

## THE EFFECT OF USER-GENERATED CONTENT QUALITY ON BRAND ENGAGEMENT: THE MEDIATING ROLE OF FUNCTIONAL AND EMOTIONAL VALUES

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### ABSTRACT

User-generated content (UGC) and online customers' brand engagement are gaining popularity and becoming essential tools in improving the online business. Considering its growing importance, the present research aims to examine the indirect effect of UGC quality on online customers' brand engagement through UGC's functional and emotional values in a non-Western culture. Data were collected using an online survey which yielded 242 useable responses which were then analysed using Partial Least Squares - Structural Equation Modelling (PLS-SEM). Findings revealed that, content and technical quality of UGC have significant effects on UGC's functional and emotional values. Moreover, functional and emotional values exert positive and significant effects on customers' brand engagement. Contrary to the expectations, the design quality of UGC has no direct effect on UGC values nor an indirect effect on customers' brand engagement. The findings of this research provide valuable insights to the managers about what they need to prioritise in regard to increase online customers' brand engagement. This study contributes significantly to the body of knowledge by developing and empirically testing research model connecting to UGC quality with UGC values and customer's brand engagement within the Asian context.

Keywords: User-generated content; Functional value; Emotional value; Online customers' brand engagement

### 1. Introduction

Web 2.0 has brought significant changes in regard to individuals' interaction pattern with the Internet [Lai & To 2015; Yang et al. 2017]. It allows the internet users to interact and collaborate with each other via user-generated content which differs from the first generation of web where users' role was limited to view the content in a passive manner [Thomas et al. 2019]. The inclusion of user-generated content enabled Web 2.0 to offer a more social, interactive, and responsive web design. More particularly, it allows users to create, modify, and share their own content [Owusu et al. 2016; Papathanassis & Knolle 2011]. The special characteristics of openness, participation, and sharing contributed to the significant increase of Web 2.0 in the production of user-generated content [UGC] [Valcke & Lenaerts 2010]. UGC is an important means that allows individuals, groups, and all type of organisations to express

themselves and communicate with others online by sharing videos, texts, audios, and images (e.g., YouTube); blogs (e.g., Blogger.com); and social networking sites (e.g., Instagram, Facebook) [Bakshy et al. 2012; Kim & Lee 2017].

In recent years, the use of UGC in business organisations to carry out marketing activities has increased significantly [Malthouse et al. 2016; Navarro & Bigné 2017; Thompkins & Regerson 2012]. These organisations utilise UGC for different purposes, including advertisement, promotions, and customer services [Shim & Lee 2009]. At the individual level, UGC helps consumers to express their personal identity, allows social interactions with others, and enables gathering or disseminate information [Daugherty et al. 2008]. Blackshaw & Nazzaro [2006, p. 4] argued that UGC is “a mixture of fact and opinion, impression and sentiment, founded and unfounded titbits, experiences, and even rumour”. It serves as a vital way for its users to express their views and opinions and communicate with others [Boyd & Ellison 2008]. Organisations started to employ UGC to achieve two-way communication and interactions with their current and potential customers [Papathanassis & Knolle 2011]. UGC assists companies to deliver their messages to customers and obtaining customers feedback. Therefore, high quality UGC is expected to be shared [Valcke & Lenaerts 2010]. Sun (2010) argued that, the qualities of information systems enhance the value served by the system. Similarly, Gangi & Wasko [2009] found that, organisations created value using high quality UGC, and this value influenced the experience and interests of users positively. In the same manner, this study argues that organisation’s UGC quality can enhance users’ values, which would in turn affect their online brand engagement positively.

Broadly speaking, the notion of the brand engagement is comparatively new in the marketing literature [Vivek et al. 2012; Zheng et al. 2015], which is considered as one of the key drivers that affect consumer’s decision-making process [Hollebeek 2011; Potdar et al. 2018]. Considering its importance, researchers have suggested to explore the antecedents that drive online customer engagement [e.g. Brodie et al. 2011; Hollebeek et al. 2014]. Brand engagement is perceived as the way to create a solid and stable relationship between the brand and the consumer [Liu et al. 2011]. Bonhomme et al. [2010] argued that to have a successful brand, a company must build customer brand engagement. Having customers willing to spend their own valuable time on a specific brand is a crucial step for each business [Smith et al. 2012]. One of the most significant tools for marketers to convey their brand, to interact with the customers and to communicate with them is UGC [Gunelius 2012; Malthouse et al. 2016; Verma 2014].

Different studies in the field of brand engagement considered the role of UGC and its effects on brand equity and utility. The research done by Kim et al. [2012] focused on the effect of UGC and UGC-created values on utility. They argued that, there are three quality factors creating value for customers, including: content quality, design quality and technology quality, which in turn improve the utility. Similarly, Bonhomme et al. [2010] found a significant positive relationship between UGC and consumer-based brand equity. Different streams of research revealed that, UGC has significant effects on brand images, purchase intentions, and sales [De Vries et al. 2012; Jin & Phua 2014]. *Nevertheless, there is a lack of studies that examine the direct and indirect effect of UGC quality on online customers’ brand engagement through UGC values.* Therefore, the main objectives of this study are threefold: (i) to examine the effect of UGC quality on UGC values, (ii) to test the effect of UGC values on online customers’ brand management, and (iii) to predict the mediating effect of UGC values between UGC quality and online customers’ brand engagement. To achieve these objectives, a theoretical framework has been developed based on Stimulus-Organism-Response (S-O-R) theory [Mehrabian & Russell 1974]. Based on this theory, this study postulates that, the online environmental cues like music, colour, lighting, technology, quality, design, etc., affect customers’ internal states (UGC values) and external state (online customers’ brand engagement) [Richard 2005; Wang et al. 2011]. The rest of the paper is as follows. First, based on past studies, a theoretical framework is developed and hypotheses are explained. Next, the adopted methodology is discussed, followed by the results, findings, and discussions. Lastly, a conclusion is made, and implications, limitations, and future research directions are highlighted.

