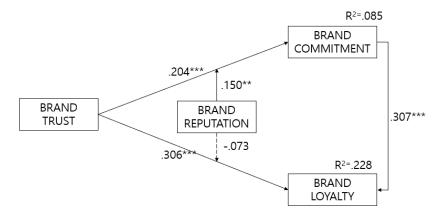


Fig. 5. Structural model

6. DISCUSSION

6.1 Summary of Findings

The study highlights how brand trust influences brand commitment and brand loyalty. It further examines the mediating and moderating roles of brand commitment and brand reputation respectively. The study assessed these relationships anchored on the commitment-trust theory. In general, the study found brand trust as germane to brand commitment. This outcome lends credence to Aydin and Ozer [66] who posit that customers' development of trust in brands is crucial to their commitment to the brands. Thus. in tandem with previous research, this study reinforces the argument that customers' trust in

brands engenders their commitment towards the brands.

Similarly, the results adduced statistical support for a positive and significant effect of brand trust on brand loyalty. This result is consistent with prior research [63], Evans et al., 2009 which underscores the fact that brand loyalty is a key outcome of brand trust. Therefore, in line with extant research, the current study corroborates the position that brand loyalty is a key consequent of brand trust. Additionally, the outcome found support for a positive and significant relationship between brand commitment and brand loyalty. This outcome lends credence to Pakdel et al. (2011) who opine that brand commitment is regarded as the main

predictor of consequences in relationship marketing which includes (but not limited to) brand loyalty. This research through these outcomes contributes to knowledge by reinforcing the argument that brand commitment is a key predictor of brand loyalty.

In the same token, the results found that brand commitment mediates the relationship between brand trust and brand loyalty. This outcome highlights the position held by Morgan and Hunt [18] that commitment is a key variable that enhances parties to work at preserving the relationship. It also reinforces the position held by Dwyer, Schurr, and Oh [38] that brand commitment is a key mediating construct engineered by factors such as trust and satisfaction, and has subsequent effects on customer behavioral dispositions. In effect, the current study, in line with extant literature underscores the argument that commitment mediates the relationship between brand trust and brand commitment.

One noteworthy outcome of this research is the role played by brand reputation in moderating the relationship between brand trust and brand commitment. In effect, the current study contributes to extant knowledge to the degree that is has uncovered that the relationship between brand trust and brand commitment is predominantly influenced by the reputation of the brand. Particularly, it is profound to observe that the standard estimate of the interaction was significant and positive, implying that brand reputation strengthens the positive relationship between brand trust and brand commitment. In effect, at high levels of brand trust, consumers' level of commitment towards the brand will be increased based on the reputation of the brand. This outcome reinforces the position of Fombrun and Shanley (1990) that because brand reputation encompasses the general assessment in which the company and the brand are held by stakeholders such as customers, it becomes the benchmark around which customers develop behavioral tendencies towards the brand. Accordingly, this study contributes to the ongoing debates in the current literature by buttressing the argument that brand reputation moderates the relationship between brand trust and brand commitment.

On a whole, this research progresses knowledge by adducing empirical and practical illuminations to the question that has remained mainly unaddressed in the extant relationship marketing literature: what is the role of brand reputation in influencing the relationships among brand trust, brand commitment, and brand loyalty. This research reveals that brand trust influences brand commitment positively and significantly. The study further finds that brand commitment positively and significantly influences brand loyalty and significantly mediates the relationship between brand trust and brand loyalty. The current research further finds that brand trust is positively and significantly related to brand lovalty. Additionally, the study finds that brand reputation moderates the relationship between brand trust and brand commitment (but not the relationship between brand trust and brand loyalty). In other words, brand reputation strengthens the positive relationship between brand trust and brand commitment.

