

# **Enhancing University Brand Image and Reputation through Customer Value Co-Creation Behaviour**

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# **Enhancing University Brand Image and Reputation through Customer Value Co-Creation Behaviour**

## **Abstract**

This study examines the causality between corporate website, customer value co-creation behavior, corporate image and reputation by conducting a quantitative research in a London-based university context. By collecting 285 questionnaires, the research findings first confirm the positive links between website feature on customer participation behavior and customer citizenship behavior. Second, the findings argue that website application and feature have different impact on customer participation and citizenship behavior. Third, the research finding supports the pivotal role of customer value co-creation behavior in creating and sustaining university image and reputation. Finally, this research is particularly useful for HE institutions by investigating their website and students' co-creation behavior. Based upon the research findings, this paper offers managerial contributions for decision-makers, brand managers, graphic and web designers who wish to understand the relationship between website and its outcomes, especially relating to corporate image and reputation.

Key words: website, customer value co-creation behavior, university image, university reputation, PLS

# **Customer Value Co-Creation Behavior to Enhance Brand Image and Reputation**

## **Introduction**

Research on customer value co-creation behavior has recently been one of the top research priorities in marketing and education research (Marketing science institution, 2016). By encouraging customers' value co-creative behavior, organisations normally gain two aspects of benefits, i.e. efficiency and effectiveness (Grisseemann and Stokurger-Sauer, 2012). Through the co-creating behaviors by customers, organisations may increase their market coverage, revenues and profitability, or even innovativeness (Prahalad and Ramaswamy, 2004; Fuller, Matzler and Hoppe, 2011).

In the higher education sector, universities are competing for recruiting more students particularly due to the marketization and globalization of the HE (Yu et al., 2016). In order to offer unique and memorable student experience, universities should also try to encourage customer/student participation in creating and delivering these customer experiences. Encouraging the interaction between the organisation and the customer has its root in the service-dominant logic, which argues that extra values may be generated in the interaction process rather than exclusively in the one-way delivery of the service (Smith et al., 2014). Therefore, involving customers (i.e. students) in the creation of university education helps tailoring the educational service to students' particular needs and hence assists in creating their unique experiences throughout their HE years.

Based on the authors' experience, reading prospective student brochures, travelling to the HE institution and attending the education exhibition are the main means for students to get information about UK universities years ago. This has been significantly changed in the last

decade with the development of technology and internet usage. The internet has significantly changed the way how students obtain their knowledge, information and experience about HE for both domestic and international students nowadays (Simoes and Soares, 2010).

New technologies, including all sorts of websites, social network media, and review websites have transformed the recruitment and brand communication method. Prospective students now face more technologically complex decision process, which may be more time-consuming when comparing university options. Due to the contemporary information technology with the absence of human interaction, the existing and prospective students' value co-creation behavior are thus believed to contribute greatly to themselves, the university and other students (Plewa et al., 2015). Via sharing their university experiences in online social networks or review sections, the existing universities students pass on the information to their community members and consequently influence community members' potential behaviors, such as word-of-mouth or decision making for their HE selection.

Nevertheless, customer (i.e. student) value co-creation behavior in HE research is particularly limited. There is a call to investigate the effects of students' value co-creation behavior on university's success (e.g. university brand image and reputation in this research) (Hoyer et al., 2010). In this research, the authors attempt to establish a model of antecedents (i.e. website) and consequences (i.e. university brand image and reputation) of customer/student value co-creation behavior from a theoretical perspective and then examine it empirically in the context of UK HE.

Hence, the research findings of this paper will demonstrate three main contributions: 1) arguing the critical role of students' value co-creation behavior contributing to university's image and reputation; 2) demonstrating the significant role that university website played in engaging students' value co-creation behavior; 3) highlighting the different types of customer value co-creative behavior (i.e. participation behavior and citizenship behavior), which may

need different attention. Based on the research findings, we conclude with managerial and theoretical implications and future research directions. The findings from this study has implications for the university policy makers, chief information officers, IT directors as well as brand and marketing directors to consider the process of co-creation as part of their brand building and image enhancing strategy.

## **Theoretical background and hypotheses Development**

### ***Customer value co-creative behavior***

The previous studies in marketing and management have recognised the importance of the role of customers in service and product co-creation process (Frow et al., 2015; Hoyer et al., 2010; Kohler et al., 2011; Ranjan and Read, 2016; Skålén et al., 2015). It has been addressed as a central tenet of service-dominant marketing (Lusch and Vargo, 2006). Previous study on customer value co-creation behavior literature has focused on the customer decision making process regarding purchases, arguing that customers are not only the receivers of and responders to marketing but also value creators (Yi and Gong, 2013).

