Social Media Marketing Communication: Effects on Brandy Equity and on Consumer's Purchase Intention

Matheus Grage Tardin (Corresponding author)

Dept. of Marketing, São Paulo School of Business (FGV-EAESP),

São Paulo, Brazil.

Anderson Soncini Pelissari

Dept. of Administration (CCJE), UFES - Federal University of Espirito Santo,

Vitória, Brazil.

Luiza Dazzi Braga

Dept. of Accounting (CCJE), UFES - Federal University of Espirito Santo,

Vitória, Brazil.

Abstract

The objective of this work is to evaluate the effects of firm generated content (FGC) and user generated content (UGC) on brand equity (BE) and on the consumer's purchase intention. To achieve it, the research methodological approach was quantitative, cross-section survey type. Data collection was carried out by an online survey, and 322 valid responses were obtained. The proposed model was analyzed using the Structural Equation Modeling method (PLS-SEM). The results show that both the firm generated content and the user generated content influence brand equity. The content generated by the company, however, has a greater effect and has greater power to explain brand equity than the content generated by the users. On the other hand, the direct effects of FGC and UGC on the intention to buy are not significant when the effect of brand equity is considered. Therefore, this research contributes to the theoretical framework of marketing, specifically in the areas of relationship and digital marketing, by being one of the first to assess the joint effects of the content generated by the brand and by the consumer on brand equity and purchase intention.

Keywords: brand equity; structural equation modeling; firm generated content; user generated content; purchase intention;

1. Introduction

New communication and information technologies are changing market dynamics, especially the media landscape, which has undergone an intense transformation over the past two decades with the emergence and popularization of social media (Bruhn, Schoenmueller, & Schäfer, 2012; Kaplan & Haenlein, 2010; Mangold & Faulds, 2009a). The term social media is defined as a group of interactive applications, based

on the internet, developed from the ideological and technological bases of Web 2.0, and which allows the creation, editing, diffusion and exchange of content generated by users (Kaplan & Haenlein, 2010). Linked to this new dynamic, consumers have been using the virtual environment in the purchase decision process, to acquire and share knowledge about brands (Datta, Ailawadi, & van Heerde, 2017). This shared knowledge is not just about brand facts, but also covers all thoughts, feelings, perceptions, images, and experiences connected to the brand in consumers' mind (Keller, 2009).

In the process of brand evaluation, one of the most popular and potentially important topics in marketing has emerged in recent years: the concept of brand equity (Keller, 2009). Central to the theory and practice of marketing, brand equity is the result of the effort over time to build brand capital (Datta et al., 2017). The marketing literature points to two main strands for the study of brand equity: one is accounting-financial based and the other is based on consumer behavior (Keller, 1993; Yoo & Donthu, 2001). From the behavioral view, customer-based brand equity (CBBE) is understood as a set of perceptions linked to the name and symbol of a brand that adds (or subtracts) value to a product or service in the consumer's mind (Aaker, 1991; Keller, 2009). In this sense, it is theoretically established that the various marketing communications activities reflect both on the development of CBBE (Keller & Lehmann, 2006), and on consumer behavior   (Keller, 2001).

In social media, these activities occur through content created and disseminated in the virtual environment (Kumar, Bezawada, Rishika, Janakiraman, & Kannan, 2016b), in which not only the company acts as a communicator, but also the consumer, who can actively participate as creator and disseminator of content about the brand (Bruhn et al., 2012; Kaplan & Haenlein, 2010). Due to the significance of active consumer participation in the social media marketing process when evaluating the effects of marketing communication in the creation of CBBE, it is essential to consider both the firm generated content (FGC) and user generated content (UGC) (Kumar et al., 2016b). This differentiation is important because while the communication initiated by firm is under managers' control, the communication initiated by users is independent of company's control.

However, previous research that investigated the effects of social media marketing communication on CBBE did not make this differentiation, treating the two types of content as a single variable (Godey et al., 2016; Kim & Ko, 2012; Seo & Park, 2018), or studied only one type of content   (Christodoulides, Jevons, & Bonhomme, 2012a; Kumar et al., 2016b). Even though it is theoretically established (Keller, 2001), such prior research also did not evaluate the direct effects of social media marketing communications on the consumer's purchase intention (Bruhn et al., 2012; Christodoulides, Jevons, & Bonhomme, 2012b; Godey et al., 2016; Kim & Ko, 2012; Kumar, Bezawada, Rishika, Janakiraman, & Kannan, 2016a; Seo & Park, 2018). Following this literature gap, the purpose of this paper is to evaluate the effects of firm generated content and user generated content [on social media] make on brand equity and on consumer's purchase intention. Also, the combined effect of FGC, UGC and CBBE on consumer's purchase intention is investigated. Thus, this research aims to answer the following research question: What are the effects of firm generated content and user generated content on social media on brand equity and on consumer purchase intention?

To answer it, a questionnaire about the electronic products of smartphones and notebooks was applied in a sample of Brazilian university students. Data analysis was carried out using the Structural Equation

Modeling method (PLS-SEM)   (Hair et al, 2017). The results show that the effects of the FGC and UGC variables on the brand equity variable are positive and significant, with the effect of FGC greater than the effect of UGC. However, the direct effects of these two variables on purchase intention variable are not significant, that is, they do not have a direct effect on purchase intention. Finally, the effect of brand equity variable on purchase intention variable is positive and significant.

Thus, this study contributes to both literature in the field of relationship marketing and digital marketing and its practice. By being pioneer in evaluating the effects of firm and user generated content on CBBE and on purchase intention, this research shows that social media marketing communications are capable of considerably increasing brand equity but are not capable of generate purchase intention directly. For practice, it is relevant to note that both generated contents can influence consumer's perception about a brand. Therefore, companies and marketers need to recognize the importance of engagement in social media and in carefully define a clear strategy for this. As through social media it is possible to find numerous opportunities to listen and engage consumers, it is possible to achieve positive results in brand equity and in purchase intention.

The rest of the paper is presented as following. Next section discusses the main concepts worked on. The development of research hypotheses is made on third section. In the fourth section, the methodological design is described. In the fifth section, data analysis and empirical results are reported. In sequence, is developed the discussion about the results and its implications. Finally, the final considerations are made.

