

## Navigating Brand Loyalty: The Dynamic Interplay of Engagement, Attachment, and Usage Patterns

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### Abstract

*Mobile electronic devices' demand is greater than any other electronic device currently. This study aims to find the mechanism that creates Brand Loyalty through Brand Engagement in the context of the mobile industry, where market saturation makes it very difficult for organizations to gain it. This study determines the effectiveness of psychological drivers including Brand Awareness; Brand Image; Brand Psychological Ownership; and Value Congruity in developing Customer Brand Engagement, as well as to investigate the effect of Customer Brand Engagement on Behavioral Brand Loyalty through the mediating influence of Brand Awareness. The study also investigated the moderating role of Brand Usage Duration and the role of Usage Frequency between Brand Awareness and Behavioral Brand Loyalty. Customers' data was collected using an existing established questionnaire through convenience sampling, the public intercept sampling approach was used. The data was acquired from 384 respondents. The structure equation model method was used to analyze the data. This study demonstrated the effectiveness of consumer psychological motives in establishing Customer Brand Engagement that further leads to Customer Loyalty and reflects which element is more powerful. Further research indicates the impact of Brand Usage Duration on Customer Brand Engagement and Behavioral Brand Loyalty. All variables were proved to have a positive and significant effect except Usage Frequency. This research will assist Brand managers in determining which aspects are more influential in the growth of Customer Brand Engagement that further leads to Brand Loyalty. Study limitations and future directions have been provided at the end of the study.*

**Key Words: Customer Brand Engagement, Brand Awareness, Brand Loyalty**

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## 1. Introduction

The demand for mobile electronic devices has recently surpassed that of any other electronic device, particularly in developing countries where ninety out of a hundred citizens possess such gadgets (Deng et al., 2017). Advances in information and communication technology (ICT) have significantly contributed to the growing demand for these devices (Deng et al., 2017). Mobile telecommunication technology encompasses wireless internet, such as mobile data and Wi-Fi, mobile phone devices, MP3 players, and Global Positioning System (GPS). This technology undergoes constant innovation and development in response to the changing needs and preferences of diverse consumers (Mokhlis & Yaakop, 2012). The World Bank's research report indicates that the mobile phone market is expanding at an impressive rate. Just 0.03 million mobile phone subscriptions existed worldwide in 2000; however, in just 13 years, that figure has increased to 13.57 million (Muneta & Pascual, 2019). Three-quarters of all mobile phone subscribers come from poor nations, according to a 2013 International Telecommunication Union (ITU) research that found 84% of the world's population have access to mobile phones (Sam, 2017).

With demand exceeding supply, mobile manufacturing organizations have substantial problems in developing Brand Engagement in an era of market saturation (Hollebeek & Macky, 2019). In this regard, Khan et al. (2016) asserted that the outcomes of Brand Engagement manifest in improved organizational performance, as evidenced by increased sales, lower costs, and product development. The study also emphasized the need to investigate other variables such as Brand Loyalty because of Brand Engagement (Khan et al., 2016). Moreover, the heightened attention towards Brand Engagement stems from its role in resisting brand switching and lowering price sensitivity (Islam et al., 2017). Companies aspire to foster long-term relationships with their customers, actively working towards relationship building (Elbedweihy et al., 2016; Tuškej & Podnar, 2018). On the other hand, customers are inclined to choose brands that add meaning or values to their lives and reflect their self-concept (Tuškej et al., 2013).

Furthermore, Kumar & Nayak (2019) claimed that the literature on Brand Engagement is still understudied. They claimed that the mechanism through which Brand Engagement is developed and further leads to Brand Loyalty is still unknown (Hollebeek et al., 2016; Kumar & Nayak, 2019). The literature has also advocated studying Brand Engagement in the context of consumer behavior and characteristics such as UFREQ and Duration, as consumers' behaviors have a significant effect on consumers' attitudes for example: Brand Engagement and Brand Loyalty (Kumar & Nayak, 2019; Hollebeek et al., 2014). This study aims to fill in the gaps in the literature by investigating the mechanisms underlying the relationship between Customer Brand Engagement (CBE) and Behavioral Brand Loyalty (BBL) in the context of the mobile sector. To develop Customer Brand Engagement (CBE), this study evaluates the efficacy of psychological drivers such as (Brand Awareness) BAWR, (Brand Image) BIMG, (Brand Psychological Ownership) BSO, and Virtual Congruity (VCON). Additionally, it explores the impact of CBE on Behavioral Brand Loyalty (BBL) through the mediating influence of Brand

Attachment (BA). Additionally, the study investigated how Brand Usage Duration (BUD) and Usage Frequency (UFREQ) moderated the relationship between BA and BBL.

