

# Middlesex University Research Repository

An open access repository of

Middlesex University research

<http://eprints.mdx.ac.uk>

Foroudi, Pantea ORCID logoORCID: <https://orcid.org/0000-0003-4000-7023>, Nazarian, Alireza, Ziyadin, Sayabek, Kitchen, P.J, Hafeez, Khalid, Priporas, Constantinos-Vasilios ORCID logoORCID: <https://orcid.org/0000-0003-1061-4279> and Pantano, Eleonora (2020) Co-creating brand image and reputation through stakeholder's social network. *Journal of Business Research*, 114 . pp. 42-59. ISSN 0148-2963 [Article] (doi:10.1016/j.jbusres.2020.03.035)

Final accepted version (with author's formatting)

This version is available at: <https://eprints.mdx.ac.uk/29574/>

## Copyright:

Middlesex University Research Repository makes the University's research available electronically.

Copyright and moral rights to this work are retained by the author and/or other copyright owners unless otherwise stated. The work is supplied on the understanding that any use for commercial gain is strictly forbidden. A copy may be downloaded for personal, non-commercial, research or study without prior permission and without charge.

Works, including theses and research projects, may not be reproduced in any format or medium, or extensive quotations taken from them, or their content changed in any way, without first obtaining permission in writing from the copyright holder(s). They may not be sold or exploited commercially in any format or medium without the prior written permission of the copyright holder(s).

Full bibliographic details must be given when referring to, or quoting from full items including the author's name, the title of the work, publication details where relevant (place, publisher, date), pagination, and for theses or dissertations the awarding institution, the degree type awarded, and the date of the award.

If you believe that any material held in the repository infringes copyright law, please contact the Repository Team at Middlesex University via the following email address:

[eprints@mdx.ac.uk](mailto:eprints@mdx.ac.uk)

The item will be removed from the repository while any claim is being investigated.

See also repository copyright: re-use policy: <http://eprints.mdx.ac.uk/policies.html#copy>

# Co-creating Brand Reputation through Higher Education Employees' and Students' Social Network

## Abstract

By drawing on social identity and stakeholders' theories, this paper seeks to examine how universities co-create and manage their brand image and brand reputation through tapping into internal-stakeholders' social network. This research utilises explanatory research design at the preliminary stage, and the subsequent model is examined via a positivist survey carried out among higher education internal stakeholders in the UK. The results show that the relationship between navigation design of the website, usability of the website and customization of the website are not significant from students' perspective, whereas all those are significant from employees' perspective. Furthermore, the relationship between logo and co-creation behaviour is not significant from employees' perspective while it is significant from students' perspective. University website is the most important marketing tool to attract students and other stakeholders. Therefore, these findings have significant implications for higher education branding and marketing managers aiming to design appropriate communication tools with a view to actively engage students and employees in a co-creation process to improve their products, services and brand image.

**Keywords** – Co-creation, brand reputation, stakeholder's social network, logo, website.

Foroudi, P., Nazarian, Al. Ziyadin, S., Kitchen, P.J., Hafeez, K., Priporas, C., and Pantano, E. (2020) Co-creating Corporate Visual Identity by Engaging Internal Stakeholders in Designing Brand Logo and Website, *Journal of Business Research*

# Co-creating Brand Reputation through Higher Education Employees' and Students' Social Network

## 1. Introduction

'Corporate visual identity', 'co-creation' and 'reputation' constitute the marketing mantras nowadays. In their quest for sustained achievements in a global market, more and more higher education institutions are struggling to build profound, meaningful, and long-standing associations with their stakeholders. Due to the globalisation and marketization of higher education (HE), the UK higher education faces new challenges and especially the need to recruit more international students. Yet, if a company's social media is any indication, only a few companies such as IBM, Lego, Airbnb have realised the definitive promise of such collaborative-development determinations. The consumer, either supporter or champion, who shares ideas can help in developing a new value, concept, solution, product and services together with experts and/or stakeholders and could improve the reputation of the company and university.