2.   Theorical Framework

2.1 Brand Equity

Starting from the consumer's perception, the most influential concepts of brand equity are those of Aaker (1991) e Keller (1993). Aaker (1991) understands brand equity as a set of assets linked to the name and symbol of a brand that adds (or subtracts) value provided by a product or customer service. Thus, a consumer perceives brand equity as the "added value" to the product, associating it with a brand name. Keller (1993) defines brand equity as customer-based brand equity (CBBE), stating that the power of a brand is inside consumer's mind. Meaning the things about the brand that consumers learned, felt, saw, and heard about the brand over time.

2.2 Social Media Marketing Communication

The definition of social media requires a discussion of two concepts: that of Web 2.0 and that of user-generated content (Kaplan & Haenlein, 2010). Web 2.0 is considered as the read-and-write Web. This is a new way in which software developers and end users have started using the internet: as a platform where content and applications are not only created and published, but also continuously modified by users in a participatory and collaborative way (Kaplan & Haenlein, 2010; Yen, Zhang, Waluyo, & Park, 2015). In this way, electronic word-of-mouth (eWOM) on social media can occur in several different ways. Users can intentionally post about brands and their products or services; or they may unintentionally display preferences to their network, such as becoming a fan of brands, interacting with brand posts, liking and commenting or posting content including the brand without any advertising purpose (Erkan & Evans, 2016).

Marketing communications represent the voice of a brand and define the means by which companies can establish a dialogue with consumers, allowing marketers to inform, persuade, encourage and remind consumers about their brands (Keller, 2001). Thus, FGC can be defined as types of communications that are posted on social media by brand managers or their representatives to consumers who are followers or fans of brand pages, accounts or channels on social media. (Kumar et al., 2016b).

2.3 Purchase Intention

The intention to exert some behavior is a central construct of Ajzen's Theory of Planned Behavior Theory (1991). According to the author, intentions are assumed to capture the motivational factors that influence a behavior, in addition to indicating the intensity of the effort that people plan to exert to carry out the buying behavior. Thus, the purchase intention refers to the mental stage in the decision-making process, in which the consumer develops a real willingness to act towards a product or brand (Wells, Valacich, & Hess, 2011).

3. Research Hypothesis

3.1 Social Media Marketing Communication and Brand Equity

In the context of social media, marketing communications developed through firm generated content are studied in several previous surveys (Godey et al., 2016; Kim & Ko, 2012; Seo & Park, 2018), such as those that investigated the effects that social media marketing efforts have on brand equity. Kim e Ko (2012) investigated this relationship in the luxury brand sector, and founded a positive and significant relationship between the constructs, that is, the better is the consumers' perception of social media marketing communications on the brand, the higher the CBBE. In a similar study, Godey et al (2016) also analyzed luxury brands and founded that social media marketing activities on have a significant positive effect on brand equity and its main dimensions: brand recognition and brand image. In turn, Seo and Park (2018) investigated the effects of social media marketing activities on brand equity and on customer response in the airline industry. The results showed that such activities have significant effects on brand recognition, brand image and brand equity.

As marketers seek to present their brand in a positive way, communication through social media, created and controlled by the company will be intended to convey positive content about the brand. A positive assessment of the FGC is predicted to positively influence brand equity. Thus, the hypothesis H1 is presented.

H1: The firm generated content on social media influences brand equity.

Regarding the effects of communication on social media generated by users on brand equity, it is necessary to recognize that the UGC is often not subject to intervention or control by the company. Therefore, user generated social media communication cannot be expected to be only positive, as it can be positive, negative or neutral (Bruhn et al., 2012).

Pior empirical research (Augusto & Torres, 2018; Bambauer-Sachse & Mangold, 2011; Colicev, Malshe, Pauwels, & O'Connor, 2018; Sijoria, Mukherjee, & Datta, 2018b) examined the direct effects of UGC on

brand equity.

In Bambauer-Sachse and Mangold's study (2011), the effects of online product analysis on CBBE were analyzed, and the research results showed that when the consumer analysis is negative, there is a negative effect on the company's brand equity. Augusto and Torres (2018) investigated the effect of brand and WOMe attitudes on CBBE in the banking sector. The results showed that a positive perception of the content positively influences brand equity. Additionally, Colicev et al (2018) investigated how UGC interact with brand recognition (one of the CBBE dimensions proposed by Keller (1993)), and with customer satisfaction. The authors found evidence that the user-generated content has a positive and significant effect on both variables.

Thus, it is expected that the content generated on social media by users about brands can influence brand equity, according to the hypothesis of research H2.

H2: User-generated content on social media influences brand equity.

3.2 Effects on Consumer Purchase Intention

The availability of brand content - both firm and user-generated - on social media offers a unique opportunity to observe customers' experiences with brands and try to decode how they relate to consumer behavior (Viswanathan, Malthouse, Maslowska, Hoornaert, & Van den Poel, 2018).

Ballantine and Yeung (2015) sought to understand how product evaluations can affect perceived credibility, brand attitude and behavioral intentions in the fashion market. The results indicated that negative analyzes led to lower ratings on brand attitude and purchase intention, while positive analyzes led to higher ratings on these two constructs. In turn, Baker, Donthu and Kumar (2015) investigated how the valence, the channel and the strength of the UGC's social bond impact on consumers' purchase intentions. The authors point out that the relationship between valence and purchase intentions is greater when the conversation takes place online, while offline conversations tend to be more strongly associated with the intentions of relaying the content, regardless of the validity of the conversation. In a study in the hotel sector, Nieto-García, Munoz-Gallego and González-Benito (2017) evaluated the effect of valence and UGC volume on consumers' purchase intention. The results showed a direct effect of valence on purchase intention, strengthened by volume. The conclusions suggested the relevant role of the UGC in determining consumers' purchase intention. Therefore, a significant relationship between the UGC and purchase intention is proposed, according to H3.

H3: User generated content on social media influences the brand's purchase intention.