## 2. Theoretical Foundation and Hypotheses Development

### 2.1 The S-O-R Theory

The S-O-R theory was introduced by Mehrabian & Russell [1974] to establish a link between physical environment and human behaviour. This model presents a mechanism including stimulus impacting the individual internal state, eventually affecting their attitude and/or behaviour [Donovan & Rossiter 1982]. Based on the S-O-R theory, ‘stimulus’ refers to the impetus within the environment with the potential to affect consumers’ cognitive, affective, consciousness, and value processes, whereas, ‘organism’ refers to “the mediating processes between the stimulus and consumers’ response” [Fiore & Kim 2007, p. 426]. On the other hand, ‘response’ refers to “the concluding result of the internal processes of the organism” [Fiore & Kim 2007, p. 432]. The S-O-R theory suggests that, individuals are likely to change their affective and cognitive attitudes after they are exposed to a stimulus, and finally, affective and cognitive attitudes then contribute to the response.

Past studies have applied the S-O-R theory to explain how the factors of the online shopping environment affect the psychological states of cognition, affection, and activation, creating customer responses [Animesh et al. 2011; Jiang et al. 2010; Parboleah et al. 2009]. In the same manner, Kim and Lennon [2010] used information to represent the stimulus, perceived risk and satisfaction to represent the organism, and revisit and purchase intention to represent the response. Additionally, Fang [2012] considered sellers' online interactivity strategies as the stimulus, and discussed its effect on perceived diagnosticity and deception, affecting consumers' transaction intention. *Likewise, this study considers that, UGC created by Internet and technology users that are made available online in the form of text, audio, and visual as online environment stimuli that may affect customers' functional and emotional values and ultimately influence their decision to engage with a certain brand (e.g., YouTube, Facebook, Twitter, Google, etc.).* Particularly, UGC that provides functional factors (such as, accessibility, ease of use, quality, etc.), and emotional factors (such as, pleasure, excitement, satisfaction, contentment, etc.) is likely to influence customers' response positively. The response part reflects the outcome, including both psychological reactions like attitude and behavioural reaction [Bagozzi 1986]. Psychological responses can be positive or negative, as behaviour can be positive (engaging with brand) or negative (avoiding brand).

## 2.2 The UGC Websites Quality

UGC can be referred to any form of content (written, audio, visual, and combined) created by Internet and technology users and made publicly available online, not necessarily created by professionals, and reflecting creative efforts of its developer [Christodoulides et al. 2012; OECD 2007]. It can be developed, produced, modified, shared, and used by individuals and groups [Ramón & Chadwick 2017]. In the contemporary modern world, researchers have argued that UGC is a unique form of digital content that incorporates content, design, and technical aspects [see Li & Lin 2009; Wunsch-Vincent & Vickery 2007]. The following sections briefly discuss these three components of UGC.

### 2.2.1 UGC content quality

Content quality refers to whether written texts, photos, images, videos, and motion pictures on a web page meet commonly known standards of semantics, style, and grammar [Bonhomme et al. 2010]. To keep the content quality along the track of continuous improvement, the website needs continuous monitoring of the content quality [Kim et al. 2012]. For instance, YouTube carries out multi-aspect activities to maintain the content quality of the website as per the standard requirements. After uploading every new video to the online stream, YouTube continually monitors users' content, requires it to meet the standard quality of the website, and inspects whether the content violates copyright laws or not. The content should also not violate society's moral standards. YouTube even has its own special website to educate users and video creators how to get started, optimise content, and engage with their community. Reward strategies are implemented by several UGC websites, encouraging the users to create additional content and keep the number of pages growing steadily, while keeping their quality standards high [Kim et al. 2010]. For example, if a user uploads a favourite food recipe on MyRecipeMagic.com and it becomes popular, the user will be paid based on the number of clicks on that specific recipe. As a result, the UGC websites are establishing their own compensation plan to increase the content quality. Content quality is a crucial factor to achieve progress and success for a UGC website [Dye 2011; Smith et al. 2012].

### 2.2.2 UGC design quality

UGC design quality refers to the outlook that the content will have when it becomes available for the users [Smith et al. 2012]. It demonstrates to which extent there is coordination, harmonisation, and synchronisation among a set of well-defined factors such as text, sound, audio, and video motions [Kim et al. 2010]. The total attributes of a website constitute characteristics of each UGC website. For example, YouTube provides more video-based design while Google shows text-based design. In the contemporary trend of increasing attraction for design quality, video-based content has become more important. The importance of the UGC design is obvious from its frequent use in modern android mobile devices [Liu et al. 2011].

The coding and design of UGC websites varies from one website to another, including audio, video, text, and images [Kim et al. 2012]. Currently, the most frequented and popular video-sharing websites include YouTube, Vimeo, and AOL; all these popular videos sharing websites have different attractive UGC designs [Liu et al. 2011]. The design of the website is flexible and allows people to upload their homemade videos and interact with each other globally, writing comments and reviews on each other's videos. Succinctly, design quality is a fundamental element to achieve success for a UGC website [Dye 2011].

### 2.2.3 UGC technology quality

UGC technology combines advanced science and modern knowledge to structure websites [Thompkins & Rogerson, 2012]. It includes video sharing, social networking, wikis, cell phone photography tags, and many others [Kim et al. 2012]. UGC technologies facilitate and assist its users in generating and sharing the content with other users, with no exception to business [Malthouse et al. 2016]. This can be considered as a magic tool in the user's hands, leading to more popularity of their product and, as a result, consumers are attracted to their respective brands, or equally, in the opposite way, may lead to destroying a business' reputation. Adobe Flash assisted UGC websites with compatibility with variety of devices through a high-resolution screen and low-capacity data, with very strong security at the end. UGC websites' technology has been improving daily. They have improved their ability to assist users with diverse social network applications (Facebook and Twitter), video sharing websites (YouTube), comments and reviews (Trip Adviser), and idea creation (MyStarbucksIdea) [Malthouse et al. 2016].