What does differentiate the reputation of universities that have struck association-gold from the others? What is the nature of the associations these have with their stakeholders? Why and when are such associations likely to arise? A large body of relevant studies cover areas such as logo (e.g., Foroudi et al., 2014; 2017; 2018), website (e.g., Ageeva et al., 2018; 2019; Foroudi, 2019), co-creation (e.g., Hoyer et al., 2010; Yi & Gong, 2013), and reputation (e.g., Lebeau and Bennion, 2014). However, such associations are elusive for most marketing and communication managers and little attention has been paid to the impact of co-creation on the relationship between website and logo (the key elements of corporate visual identity) with corporate reputation (Foroudi et al., 2019).

Corporate visual identity (CVI) is increasingly significant as a means of differentiation in today's economy that creates a corporate reputation. Undoubtedly, the two key elements that have a considerable impact on a company's corporate reputation are the company's logo and website (Ageeva et al., 2018; 2019; Foroudi, 2019; Van den Bosch et al., 2006). However, having said that, little attention has been paid to the impact of co-creation on the relationship between website and logo with corporate reputation (Foroudi et al., 2019). Grounded on

social identity and stakeholders' theories, this research aims to investigate the link between logo and corporate reputation through the website and co-creation from employees' and students' perspective.

As students and employees become more market savvy, only organisations able to differentiate themselves from their competitors via the company's visual identity will succeed (Melewar et al., 2018; Van Riel et al., 2001). It is challenging to create and sustain the company's CVI as it creates the first impression for consumers which is difficult to change thereafter. However, this impression can be improved via customers' value co-creative behaviour, which could potentially increase the company's revenues, market coverage, innovativeness, profitability (Fuller et al., 2011), and reputation. We employ the concept of "student as consumer is merely metaphorical and acknowledges that students can perform different roles in higher education" (Wilkins & Huisman, 2015, p.1257).

Due to the globalisation and marketization of higher education (HE), the UK higher education faces new challenges to recruit more international students. UK higher education and universities focus on recruiting more students predominantly due to the globalisation and marketisation of HE (Yu et al., 2016). Furthermore, HE has often witnessed the largest growth in the diversity of students in terms of ethnic backgrounds (Melewar et al., 2018). Due to competitiveness, universities try to encourage student and employee participation and interaction in developing memorable experiences. This interaction has its root in the service-dominant logic, which is a new way of articulating a view of value creation and exchange in the process (Smith et al., 2014). It helps adjusting the educational service to students' particular needs and it, hence, assists in creating for them unique experiences throughout their HE years. Therefore, involving stakeholders (i.e. students) in the creation of university education helps tailor the educational services provided to students and hence assists in creating their unique experiences throughout their HE years (Elsharnouby, 2015).

Due to recent studies on higher education, it is agreed among scholars that involving students as end-customer (Hughes, 2010; Fueller et al., 2011; Cherif & Miled, 2013) could potentially improve higher quality services and customised products (Hafeez & Aburawi, 2013). A university website is the front-gate for students and other stakeholders. Online social platforms, such as Facebook and Twitter, provide a collaborative environment enabling

stakeholders to acquire and share knowledge. Increasingly, websites are seen as socially interactive processes in stakeholder networks (Bravo et al., 2012; Bravo et al., 2013; Kitchen, 2010; Merz et al., 2009). For instance, logos constitute a distinctive signature of a company among company stakeholders (Foroudi, 2019). Also, based on the communication tools (e.g., social media and reviews) used by the recruitment team, existing and alumni students are sharing their university experiences using online social networks or review sections, which impacts on the community's behaviours and their decision making for their HE selection (Plewa et al., 2015). Advances in web-based technology brought a paradigm shift in the ways companies and higher education institutions communicate with clients (Macharia & Pelsler, 2014). In the internet and digital era, websites have become a primary vehicle for CVI (Van den Bosch et al., 2006) as well as in inter and intra-organization information exchange (Tarafdar & Zhang, 2008). According to Wilkins and Huisman (2015), the decision-making process of international students is a complex task that is subject to multiple influences.