Yi and Gong's (2013) research identifies two types of customer value co-creation behavior: customer participation behavior and customer citizenship behavior. Customer participation behavior refers to customers' in-role behavior so that they co-create the products or the service together with the company. Customer citizenship behavior refers to customers' extra-role behavior that leads to their extra effort to interact with the organisation so as to contribute to the organisation's performance (Yi and Gong, 2013). Both these two types of behavior require customers to input their labour, time, psychological effort as well as information communication (Grissmann and Stokburger-Sauer, 2012). Online behavioral intent may mean interactive behavior with the website, leading to further navigation and repurchase (Tarafdar and Zhang, 2008).

In the internet age, websites serve an important communication function (Kim and Stoel, 2004). Corporate website has become a primary vehicle for customers to get their impression of corporate brand image (Van den Bosch et al., 2006), which can also be the same for universities (Macharia and Pelser, 2014). Alavi et al. (2012) claim that information system has a great impact on customers' value co-creative behavior and thus change the company-customer relationship. The technologic platform enhances customers' engagement and interaction with the platform, organisation, product innovation or service improvement (Kabadayi and Gupta, 2011). In particular, previous research promotes that social co-creation processes through web based interactions allow firms to increase market acceptance while reducing market risk and allow consumers to achieve financial, social, technological, and psychological benefits (Hoyer et al., 2010).

A research gap concerning the relationship of organisation support and customers' actual co-creation behavior is obvious. For example, Diaz-Mendez and Gummesson (2012) investigated in students' value co-creation behavior in assessing teaching quality. Their research challenges the appropriateness of student satisfaction surveys for lecturers' teaching quality. Grisseman and Stokburger-Sauer (2012) conducted their research in the tourism industry and argue the important role of company's support in customers' co-creation behavior, which hence leads to improved firm performance in terms of customer satisfaction, loyalty and expenditures. How the website can engage and interact with customers so as to encourage their value co-creation behavior is not researched yet (Cherif and Miled, 2013; Gronroos, 2011), particularly in the education sector. This study thus attempts to explore the university website – customer /students interaction in a UK HE context.

### ***Websites and students' value co-creation behavior***

Website is an essential tool for organizational communication and interactions between firms and their customers, stakeholders and media (Ramaswamy and Gouillart, 2010; Vallaster and Von Wallpach, 2013). With the advancement in technology, a university website becomes such a dynamic marketing tool to involve students as consumers. Universities can use their websites to reveal their identity and brand image, signal uniqueness and manage external impressions (Abdullah et al., 2013; Bravo et al., 2012). Authors have argued that users gain trust of the business in the first few seconds via their website impression (Robins and Holmes, 2008; Lowry et al., 2014; Wang et al., 2013). This is particularly true for students who are located in another city, or county or country that they are not familiar with to get information about their potential HE providers (Wilkins and Huisman, 2015).

According to Yi and Gong (2013) customers can act as value co-creators by interacting during a service encounter by outlining their likes, dislikes, preferences and expectations. A university website can be the starting point for students to interact and co-create value for the university via other associated social media (Ind et al., 2013). A pleasant and entertaining web environment would attract more consumers to engage (DeNisco and Napolitano, 2006). Existing literature indicates some interest in seeking to understand the co-creation process through web-based interactions (Hafeez and Alghatas, 2007). Particularly, online social platforms such as Facebook and Twitter provide a collaborative environment enabling students to acquire and share knowledge (Kanuka and Anderson, 2007). Therefore, our research hypothesises that the university website (i.e. its features and applications) can have a strong impact on students' perception of and interaction with the university, which lead to their value co-creation behavior. The more students engage with the university, the better the university's brand image and reputation (Hafeez and Aburawi, 2013; Kabadayi and Gupta, 2011). Figure 1 illustrates the research hypotheses.