### 2.3 UGC Values

The value creation process of UGC includes planning, production, distribution, and consumption, which involve the participation of users [Feijoo et al. 2009]. Value is perceived as the usefulness of something that satisfies needs [Bonhomme et al. 2010]. In the same manner, Zeithaml (1988, p. 4) defines value as "the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given". These definitions are in line with the theory of utility, which assumes that individuals perceive value as the difference between the utility and the cost reflected by the price paid for the product and/or services [Tellis & Gaeth 1990]. These definitions were criticized by other researchers [see Lee et al. 2011; Babin et al. 1994; Holbrook 1994] because it focused on one side of value i.e., functional value and ignored other side. Those researchers argued that, functional value does not capture the emotional dimension, and suggested that value is a multidimensional construct that is consist of emotional and functional dimensions, and that emotional value is vital in motivating customer attitude and behaviour.

Another school of thought proposed three dimensions of value i.e., extrinsic, intrinsic, and systemic value [Hartman 1973]. Extrinsic value refers to the functional side, whereas intrinsic value reflects to the emotional aspect of consumption. Conversely, systemic value represents the rational aspect. On the other hand, Sheth et al. [1991] postulated five consumption values: functional, social, emotional, epistemic, and conditional values. Later studies omit epistemic and conditional values because they are too transient [Sweeney et al. 1996].

Based on these discussions, this study conceptualizes value as a multidimensional construct which consists of two dimensions i.e., functional and emotional values due to the fact that most of past studies have focused on these two dimension [see Gursoy et al. 2006; Park 2004; Williams & Soutar 2009]. Moreover, Gursoy et al. [2006] argued that emotional and functional values are better predictors of consumer attitude and behaviour compared to other values. Additionally, this definition of value is in agreement with Lee et al. [2011], Babin et al. [1994], and Holbrook [1994] conceptualization. The following subsection briefly explain these two dimensions.

#### 2.3.1 Functional value.

Functional value refers to the content that enhances the satisfaction level of the users' practical needs and expectations (Bonhomme et al. 2010). It is about communicating the functional benefits of the product or brand [Doyle & Stern 2006]. For example, lower cost, higher quality, and reasonable prices [Bergstrom 2000]. To provide the functional value for users of the websites, UGC creators and website designers try to improve their content quality. For example, providing functional factors like accessibility, ease of use, low cost, quality, and availability seems to be the right steps [Thompkins & Rogerson 2012].

#### 2.3.2 Emotional value

Emotional value exhibits positive feelings about the brand and product that motivate purchase [Bendixen et al. 2004]. Particularly, it refers to the amount of pleasure that consumers experience from their consumption [Bonhomme et al. 2010]. The implicit pleasure attached with watching pro-environmental campaigns on YouTube is an explicit example of this fact. Figures and facts show how UGC content has been growing in popularity among emotional members. Particularly, recent survey about the popularity of UGC websites reveals that among emotionally related members, 25% of users in the United States have commented on a news story or a blog post; 9% have contributed article, image, or video; and 11% have tagged online content. Furthermore, it has been observed that social network applications have been growing in popularity, just like print and electronic media, to present social and political ideas [Dylko & McCluskey 2012].

#### 2.4 Customer Brand Engagement

The emergence of social media and the greater development of technology have been major factors in motivating organisations to focus more on customer engagement [Hussein & Hassan 2017; Kang et al. 2016; Sashi 2012]. The notion of ‘engagement’ is comparatively new in the marketing literature, and more studies should focus on it, especially in the context of online environments [Dessart et al. 2015; Harrigan et al. 2017]. In general, customers engage with different ideas related to products, organisations, brands, and virtual brand communities [Muñoz-Expósito et al. 2017]. Customer engagement has been recognized as an important factor that connects the company with its customers emotionally [Oviedo-García et al. 2014]. Therefore, companies “are placing more emphasis on competing for the social attention of consumers to drive customer engagement” (p. 28) by various ways such as integrating social media in their marketing strategies [Hudson et al. 2016]. Apart from that, literature found that customer-brand engagement exerts significant effect on organisational performance, particularly growth of sales, reductions of cost, products/services development, customer commitment, satisfaction, and loyalty [Harrigan et al. 2017; Kumar et al. 2010]. Therefore, it is crucial to examine the factors that can boost customer brand engagement [Harrigan et al. 2017].

According to Bowden [2009], customer engagement can be viewed as a psychological process involving cognitive and emotional factors. Vivek et al. [2012] defined customer engagement as the individual’s involvement and connection with organisational activities. It involves encouraging a company’s customers to interact with the brand and other customers, allowing all customers to share their experiences with the brand, eventually brand development and loyalty is enhanced [Danso 2015]. Mollen & Wilson [2010, p. 919] defined online engagement as “a cognitive and affective commitment to an active relationship with the brand as personified by the website or other computer-mediated entities designed to communicate brand value”. Brodie et al. [2011] assumed that customer engagement is a crucial factor for creating a sustainable competitive advantage for business. Moreover, Voyles [2007] argued that consumer engagement can boost profitability of an organisation. In the same manner, Brodie et al. [2011] contend that, engaged customers are a key factor in providing organisation with suggestions/recommendations/ideas related to certain products, services, and/or brands. Similarly, Nambisan & Nambisan [2008] indicated that engaged customers are important means leading to new product/service development.

User-generated content of videos, photos, texts, tags, and comments on other customers’ ideas play a great role in keeping current customers engaged in the company, to be the potential customers for future products, and that is the magical value of engaged customers [Malthouse et al. 2016; Verma 2014]. UGC value gained popularity after social media started to become the source of shaping people’s demands. Every one of the newly emerged social media websites empowers users, determining how much of their personal data can be published publicly. It also makes them able to create connections between different platforms of UGCs. This ability boosted the amount of data published on the web because of an integrated system between those websites [Dylko & McCluskey 2012]. Another popular form of data creation and publishing for free is the emergence of fast-growing Wikis. Users can add their own pages to the thousands of pages of data and be sure that many users will come to use it [OECD 2007]. News websites are going to allow their users to play the role of independent journalists by posting their videos, audios, pictures, and even stories freely. Blogs and video blogs are getting popularity every day and other users are allowed to post comments, tags, and rate each other’s contents [Dylko & McCluskey, 2012]. In today’s business environment, day-by-day investors and owners of brands become aware of the significant role that UGC can play for them. From the consumer’s viewpoint, UGC in the form of wiki data, blog text and images, YouTube videos or Facebook reviews, etc., deepen engagement levels with the brand.