6.2 Theoretical Implication

The current study progresses theory by extending the commitment-trust theory on a phenomenon-brand trust. burgeoning existing literature on brand trust and brand loyalty shows a lacuna and dearth of studies premised on the commitment-trust theory. Accordingly, this research contributes modestly to that effect, by adducing empirical support from brand trust, brand loyalty and brand reputation perspectives for this well-acknowledged theory [18] with a conceptual framework that demonstrates robustness, rigor and good explanatory power. Additionally, the literature on brand trust shows a paucity of empirical research that integrates and evaluates interconnections among the constructs utilized in this study, particularly in the dimensions of brand commitment, brand reputation, and brand lovalty. Previous studies either assessed interconnections among these constructs in isolation or in tandem with different variables [12,13] (Garbine and Johnson, 1999; Maria, 2003 stimulating the need for further empirical evaluations, validation and theory building. More so, this research contributes to knowledge by presenting outcomes that evaluate multiple nexuses among the constructs adopted as well as utilizing data from respondents from a South Korean context.

6.3 Managerial Implications

Deriving understanding into how brand trust influences band loyalty via brand commitment and brand reputation provides new guidelines in managing issues such as brand trust. Significant empirical outcomes in the current research can

be observed along the following lines: that brand trust is instrumental in predicting brand commitment. That brand commitment and brand loyalty are positive and significant antecedents of brand loyalty. That brand commitment mediates the relationship between brand trust and brand loyalty and that brand reputation moderates the relationship between brand trust and brand commitment. Consequently, to enhance and encourage consumers' loyalty to smartphone brands, firms in the smartphone industry and by extension all firms in South Korea and the world as a whole must put in place strategies that enhance consumers' trust in the brand. This may include but not limited to building more brand credibility (ensuring the quality and safety of the phone as well as offering guarantees/warranties), enhancing the integrity of the phone brand (through ensuring sincerity and honesty towards customers) as well as building on the brand benevolence (through ensuring that the phones are reviewed taking into account advances in research, looking for avenues to improve customer service, among others). Also, to enhance the reputation of the brand, firms should exert more effort into being customer-oriented, ensuring the quality and reliability of the phones and taking into consideration social and environmental responsibility as that has the potential of appealing to the emotions of customers.

7. LIMITATIONS AND FUTURE RESEARCH

Consistent with all empirical researches, the current study comes along with some limitations providing fresh possibilities for future research. In the first instance, this research is limited to South Korean smartphone users only. Consequently, the findings are only within this remit, implying that practitioners and scholars should exercise high levels of caution in attempting to universally generalize it with other contexts. Equally, the various hypotheses advanced in this study were tested using respondents in a single country, is cross-sectional and hence, may not yield static effects in other contexts. Besides, due to disparities in contexts, subsequent research is needed to validate and substantiate the construct relationships and outcomes from this research. Furthermore. the effects tested relationships and not causalities. The concepts examined in the current study are also relevant across different economic contexts. Accordingly, these outcomes open up fresh debates on the concept under investigation, particularly, the

incongruities that may emerge between brand trust and brand loyalty as well as the moderating role played by brand reputation. Additional research that adopts different moderating and mediating variables will be insightful.

8. CONCLUSION

This research commenced to empirically test the effect of brand trust on brand commitment and brand loyalty while testing for the mediating and moderating roles of brand commitment and brand reputation respectively. The results of the study reveal that brand trust and brand commitment positively and significantly influence brand loyalty. The study further finds that brand trust is positively and significantly related to brand commitment, while the latter mediates the relationship between brand trust and brand loyalty. Equally, the study finds support for the moderating role of brand reputation on the relationship between brand trust and brand commitment.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