## **2. Literature Review**

### **2.1. Brand Psychological Awareness (BSO)**

In their comprehensive literature review, Lyu et al. (2023) claimed that organizations can increase involvement by encouraging psychological ownership. Furthermore, research shows that different company stakeholders, such as customers and workers, have a sense of psychological ownership that improves their involvement with a brand, even if they do not have legal ownership rights (Chang et al., 2012; Dawkins et al., 2017). Psychological ownership has been identified as a driver in determining customer responses to a brand, ultimately contributing to engagement (Thürriidl et al., 2020). Consequently, the proposition is made that Psychological Ownership of a Brand leads to increased Customer Engagement with the brand.

**H1:** BSO has a positive effect on CBE.

### **2.2. Value Congruity (VCON)**

The Congruity theory elucidates that an individual is inclined to harbor positive attitudes toward an object when they perceive that the object or phenomenon aligns with their existing beliefs or values (Rather & Camilleri, 2019). Theories regarding VCON have also been studied with several factors. The outcomes of these studies show that customers remain highly engaged with brands that reflect and value their distinctiveness and personal worth. Customer base VCON and efficient service delivery are considered core antecedents for Brand Engagement and identification, which have a positive influence on loyalty towards a specific brand (Rather & Camilleri, 2019). Studies also reveal that a crucial factor for a brand's success is VCON in the delivery of value-added services (Lee & Jeong, 2014). Literature posits that when a customer identifies themselves with any brand that matches their values, they are more likely to be satisfied and found to be loyal to that brand (Lee & Jeong, 2014). Therefore, those brands that complete this task to align their values with the customer's values seem to have a more loyal and engaged customer base with them (Bhattacharya & Sen, 2003; Rather, 2018; So, King et al., 2017). Hence, we propose:

**H2:** VCON has a positive effect on CBE.

### **2.3. Brand Awareness (BAWR)**

Awareness of brand is an important antecedent to building loyalty of the brand and therefore it has a great impact on the choices of consumers and their buying behavior (Alexandra & Cerchia, 2018; Sultan et al., 2019). The awareness indicates how well consumers are educated about the occurrence and the availability of a brand and then catch exactly the point to which consumers' desired brand and how well they recognize it (Samran, Wahyuni, Misril, Nabila, & Putri, 2019). Indeed, brand recognition denotes "one's ability to know and distinguish the name of a brand upon seeing it", and brand recall denotes "one's capability to name a brand when questioned to recall names of the brand in overall", that correspondingly with (Keller, 1993). In this regard, the researchers have established that customers are not able to pick a brand if they do not have sufficient

information about the brand. BAWR plays a fundamental role in buyer decision-making (Huang & Cai, 2015; Molinillo et al., 2017). Hence, it is posited that:

**H3:** BAWR is positively related to CBE.

#### **2.4. Brand Image (BIMG)**

BIMG serves as a significant factor that influences customer satisfaction and loyalty which leads to repurchase intention. Literature defined BIMG firstly as developing a positive perception of the company in customers' minds (Sasmita et al., 2015). Previous studies have revealed that a positive BIMG intensifies Brand choice and yields Customer Loyalty (Ansary & Hashim, 2018). It is considered as an external perception of the company that builds up through brand experience. Brand is a promise that company makes and communicates externally to develop a positive BIMG (Coelho, Rita, & Santos, 2018).