#### 2.5 UGC Content, UGC Values, and Brand Engagement

Quality is a crucial matter for UGC sites, hence UGC providers must not compromise the quality of their content [Feijoo et al. 2009]. Recent research demonstrated that the high-quality content of the UGC have attracted the attention of considerable number of users [Ewalda & Ali 2016; Kim et al. 2012]. As an example, YouTube provides significant flexibility to the customer in terms of allowing them to improve previously uploaded videos through allowing the viewers to write comments on the videos. This practice has helped YouTube to significantly improve its contents, functional values, and, consequently, has led to increased brand engagement among the users. In a comparable way, improving the audio and sound effects content quality can support the emotional values of UGC by stimulating psychological reactions from users (De Vries 2012). Obviously, users in the modern era prefer access to the UGC that provides significantly improved quality of all contents, which attracts much network traffic and improves the brand engagement [Coursaris et al. 2016].

Based on previous discussions, this study assumes that content quality of UGC can enhance consumers’ functional and emotional values positively, which eventually can increase customer brand engagement. *This assumption is grounded in the S-O-R model.* According to this model, stimulation and human behaviour are linked by an organismic component [Mehrabian & Russell 1974]. Particularly, the quality of UGC content can stimulate the customer’s internal

state of mind, which can include pleasure, satisfaction, arousal, dominance, and comfort, and ultimately inspire customers to respond by engaging in the brand. Accordingly, the following hypotheses are developed:

*H1. UGC content has a positive effect on the functional value of UGC.*

*H2. UGC content has a positive effect on the emotional value of UGC.*

*H3. Functional value has a positive effect on customer-brand engagement.*

*H4. Emotional value has a positive effect on customer-brand engagement.*

*H5. Functional values mediate the relationship between UGC content and customer-brand engagement.*

*H6. Emotional values mediate the relationship between UGC content and customer-brand engagement.*

## 2.6 UGC Design, Functional and Emotional Values, and Brand Engagement

UGC contents are developed in different forms, including blogs, wikis, videos, podcasts, and social networking sites [Peters et al. 2013]. The visible characteristics and elements of every website are called design. Every UGC website developer has been trying to develop a distinguished and unique design from that of the competitors, and thus numerous readymade templates are available with the flexibility of editing and formatting. It is logical that the more appealing the appearance and outlook of any web-based UGC, is the higher number of UGC users it will directly attract [Ewalda & Ali 2016]. There are elements and factors contributing to website designs. Those elements can include audios, graphics, fonts, colours, shapes, etc. The method by which UGC is designed is important, because it can improve the values of UGC in terms of functional and emotional values [Kim et al. 2010]. More clearly, the flexibility of website design makes it simple and easy for users to share videos, images, comments, ideas, etc., with others locally and globally, enhancing their functional and emotional values, and ultimately boosting their engagement with the brand.

Based on the above mentioned discussions, this study argues that design quality of UGC can exert a direct effect of UGC emotional and functional values, and indirect effect on brand engagement through UGC values. This argument is rooted in the S-O-R theory. It theorises that, online environmental signals act as stimuli (stimulus) affecting the customers' emotional and functional state (organism), which ultimately affects their behaviour (response). In detail, the structure of the UGC content, including the unification and harmonisation of sound, video, text, and audio, can enhance the emotional and functional values of customers, and eventually motivate them to engage with the brand. Accordingly, the following hypotheses are developed:

*H7. UGC design quality has a positive effect on the functional value of UGC.*

*H8. UGC design quality has a positive effect on the emotional value of UGC.*

*H9. Functional value mediates the relationship between UGC design quality and customer-brand engagement.*

*H10. Emotional value mediates the relationship between UGC design quality and customer-brand engagement.*

## 2.7 UGC Technology Quality, Functional and Emotional Values, and Brand Engagement

Technological advancement plays a vital role in the success of almost every business of the modern world [Bui & Kemp 2013; Leong et al. 2018]. New generations of techno-savvy Internet users demand more and more advancement in technology of every product they used [Priporasa et al. 2017]. Technology advancement makes the competition strong, thus attracting users to every web-based UGC platform is difficult. One might easily lose vast numbers of fans from lagging facilities and attributes that rival UGC websites have. UGC technology can increase the functional and emotional values of UGC, providing more user-friendly interfaces, ease of accessibility, and convenience [Kim et al. 2012]. Furthermore, UGC contains videos and motion pictures that can directly impact the emotional value of UGC [Kim et al. 2010]. These efforts from UGC sites not only help in improving UGC technological functional and emotional values, but also lead to an increase in brand engagement among users.

Based on previous discussions, this study proposes that UGC technology can affect functional and emotional values of UGC and enhance the users' engagement with the brand. This argument is embedded in the S-O-R model. Based on this theory, the effect of online environmental stimuli on customers' action/reaction is mediated by attitudinal and emotional regulation. More clearly, UGC's advanced and friendly technologies that assist the users in generating and sharing the content with others boosts the emotional and functional values of the user, motivating them to engage with a specific brand. Accordingly, the following hypotheses are developed:

H11. UGC technology quality has a positive effect on the functional value of UGC.

H12. UGC technology quality has a positive effect on the emotional value of UGC.

H13. Functional value mediates the relationship between UGC technological quality and customer-brand engagement.

H14. Emotional value mediates the relationship between UGC technological quality and customer-brand engagement.

Based on the discussion above a research model is drawn as shown in Figure 1.