In the view of Keller (2001), the marketing communications generated by the company can influence brand consumer's behavior. In the context of social media, the study by Kumar et al (2016) showed that FGC has a positive effect on both customer spending and cross-buying (buying several categories of products under the same brand). That is, the greater the perception of value in relation to the content generated by the company, the more consumers consume the brand.

In a complementary way, Hutter et al (2013) analyzed how marketing activities on social media, specifically

on the Facebook page of automakers, influence consumers' purchasing decisions. Their findings demonstrated that engagement in a Facebook fanpage has positive effects on purchase intention. The results also indicated that a negative perception of the fanpage content leads to negative effects on consumer behavior. Gautam and Sharma (2017), in turn, studied the direct and indirect impacts that social media marketing activities have on consumers' purchase intention of luxury fashion brands. The results revealed a positive and significant impact of marketing activities on consumers' purchase intentions in the context of social media. Thus, this work proposes that the FGc significantly influences the consumer's purchase intention, accordingly to hypothesis H4.

H4: Firm generated content influences the brand's purchase intention.

The seminal work of Cobb-Walgren, Ruble and Donthu (1995) explored some of the consequences of brand equity: consumer preferences and purchase intention. Their results reveal that the brands with the highest capital generated presented a significantly higher preferences and purchase intentions than the brands with the lowest value. The authors concluded that the consumer's purchase intention is one of the most significant consequences of CBBE.

In the air transport sector, Chen and Chang (2008) found similar results, with brand equity positively and significantly influencing consumers' purchase intentions. More recently, Foroudi et al (2018) investigated the relationship between the dimensions that constitute perceptual components of brand equity - brand perception, perceived quality, brand association, brand preference, brand image and country product image - in behavioral components brand loyalty and brand purchase intention. The results showed that all dimensions of the CBBE significantly influence consumer behavior.

Thus, it is proposed that brand equity significantly influences the consumer's purchase intention, according to the H5 research hypothesis.

H5: Brand equity influences the customer's purchase intention.

4. Methodological Design

To achieve the proposed objective and to test the research hypotheses, the research methodological approach was quantitative, of the survey type, and with transversal cut. To test the empirical model, it was chosen the electronic products sector, specifically smartphones and notebooks. These products can cover different consumer profiles, have an average replacement cycle and high prices depending on the product specifications. Due to these characteristics, and the wide expansion of the adoption of smartphones and personal computers in society, consumers tend to buy these products in a planned way, with extensive research on the internet (Akkucuk & Esmaeili, 2016).

4.1 Variables measurement

Assuming that the constructs of the theoretical model presented in the previous session cannot be observed directly (Hair, Hult, Ringle, & Rstedt, 2014), this section will present the operationalization of the

constructs that make up the research model. To measure brand equity, it was used the scale proposed by Baalbaki and Guzmán (2016), which is composed of four dimensions: perceived quality, preference, social influence, and sustainability; each supported by four to nine items, as shown in Figure 1. The constructs FGC and UGC are defined as proposed by Erkan and Evans (2016) and Park, Lee and Han (2007), and are measured by the consumer's perception about characteristics of the information expressed on the content. Finally, the scale used to measure the purchase intention construct followed the study of Bian and Forsythe (2012), in which the propensity of consumers to buy products from a certain brand is measured. The research model is shown in Figure 1.

4.2 Research Instrument

The questionnaire was composed of three parts. The first was formed by the control questions, to ensure the respondent was a consumer of technological products and that he had been exposed to the FGC and UGC during the purchase process. At this stage, it was also asked which product was purchased, its brand, the social media accessed, and which social media the respondent sought for opinions from other customers. Respondents who did not meet the criteria were eliminated at this stage. The second part of the questionnaire aimed to verify the respondents' perception of each construct of the proposed conceptual model. This section was built based on the operationalization of the variables. Respondents were asked to give their opinion on each of the indicators, on a 7-point Likert scale. Finally, the last part consisted of identifying the socioeconomic profile of the participants.
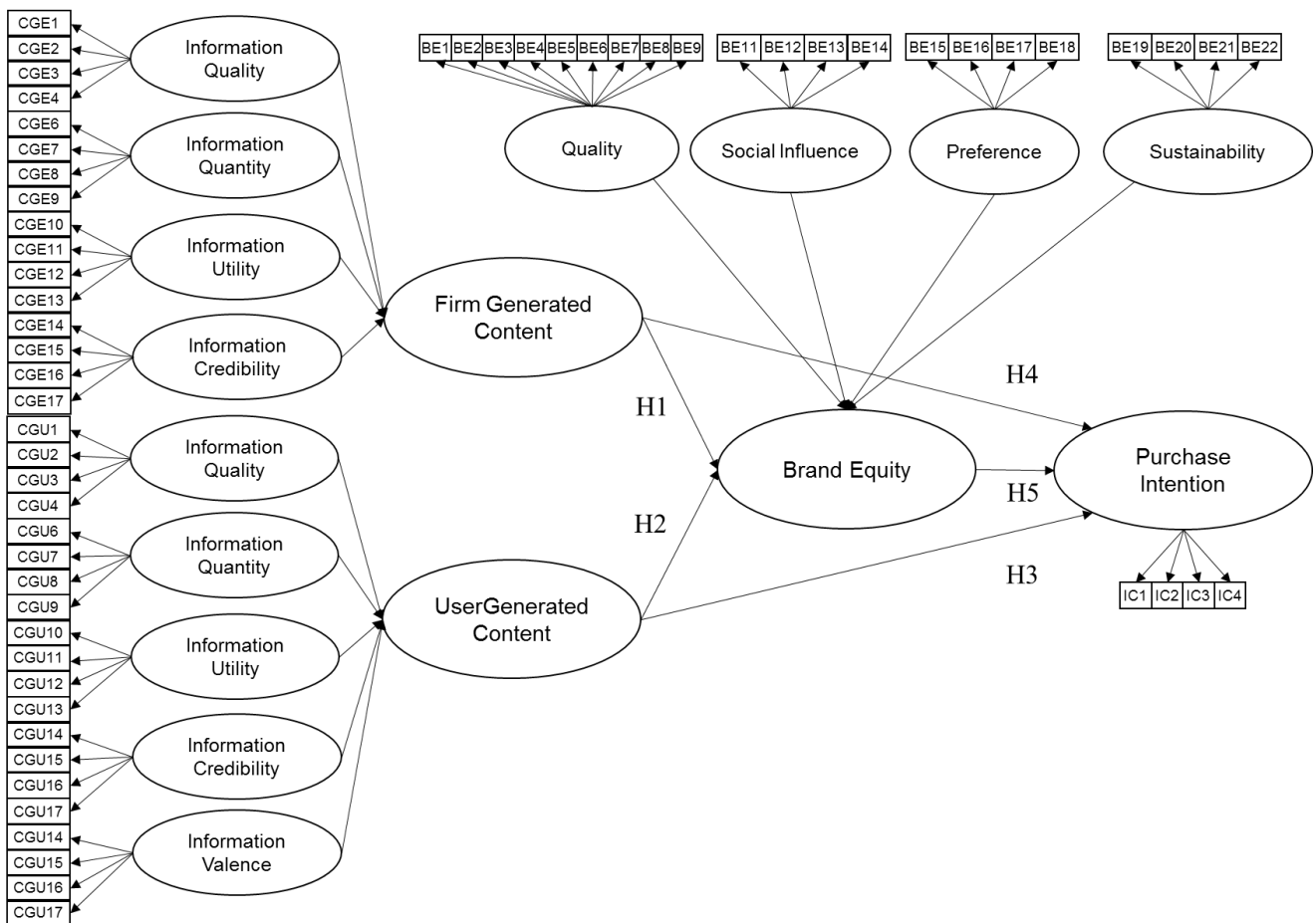