- Singla V, Gupta G. Emotional Branding Scale and Its Role in Formation of Brand Trust. Paradigm; 2019. 0971890719859668.
- Ramirez R, Merunka D. Brand experience effects on brand attachment: The role of brand trust, age, and income; 2019.
- 3. Bhandari M, Rodgers S. What does the brand say? Effects of brand feedback to negative eWOM on brand trust and purchase intentions. International Journal of Advertising. 2018;37(1):125-141.
- Becerra PE, Badrinarayanan V. The influence of brand trust and brand identification on brand evangelism. Journal of Product & Brand Management. 2013; 22(5/6):371-383.
- Grönroos C. Relationship marketing: challenges for the organization. Journal of Business Research. 1999;46(3):327-335.
- Zeithaml VA. Mary Jo Bitner. Service Marketing, Integrating Customer Focus Across The Firm; 2000.
- Das G, Agarwal J, Malhotra NK, Varshneya G. Does brand experience translate into brand commitment?: A

- mediated-moderation model of brand passion and perceived brand ethicality. Journal of Business Research. 2019;95: 479-490.
- 8. Egan J. Relationship marketing: Exploring relational strategies in marketing (2nd Ed.). Essex, UK: Prentice Hall; 2004.
- Payne A, Frow P. Services Relationship Marketing: A Sector Case Study, in this book; 2000.
- Fournier S. Consumers and their brands: developing relationship theory in consumer research. Journal of Consumer Research. 1998;24:343–73.
- Garbarino E, Johnson MS. The different roles of satisfaction, trust, and commitment in customer relationships. Journal of Marketing. 1999;63(2):70-87.
- Doney PM, Cannon JP. An examination of the nature of trust in buyer-seller relationships. Journal of Marketing. 1997;61(2):35-51.
- El Naggar RAA, Bendary N. The impact of experience and brand trust on brand loyalty, while considering the mediating effect of brand Equity dimensions, an empirical study on mobile operator subscribers in Egypt. The Business & Management Review. 2017;9(2):16-25.
- Zehra SJ, Arshad U. Brand trust And Image: Effect on customers' satisfaction. Journal of Marketing and Logistics (JML). 2019;2:50-64.
- Sahin A, Zehir C, Kitapçı H. The effects of brand experiences, trust and satisfaction on building brand loyalty; an empirical research on global brands. Procedia-Social and Behavioral Sciences. 2011;24:1288-1301.
- Reast JD. Brand trust and brand extension acceptance: The relationship. Journal of Product & Brand Management. 2005;14:4-13.
- 17. Kabadayi ET, Alan AK. Brand trust and brand affect: Their strategic importance on brand loyalty. Journal of Global Strategic Management. 2012;11(6):81-88.
- 18. Morgan RM, Hunt SD. The commitment-trust theory of relationship marketing. Journal of Marketing. 1994;58(3):20-38.
- Delgado-Ballester E, Munuera-Aleman JL, Yague-Guillen MJ. Development and validation of a brand trust scale. International Journal of Market Research. 2003;45(1):35-54.
- Chaudhuri A, Holbrook MB. The chain of effects from brand trust and brand affect to

- brand performance: The role of brand loyalty. Journal of Marketing. 2001;65(2): 81–93.
- 21. Dalziel N, Harris F, Laing A. A multidimensional typology of customer relationships: From faltering to affective. International Journal of Bank Marketing. 2011;29(5):398-432
- Krishnan HS. Characteristics of memory associations: A consumer-based brand equity perspective. International Journal of Research in Marketing. 1996;13(4):389-405.
- Oly Ndubisi N. Relationship marketing and customer loyalty. Marketing Intelligence & Planning. 2007;25(1):98-106.
- 24. Lewis BR, Soureli M. The antecedents of consumer loyalty in retail banking. Journal of Consumer Behaviour: An International Research Review. 2006;5(1):15-31.
- 25. Ramesh Kumar S, Advani JY. Factors affecting brand loyalty: A study in an emerging market on fast moving consumer goods. Journal of Customer Behaviour. 2005;4(2):251-275.
- Sirdeshmukh D, Singh J, Sabol B. Consumer trust, value, and loyalty in relational exchanges. Journal of Marketing. 2002;66:15–3.
- Amani Z. Commitment as a Mediator of the Relationship between Trust and Relationship Loyalty to Retailer. Journal of Business Studies Quarterly. 2015;6(3):144.
- Verhoef PC, Franses PH, Hoekstra JC.
 The effect of relational constructs on customer referrals and number of services purchased from a multiservice provider: does age of relationship matter? Journal of the Academy of Marketing Science. 2002;30(3):202-16.
- 29. Ring PS, Van de Ven AH. Structuring Cooperative Relationships between Organizations, Strategic Management Journal. 1992;13(7):483-498.
- 30. Moorman C, Zaltman G, Deshpande R. Relationships between providers and users of marketing research: The dynamics of trust within and between organizations. Journal of Marketing Research. 1992; 29(3):314–329.
- Rempel, John K, John G. Holmes, Mark P. Zanna. Trust in Close Relationships Journal of Personality and Social Psychology. 1985;49(1):95-112.
- 32. Cambier F, Poncin I. Proclaiming brand transparency: An effective strategy for advertising customer-ideated new