Companies can gain a competitive advantage due to increased BIMG and Customer Loyalty. BIMG can escalate purchase intention directly as well as indirectly (Lee & Lee, 2018). Building a strong BIMG in customers' minds is extremely important to enhance Customer Loyalty (Iglesias et al., 2019). BIMG reveals society's views, interests, and perceptions about the company. Literature shows that BIMG is flexible, and it is influenced by receivers' attitudes, behavior, and knowledge about the company. BIMG is not the possession of the company instead of it is developed in customers' minds (Farizan et al., 2019). Hence, it is proposed that:

**H4:** BIMG has a positive impact on CBE.

#### **2.5. Customer Brand Engagement (CBE)**

Brand Engagement has become a buzzword in the business world nowadays. It's defined as the "customer's cognitive, emotional, and behavioral investment" for the brand. The main reason behind it is that engagement is a concept that takes customer brand relationship beyond the buying and consumption pattern (Dessart et al., 2016). Customer Engagement is also a valuable concept for building brand Loyalty due to the customers' social network, their knowledge about the brand, and their interest all these factors enhance Brand Loyalty (Harmeling et al., 2017). There are various more advantages that a brand can get over time by utilizing Brand Engagement as a key aspect (Hollebeek et al., 2016). Customer psychological involvement is more beneficial to brands because in this state of engagement, customers sense an attachment to the brand, which encourages them to be loyal customers (Jahn & Kunz, 2012).

**H5:** CBE has a positive effect on Brand Loyalty.

#### **2.6. Customer Brand Engagement (CBE), Brand Attachment (BA), and Behavioral Brand Loyalty (BBL)**

Businesses are putting more emphasis on customer loyalty as a critical phenomenon in an effort to strengthen their position in the market (Bilal et al., 2020; Haq, 2020). Rather et al. (2022) assert that brand identification is greatly influenced by elements such as customer experience, credibility, and brand value congruence. These factors affect brand advocacy, attachment, and loyalty; brand loyalty captures the favorable feelings that unite customers and businesses and reflects the power of the product in consumer repurchase (Sasmita & Mohd Suki, 2015). Additionally, Samarah et al. (2022)

proposes a positive link between social media CBE and brand trust, contributing to Brand Loyalty. Consequently, we propose that Brand Attachment (BA) denotes the robust connection between a brand and its customers (Kashif et al., 2023; Park et al., 2010). BA yields "Psychological Consequences" for the brand, encompassing associations, possessive recall, and a profound customer connection and sense of brand ownership (Park et al., 2010; Hollebeek et al., 2014). Research affirms that Brand Engagement leads to Brand Attachment, and reciprocally, Brand Attachment fosters Brand Loyalty (Brodie et al., 2013). Therefore, we propose that:

**H6:** There is a positive effect of CBE on BBL through the mediating influence of BA.

### 2.7. Brand Usage Duration (BUD) and Usage Frequency (UFREQ)

BUD refers to the time span from which an individual is attached to a specific brand. The very next step of Usage Duration is to push towards loyalty (Alemi, et al., 2019). UFREQ refers to buying and Frequency for a certain product or brand, it is also a way to influence consumers' behavior. Recently a study conducted in California by targeting customers of mobile phone applications revealed that customers who repeatedly use mobile applications to achieve other facets of their travel are more often loyal and frequently use the specific brand (Alemi et al., 2019). Hence, we suggest that:

**H7:** BUD moderates the connection between CBE and BBL.

**H8:** UFREQ moderates the relationship between BA and BBL.

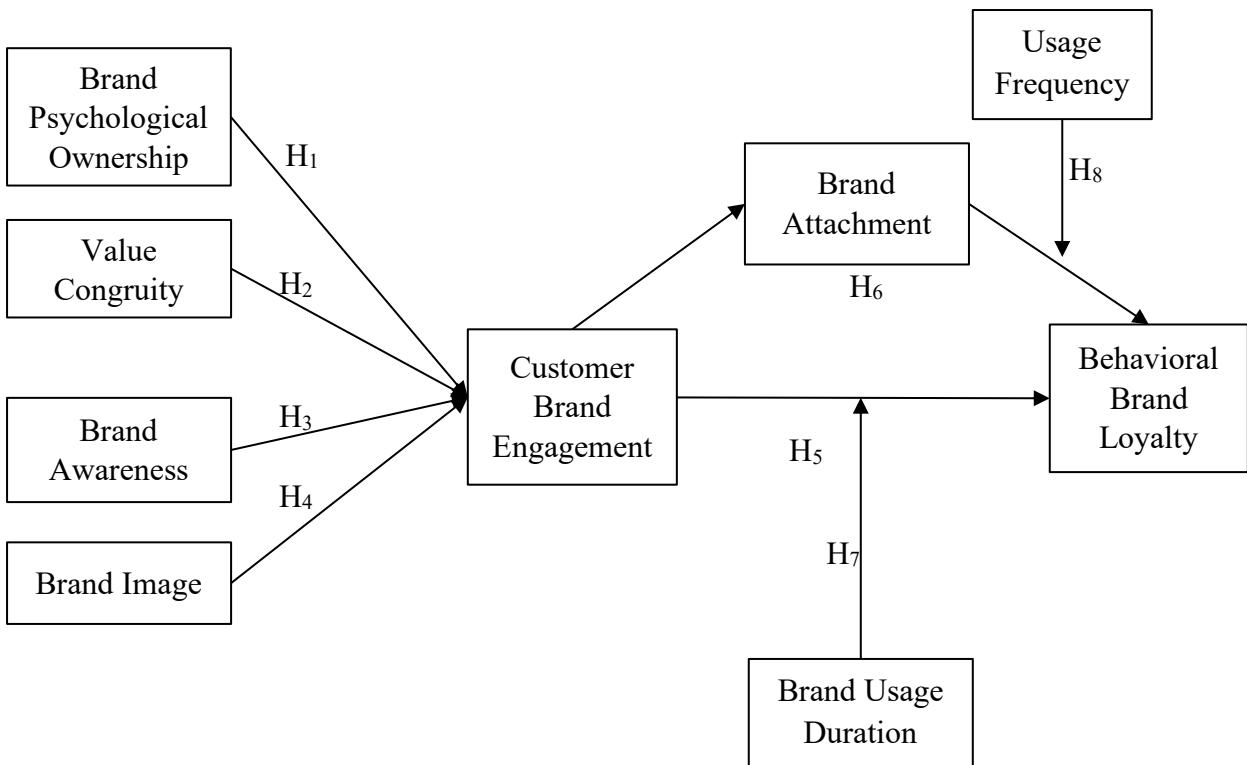


Figure 1: Theoretical Framework

### 3. Research Methodology

This study is based on a quantitative research method. Self-administered five-point Likert scale questionnaire was adopted for the purpose of data collection, the target population was mobile phone users. Due to the unavailability of sampling frame, a method proposed by Krejcie & Morgan (1970) was used. Hence, convenience sampling was used to collect the sample of 500 mobile users (Krejcie & Morgan, 1970).

#### 3.1. Measures

The questionnaire was adopted from existing literature; 4 item scale of BSO adapted from Pierce et al. (2001) and Kumarand Nayak (2019); VCON was also measured by 4 items from Sirgy (1982) and France et al. (2016); BAWR was measured by 5 items (Oh, 2000); 3 items were adopted to measure BIMG from Sasmita and Suki (2015); 10 items scale was adopted to measure CBE (Hollebeek et al., 2014); BA was measured by 4 items (Whan et al., 2010); 5 items of BBL adopted from (Johnson et al., 2006), UFREQ and Usage Duration was also adapted from (Thomée et al., 2011).

### 4. Data Analysis and Findings

**Table 1: Demographic Results**

		Frequency	Percent	Valid Percent	Cumulative Percent
<b>Mobile Brand</b>	Samsung	88	23.9	23.9	23.9
	Apple	24	6.5	6.5	30.4
	Oppo	100	27.2	27.2	57.6
	Nokia	10	2.7	2.7	60.3
	Huawei	99	26.9	26.9	87.2
	LG Mobile	32	8.7	8.7	95.9
	Other	15	4.1	4.1	100
	<b>Total</b>	<b>368</b>	<b>100</b>	<b>100</b>	
<b>Age</b>	18-24 Years	82	22.3	22.3	22.3
	25-31 Years	143	38.9	38.9	61.1
	32-38 Years	117	31.8	31.8	92.9
	39-45 Years	15	4.1	4.1	97
	45 Years & above	11	3	3	100
	<b>Total</b>	<b>368</b>	<b>100</b>	<b>100</b>	
<b>Gender</b>	Male	128	34.8	34.8	34.8
	Female	240	65.2	65.2	100
	<b>Total</b>	<b>368</b>	<b>100</b>	<b>100</b>	
<b>Occupation</b>	Student	157	42.7	42.7	42.7
	Employee	126	34.2	34.2	76.9
	Self-Employee/ Business	85	23.1	23.1	100
	<b>Total</b>	<b>368</b>	<b>100</b>	<b>100</b>	

In the present study, from the total collected responses of 500, valid responses are 368, hence the response rate was 73.6%. Demographics of data are presented in table 1. Very first section of the questionnaire was regarding demographic questions which were regarding mobile brand, age, gender, and occupation of respondent. Results of this section show that from a total reliable sample of 368, the majority respondents are female and using the Oppo mobile brand, having a maximum number of individuals in the age slot of 25-31 years.