Figure 1. Conceptual model.

4.3 Data Collection

After the questionnaire elaboration, a pre-test with 20 university students was applied to assess the instrument in terms of writing, clarity, relevance, and time spent. After making minor adjustments, the questionnaire was sent via e-mail to about 100 undergraduate and graduate course coordinators from 21 Brazilian federal universities, asking that the questionnaire to be shared with students of the courses. Data collection occurred during the month of July 2019. In total, 858 responses were received. After eliminating respondents who did not meet the criteria, the final sample for analysis of the model was composed of 322 observations.

Most respondents are female (57%), have a family income of 4 to 10 minimum wages (38%), are undergraduate students (59%), and are 22 to 31 years old (50%). About the two types of products analyzed, smartphones were the products that respondents most bought in the last 12 months, with a total of 206 (64% of the sample), against 116 notebooks (36%). The most purchased smartphone brand was Samsung (28%) and Apple (25%). For notebook, the brands more purchased were Dell (36%) and Samsung (23%).

5. Data Analysis and Results

The proposed model was analyzed using the Structural Equation Modeling method (PLS-SEM). According to Hair et al. (2014), the PLS-SEM encompasses statistical techniques used to identify the relationship between several variables, independent and observable. To perform the data analysis, the software R (R Core Team, 2019) and specifically the package "plspm" (Sanchez, Trinchera, & Russolillo, 2017) were used. This method requires two main analyzes, discussed below: the confirmatory factor analysis (CFA), in which the measurement model was evaluated; and the analysis of the structural model, in which the relationships between variables were evaluated.

5.1 Confirmatory Factorial Analysis

The variables FGC, UGC, and CBBE are second-order reflective-formative constructs. That is, they are formed by first-order reflective constructs. Thus, for the realization of the CFA, the second order constructs were treated by the two-step approach (HAIR et al., 2014). In the first step, second order constructs received all the indicators of their first order constructs. In the second step, the scores generated for the first order constructs served as indicators in the measurement model of the second order construct. These new indicators are of a formative nature and must be evaluated by the criteria of this type of model.

Initially, the assessment of internal consistency and convergent validity was carried out. All constructs were within the acceptable limit for internal consistency. In convergent validity, the stroke of the UGC construct was below the recommended limit, as well as the load of several indicators. Thus, eight indicators were removed from the measurement models. The other indicators with loads below 0.70 were not removed as they did not generate a significant increase in stroke and the load of other factors. After removing the indicators, all constructs passed the criteria of internal consistency and convergent validity. Table 2 shows the results of convergent validity. The Fornell-Larcker criterion was used to assess the discriminant validity. It compares the square root of the AVE values with the correlations between the variables. Specifically, the square root of the AVE of each construct must be greater than its correlation with any other construct. The

only exception is between first order and second order constructs. As shown in Table 1, all constructs passed the criterion.

Table 1 - Results of Fonell-Larcker criterion

	Util	Quali	Quanti	Credi	FGC	Util1	Quali1	Quati1	Credi1	Valen	UGC	Qual	Pref	Sust	Infl	BE	IC
Util	**0.87**																
Quali	0.78	**0.86**															
Quanti	0.69	0.64	**0.76**														
Credi	0.74	0.78	0.63	**0.88**													
FGC	0.91	0.92	0.78	0.91	**0.76**												
Util1	0.42	0.46	0.44	0.57	0.53	**0.82**											
Quali1	0.31	0.39	0.40	0.37	0.41	0.66	**0.73**										
Quanti1	0.44	0.46	0.31	0.47	0.49	0.76	0.68	**0.85**									
Credi1	0.32	0.26	0.25	0.37	0.35	0.73	0.58	0.67	**0.86**								
Valen	0.35	0.40	0.27	0.46	0.43	0.58	0.50	0.49	0.52	**0.89**							
UGC	0.44	0.47	0.38	0.55	0.53	0.90	0.74	0.86	0.84	0.79	**0.72**						
Qual	0.51	0.55	0.35	0.58	0.58	0.45	0.41	0.49	0.36	0.60	0.58	**0.87**					
Pref	0.42	0.31	0.41	0.55	0.48	0.33	0.27	0.21	0.25	0.33	0.33	0.55	**0.83**				
Sust	0.29	0.23	0.22	0.43	0.34	0.26	0.11	0.14	0.27	0.19	0.25	0.26	0.44	**0.87**			
Infl	0.32	0.28	0.28	0.43	0.38	0.29	0.28	0.22	0.26	0.27	0.31	0.46	0.49	0.40	**0.80**		
BE	0.54	0.55	0.39	0.62	0.61	0.47	0.42	0.48	0.37	0.59	0.58	0.98	0.69	0.33	0.54	**0.89**	
IC	0.47	0.49	0.37	0.55	0.55	0.36	0.36	0.39	0.30	0.50	0.47	0.78	0.65	0.26	0.43	0.78	**0.80**

After confirming that all constructs passed the criteria of internal consistency, convergent validity and discriminating validity, a new measurement model was defined for the second order constructs, where the scores of the first order constructs were used as indicators of the second-order constructs, now with a formative nature (HAIR et al., 2014). Thus, it became necessary to evaluate these new measurement models. After confirming that all reflective and formative indicators passed the criteria, and with the question of second order constructs addressed, it was possible to proceed with the tests for the structural model.