Higher education institutions have recognised the importance of branding, corporate communication and reputation as strategic priorities (O'Loughlin et al., 2015; Waeraas & Solbakk, 2008). Corporate/brand logo is the most visible element of external organisational communications. It can thus be a badge of recognition (Omar & Williams, 2006) as it impacts visibility (Van den Bosch et al., 2005). A logo helps people remember an organisation (Van den Bosch et al., 2006). It can enhance the favourable image (Ewing, 2006; Van den Bosch *et al.*, 2005) and underpin reputation. Logos communicate corporate structure to stakeholders. It enables employee identification, (Van den Bosch et al., 2006; Stuart & Muzellec, 2004; Van Riel & Van Hasselt, 2002) and can also communicate organisational goals and directionality (Van den Bosch et al., 2006). In sum, corporate/brand logo is an essential managerial and marketing tool (Van Riel et al., 2001). Despite the importance of the relationship between corporate/brand logo and reputation, all previous studies have not examined this importance relationships empirically. So, there is little systematic research that examines the impact of the university logo and website on the university identity. The present study investigates the relationship of university logo to the university website, which could impact on students' image.

In particular, social co-creation processes through web-based interactions help firms to increase market acceptance while reducing market risk (Hoyer et al., 2010), allowing

consumers to (i) achieve financial, social, technological, and psychological benefits (Hoyer et al., 2010). It is acknowledged that a pleasant and entertaining web environment would attract more consumers (DeNisco & Napolitano, 2006). Literature unveils some interest in seeking to understand the co-creation process through web-based interactions (Hafeez & Alghatas, 2007). This, however, requires multiple perspectives that must involve stakeholders in order to lead to organisational success (Vallaster & von Wallpach, 2013).

One limitation of current research is that studies to date have adopted an almost exclusive consumer perspective and have ignored other internal-stakeholder groups (Hatch and Schultz, 2010; Ind & Coates, 2013). For example, a number of authors (e.g. Lusch & Vargo, 2006; Woodall, 2014) have emphasised the role students and consumers play as value co-creators. Cherif and Miled (2013) posit that consumers may be involved in brand value creation by considering the brand as the result of a relationship between client and firm. Despite these assertions, the view that consumers are the only stakeholders in co-creation is extremely debatable (Ind & Coates, 2013; Hatch & Schultz, 2010) and leads to a more holistic organisational view including consumers and employees that can impact firm behaviour. Also, limited research has been conducted on how university internal-stakeholders' co-creation behaviour affects university reputation from a multi-disciplinary perspective. In this paper, to avoid the repetition, authors use the term internal stakeholder instead of employee and students. Although there is a significant number of studies that have investigated stakeholder co-creation behaviour in marketing and management in higher education (Thatcher et al., 2016), there is a lack of studies which examine the relationships between logo, website, co-creation, and reputation display; it is exactly this gap in higher education that the current paper addresses.

In addition, there is a marked lack of explanatory models and theory-building studies in this area. In this study, we establish a model of antecedents (university's logo and website) and consequences (i.e. university's reputation) of employees and student value co-creation behaviour and then examine it empirically in the HE context in UK. The key role of employees and students' value of co-creation behaviour is to develop a university's reputation and how a university's logo and website could strengthen students' and employees' engagement. In addition, it illustrates how the components of value co-creative behaviour requires more attention in order to enhance a university's reputation.

As a result, we first review the literature in this domain. The next section outlines the research method and analysis for testing the hypotheses. An emergent model of university brand reputation and university internal-stakeholder co-creation is presented, along with implications for practitioners and researchers provided. We conclude with managerial and theoretical implications, as well as future research directions. In general, in today's higher education, marketisation and competition, university brand building and image play a significant role in attracting students and other stakeholders.