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### *Website Features*

Website is considered to be an organisation's virtual storefront and provides general audience information about the organisation and its products/services and promotes a positive corporate and product/brand image (Argyriou et al., 2006). We categorise university website into two, which include website features and application. We propose university website features include availability, usability and customisation. *Website availability* or accessibility is extremely important nowadays for sustained use by information seekers (Alwi and Ismail, 2013). Without the website accessibility, the corporate loses one of its most important gates. *Usability* can be explained as the ease with which the website can be accessed and used (Casaló et al., 2008; Flavian et al., 2006; Nielsen, 2000), which also includes whether it is visually appealing and fun, or whether it incorporates the effective use of multimedia (Lin, Yeh and Wei, 2013). Moreover, usability can help users to successfully achieve their purpose associated with website access (Agarwal and Venkatesh, 2002; Flavian et al., 2006). *Customisation* is highlighted in several studies of website construction (Raman et al., 2008; Tarafdar and Zhang, 2008). Customisation is the ability of a company to personalise services and products for customers (Srinivasan et al., 2002). This leads to the following hypotheses:

*H1a: University website features have a direct positive impact on students' participation co-creation behavior.*

*H1b: University website features have a direct positive impact on students' citizenship co-creation behavior.*



### *Website Applications*

A unique corporate/brand website design is considered as an important tool to gain competitive advantage via improved communication, to improve customer relationship and satisfaction, and to enable innovation and strengthen corporate identities (Bravo et al., 2013; Casalo et al., 2008; Foroudi et al., 2016; Mahmoud and Hafeez, 2013). In an online setting, a website which is able to deliver what is expected generates trust among customers. This will lead to their further engagement with the website based on the prior experience (Gefen, 2000; Yoon, 2002). In order to build consumer trust, the website application aims to convince web browsers on the content, the comfort and the safety of web environment (McKnight et al., 2002; Shankar et al., 2003). Therefore, we include navigation design, information design and security as key components for website application.

*Navigation design* refers to the navigation scheme that aids access to different parts of a website, which is central in influencing customers (Gefen et al., 2000). Navigation design includes the layout (e.g. hyperlinks and tabs) and the ways in which these elements are arranged (Tarafdar and Zhang, 2008). *Information design* involves providing correct information about services or products to customers via website (Cyr, 2008), which is also considered as an essential step to satisfaction (Flavián et al., 2006; Mahmoud and Hafeez, 2013). *Website security* is a vital website element as it is regarded as the biggest concern for customers, particularly relating to money transaction (Angelakopoulos and Mihiotis, 2011; Sayar and Wolfe, 2007). Belanger et al. (2002) found that consumers were more concerned with security of the website rather than any statements of privacy. Therefore, we hypothesise:

*H2a: University website application have a direct positive impact on students' participation behavior.*

*H2b: University website application have a direct positive impact on students' citizenship behavior.*

### ***Customer value co-creation behavior and corporate image***

Value co-creation can be defined as a joint innovation of distinctive value and/or experiences through the participation of customers and other stakeholders (Hatch and Schultz, 2010; Ind and Coates, 2013; Payne et al., 2009; Thatcher et al., 2016). It requires continuous interactions between a firm and its consumers, where both parties combine and integrate (to some degree) resources to help move the business forward and to establish their reputation in an attractive field (Lebeau and Bennion, 2014). Consumers' participation to create value can also influence other stakeholder perceptions of the company (Ind and Coates, 2013).

Brand image represents the beliefs, associations, attitudes, and impressions held by customers. By engaging the activities, students interact with the university via dialogue and collaboration and thus enhance university's brand image (Hafeez and Alghatas, 2007; Hatch and Schultz, 2010). Value co-creation behavior by the students via university website includes solicited and unsolicited information, which may aid the HE institutions to improve service in the long term. Students' participation in value co-creation can be a natural result of interest in a brand and/or belonging to a brand or corporate community (Schau et al., 2009). An innovative and well-organized website can encourage customers' involvement actions in branding and brand image building (Black and Veloutsou, 2016; Flores and Vasquez-Parraga, 2015). Hence, we propose:

*H3: Students' participation behavior has a direct positive influence on university image.*

*H4: Students' citizenship behavior has a direct positive influence on university image.*

### ***University image and university reputation***

The aim of the university management and marketing is to create and develop a positive university image and university reputation among students and other stakeholders. Marketing studies consider corporate reputation takes time to build and manage (Foroudi et al., 2014, 2016; Gotsi and Wilson, 2001). An enduring brand image ensures a favourable reputation and develops positive attitudes in customers toward an organization. Wilkins and Huisman (2015, pp.1256-1257) argue “*as universities have become more exposed to competitive market forces, marketing has become more important in contributing to the creation of favourable institutional images that will help attract students, staff and resources*”. Based on these arguments, we propose that once students have a positive university brand image, a university’s reputation will be maintained or improved (Walsh et al., 2009). Therefore, the hypothesis is that:

*H5: The better the University image, the better the university reputation.*

## **Methods**

### ***Data collection***

With the marketization of universities and internationalization, UK HE sector has changed policies in the last five years, leading to a shift in the balance between higher education and further education. The government has recently signalled its intention to support the entry of new providers to the HE market (educationuk.org, 2015; Thatcher et al., 2016). The UK has been a popular international destination for its history in HE and high quality reputation (Ayoubi and Massoud, 2007; Foroudi et al., 2016). UK government ministers also propose HE as a strategic sector to attract foreign students (Bolsmann and Miller, 2008). Along with market expansion, the growth of student numbers has largely come from significant increase in international students studying at UK universities, which can be a highly complex a multidimensional task for UK HE institutions (Zlatkin *et al.*, 2015). Thus, the marketing

strategy targeting international market becomes crucial for institutions in the UK HE sector (Jacob and Hellström, 2014; Taha and Cox, 2014). Apart from the international competition, the UK HEs also face domestic competition. These market factors drive HE institutions to invest in their brand and reputation establishment (Adcroft et al., 2010).

To assess the research's conceptual framework, a pilot study was conducted among 55 PhD researchers and postgraduate students to test the validity, suitability and freedom from error of the measurement items. At this stage, reliability as an important condition of validity and exploratory factor analysis (EFA) were tested to identify any patterns in the data (De Vaus, 2002). After the pilot study, a research assistant was employed to hand out survey questionnaires on campus of a London based university for two weeks. 339 questionnaires were obtained and 285 were usable, which reached a response rate of 84%. The reason to choose this university is because this middle-ranked university has enjoyed a significant growth over the last decade, particularly its international students' number. Of the usable responses, 54% were from women. 43.2% were between the ages of 20 to 29, and 50.7% were postgraduate of above (Table 1).

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### ***Measures***

The measures of the survey were obtained from previous research. We use Yi and Gong's (2013) multidimensional concept (information seeking, information sharing, responsible behavior, personal interaction, feedback, advocacy, tolerance, and helping) to measure students' value co-creation behavior. They categorised these eight variables under two constructs, i.e. customer participation behavior and customer citizenship behavior. They

conducted a formative measurement model to construct customer's value co-creation behavior by these two dimensions. However, in this research we evaluation their relationships with other latent variables separately.

The measurement for corporate website application (i.e. navigation, information; security) and corporate website features (i.e. usability; customization; and availability) were taken from previous studies and modified during the pilot study (Alwi, 2009; Argyriou et al., 2006; Halliburton and Ziegfeld, 2009). In addition, university brand image and reputation were obtained from existing scales (Foroudi et al., 2014). The items employed in this study are shown in Table 2. All items were measured using a seven-point Likert scale (1=strongly disagree, 7=strongly agree).

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### **Analysis and model testing**

We apply partial least squares structural equation modelling (PLS-SEM) to test the research model using SmartPLS 3.2. PLS-SEM has a few advantages over more often used covariance-based SEM, such as small sample size, complex model with many indicators, and so on (Hair et al., 2014). Considering the number of items in this research model, together with the sample size, the authors believe PLS-SEM is a better alternative for this particular research which avoids the constraints of LISREL and AMOS (Hair, Sarstedt, and Ringle, 2011). The analysis involves separate assessments of the measurement model and structural model.

### *Measurement model*

We use the measurement model to assess the reliability and validity of the construct measures. The initial research measurement items were subjected to a series of factor and reliability analyses as an initial examination of their performance within the entire sample. First of all, we use SmartPLS to examine the reliability and validity of the construct measures. Internal consistency reliability is measured by both Cronbach's  $\alpha$  and composite reliability. All the items have an  $\alpha$  and CR above 0.80, which regarded satisfactory (Nunally and Bernstein, 1994). Convergent validity (AVE) and discriminant validity are checked for each construct (see Table 3). All the AVEs for constructs are above 0.50 representing that on average, the construct explains more than half of the variance of its indicators.

All the indicators' outer loadings on a construct are higher than its cross loadings suggesting that discriminant validity is achieved (Chin, 1998). We also run four higher-order reflective models testing second-order structures (Ringle, Sarstedt and Straub, 2012). For example, the website feature is composed by three first-order latent variables (i.e. availability, usability and customisation). The website application is measured by navigation design, information design and security as first-order variables. The customer value co-creation behaviors are measured separately using two second-order constructs. That is customer participation behavior including four first-order dimensions (i.e. information seeking, information sharing, responsible behavior and personal interaction), and customer citizenship behavior composed by feedback, advocacy, helping and tolerance as first-order variables. Following the repeated indicators approach to estimate higher-order constructs with PLS (Ringle, Sarstedt and Straub, 2012), the results show good reliability of all measures (see Table 3).