Table 2. Results of convergent validity

Validade Convergente

Variável	Indicador	C.alpha	DG.rho	AVE	Carga
Utilidade		0.895	0.927	0.760	
	CGE1				0.840
	CGE2				0.886
	CGE3				0.901
	CGE4				0.859
Qualidade		0.877	0.916	0.730	
	CGE19				0.844
	CGE20				0.883
	CGE21				0.822
	CGE22				0.868
Quantidade		0.641	0.807	0.582	
	CGE23				0.735
	CGE25				0.773
	CGE26				0.780
Credibilidade		0.906	0.935	0.781	
	CGE27				0.881
	CGE28				0.920
	CGE29				0.838
	CGE30				0.894
CGE		0.946	0.953	0.576	
	CGE1				0.740
	CGE2				0.806
	CGE3				0.832
	CGE4				0.800
	CGE19				0.803
	CGE20				0.783
	CGE21				0.814
	CGE22				0.718
	CGE23				0.581
	CGE25				0.632
	CGE26				0.569
	CGE27				0.772
	CGE28				0.845
	CGE29				0.801
	CGE30				0.808
IC		0.909	0.936	0.786	
	IC1				0.855
	IC2				0.898
	IC3				0.870
	IC4				0.922

Variável	Indicador	C.alpha	DG.rho	AVE	Carga
Utilidade1		0.835	0.891	0.674	
	CGU1				0.866
	CGU2				0.888
	CGU3				0.694
	CGU4				0.822
Qualidade1		0.702	0.817	0.528	
	CGU5				0.695
	CGU6				0.799
	CGU7				0.697
	CGU8				0.709
Quantidade1		0.868	0.910	0.716	
	CGU9				0.840
	CGU10				0.838
	CGU11				0.859
	CGU12				0.846
Credibilidade1		0.879	0.917	0.733	
	CGU13				0.869
	CGU14				0.864
	CGU15				0.819
	CGU16				0.871
Valência		0.909	0.936	0.786	
	CGU17				0.914
	CGU18				0.892
	CGU19				0.870
	CGU21				0.870
CGU		0.940	0.947	0.511	
	CGU1				0.742
	CGU2				0.796
	CGU3				0.714
	CGU4				0.681
	CGU6				0.644
	CGU9				0.680
	CGU10				0.773
	CGU11				0.720
	CGU12				0.720
	CGU13				0.694
	CGU14				0.685
	CGU15				0.748
	CGU16				0.752
	CGU17				0.709
	CGU18				0.714
	CGU19				0.653
	CGU21				0.710

Variável	Indicador	C.alpha	DG.rho	AVE	Carga
Qualidade2		0.960	0.966	0.758	
	BE1				0.904
	BE2				0.871
	BE3				0.861
	BE4				0.868
	BE5				0.848
	BE6				0.897
	BE7				0.792
	BE8				0.899
	BE9				0.889
Preferência		0.845	0.896	0.683	
	BE10				0.795
	BE11				0.805
	BE12				0.828
	BE13				0.875
Sustentabilidade		0.891	0.925	0.753	
	BE14				0.891
	BE15				0.866
	BE16				0.887
	BE17				0.826
Influência		0.829	0.888	0.639	
	BE18				0.819
	BE19				0.826
	BE20				0.820
	BE21				0.730
BE		0.944	0.952	0.613	
	BE1				0.898
	BE2				0.861
	BE3				0.859
	BE4				0.845
	BE5				0.828
	BE6				0.877
	BE7				0.783
	BE8				0.886
	BE9				0.856
	BE11				0.547
	BE12				0.619
	BE13				0.573
	BE19				0.613

Table 3 - Results of the multicollinearity of the formative model

Variables	CGE				CGU				BE				
Indicador	Util	Quali	Quanti	Credi	Util1	Quali1	Quanti1	Credi1	Valen	Qual	Pref	Sust	Infl
VIF	3.21	3.33	2.06	2.99	3.33	2.12	2.86	2.39	1.58	1.54	1.76	1.31	1.49

5.2 Structural Model

To analyze the structural model, four steps suggested by Hair et al (2017) were carried out. Initially, the model was evaluated for collinearity questions (VIF <5, Table 4), then the significance and relevance of the path coefficients and the levels of the R^2 determination coefficients were evaluated.

Table 4 - Results of the multicollinearity of the structural model

Endogenous variable	BE		IC		
Exogenous variable	FGC	UGC	FGC	UGC	BE
VIF	1.406	1.406	1.819	1.704	2.088

After confirming that all variables passed the collinearity test, the next step was to assess the significance and relevance of the path coefficients. This assessment ascertains the relevance and significance of each

path coefficient of the structural model, identifying whether each one is statistically significant in relation to the construct in which it is linked. The test seeks to estimate the direct relationships of the structural model, based on the path coefficients that typify the hypothetical relationships between the variables, revealing whether they are confirmed or refuted. For the analysis, the bootstrap procedure with 5000 sub samples was used again to generate the 95% confidence interval (HAIR et al., 2017). The results are shown in Table 5.

The results show that the effects of the variables FGC and UGC on the variable BE are positive and significant, with the effect of the FGC being greater than the effect of the UGC. Such results support the H1 and H2 research hypotheses. On the other hand, the direct effects of these two variables on the purchase intention variable are not significant, that is, they do not have a direct effect on the purchase intention. Thus, research hypotheses H3 and H4 are rejected. Finally, the effect of the BE variable on the purchase intention variable is positive and significant, thus confirming the research hypothesis H5.