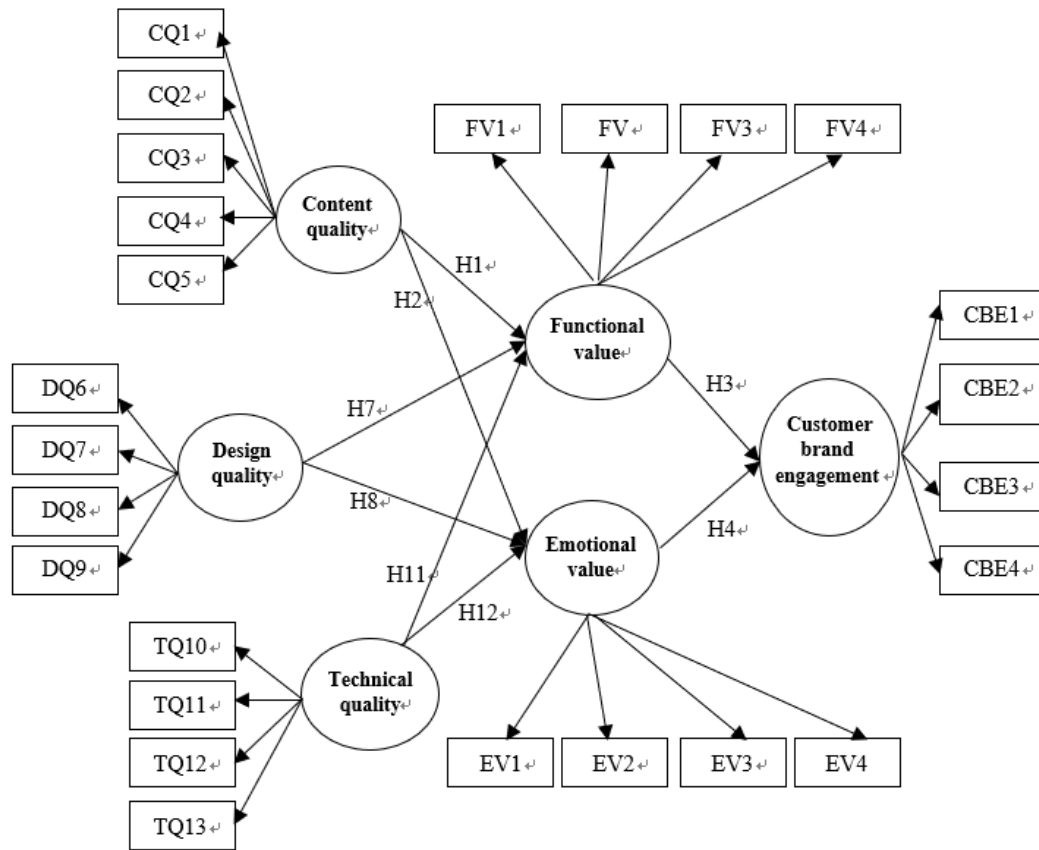


Figure 1: Conceptual Framework

### 3. Methodology

#### 3.1 Procedure of Data Collection

This is a cross-sectional study where the data-gathering process was carried out at one point of time. This study utilised the quantitative research particularly survey method to collect data from participants. Due to the Internet-based subject of this research, the best place to find the respondents and collect the data from them was the Internet. The ‘Qualtrics’ web-based survey administration website was employed to collect data from respondents. The online survey was sent to respondents through the Internet via messenger, email, and social media, including Twitter and Facebook, for approximately 10 weeks, from February 2017 to mid-April 2017. The answers were automatically and directly collected on the ‘Qualtrics’ website. A total number of 1000 questionnaire links were distributed and around 242 questionnaires were returned and found usable for further analysis. The profiles of the respondents are presented in Table 1. About 55% of the respondents were females and 45% were male. In terms of their ethnicity, 44.95% of participants were Malay, followed by Chinese (25.25%), and Indian (13.44%). In terms of age, the majority of respondents (61.4%) were less than 35 years. Regarding participants education background the bulk of them have a bachelor degree and above (50.9%). With respect to experience in UGC use, the majority of respondents use it more than 6 times every week for different reasons such as sharing information (23.5%), social relationship (22.6%), community participating (18.9%), pleasure improvement (8.8%), expression expansion (9.5%).

3.2 Sampling and Sample Size

The target respondents of this study were UGC users in Malaysia. As the main concern of this study is to contribute to theory, non-probability judgmental sampling was employed [Calder et al. 19981]. Particularly, data was collected from consumers with experience in using UGC. This experience could come from using any UGC platform like YouTube, Facebook, MySpace, Blogs, Google, etc. [Kim & Lee 2017]. In this study, the minimum sample size requirements necessary to detect R<sup>2</sup> value greater than 0.10 in any endogenous construct in the structural model at a significant level of 0.05, with statistical power of 95% and effect size of 0.15 is 140 [Hair et al. 2017].

Table 1. Respondent Profile.

Demographics variables	N= 238	Percentage (%)
<b>Gender</b>		
Male	107	45%
Female	131	55%
<b>Age</b>		
34 and below	146	61.4%
35 and above	92	38.6%
<b>Ethnicity</b>		
Malay	107	44.95%
Chines	61	25.25%
Indian	38	15.23%
Others	32	13.44%
<b>Education</b>		
High school	47	19.7%
College degree	70	29.4%
Bachelor degree	53	22.3%
Master degree	46	19.3 %
Doctoral degree	22	9.3%
<b>UGC experience</b>		
2-3 times/week	79	33.2%
4-5 times/week	40	16.8%
More than 6 time/week	118	49.6%
<b>UGC purpose</b>		
Community Participating	45	18.9%
Hobby Club/Café Activity	28	11.8%
Information Sharing	56	23.5%
Pleasure Improvement	21	8.8%
Expression Expansion	22	9.5%
Social Friendship	54	22.6%
Intellectual Capability	11	4.6%

3.3 Measurement Items

All constructs and items were adapted from extant literature and were revised to suit the objective of this study (Appendix). All major scale items are based on a five-point Likert-scale, ranging from strongly disagree (1) to strongly agree (5). Content quality (5-items), design quality (4-items), technological quality (4-items), functional quality (4-items), and emotional value (4-items) were adapted from Kim *et al.* [2012]. Customer brand engagement with 4-items were adapted from Bonhomme et al. [2010].