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Table 4 shows that the square root of the AVE exceeds the intercorrelations of the construct with the other constructs in the models, which indicate there is no discriminant validity issues. Thus, we proceed with the structural model evaluation using four higher-order constructs to test the hypotheses.

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### ***Structural model assessment***

After confirming the construct measures, we assess the structural model results. First, the collinearity among the constructs are examined before conducting the path coefficient estimation. We examine each set of predictors in the structural model for collinearity and each predictor has a VIF value lower than 5. Following this initial step, we then assess the significance of path coefficients to investigate the hypothesized relationships proposed by conceptual framework. The significance of all the path coefficients by using 5,000 bootstrapping to produce *t*-statistics (see Table 5).

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The statistics show that H1a, the impact of website feature on customer participation behavior ( $\beta=0.25$ ,  $p<0.001$ ) and H1b, the impact of website feature on customer citizenship behavior ( $\beta=0.36$ ,  $p<0.001$ ), are supported. H2a is also support ( $\beta=0.21$ ,  $p<0.01$ ) and it shows a positive impact of website application on customer participation behavior. However, H2b is

not supported as ( $\beta=0.10$ ,  $p>0.01$ ), which means that the website application does not influence customer's citizenship behavior. H3 and H4 are both supported with  $\beta=0.37$ ,  $p<0.001$  and  $\beta=0.23$ ,  $p<0.01$  respectively, which demonstrate both significant impact of customer participation behavior and citizenship behavior on university image. H5 is supported ( $\beta=0.54$ ,  $p<0.001$ ) showing strong impact of university image on reputation.

Finally, the structural model was evaluated by  $R^2$  values of the endogenous variables in the path model. The  $R^2$  values in this model show some degree of effect, with both website feature and application explains over 18% of the variances of customer participation and citizenship behavior correspondingly. In addition to testing the magnitude of the  $R^2$  values for its predictive accuracy, we also applied Gtong-Geisser's  $Q^2$  value by using the blindfolding procedure for an omission distance  $D=7$  (Chin, 1998). The model is believed to have predictive relevance when a  $Q^2$  is greater than 0 (Hair et al., 2014). For this structural model, all the endogenous variables have  $Q^2$  greater than 0, which hence provide support for the model's predictive relevance (see Table 6).

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### **Discussions and implications**

While existing literature has not yet inspected the critical role of website in terms of its feature and application in influencing the customer's value co-creation behavior, this study attempts to investigate how university website can have an effect on students' participation and citizenship behavior to create values together with the university for its image and reputation enhancement. The findings show that the more favourably the website are perceived by students, the more they tend to engage in the value creation process. This study



particularly highlights the importance of website features (i.e. availability, usability and customisation) for encouraging students' interaction with the university and also providing them with opportunities to perform a citizenship role (Beldad et al., 2010; Flanagan et al., 2014). Although website application (security, information and navigation design) shows significant impact on students' participation behavior, it fails to demonstrate any impact on their citizenship behavior. This might be due to the role of students in the HE institution with the main purpose of pursuing education and most of the time is devoted to complete the degree within a scope of time. Thus, students are not expected to carry out extra roles. Within the HE context which has its specialty, there is no multiple options for students to choose from, to compare and to concern about the security of their payment procedure, like other commercial websites (Srinivasan et al., 2002).

Consistent with prior studies (Chun, 2005; Helm, 2007; Fombrun et al., 2000), we confirm that when students find the university website can provide them with sufficient, clear information, a sense of security, easy navigation for them to get around on the website for solving their problems, they are more likely to conduct participation and citizenship behavior, which further leads to obvious benefits for the university, such as better university image and reputation (Hatch and Schultz, 2010; Yngfalk, 2013). Once, the university has a continuously improved image and reputation, it gains sustainable competitive advantage (Firestein, 2006; Lomer et al., 2006).

This research thus presents some managerial implications for the HE sector. First, we argue the importance of website at the centre of an organizations effort to encourage customer's value co-creation behavior. Even though organizational management nowadays pay attention to their website design, the website feature (i.e. availability, usability and customisation) should be their priority to tackle issues (Casaló et al., 2008). Providing good-looking website, and information will not generate customers' citizenship behavior. As the

purpose of students browsing the university website is for information and their expectation on these characteristics of website is almost a must, which means branding/marketing managers need to find alternative ways to get customers actively engaged. The website designer and promoter may also need to consider how to increase the interactions between their customers and the corporate in co-creation processes so as to improve their offerings eventually (Pinho et al., 2014).