Table 5 - Results of path coefficients

Path	Effect	p-valor	Hypothesis
FGC -> BE	0.445	0.000	Confirmed
UGC -> BE	0.378	0.000	Confirmed
FGC -> IC	0.051	0.242	Rejected
UGC -> IC	0.037	0.379	Rejected
BE -> IC	0.761	0.000	Confirmed

The next step in the evaluation of the structural model is the analysis of the coefficient of determination R^2. This coefficient is a measure of predictive accuracy of the model and is calculated by the square correlation between the real and predicted values of a specific endogenous construct. Therefore, the closer the R^2 value is to 1, the greater the predictive precision of the exogenous constructs to explain the variation in the behavior of the endogenous construct in question (HAIR et al., 2017). The bootstrap procedure with 5000 sub samples was again used to assess the significance of the R^2 values.

The results show that the R^2 of the BE variable is 0.521 and significant. Therefore, 52.1% of the variance in the BE construct is explained by the variation in the FGC and UGC constructs. This denotes a moderate R^2 value (HAIR et al., 2017). The R^2 of the purchase intention variable is 0.669 and significant. Thus, 66.9% of the variance of the variable is explained by the variables FGC, UGC and BE. This value also denotes moderate R^2 (HAIR et al., 2017). The non-significant results of the effects of FGC and UGC in the purchase intention raise the question of the occurrence of a mediating effect of CBBE in these relationships.

6. Discussion and Implications

Initially, the direct effects of the variables FGC and UGC on the variable CBBE were evaluated. The results show that the effects of both variables on brand equity are positive and significant. Together, the variables explain 52% of the CBBE variation. This result is consistent with the previous literature (Augusto & Torres, 2018; Colicev et al., 2018; Godey et al., 2016; Kim & Ko, 2012; Seo & Park, 2018; Sijoria, Mukherjee, &

Datta, 2018a) .

Comparing the effects of FGC and UGC, it is noteworthy that FGC has more effect on brand equity than UGC. Individually, the FGC explains 43% of the CBBE variation, against 39% of the UGC. Thus, the size of the f^2 effect of the FGC is also greater than that of the UGC. Bruhn, Schoenmueller and Schäfer's research (2012) showed that FGC and UGC can affect brand equity in different ways. According to the authors, the social media communication created by the company increases the functional brand image, while the social media communication generated by user affects the hedonic image of the brand. This work showed that in addition to influencing in different ways, the FGC has greater explanatory power than the CBBE than the UGC.

In turn, the effect of BE variable on the purchase intention variable is significant, and has a strong contribution to R^2, being its most important predictor. This relationship is consolidated in the literature, having been found in several studies (Chen & Chang, 2008; Cobb-walgren et al., 1995; Foroudi et al., 2018). On the other hand, the direct effects of the FGC and UGC on the purchase intention variable are not significant when the CBBE effect is considered. Regarding the contribution to the R^2 of the purchase intention, the UGC has no effect, while the variable FGC has a small effect. These results are in line with the findings of previous studies that point to a significant effect between these variables (Abubakar, Ilkan, & Sahin, 2016; Bambauer-Sachse & Mangold, 2011; Gautam & Sharma, 2017; Yadav & Rahman, 2017).

The non-significance of the effects of the FGC and UGC on the purchase intention raises the question of the possibility of a mediating effect of the CBBE on these relationships. When testing the direct effect of the variables FGC and UGC in the variable purchase intention without the inclusion of the mediating variable BE, a significant result was found for these relationships. Thus, the results show that the variable BE exercises complete mediation in the relationship between the variables FGC and UGC in the variable purchase intention, with the mediating variable absorbing 86.9% and 88.6% of the effects, respectively directly from the variables FGC and UGC in the Purchase Intent.

Marketing scholars have endorsed the importance of social media in marketing to retain and develop the customer base (Kaplan & Haenlein, 2010). Social media is also considered as a component of the marketing promotion mix (Mangold & Faulds, 2009b). This study contributes to the literature in the field of relationship marketing and digital marketing, as it is pioneer in evaluating the effects of the firms and consumer generated content on the CBBE and on the purchase intention. Another theoretically relevant finding is the mediating effect of brand equity in the relationship between FGC, UGC and purchase intention. Thus, the results of this research provide a greater understanding of such variables, showing empirically that social media marketing communications can considerably increase brand equity, but are not able to generate purchase intention directly.

As practical contributions, by showing that both the content generated by the consumer and that generated by the company are capable of influencing the consumer's perception of the brand, this work emphasizes that companies must recognize the need to engage in social media and define carefully a clear engagement strategy. Social media offers countless opportunities for the company to listen and engage with its consumers. Considering the FGC, marketers can focus on producing content that conveys quality information and that is useful to consumers. They must also be aware of the amount of information generated and their credibility with consumers.

On the other hand, the content generated by the brand's consumer on social media, is often beyond the reach of the company. Thus, the company must always be attentive to this type of content that can influence the value of the brand, devising strategies to soften the impact when this content is negative. In addition, companies can also promote electronic word-of-mouth, actively initiating consumer word of mouth advertising about their brand, leaving indelible impressions on consumers' minds.

6. Final Considerations

This research aimed to evaluate the effects of the firm generated content and user generated content on brand equity and consumer purchase intention. The joint effects of FGC, UGC and CBBE on the consumer's purchase intention were also analyzed. To achieve the proposed objective, five research hypotheses were raised, and a theoretical model was developed. The model was analyzed using structural equation modeling (PLS-SEM).

Theoretical model analysis showed that the effects of the firm and user generated content on the brand equity variable are positive and significant. Such results support the H1 and H2 research hypotheses. In addition, the effect and explanatory power of the FGC on the purchase intention is greater compared to the UGC. In other words, consumers take more into account the content generated by the company than that generated by the consumer when forming their perceptions about a brand. On the other hand, the direct effects of the variables FGC and UGC on purchase intention are not significant, that is, it do not had a direct effect on the purchase intention. Thus, research hypotheses H3 and H4 were rejected. As much as companies and consumers try to directly influence the purchase intention of other consumers through social media marketing communications, this direct relationship has not been found.