## **Theoretical background leading to research hypotheses**

### **Corporate identity**

#### *University brand logo and its elements*

*Logo* is a significant element of corporate visual identity and is crucial in communicating corporate identity (CI) to an audience in order to sustain competitive advantage. Logos play an important role in corporate branding and visual identity strategies (Hagtvedt, 2011; van den Bosch, et al., 2006). Based on the literature (Henderson and Cote, 1998; Van den Bosch et al., 2005; Foroudi et al., 2014), the logo has been defined as the signature of a company with essential communication and distinctiveness, which can reflect the company's image. The theory supports that customers' impressions are based on four elements of logo, namely the name (Foroudi et al., 2014; Henderson et al., 2003; Ohme and Boshoff, 2019), the colour, (Aslam, 2006; Hynes, 2009; Van den Bosch et al., 2005), the typeface (Hagtvedt, 2011; Henderson et al., 2004) and the design (Foroudi, 2019; Van der Lans et al., 2009). These elements are considered vital for every corporation because they can communicate an image, create differentiation, speed company recognition and attract customers (Van den Bosch et al., 2006).

*Colour* is instrumental in attracting consumers' attention towards the logo as it can be associated with various consumer rituals (Foroudi *et al.*, 2014). Colour is a more imperative factor than shape on the grounds that feelings can be related to colours. Colour communicates a message to an audience, and the message might include several meanings depending on other elements. The colour of a logo is significant in terms of recognition which helps a company and/or its brands stand out from the crowd. The second element of corporate logo is *typeface* which is a key communication objective (Hagtvedt, 2011; Henderson *et al.*, 2004); it can communicate through the logo (Chen and Bei, 2019; Henderson *et al.*, 2004), and is

endorsed by managers. The company's typeface aids memorability and readability. In addition, typeface can create a significant impression and portray an optimistic image to stakeholders. Another element which expresses a distinct message and relays organizational quality to consumers is *name*. A name can convey a distinct message and make organizational quality evident to consumers. It is the basis for distinguishing one organization from another. Name aids communication between corporations and consumers, and a name change also constitutes an object of communication. The role of the corporate/brand name is to help identify a company through its design in order to increase recognition speed (Foroudi *et al.*, 2014). A well-recognised logo needs to be compatible with the name. The last element of a logo is its *design* which should match corporate objectives and stakeholder perceptions, and which has a strong level of visual equity that can be recognised within an industry (O'Connor, 2011; Pathak *et al.*, 2019). Design interacts with stakeholders. Therefore, it is critical that marketing managers and researchers understand design influence upon an audience (Van der Lans *et al.*, 2009). Appropriateness appears to be generally associated with more meaningful messages and leads to better evaluation. According to Clow and Baack (2010), the logo design needs to be compatible with the logo name. Therefore, our first hypotheses are:

*H1: The favourable perception of employees and students towards (a) the colour, (b) the brand typeface, (c) the brand's name, and (d) the design used in the university's logo has a positive impact on their attitude toward the acceptance of brand logo.*

*Websites*, on the other hand, serve an important communication function (Kim and Stoel, 2004) and previous studies (Lowry *et al.*, 2014; Robins and Holmes, 2008) show that the impression a user gets in the first few seconds is crucial to a website and business success (Lowry *et al.*, 2014) and may impact online trust (Bart *et al.*, 2005). The importance of customer trust has recognised by scholars (Shankar *et al.*, 2003). Developing an effective e-marketing strategy requires an understanding of the way consumer trust is developed and how trust influences on online consumer behaviour (Bart *et al.*, 2005). In an online setting, the notion of trust is the confidence about a website able to deliver according to the expectation, which is based on the prior experience (Gefen, 2000; Yoon, 2002). Website is considered to be a firms' virtual storefront (Argyriou *et al.*, 2006) and provides general audience information about the firm and its products/services and promotes a positive



corporate and product/brand image. Previous studies students use the university website to get access to information and literature (Sojkin *et al.*, 2012; Simoes & Soares, 2010; Wilkins & Huisman, 2015).

A unique corporate/brand website design is considered an important tool to gain competitive advantage, improve communication strategies, contribute to improving customer relationships, enable innovation, project corporate identities of the company (Bravo *et al.*, 2012; Bravo *et al.*, 2013), facilitate reputation (Campbell & Beck, 2004), reporting (Marston, 2003) increase loyalty (Srinivasan *et al.*, 2002), and enable satisfaction (Mahmoud & Hafeez, 2013; Casalo *et al.*, 2008). Based on these studies (Beldad *et al.*, 2010; Flanagin *et al.*, 2014), stakeholders' perceptions towards corporate/brand websites are: navigation design, visual identity/design, information, usability, customisation, security, and availability.