3.4 Common Method Variance

In this study data were collected from same respondents (i.e. UGC users), thus it was important to examine the presence of common method variance (CMV). This statistical phenomenon refers to the false variance among endogenous variables that occur due the data collection process and scale measurement rather than to the variables of interest [Podsakoff et al. 2003]. This study employed procedural and statistical strategies to reduce the effect of this phenomena. In term of procedural strategy, the participants’ anonymity and confidentiality were confirmed; the questionnaire was pretested to avoid difficult and vague questions, and a clear guideline were provided for respondents to complete the survey [Podsakoff et al. 2012]. Statistically, Harman’s single factor was used to test if there is any



factor that explain the majority of variance [Podsakoff et al. 2003]. The result of the un-rotated factor analysis revealed that the first factor explained 24.95% of the total explained variance (62.95%) which confirms that CMV is not an issue in this study.

#### 4. Results

To test the research model, this study used structural equation modelling Partial Least Squares (PLS-SEM), using the SmartPLS 3.0 software [Ringle et al. 2015]. Following the recommended two-stage analytical procedures by Anderson & Gerbing [1988], the measurement model was tested followed by the structural model. The measurement model represent the relationship between latent variable and its relevant indicators, whereas, the structural model reflect the relationship between the latent variables [Hair et al. 2017; Quoquab et al. 2018].

In this study, the PLS-SEM was considered for different reasons. First, this is an exploratory research [Richter et al. 2016] that aim to know more about the causal relationships between UGC, UGC values, and customer online brand engagement. Second, this study aim to predict and maximize the explained variance in the endogenous variables [Hair et al. 2017]. Additionally, PLS-PM is recommended for complex models that has direct and indirect relationships [Richter et al. 2016].

##### 4.1 Measurement Model

The measurement model was assessed in term of its reliability, convergent validity, and discriminate validity. First, the reliability of indicators was confirmed based factor loading values. Table 2 reveals that most of the item loadings on their associated latent variables were higher than 0.60, except five items i.e. CQ2, CQ4, EV3, FV2, and these items were omitted from this study [Chin 1998]. At the constructs level the reliability was established based on composite reliability values (CR). Table 2 demonstrates that the composite reliability for all constructs were higher than 0.70, thus reliability of measurement model was ascertained at the item and construct levels. Second, the convergent validity was assessed based on average variance extracted (AVE) [Hair et al. 2017; Quoquab et al. 2019]. Table 2 illustrate that AVE for all constructs exceeded the cut-off point of 0.50, thus convergent validity was confirmed [Henseler et al. 2016].

Table 2: Convergent Validity

Construct	Items	Loadings	CR	AVE
Customer Brand Engagement(CBE)	CBE1	0.837	0.919	0.740
	CBE2	0.869		
	CBE3	0.840		
	CBE4	0.894		
Content Quality(CQ)	CQ1	0.721	0.763	0.517
	CQ3	0.741		
	CQ5	0.695		
Design Quality(DQ)	DQ1	0.817	0.853	0.594
	DQ2	0.746		
	DQ3	0.686		
	DQ4	0.826		
Emotional Value(EV)	EV1	0.816	0.875	0.701
	EV2	0.821		
	EV4	0.874		
Functional Value(FV)	FV1	0.705	0.776	0.536
	FV3	0.717		
	FV4	0.773		
Technology Quality(TQ)	TQ1	0.830	0.801	0.575
	TQ2	0.754		
	TQ4	0.683		

Note: CQ2, CQ4, EV3, FV2 and TQ3 were deleted due to low loadings

Next, discriminate validity was evaluated based on two methods i.e., Fornell & Larcker's [1981] criterion and heterotrait-monotrait (HTMT) method [Henseler et al. 2015]. To establish discriminant validity based on Fornell - Larcker criterion, the square root of the average variance extracted for that constructs should be higher than its correlation with other constructs in the model [Hair et al. 2017]. Table 3 shows that all the values on the diagonals were greater than the corresponding row and column values indicating the measures were discriminant. To establish

discriminate validly using HTMT method, the ratio of between construct correlations to within construct correlation should be less than 0.85 or 0.90 [Henseler et al. 2015]. The results in Table 4 show that the HTMT<sub>0.90</sub> of all latent variables were lower than 0.90. Thus, discriminant validity has been established using both methods.

Table 3: Discriminant Validity “Fornell - Larcker method”

	1	2	3	4	5	6
1. Brand Engagement	<b>0.860</b>					
2. Content	0.341	<b>0.719</b>				
3. Design	0.225	0.407	<b>0.771</b>			
4. Emotional	0.271	0.510	0.305	<b>0.837</b>		
5. Functional	0.304	0.395	0.322	0.399	<b>0.732</b>	
6. Technology	0.263	0.490	0.501	0.386	0.548	<b>0.758</b>

Note: Diagonal values (bolded) are square root of the AVE while the off-diagonals are correlations

Table 4: Discriminant Validity “HTMT method”

	CBE	CQ	DQ	EV	FV	TQ
BE						
CQ	0.498					
DQ	0.269	0.604				
EV	0.299	0.731	0.374			
FV	0.430	0.707	0.446	0.569		
TQ	0.354	0.840	0.691	0.513	0.871	

#### 4.2 Structural Model

To assess the structural model, Hair et al. [2017] and Mohammad et al. [2019] suggested to look at the R<sup>2</sup>, beta, and the corresponding t-values via a bootstrapping procedure with a resample of 5,000. In addition to these basic measures researchers should also report the predictive relevance (Q<sup>2</sup>) and the effect sizes (f<sup>2</sup>) [Henseler et al. 2016]. First, this study observed the effects of the independent variables on the two mediators (see Table 5), the R<sup>2</sup> was 0.322 (Functional Value) and 0.287 (Emotional Value), indicating that the content quality, design quality, and technology quality together can explain 32.2% of the variance in functional value and 28.7% of the variance in emotional value. Next, this research looked at the effect of functional value and emotional value on brand engagement; the R<sup>2</sup> was 0.119, indicating that both type of values explains 11.9% of the variance in customer brand engagement.