Finally, the effect of brand equity on purchase intent is positive and significant, confirming the H5 research hypothesis. Consumers' perceptions of a brand and how much value that brand brings to the product strongly influence their brand purchase intentions. In response to the research problem, the content generated by the company and the user about brands on social networks positively and significantly affects brand equity. However, they do not directly influence the purchase intention, but indirectly, being mediated by CBBE. Actions to improve the communication generated by the company and the consumer can lead to greater brand value. A high brand value, in turn, can directly influence the brand's purchase intention.

This work has some limitations. The focus on the university population ends up excluding most consumers of electronic products, and by limiting the interpretation of results to this specific population. Similarly, the choice to focus the search only on the category of electronic products, specifically on smartphones and notebooks, also limits the interpretation of results. Finally, given that the consumers studied are Brazilian, cultural issues may arise in the extrapolation of results to other contexts.

In addition, it is suggested that the effects of the dimensions of the FGC and UGC on the CBBE be investigated, in order to generate more insights into which characteristics of communications consumers consider most in building brand value. Similarly, it can be investigated which dimensions of CBBE are most influenced by FGC and UGC. In this work, the behavioral variable studied was the purchase intention. Other behavioral variables such as loyalty, intention to pay a premium price, among others, can be used and can generate different results.

7. Acknowledgement

8. References

Aaker, D. A. (1991). Managing Brand Equity. New York: Free Press.

Aaker, D. A. (1996). Measuring Brand Equity Across Products and Markets. California Management Review, 38(3), 102–120.

Abubakar, A. M., Ilkan, M., & Sahin, P. (2016). eWOM, eReferral and gender in the virtual community. Marketing Intelligence and Planning, 34(5), 692–710. https://doi.org/10.1108/MIP-05-2015-0090

Akkucuk, U., & Esmaeili, J. (2016). The Impact of Brands on Consumer Buying Behavior: An Empirical Study On Smartphone Buyers. International Journal of Research in Business and Social Science, 5(4), 1. https://doi.org/10.20525/ijrbs.v5i4.551

Augusto, M., & Torres, P. (2018). Effects of brand attitude and eWOM on consumers' willingness to pay in the banking industry: Mediating role of consumer-brand identification and brand equity. Journal of Retailing and Consumer Services, 42, 1–10. https://doi.org/10.1016/j.jretconser.2018.01.005

Baalbaki, S., & Guzmán, F. (2016). A consumer-perceived consumer-based brand equity scale. Journal of Brand Management, 23(3), 229–251. https://doi.org/10.1057/bm.2016.11

Baker, A. M., Donthu, N., & Kumar, V. (2015). Investigating How Word of Mouth Conversations About Brands Influence Purchase and Retransmission Intentions. Journal of Marketing Research, 404–413.

Ballantine, P. W., & Yeung, C. A. (2015). The effects of review valence in organic versus sponsored blog sites on perceived credibility, brand attitude, and behavioural intentions. Marketing Intelligence and Planning, 33(4), 508–521. https://doi.org/10.1108/MIP-03-2014-0044

Bambauer-Sachse, S., & Mangold, S. (2011). Brand equity dilution through negative online word-of-mouth communication. Journal of Retailing and Consumer Services, 18(1), 38–45. https://doi.org/10.1016/j.jretconser.2010.09.003

Bian, Q., & Forsythe, S. (2012). Purchase intention for luxury brands : A cross cultural comparison. Journal of Business Research, 65(10), 1443–1451. https://doi.org/10.1016/j.jbusres.2011.10.010

Bruhn, M., Schoenmueller, V., & Schäfer, D. B. (2012). Are social media replacing traditional media in terms of brand equity creation? Management Research Review, 35(9), 770–790. https://doi.org/10.1108/01409171211255948

Chen, C. F., & Chang, Y. Y. (2008). Airline brand equity, brand preference, and purchase intentions-The moderating effects of switching costs. Journal of Air Transport Management, 14(1), 40–42. https://doi.org/10.1016/j.jairtraman.2007.11.003

Christodoulides, G., Jevons, C., & Bonhomme, J. (2012a). Memo to marketers: Quantitative evidence for change - how user-generated content really affects brands. Journal of Advertising Research, 52(1), 53–64. https://doi.org/10.2501/JAR-52-1-053-064

Christodoulides, G., Jevons, C., & Bonhomme, J. (2012b). Memo to marketers: Quantitative evidence for change - how user-generated content really affects brands. Journal of Advertising Research, 52(1), 53–64.

https://doi.org/10.2501/JAR-52-1-053-064

Cobb-walgren, C. J., Ruble, C. A., & Donthu, N. (1995). Brand Equity, Brand Preference, and Purchase Intent. Journal of Advertising, 24(3). https://doi.org/10.1080/00913367.1995.10673481

Colicev, A., Malshe, A., Pauwels, K., & O'Connor, P. (2018). Improving Consumer Mindset Metrics and Shareholder Value Through Social Media: The Different Roles of Owned and Earned Media. Journal of Marketing, 82(1), 37–56. https://doi.org/10.1509/jm.16.0055

Datta, H., Ailawadi, K. L., & van Heerde, H. J. (2017). How Well Does Consumer-Based Brand Equity Align with Sales-Based Brand Equity and Marketing-Mix Response? Journal of Marketing, 81(3), 1–20. https://doi.org/10.1509/jm.15.0340

Erkan, I., & Evans, C. (2016). The influence of eWOM in social media on consumers' purchase intentions : An extended approach to information adoption. Computers in Human Behavior, 61, 47–55. https://doi.org/10.1016/j.chb.2016.03.003

Foroudi, P., Jin, Z., Gupta, S., Foroudi, M. M., & Kitchen, P. J. (2018). Perceptional components of brand equity: Configuring the Symmetrical and Asymmetrical Paths to brand loyalty and brand purchase intention. Journal of Business Research, 89(June 2017), 462–474. https://doi.org/10.1016/j.jbusres.2018.01.031

Gautam, V., & Sharma, V. (2017). The Mediating Role of Customer Relationship on the Social Media Marketing and Purchase Intention Relationship with Special Reference to Luxury Fashion Brands. Journal of Promotion Management, 23(6), 872–888. https://doi.org/10.1080/10496491.2017.1323262

Godey, B., Manthiou, A., Pederzoli, D., Rokka, J., Aiello, G., Donvito, R., & Singh, R. (2016). Social media marketing efforts of luxury brands: Influence on brand equity and consumer behavior. Journal of Business Research, 69(12), 5833–5841. https://doi.org/10.1016/j.jbusres.2016.04.181

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Rstedt, M. S. (2014). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks, California: Sage Publications.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). A primer on partial least squares structural equation modeling (PLS-SEM) (Second). Los Angeles: SAGE.