Second, the managers need to inspect customers' value co-creation behavior carefully as it may have different content. For example, in this study there are two types of co-creation behavior, i.e. participation and citizenship (Yi and Gong, 2010). The authors believe it is necessary to obtain customers' participation behavior before they can conduct citizenship behavior. The website may not demonstrate the same level of impact on customers' different types of behavior. Based on the research finding, the website shows stronger impact on customer's participation behavior rather than citizenship behavior (Tarafdar and Zhang, 2008). Nonetheless, both types of value co-creation behavior are important for the corporate image and reputation. This reconfirms the significant role of customer's value co-creation behavior for corporate to establish their reputation and obtain consistent competitive advantages in the market.

Furthermore, this research contributes to the existing knowledge by providing an integrated and conceptualised multidimensionality of website feature, application, customer value co-creation behavior in the context of a higher education institution in the UK. The findings are of value to HE institution managers to ensure that they operation their website properly to engage better with the customers (i.e. students) in this context (Jones, 2005). The institution's website is the key to communicate the institution beliefs, ideas, feelings and impressions to stakeholders. It also considered as the best platform to transmit the institution services to international potential students (Foroudi et al., 2016). Apart from convincing

students to obtain positive institutional images and reputation (Wilkins and Huisman, 2015), institutions also need to carefully manage their reputations and communications with all stakeholders, mainly those who directly influence students, parents or friends for instance.

As in the HE marketization context, HE management has to realise its service feature and make the institutional image more discernible and easily perceived by its communication targets (Nguyen and LeBlanc, 2001). From this viewpoint, this study helps the future researchers in higher education to better understand the meaning of institutional image and reputation from the consumers' perception. The findings from this study urge university policy makers, IT directors and marketing directors to consider the particular important role of corporate website to contribute to customers' value co-creation behavior, which leads to enhanced university image and reputation in the HE market.

### **Conclusions and future research directions**

This study attempted to examine the causality between corporate website, customer value co-creation behavior, corporate image and reputation by conducting a quantitative research in a London-based university context. First, the research tested four higher-order constructs to check their validities representing the relevant variables in the conceptual framework. We particularly do not force the two dimensions of customer value co-creation behaviors into one and examine them separately in order to precisely understand the effectiveness of proposed antecedents. Second, the research findings confirm the positive links between website feature on customer participation behavior and customer citizenship behavior. However, as website application still have the positive influential role on customer participation behavior, it does not show its impact on customer citizenship behavior. Third, the research ensures the pivotal role of customer value co-creation behavior (i.e. participation and citizenship behavior) to the enhanced university image and reputation. apart from the relationship between website

application and customer citizenship behavior. Finally, this research extended current literature by exploring the research context in a HE setting and used website as antecedent for students' co-creation behavior.

Based upon the research findings, this paper offers managerial contributions for decision-makers, brand managers, graphic and web designers who wish to understand the relationship between website and its composite dimensions, i.e. website application (navigation design, information design and security) and website feature (usability, customisation and availability). Contrary to extant branding research, the emphasis of this research is not on branding resulting from one-way managerial efforts to build up an intended image or reputation (Keller, 2003), but on the active role customers can play in co-creating image and reputation for corporate's sustainability and competitiveness (Gupta et al., 2016; Hatch and Schultz, 2010).

However, the limitations of this study also throw light for the future research in the area. The samples collected from a single HEI in the UK faces generalisation issues, which needs to be more widely spread for the pertinent research. Hence, future studies could replicate this study in other contexts or countries in order to test the outcome generalizability. Using website as an antecedent for customer value co-creation is another limitation as there may be many other factors playing important roles too, particularly in the university scenario. Thus, including other antecedents, such as corporate visual image may provide more insights on how to engage customers' value co-creation behavior (Foroudi et al., 2014). Future empirical research should also consider repeat this study in other cultural settings. With the increasing globalization of HEI, similar research can include the influence of culture on stakeholders' value co-creation behavior as well. Finally, taking only students' self-reporting opinions to check the whole conceptual framework may lead to common method bias and increase the

risk of unreliability of the study. Thus, future research may also consider to include other stakeholders' opinions, such as employees, alumni, or parents.