In the prediction of functional value, content quality ( $\beta = 0.160, p < 0.01, f^2 = 0.028$ ), and technology quality ( $\beta = 0.455, p < 0.01, f^2 = 0.199$ ) were positively related to functional value while design quality was not significant. Thus, H1 and H11 were supported while H7 was not supported. In the prediction of emotional value, content quality ( $\beta = 0.409, p < 0.01, f^2 = 0.170$ ) and technology quality ( $\beta = 0.156, p < 0.01, f^2 = 0.022$ ) were positively related to emotional value while design quality again was not significant. This supports H2 and H12 while not supporting H8. In the prediction of customer-brand engagement, functional value ( $\beta = 0.233, p < 0.01, f^2 = 0.52$ ) and emotional value ( $\beta = 0.178, p < 0.01, f^2 = 0.03$ ) were positively related to customer-brand engagement. This provides support for H3 and H4.

Finally, this study looked at the mediating effect of functional value and emotional values on the IV-DV relationships (see Table 6). Four out of the six mediations were statistically significant, including Content > Functional > Customer-brand engagement ( $\beta = 0.039, p < 0.05, BC_{0.95} LL = 0.002$  and  $UL = 0.076$ ), Content > Emotional > Customer-brand engagement ( $\beta = 0.073, p < 0.05, BC_{0.95} LL = 0.008$  and  $UL = 0.137$ ), Technology > Functional > Brand Engagement ( $\beta = 0.106, p < 0.01, BC_{0.95} LL = 0.036$  and  $UL = 0.176$ ), and Technology > Emotional > Brand Engagement ( $\beta = 0.033, p < 0.05, BC_{0.95} LL = 0.003$  and  $UL = 0.023$ ). Also, as suggested by Preacher & Hayes [2008], the indirect effects did not include zero in between, indicating there is mediation. Thus, this research concluded that the mediation effect is statistically significant, indicating that H5, H6, H13, and H14 were supported while H9 and H10 were not supported.

The study assessed the predictive relevance of the model using the blindfolding procedure. Blindfolding is a sample reuse technique that omits every *d*th data point in the endogenous construct's indicators and estimates the parameters with the remaining data points [Hair et al. 2017]. If the Q<sup>2</sup> value is larger than 0, the model has predictive relevance for a certain endogenous construct, and otherwise if the value is less than 0 [Hair et al. 2017]. Table 5 shows all Q<sup>2</sup> values were all more than 0 with the Q<sup>2</sup> = 0.157 for Functional Value, Q<sup>2</sup> = 0.176 for Emotional Value, and Q<sup>2</sup> = 0.075 for Brand Engagement, suggesting that the model has sufficient predictive relevance.

Table 5. Hypothesis Testing (Direct Relationships)

Hypothesis	Relationship	Std. Beta	Std. Error	t-value	Decision	f2	R2	Q2	VIF	95% BC CI	
										LL	UL
H1	Content -> Functional	0.160	0.067	2.401**	Supported	0.028	0.322	0.157	1.379	0.023	0.287
H7	Design -> Functional	0.029	0.044	0.662	Not Supported	0.001			1.400	0.000	0.100
H11	Technology -> Functional	0.455	0.070	6.456**	Supported	0.199			1.536	0.302	0.580
H2	Content -> Emotional	0.409	0.070	5.844**	Supported	0.170	0.287	0.176	1.379	0.265	0.541
H8	Design -> Emotional	0.060	0.056	1.069	Not Supported	0.004			1.400	0.001	0.181
H12	Technology -> Emotional	0.156	0.075	2.089*	Supported	0.022			1.536	0.018	0.300
H3	Functional -> Brand	0.233	0.070	3.313**	Supported	0.052	0.119	0.075	1.190	0.083	0.362
	Engagement				Supported						
H4	Emotional -> Brand	0.178	0.070	2.552**	Supported	0.030			1.190	0.036	0.309
	Engagement				Supported						

Note: \*\*p< 0.01, \*p< 0.05

Table 6. Mediation Test (Indirect relationships)

Hypothesis	Relationship	Std. Beta	Std. Error	t-value	Decision	LL	UL
H5	Content -> Functional -> Brand Engagement	0.039	0.019	2.052*	Supported	0.002	0.076
H6	Content -> Emotional -> Brand Engagement	0.073	0.033	2.211*	Supported	0.008	0.137
H9	Design -> Functional -> Brand Engagement	0.007	0.012	0.576	Not Supported	-0.016	0.030
H10	Design -> Emotional -> Brand Engagement	0.011	0.012	0.861	Not Supported	-0.014	0.035
H13	Technology -> Functional-> Brand Engagement	0.106	0.036	2.972**	Supported	0.036	0.176
H14	Technology -> Emotional -> Brand Engagement	0.033	0.015	2.20*	Supported	0.003	0.023

Note: \*\*p< 0.01, \*p<0

## 5. Discussion

The objectives of this study were to predict the direct effect of UGC quality on UGC values and the direct effect of UGC values on customer-brand engagement. It also examined the mediating role of UGC values between UGC quality and customer-brand engagement in a non-western context. To accomplish the objectives of this study, a conceptual framework was developed based on S-O-R model, literature, and logical argument. Structural equation modelling - partial least square approach was employed to examine the hypothetical model. Overall, the findings of this study found support for majority of the hypotheses (8 out of 14).