Hutter, K., Hautz, J., Dennhardt, S., & Füller, J. (2013). The impact of user interactions in social media on brand awareness and purchase intention: The case of MINI on Facebook. Journal of Product and Brand Management, 22(5), 342–351. https://doi.org/10.1108/JPBM-05-2013-0299

Kaplan, A., & Haenlein, M. (2010). The challenges and opportunities of social media in health. Business Horizons, 53, 59–68.

Keller, K. L. (1993). Conceptualizing, Measuring, and Managing Customer-Based Brand Equity. Journal of Marketing, 57(1), 1–22. https://doi.org/www.jstor.org/stable/1252054

Keller, K. L. (2001). Mastering the Marketing Communications Mix: Micro and Macro Perspectives on Integrated Marketing Communication Programs. Journal of Marketing Management, 17(7–8), 819–847. https://doi.org/10.1362/026725701323366836

Keller, K. L. (2009). Building strong brands in a modern marketing communications environment. Journal of Marketing Communications, 15(3), 139–155. https://doi.org/10.1080/13527260902757530

Keller, K. L., & Lehmann, D. R. (2006). Brands and Branding: Research Findings and Future Priorities. Marketing Science, 25(6), 740–759. https://doi.org/10.1287/mksc.1050.0153

Kim, A. J., & Ko, E. (2012). Do social media marketing activities enhance customer equity? An empirical

study of luxury fashion brand. Journal of Business Research, 65(10), 1480–1486. https://doi.org/10.1016/j.jbusres.2011.10.014

Kumar, A., Bezawada, R., Rishika, R., Janakiraman, R., & Kannan, P. K. (2016a). From Social to Sale: The Effects of Firm-Generated Content in Social Media on Customer Behavior. Journal of Marketing, 80(1), 7–25. https://doi.org/10.1509/jm.14.0249

Kumar, A., Bezawada, R., Rishika, R., Janakiraman, R., & Kannan, P. K. (2016b). From Social to Sale: The Effects of Firm Generated Content in Social Media on Customer Behavior. Journal of Marketing, 80(1), 7–25.

Mangold, W. G., & Faulds, D. J. (2009a). Social media: The new hybrid element of the promotion mix. Business Horizons, 52(4), 357–365. https://doi.org/10.1016/j.bushor.2009.03.002

Mangold, W. G., & Faulds, D. J. (2009b). Social media: The new hybrid element of the promotion mix. Business Horizons, 52(4), 357–365. https://doi.org/10.1016/j.bushor.2009.03.002

Nieto-García, M., Munoz-Gallego, P. A., & González-Benito, Ó. (2017). Tourists' willingness to pay for an accommodation: The effect of eWOM and internal reference price Marta. International Journal of Hospitality Management, 62, 67–77. https://doi.org/10.1016/j.ijhm.2016.12.006

Park, D.-H., Lee, J., & Han, I. (2007). The Effect of On-Line Consumer Reviews on Consumer Purchasing Intention: The Moderating Role of Involvement. International Journal of Electronic Commerce, 11(4), 125–148. https://doi.org/10.2753/JEC1086-4415110405

R Core Team. (2019). R: A language and environment for statistical computing. Vienna, Austria: R Foundation for Statistical Computing.

Sanchez, G., Trinchera, L., & Russolillo, G. (2017). plspm: Tools for Partial Least Squares Path Modeling (PLS-PM). Retrieved from https://cran.r-project.org/package=plspm

Seo, E., & Park, J. (2018). A study on the effects of social media marketing activities on brand equity and customer response in the airline industry. Journal of Air Transport Management, 66(September 2017), 36–41. https://doi.org/10.1016/j.jairtraman.2017.09.014

Sijoria, C., Mukherjee, S., & Datta, B. (2018a). Impact of the antecedents of electronic word of mouth on consumer based brand equity: a study on the hotel industry. Journal of Hospitality Marketing & Management, 00(00), 1–27. https://doi.org/10.1080/19368623.2018.1497564

Sijoria, C., Mukherjee, S., & Datta, B. (2018b). Impact of the antecedents of eWOM on CBBE. Marketing Intelligence & Planning. https://doi.org/10.1108/MIP-10-2017-0221

Viswanathan, V., Malthouse, E. C., Maslowska, E., Hoornaert, S., & Van den Poel, D. (2018). Dynamics between social media engagement, firm-generated content, and live and time-shifted TV viewing. Journal of Service Management, 29(3), 378–398. https://doi.org/10.1108/JOSM-09-2016-0241

Wells, J. D., Valacich, J. S., & Hess, T. J. (2011). What signal are you sending? How website quality influences perceptions of product quality and purchase intentions. MIS Quarterly, 35(2), 373–396.

Yadav, M., & Rahman, Z. (2017). Measuring consumer perception of social media marketing activities in e-commerce industry: Scale development & validation. Telematics and Informatics, 34(7), 1294–1307. https://doi.org/10.1016/j.tele.2017.06.001

Yen, N. Y., Zhang, C., Waluyo, A. B., & Park, J. J. (2015). Social Media Services and Technologies Towards Web 3.0. Multimedia Tools and Applications, 74(14), 5007–5013. https://doi.org/10.1007/s11042-015-

2461-4

Yoo, B., & Donthu, N. (2001). Developing and validating a multidimensional consumer-based brand equity scale. Journal of Business Research, 52, 1–14.

Copyright Disclaimer