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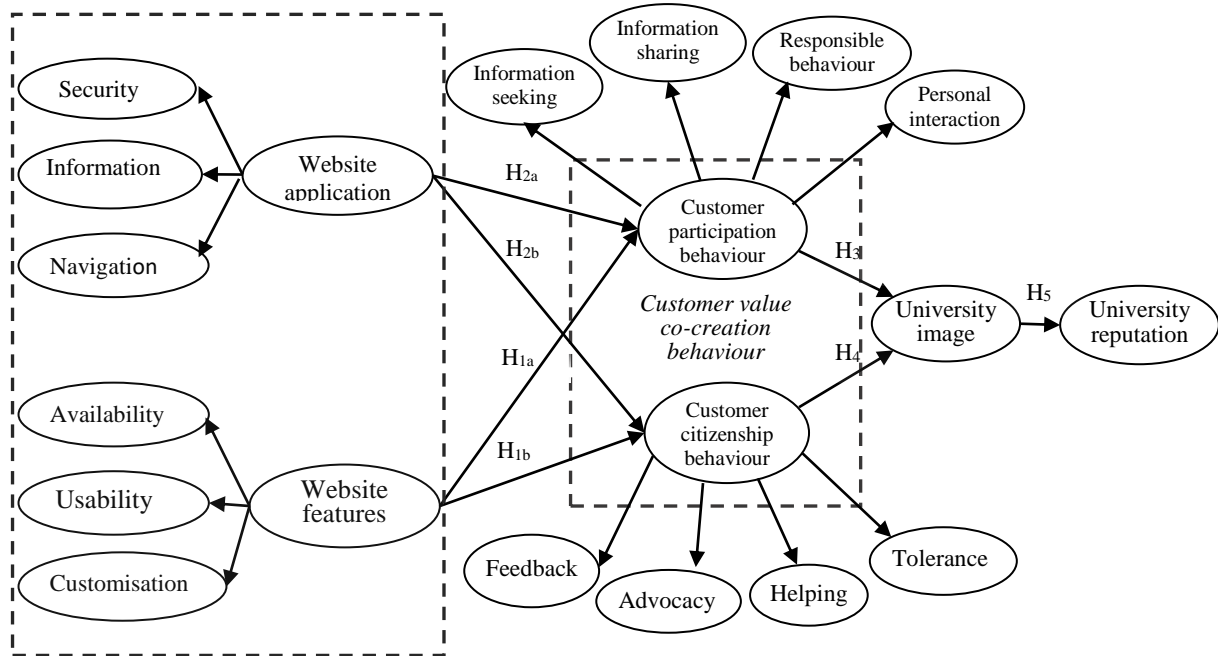
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**Figure 1. Conceptual Framework**



**Table 1. Participant characteristics**

		<b>Frequency</b>	<b>Percent</b>
<b>Gender</b>	Female	153	54.0
	Male	132	46.0
<b>Age</b>	19 years old or less	126	44.2
	20 to 29 years	147	51.6
	Over 30	22	0.1
<b>Degree</b>	Undergraduate	141	49.3
	Postgraduate and above	144	50.7

**Table 2. Measurement model evaluation for first-order constructs**

<b>Construct items</b>	<b>loadings</b>	<b><i>a</i></b>	<b>CR</b>	<b>AVE</b>
<b>Student Value Co-Creation Behavior</b>				
<b><i>Customer Participation Behavior</i></b>				
<b><i>Information seeking</i></b>				
I have asked others for information on what the University service offers.	.92	.96	.97	.92
I have searched for information on where this service is located.	.97			
I have paid attention to how others behave to use this service well	.92			
<b><i>Information sharing</i></b>				
I have asked others for information on what the University service offers.	.90	.94	.96	.89
I have searched for information on where this service is located.	.96			
I have paid attention to how others behave to use this service well.	.88			
<b><i>Responsible behavior</i></b>				
I performed all the tasks that are required.	.97	.96	.98	.93
I adequately completed all the expected behaviors	.97			
I fulfilled responsibilities to the University's.	.88			
<b><i>Personal interaction</i></b>				
I was friendly to the University's staff and other students.	.93	.97	.98	.90
I was polite to the University's staff and other students.	.94			
I did not act rudely to the University's staff and other students.	.94			
<b><i>Customer Citizenship Behavior</i></b>				
<b><i>Feedback</i></b>				
If I have a useful idea on how to improve the University's service, I let the staff know.	.92	.95	.97	.92
When I receive good service from the University's staff, I comment about it.	.94			
When I experience a problem, I let the University's staff know about it.	.94			
<b><i>Advocacy</i></b>				
I said positive things about the University to others.	.85	.93	.95	.87
I recommended the University to others.	.94			
I encouraged friends and relatives to attend the University.	.91			
<b><i>Helping</i></b>				
I assist other students if they need my help.	.92	.96	.97	.89
I help other students if they seem to have problems.	.93			
I teach other students to use the service correctly.	.90			
<b><i>Tolerance</i></b>				
If the University's service is not delivered as expected, I would be willing to put up with it.	.86	.92	.95	.87
If the University's staff makes a mistake during service delivery, I would be willing to be patient.	.96			
If I have to wait longer than I normally expected to receive the service, I would be willing to adapt.	.86			
<b>University Website Features</b>				
<b><i>Usability</i></b>				
When I navigate the University website, I feel that I am in control of what I can do.	.92	.97	.98	.94
The University website is exciting and interesting.	.99			
The University website is easy to use.	.95			
<b><i>Availability</i></b>				
The University website does not crash	.97	.99	.99	.98
Pages at this website do not freeze after I enter my order information	.99			
It is easy to read off the contents of the University website.	.99			
<b><i>Customisation</i></b>				
The University website makes me feel that I am a unique consumer	.98	.99	.99	.99
I believe that the University website is customized to my needs	.99			
The University website has personalization characteristics	.99			
<b><i>Navigation Design</i></b>				
I can easily navigate the University website	.98	.98	.99	.95