#### 4.1. Convergent Validity and Reliability

Convergent Validity, which is used to check the validity of items in a scale, was calculated by using the average factor extracted (AVE). AVE values were above 0.7, hence meeting the threshold validity points (Hair et al., 2017). Reliability shows that data will show the same result if assessed again. In this study, composite reliability and Cronbach Alpha are being used as criteria to measure the reliability of data. Table 2 shows that the factor loading values before and after deleting items and Cronbach alpha were above 0.7, hence the scales are reliable (Hair et al., 2017).

**Table 2: Convergent Validity and Reliability**

Variables	Items	Initial Loading	Reliable Loading	Average Variance Extracted	Cronbach's Alpha	Composite Reliability
BAWR	BAW1	0.812	0.812	0.676	0.880	0.912
	BAW2	0.836	0.836			
	BAW3	0.769	0.769			
	BAW4	0.833	0.833			
	BAW5	0.858	0.858			
BA	BAT1	0.759	0.759	0.638	0.811	0.876
	BAT2	0.767	0.767			
	BAT3	0.841	0.841			
	BAT4	0.824	0.824			
Behavioural Brand Loyalty	BBL1	0.780	0.780	0.635	0.855	0.897
	BBL2	0.722	0.722			
	BBL3	0.820	0.820			
	BBL4	0.778	0.778			
	BBL5	0.878	0.878			
BIMG	BI1	0.868	0.868	0.769	0.850	0.909
	BI2	0.872	0.872			
	BI3	0.890	0.890			
BSO	BPO1	0.860	0.860	0.776	0.903	0.933
	BPO2	0.930	0.930			
	BPO3	0.849	0.849			
	BPO4	0.883	0.883			
BUD	BUD1	1.000	1.000	1.000	1.000	1.000

	CBE1	0.771	0.771			
	CBE10	0.764	0.764			
	CBE2	0.831	0.831			
	CBE3	0.766	0.766			
CBE	CBE4	0.791	0.791	0.617	0.931	0.941
	CBE5	0.785	0.785			
	CBE6	0.806	0.806			
	CBE7	0.843	0.843			
	CBE8	0.804	0.804			
	CBE9	0.684	0.684			
UFREQ	UF1	0.564	0.627			
	UF2	0.440	-	0.656	0.750	0.785
	UF3	0.956	0.959			
VCON	VC1	0.882	0.883			
	VC2	0.696	-	0.794	0.874	0.920
	VC3	0.884	0.882			
	VC4	0.903	0.908			

*Note:* Behavioral Awareness (BAW); Brand Attachment (BAT); Behavioral Brand Loyalty (BBL); Brand Image (BI); Brand Psychological Ownership (BPO); Brand Usage Duration (BUD); Customer Brand Engagement (CBE); Usage Frequency (UF); Value Congruity (VC)

#### 4.2. Discriminant Validity

**Table 3: Discriminant Validity**

	BAW	BAT	BBL	BI	BPO	BUD	CBE	UD mod	UF	UF mod	VC
<b>BA</b>	<b>0.822</b>										
<b>BAT</b>	0.685**	<b>0.799</b>									
<b>BBL</b>	0.71**	0.72**	<b>0.797</b>								
<b>BI</b>	0.61**	0.69**	0.74**	<b>0.877</b>							
<b>BPO</b>	0.71**	0.67**	0.74**	0.70**	<b>0.881</b>						
<b>BUD</b>	0.06*	0.08*	0.08*	0.06*	0.06*	<b>1.000</b>					
<b>CBE</b>	0.46*	0.73**	0.63**	0.23*	0.76**	-0.070	<b>0.786</b>				
<b>UD mod</b>	0.12*	0.087*	0.15*	0.11*	0.150*	0.006	0.114	<b>1.000</b>			
<b>UF</b>	-0.049	-0.082	-0.072	-0.034	-0.129	0.212	-0.046	-0.075	<b>0.810</b>		
<b>UF mod</b>	0.004	0.04	0.020	0.097	0.077	-0.070	0.015	0.163	-0.062	<b>1.000</b>	
<b>VC</b>	0.010*	0.076	0.004	0.024	-0.025	0.041	0.071	0.030	0.087	0.014	<b>0.891</b>