- products. In 2018 AFM International Congress; 2018.
- 33. Rieke ML, Guastello SJ. Unresolved issues in honesty and integrity testing; 1995.
- 34. Foroudi P. Influence of brand signature, brand awareness, brand attitude, brand reputation on hotel industry's brand performance. International Journal of Hospitality Management, 2019;76:271-285.
- Gurviez P, Korchia M. Test of a consumerbrand relationship model including trust and three consequences. In Thirtieth International Research Seminar in Marketing. 2003;1-20.
- Rusbult CE, Buunk BP Commitment processes in close relationships: An interdependence analysis. Journal of Social and Personal Relationships. 1993; 10(2):175-204.
- Rusbult CE, Farrell D. A longitudinal test of the investment model: The impact on job satisfaction, job commitment, and turnover of variations in rewards, costs, alternatives, and investments. Journal of Applied Psychology.1983;68(3):429.
- 38. Dwyer FR, Schurr PH, Oh S. Developing buyer-seller relationships. Journal of Marketing. 1987;51(2):11-27.
- Montgomery NV, Rajagopal P. Motivated reconstruction: The effect of brand commitment on false memories. Journal of Experimental Psychology: Applied, 2018; 24(2):159.
- 40. Gundlach GT, Achrol RS, Mentzer JT. The structure of commitment in exchange. Journal of Marketing. 1995;59(1):78-92.
- 41. Chaudhuri A, Holbrook MB. Product-class effects on brand commitment and brand outcomes: The role of brand trust and brand affect. Journal of Brand Management. 2002;10(1):33-58.
- 42. Jacoby J, Chestnut RW. Brand loyalty measurement and management; 1978.
- 43. Coelho PS, Rita P, Santos ZR. On the relationship between consumer-brand identification, brand community, and brand loyalty. Journal of Retailing and Consumer Services. 2018;43:101-110.
- 44. Rosenbaum-Elliott R, Percy, Pervan S. Strategic brand management; 2011.
- 45. Kim SS, Choe JYJ, Petrick JF. The effect of celebrity on brand awareness, perceived quality, brand image, brand loyalty, and destination attachment to a literary festival. Journal of Destination Marketing & Management. 2018;9:320-329.