In explaining the hypotheses, the data support the relationship between the content quality of UGC and functional and emotional values which is consistent with the S-O-R theory as well as past studies [Kim et al. 2012]. It implies that when the content quality of UGC sites is simple to understand, easy to use, novel, popular, and relevant to users' interests, this will stimulate and enhance users' functional and emotional values, and ultimately they will be inclined to allocate more time to be involved and connect cognitively and emotionally with the brand. Moreover, this study found that, the technological quality of UGC exerts positive and significant effects on both functional and emotional values. This result is in line with S-O-R theory and past studies [Kim et al. 2012]. This result suggests that to enhance users' functional and emotional values, the technology quality of UGC must provide users with friendly access to various websites, help users upload and share their items (video, audio, image) with others, and have fast interactions with UGC. Eventually, customers will be more willing to engage cognitively and emotionally with the brand. Interestingly, the results of this study found that design quality of UGC has no effect on users' functional and emotional values in the Malaysian context. This result contradicts past studies that found that, these variables were positively related [Kim et al. 2012]. A possible explanation for this result is that the organisation, structure and harmony among different elements of UGC, including audio, video, image, sound, etc., was not important in this culture. The users' main concern focused more on the practical and technical side rather than the aesthetic side. Overall, the results suggest that both content and technological quality of UGC are important predictors of users' functional and emotional values, whereas design quality was less important in this context.

This study hypothesised that functional and emotional values of UGC will exert a positive effect on customer-brand engagement. The findings of this research provide support for these hypotheses. In other words, the higher the users' functional and emotional values, the more they will be engaged with an online brand like Facebook, YouTube, Twitter, etc. More specifically, if providers of UGC can satisfy the need of their users by providing convenient and easy to use functions, with low cost, and make the use of these functions an enjoyable experience, their functional and emotional values will increase, and eventually their engagement with the provider's brand will rise. The result of this study is in line with the S-O-R theory and past studies that found these types of values affect users' attitudes, in terms of their utility [Kim et al. 2012].

The results of this study also found that, the functional and emotional value of UGC mediate the relationship between content and technological quality and customer-brand engagement. This result is consistent with the S-O-R theory. More particularly, when UGC sites provide users with a good combination of technology and knowledge that are simple, clear, and easy to use, with refreshing and popular content, their functional and emotional value are likely to increase and, ultimately, customers tend to be more engaged with the brand. Contrary to the expectation, neither functional nor emotional values mediate the relationship between design quality and customer-brand engagement.

## 6. Theoretical Contribution and Managerial Implication

This study contributes significantly to the theory and practice alike. Theoretically, this research has proposed a research model that connects UGC quality with UGC values and customers' attitudes towards brand engagement. Particularly, this study has developed relatively new relationships, including the effect of functional value and emotional values on customer-brand engagement. This study found that both types of values exerted positive and significant effects on customer-brand engagement. This is expected to contribute significantly to the theoretical work of customer-brand engagement. Additionally, this is comparatively new research that introduces the functional and emotional UGC values as mediators between UGC quality, including content quality, technological quality, design quality, and customer-brand engagement. This can contribute significantly to the theory of UGC quality and UGC values in a non-Western context. Moreover, this study highlights the key role of the S-O-R theory in explaining the relationships between the variables of the study in the Asian context.

The output of this study emphasised the crucial role of UGC quality, specifically content and technology, in enhancing customers' functional and emotional values. Therefore, UGC providers in Malaysia are advised to provide users with high quality content that can meet and or exceed their expectations and increase their tangible and intangible values. More specifically, the content of UGC need to be ethical and in line with the law, social norms and customs, insightful and resourceful, clear to comprehend, easy to use, interesting, and relevant for users. This will increase the users' functional and emotional values and, ultimately, they will be more inclined to engage with the online brand. Moreover, the operators of the UGC sites are recommended to provide users with advanced, up-to-date, and high-quality technology of UGC. This involves providing users with user-friendly access, connectivity, convenience, interaction, and ease of use. This will increase users' tangible and intangible values and ultimately will enhance their engagement with the brand. The output of this study found that, both functional and emotional values are important predictors of customer-brand engagement; hence, provider and sites of UGC need to work hard to improve and enrich customer functional and emotional values.

## 7. Conclusion and Future Research Direction

In a nutshell, the mechanism of underlying UGC quality, UGC values, and customer-brand engagement can be employed as a framework to improve the understanding of how quality affects value, which eventually transforms into brand engagement and provides a key theoretical platform useful for further research. While the current study has its advantages regarding testing reasonably new linkages and providing some valuable outcomes regarding this issue, it has some limitations. Nevertheless, the limitations of this study may serve as future research directions for other studies in the field. Future research might narrow down the perspective from the general type of UGC to the specific effect of videos created by customers. Moreover, future research can be more specific and cover certain brands, like YouTube, and how the UGC affected this brand. Furthermore, future research can retest this model in a different context to increase the generalisability of the results.

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**Appendix: Measurement items**

Content Quality		Source
No.	Item	
1.	The content in the UGC is easy to understand.	Kim <i>et al.</i> (2012)
2.	The content in the UGC is new.	
3.	The content in the UGC is refreshing.	
4.	The content in the UGC is popular.	
5.	The content in the UGC is relevant for users.	
Design Quality		
6.	The design of the UGC is well organized.	
7.	The content, such as texts, graphics and sounds, are well unified in the UGC structure.	
8.	The content of videos, graphics and audios is appropriately assembled in the structure of the UGC	
9.	Components of the UGC are well harmonized.	
Technology Quality		
10.	UGC provides a user-friendly access to users.	
11.	The interface of the UGC is user-oriented.	
12.	The UGC is uploaded and can be shared by anyone.	
13.	The interaction with the UGC is fast	
Functional Value		Source
No.	Item	
1.	The UGC provides convenient functions.	Kim <i>et al.</i> (2012)
2.	The UGC properly satisfies users' needs.	
3.	The availability of the UGC is high.	
4.	The UGC provides ease of use.	
Emotional Value		Kim <i>et al.</i> (2012)
5.	I enjoy using the UGC.	
6.	I feel good when I use the UGC.	
7.	I have some expectations from the UGC.	
8.	The UGC is interesting.	
Brand Engagement		Source
No.	Item	
1.	I use UGC to support special brand.	Bonhomme <i>et al.</i> (2010)
2.	I use UGC to update myself about special brand.	
3.	I use UGC to promote special brand.	
4.	I use UGC to exchange comments about special brand.	