*Note:* Behavioral Awareness (BAW); Brand Attachment (BAT); Behavioral Brand Loyalty (BBL); Brand Image (BI); Brand Psychological Ownership (BPO); Brand Usage Duration (BUD); Customer Brand Engagement (CBE); Usage Frequency (UF); Value Congruity (VC); \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

Second criteria to measure the validity is through discrimination concept, (Urbach & Ahlemann, 2010). This concept is used to check the discrimination of a scale from other



scales. While using PLS, discrimination is being measured through Fornell Larcker Criteria. Table 3. demonstrates the results of the Fornell-Larcker Criterion. The criterion for this is that upper diagonal values (square root of AVE) should be above 0.7 and higher than other correlations. The results meet the criteria, hence all scales in this study show discriminant validity.

**4.3. Common Method Bias and Goodness of Model**

To remove any possibility of common method bias Harman’s single-factor test was applied as a post-remedial strategy, which reports that the data are free from common method bias as the maximum variance explained by the single-factor model was 31%, which is less than the recommended maximum of 50%.

The goodness of the model was run through the partial least square technique. Mainly model fit is measured by SRMR and Chi Square Theta. SRMR is defined as the difference between the observed correlation and predicted correlation of the variables i.e., constructs (Henseler et al., 2015). The SRMR is the average of the residuals between the observed and implied covariance matrix (correlation matrix). Its value should be less than 0.10 which is a good fit value (Hair et al., 2017).

**Table 4: Goodness of Model**

	Saturated Model	Estimated Model
SRMR	0.051	0.057
Chi-Square	2200.644	2277.811

Table 4 shows the result of goodness here SRMR and Chi-Square is being measured. Results show that the SRMR value for both the Saturated and Estimated model is good enough and less than 0.10, and Chi-Square is also high so due to meeting criteria this supports goodness of results.

**4.4. Hypotheses Testing**

The structure equation model method is used to test the hypotheses. The predictive power of the structural model is measured through path coefficient (Beta  $\beta$ ) values between the relationships of variables. Table 5 shows the results of hypothesis testing along with mediation and moderation by showing the significance through bootstrap analysis by T and P values (Hair Jr et al., 2014).

Starting from H<sub>1</sub> the influence of BSO on CBE, its coefficient shows a 21.8% influence of BSO, and its T value is 5.261 which is higher than 1.96, whereas the P value is 0.000 which is lesser than 0.05, both values are good enough for being considered a significant path so H<sub>1</sub> is being accepted and significant. The next one is H<sub>2</sub> about the influence of VCON on CBE, its coefficient value shows a 6.5% impact of Congruity on Brand Engagement, and its T value is 2.432 and the P value is 0.015 both values are good for being accepted a hypothesis recommended by Hair et al. (2017), So H<sub>2</sub> is also being accepted that VCON has significant impact on CBE.

The next one is H<sub>3</sub> the influence of BAWR on CBE coefficient result shows a 45.1% influence of BAWR and the T value for this path is 7.854 which is higher than the acceptance criteria of Hair et al (2016), whereas P value is 0.000 which is lesser than 0.05,

both values are good enough for acceptance of hypothesis, so H<sub>3</sub> is being accepted that there is positive impact of BAWR on CBE. Next is H<sub>4</sub> about the influence of BIMG on CBE coefficient value is 0.311 means 31.1% impact of BIMG on Brand Engagement and its T value is 6.319 and its P value is 0.000. So, these values met the acceptance criteria which shows that H<sub>4</sub> is also being accepted.

**Table 5: Direct and Indirect Relationships**

Hypotheses	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
H <sub>1</sub> : BPO -> CBE	0.218	0.217	0.041	5.261	0.000
H <sub>2</sub> : VC -> CBE	0.065	0.063	0.027	2.432	0.015
H <sub>3</sub> : BA -> CBE	0.451	0.450	0.057	7.854	0.000
H <sub>4</sub> : BI -> CBE	0.311	0.312	0.049	6.319	0.000
H <sub>5</sub> : CBE -> BBL	0.636	0.639	0.041	15.539	0.000
H <sub>6</sub> : CBE -> BAT -> BBL	0.186	0.184	0.034	5.444	0.000
H <sub>7</sub> : UD mod CBE -> BBL	0.065	0.063	0.032	2.040	0.042
H <sub>8</sub> : UF mod BAT-> BBL	-0.013	-0.012	0.032	0.418	0.676
<b>Variance Accounted for (VAF)</b>					
	P <sub>1-&gt;2</sub>	P <sub>2-&gt;3</sub>	P <sub>1-&gt;3</sub>	Calculation	VAF
CBE-> BAT-> BBL	0.733	0.253	0.636	0.5354	53.54%