- 46. Dick AS, Basu K. Customer loyalty: toward an integrated conceptual framework. Journal of the Academy of Marketing Science. 1994;22(2):99-113.
- 47. Mittal V, Kamakura WA. Satisfaction, repurchase intent, and repurchase behavior: Investigating the moderating effect of customer characteristics. Journal of Marketing Research. 2001;38(1):131-142.
- 48. Aluri A, Price BS, McIntyre NH. Using machine learning to cocreate value through dynamic customer engagement in a brand loyalty program. Journal of Hospitality & Tourism Research, 2019; 43(1):78-100.
- Bloemer JM, Kasper HD. The complex relationship between consumer satisfaction and brand loyalty. Journal of Economic Psychology. 1995;16(2):311-329.
- Khan I, Fatma M. Connecting the dots between CSR and brand loyalty: the mediating role of brand experience and brand trust. International Journal of Business Excellence. 2019;17(4):439-455.
- Loureiro SMC, Sarmento EM, Le Bellego, G. The effect of corporate brand reputation on brand attachment and brand loyalty: Automobile sector. Cogent Business & Management. 20174;4(1):1360031.
- 52. Han SH, Nguyen B, Lee TJ. Consumer-based chain restaurant brand equity, brand reputation, and brand trust. International Journal of Hospitality Management. 2015; 50:84-93.
- 53. Sengupta AS, Balaji MS, Krishnan BC. How customers cope with service failure? A study of brand reputation and customer satisfaction. Journal of Business Research. 2015;68(3):665-674.
- 54. Herbig P, Milewicz J. The relationship of reputation and credibility to brand success. Pricing Strategy and Practice. 1997; 5(1):25-29.
- 55. Joo, B., & Hwang, S. Impact of Negative Review Type, Brand Reputation, and Opportunity Scarcity Perception on Preferences of Fashion Products in Social Commerce. Journal of Fashion Business. 2016;20(4):207-225.
- Moorthy K. Sridhar. Using Game Theory to Model Competition. Marketing. 1985; 262-282.
- 57. Kapferer J. Strategic brand management, 2/e, Kogan Page; 1997.

- 58. Loureiro SMC, Kaufmann HR. Luxury values as drivers for affective commitment: The case of luxury car tribes. Cogent Business & Management. 2016;3(1), 1171192.
- 59. Walsh G, Beatty SE. Customer-based corporate reputation of a service firm: Scale development and validation. Journal of the Academy of Marketing Science. 2007;35(1):127-143.
- Amis J. Good things come to those who wait": The strategic management of image and reputation at Guinness. European Sport Management Quarterly. 2003;3(3): 189-214.
- 61. Japutra A, Ekinci Y, Simkin L. Exploring brand attachment, its determinants and outcomes. Journal of Strategic Marketing, 2014;22(7):616-630.
- Alrubaiee L, Al-Nazer N. Investigate the impact of relationship marketing orientation on customer loyalty: The customer's perspective. International Journal of Marketing Studies. 2010;2(1):155.
- 63. Vazifedoust Hosein, Omidzadeh Rezvan. Examining the effect of automatic services on customer commitment in banking industry, Marketing Management Magazine. 2013;20.
- Ghasemi N, Beiranvand T. Effect of Customer Commitment on Trust and Loyalty of Customers towards Air Travel Agencies in Ahwaz City, Iran. Journal of

- Administrative Management, Education and Training. 2016;12:92-101.
- 65. Zeithaml VA. Consumer perceptions of price, quality and value: A means-end model and synthesis of evidence. The Journal of Marketing. 1988;52:2-22.
- Aydin S, Özer, G. The analysis of antecedents of customer loyalty in the Turkish mobile telecommunication market. European Journal of Marketing. 2005; 39(7/8):910-925.
- King RA, Racherla P, Bush VD. What we know and don't know about online word-ofmouth: A review and synthesis of the literature. Journal of Interactive Marketing. 2014;28(3):167-183.
- 68. DeVellis Robert F. Scale development: Theory and Applications; 2003.
- 69. Bagozzi RP, Yi Y. On the evaluation of structural equation models. Journal of the Academy of Marketing Science. 1988; 16(1):74-94.
- 70. Bagozzi RP, Yi Y. Specification, evaluation, and interpretation of structural equation models. Journal of the Academy of Marketing Science. 2012;40(1):8-34.
- 71. Byrne BM. Structural equation modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming. Psychology Press; 2013.
- Nunnally JC, Bernstein IH. McGraw-Hill series in psychology. Psychometric theory. New York, NY, US: McGraw-Hill; 1967.

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