The University website provides directions for using the website	.94			
The links are consistent	.97			
<b>Information Design</b>		<b>.99</b>	<b>.99</b>	<b>.97</b>
University website provides me with high-quality information	.99			
The information is useful	.95			
The layout of the information is easy to understand	.99			
<b>Security</b>		<b>.98</b>	<b>.99</b>	<b>.96</b>
I feel safe in my transactions with the University website.	.93			
The University website has adequate security features.	.95			
The University to which the website belongs has a well-known brand	.95			
<b>University Brand Image</b>		<b>.98</b>	<b>.98</b>	<b>.92</b>
I like the University	.88			
I like the University compared to other companies in the same sector	.97			
I think other students/employees like the University as well	.98			
The University's visual identity/design communicates information about the University to its customers	.97			
The University's visual identity/design enhances the University's image.	.93			
<b>University Brand Reputation</b>		<b>.96</b>	<b>.97</b>	<b>.90</b>
I have a good feeling about the University.	.85			
I admire and respect the University.	.92			
The University offers products and services that are good value for money.	.97			
The University is a well-managed	.98			

**Table 3. Assessing hierarchical models for Website features, website application, customer participation behavior and customer citizenship behavior**

<b>Constructs</b>	<b>loadings</b>	<b><math>\alpha</math></b>	<b>CR</b>	<b>AVE</b>
<i>Website features</i>		.93	.94	.62
Availability	.72			
Customisation	.84			
Usability	.80			
<i>Website applications</i>		.92	.94	.59
Security	.78			
Information design	.73			
Navigation design	.83			
<i>Customer participation behavior</i>		.94	.95	.57
Information seeking	.96			
Information sharing	.94			
Responsible behavior	.96			
Personal interaction	.97			
<i>Customer citizenship behavior</i>		.91	.93	.49
Feedback	.82			
Advocacy	.76			
Helping	.83			
Tolerance	.77			

**Table 4. Correlations between constructs**

	1	2	3	4	5	6
1. Website features	1.000					
2. Customer citizenship behavior	0.355	1.000				
3. Website applications	0.701	0.433	1.000			
4. University image	0.501	0.484	0.546	1.000		
5. Customer participation behavior	0.381	0.688	0.394	0.529	1.000	
6. University reputation	0.482	0.339	0.461	0.544	0.380	1.000

**Table 5. Path coefficients**

Paths	H	Expected sign	Path coeff.	SE	Absolute <i>t</i> -value	Supported
WF->CPB	H1a	+	0.25**	0.07	3.64	Yes
WF->CCB	H1b	+	0.36**	0.07	4.907	Yes
WA->CPB	H2a	+	0.21*	0.08	2.439	Yes
WA->CCB	H2b	+	0.10	0.09	1.157	No
CPB->UI	H3	+	0.37**	0.09	4.304	Yes
CCB->UI	H4	+	0.23*	0.08	2.74	Yes
UI->UR	H5	+	0.54**	0.06	9.407	Yes

\*\* $p < 0.001$ , \*  $p < 0.01$ .

**Table 6. Results of  $f^2$  and  $Q^2$  values**

Endogenous latent variable	$R^2$ Value	$Q^2$ Value
Customer participation behavior	0.18	0.17
Customer citizenship behavior	0.19	0.17
University image	0.31	0.29
University reputation	0.30	0.29