**Note:** Behavioral Awareness (BAW); Brand Attachment (BAT); Behavioral Brand Loyalty (BBL); Brand Image (BI); Brand Psychological Ownership (BPO); Brand Usage Duration (BUD); Customer Brand Engagement (CBE); Usage Frequency (UF); Value Congruity (VC)

Now moving towards the second part of the model starting from the H<sub>5</sub> influence of CBE on Brand Behavioral Attachment coefficient shows a 63.6% influence of CBE and its T value is 15.539 which met the acceptance criteria of Hair et al, whereas P value is 0.000 which is also good enough to being accepted, so H<sub>5</sub> is being accepted that there is positive impact of CBE on Brand Behavioral Loyalty. Next is the mediating role of BA between CBE and Brand Behavioral Loyalty. The coefficient value is 0.186 means mediates the relationship by 18.6% positively, its T value is 5.444 and the P value is 0.000, both values are good enough to be accepted H<sub>6</sub>.

H<sub>7</sub> is about moderating role of Usage Duration on the relationship of CBE and Brand Behavioral Loyalty. The coefficient value shows that Usage Duration strengthens the relationship between CBE and Brand Behavioral Loyalty by 6.5%. Its T value is 2.040 and P value is 0.042 so both values are good enough to accept the hypothesis H<sub>7</sub>. Lastly, H<sub>8</sub> is about the moderating role of UFREQ between BA and Brand Behavioral Loyalty. Results show the insignificance of this hypothesis because T and P values do not meet the acceptance criteria of Hair et al. (2016) so only H<sub>8</sub> will be rejected.

**4.5. Variance Accounted for (VAF)**

The core reason for VAF analysis is to test the strength or power of the mediator between the independent and dependent variable. In other words, it shows whether the mediation relationship is mediated fully, partially or there is no mediation (Tavakoli, 2013).

The only mediating impact in the model is of BA between CBE on BBL. For this VAF value is 0.5354 which shows a 53.5% VAF value which fulfills the second criteria for being partial mediation for this relationship.

## **5. Conclusion and Discussion**

The present study was conducted to uncover the factors that build a strong Customer Engagement which further pushes customers towards behavioral Loyalty. This study considered four factors i.e. (BSO, VCON, BAWR, and BIMG) which could be a cause of building strong and positive Customer Engagement which leads towards positive behavioral Loyalty directly and indirectly through BA. Moreover, the study also revealed the moderating influence of Usage Duration and UFREQ.

Starting from  $H_1$  which was about the influence of BSO on customer Business Engagement, results depict a significant 21.8% positive influence of BSO on Customers' Brand Engagement these findings are also supported by prior literature as well. A study by Kumar and Nayak (2019), recently found a positive association between Business Psychological Ownership and CBE. Moreover, earlier studies have also validated the existence of a significant relationship between these two variables (Chang et al., 2016; De Villiers, 2015).

$H_2$  is about the influence of VCON on CBE, findings show the significant and positive influence of VCON on CBE by 6.5%, these findings are also supported by existing literature, for instance, a study found that VCON positively pushes customer's thinking towards engaged positively with a specific Brand (Rather & Camilleri, 2019).  $H_3$  is about the influence of awareness on Business Engagement building, results found that BAWR positively and significantly influences CBE by 45.1%. Prior studies also support the existence of a relationship between BAWR and customer Business Engagement but in different contexts and suggested studying the gap, the present study responding to such studies tested the relationship and found the results compliant with the previous ones (Bolton, et al., 2013; Brodie et al., 2013). Similarly,  $H_4$  is about the influence of BIMG on Business Engagement which was also being identified as gap by Kumar and Nayak (2019) and Hollebeek *et al.* (2016), the present study shows 31.1% positive and significant influence of Brand Identification on CBE.

Further moving towards the influence of CBE. On BBL  $H_5$ , results show a positive and significant impact of CBE on BBL by 63.6%, this hypothesis is also theoretically justified and supported positively by existing literature (De Villiers, 2015; Guizon & Magnoni, 2019; Kaur et al., 2020; Leckie et al., 2016;). Next mediating role of BA in the relation of CBE and Brand Loyalty, the coefficient value shows that Attachment mediates by 18.6% positively and significantly, this was also significantly proven in existing literature (Hollebeek et al., 2016; Kumar & Nayak, 2019). Moreover, results show Attachment partially mediates the relationship. Finally, the moderating role was noted as a research gap in previous studies, which was empirically addressed in the current study (Hollebeek et al., 2014; Kumar & Nayak, 2019). The findings demonstrated that BUD significantly and positively works as a moderator on the link between CBE and BBL, demonstrating the empirical significance of hypothesis  $H_7$  (Dwivedi, 2015).

### **5.1. Theoretical Implications**

This research makes significant contributions to the existing body of knowledge. Firstly, our study addresses the relatively unexplored terrain of Customer Engagement, with a specific focus on Brand engagement. This response aligns with recent calls in literature (Aljumahni et al., 2023), urging for more empirical investigations into the Customer Engagement concept. To fill this gap, we formulated and empirically tested a conceptual model elucidating the antecedents of Customer Engagement – namely BSO, VCON, BAWR, and BIMG – and the resulting outcome, which is Brand Loyalty. The study also proved the moderating role of UFREQ and BUD. Specifically, within the realm of mobile phone service providers, our research presents robust empirical evidence highlighting the significance of CBE as a mediator in the relationships between BSO, VCON, BAWR, BIMG, and Brand Loyalty.

### **5.2. Managerial Implications**

The present study findings explained how, towards which direction, and to what extent this integrated model of a customer is workable in the mobile industry. The mobile devices industry is saturated and it's becoming challenging for companies to retain customers. This study fills the theoretical gap by presenting a comprehensive model that defines variables explaining Customer Loyalty.

Secondly, the present study has been conducted in a diverse population where customers consider branding very significant, and parallel brands consider engaged and loyal customers more vital for their business development. Hence, this study plays a very important role for brands that want to have Customer Loyalty as a competitive edge or even want to gain more market share, they must know what factors could play a vital role in gaining Customers' Loyalty.

Overall, the current research is highly useful for strategy makers in terms of developing strategies that consider aspects that are thought to be significant for Customer Loyalty building. As more businesses enter the competitive arena, this study will help strategy makers understand how they should use BAWR and Image in the development of BE to keep their customers loyal to their company. The study's findings also advise practitioners to explore the concept of BA and to monitor Customer Brand UFREQ and Duration. According to the findings of this study, VCON and psychological Ownership are also highly useful for marketers in developing new tactics to keep their Customer Loyalty in this competitive market period.

### **5.3. Limitations and Future Directions**

Every study has its limits, and this one is no different. It is critical to recognize and talk about these constraints. The small and restricted sample size of the social sciences research is one significant drawback. The study lacked a broad variety of samples from various businesses and had a very small sample size. This means that more study needs to be done in the manufacturing and service sectors in the future, with an emphasis on comparing various businesses. Another limitation is related to the data collection method employed in this study. Due to the unavailability of a sampling frame and financial constraints, the study was unable to utilize any type of probability sampling. Therefore,

future studies should strive to employ appropriate probability sampling techniques to enhance the generalizability of the findings.

In addition, future researchers could consider incorporating other contextual and theoretical constructs that directly and indirectly influence behavioral Loyalty. It is also suggested that future studies explore the inclusion of negative factors that can affect Loyalty, such as service failures and their consequences, the magnitude of these failures, and strategies for service recovery. By addressing these limitations and incorporating these suggestions, future research can provide a more comprehensive understanding of behavioral Loyalty in different industries and under various circumstances.

### **Ethical Consideration**

The authors declare that this submission follows the policies of AJSS as outlined in the Guide for Authors and in the Ethical Statement. Full consent was obtained from the participants before the study and all procedures were carried out following approved ethical standards.

### **Informed Consent**

A fully informed, considered, and freely given decision about whether or not to participate in the study, without the exercise of any pressure or coercion was taken from the respondents.

### **Declaration of Interest Statement**

The authors declare that we have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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