*Navigation design* is essential for website success (Bart *et al.*, 2005). Navigation design is the navigation scheme that aids access to different parts of a website (Gefen *et al.*, 2000). According to Tarafdar and Zhang (2008), this encompasses layout, including hyperlinks and tabs, as well as the ways in which these elements are arranged. Navigation design is one of the key elements of website design and is central in influencing customers. Another important element of the website which can play a role in building consumer trust is *visual identity/design* (Bart *et al.*, 2005; Urban *et al.*, 2000). Components of visual design include shape, colour, photographs and font types. Other elements, such as logo, typeface, slogan and name, are mentioned by authors as CVI components (Van den Bosch *et al.*, 2006). As one would expect, visual identity aids visibility and recognisability by supplying people with signs that can help them remember an organization (Van den Bosch *et al.*, 2006). Moreover, components of visual identity are connected to the uniformity of the website and its emotional appeal.

Another element of website is *information* design which deals with website features that provide correct information about services or products to customers (Cyr, 2008). Information is also defined as an essential step to user's satisfaction (Flavián *et al.*, 2006). In fact, the information range available has increased markedly over the past two decades and should be organised in a way that satisfies users (Mahmoud & Hafeez, 2013). Nielsen (2000) explained *usability* as the ease with which a website can be accessed and used. This is associated with

ease to use, challenging character, whether it is visually appealing and fun, and whether it incorporates effective use of multimedia. Usability basically means that the website is natural and allows users to find what they are looking for rapidly and with a minimum effort (Lin, 2013). Moreover, usability can help users to successfully reach their purpose associated with accessing that website (Agarwal & Venkatesh, 2002).

Various authors (Raman *et al.*, 2008; Tarafdar & Zhang, 2008) have acknowledged *customisation* as an element in the construction of websites; this is the ability of a company to personalise services and products for its customers (Srinivasan *et al.*, 2002). It is noted that common features, such as customisation, can impact favourably customer reputation and e-loyalty. Another vital website element is *security* (Angelakopoulos & Mihiotis, 2011; Bart *et al.*, 2005); “[a] majority of studies highlight the fact that ‘security’ is the biggest single concern for customers when faced with the decision to use internet banking” (Sayar & Wolfe, 2007 p.125). Belanger *et al.* (2002) found that consumers were more concerned with the security features of the website rather than any statements of privacy. Security is applied by providing users with verifiable and safe transactions. The crucial element which is seen as the correct technical functioning of a site is *availability* (Alwi & Ismail, 2013). Website accessibility or availability are important for sustained use of the website by browsers. The above leads to the following hypotheses:

*H2: The favourable perception of employees and students towards (a) the navigation design, (b) visual identity/design, (c) information design/content, (d) usability, (e) customisation, (f) security, (g) availability has positive impact on their attitude toward the acceptance of brand website.*

*University’s brand logo and websites creation*– can be an arduous task as it results in first impressions students and stakeholders form about the university, its image and/or reputation; it is a tool for managing stakeholder perceptions. A logo serves as a platform for innovative marketing and can help a university be distinctive. A website projects CI (Abdullah *et al.*, 2013; Booth & Matic, 2011; Iftach & Shapira-Lishchinsky, 2019) as “the visual manifestation of the company’s reality” (Argenti, 2007, p.66) revealed through organizational logo, name, colour, design, and other tangible issues. Individuals react attitudinally to CVI (Lichtle, 2007), which must communicate a consistent image to stakeholders. Standardising

logo as a salient feature of CVI is presumed to have a positive effect on consumers' awareness (Van den Bosch *et al.*, 2006) and enhances students' familiarity with the university.

Furthermore, logos and trademarks are important characteristics of websites and/or for products presented there. Lowry *et al.* (2014) found that credible logos increase the tendency of site visitors to interact with a website. However, the assumption that a logo is a key element of CI that influences websites has yet to be tested (Foroudi *et al.*, 2014). Higher education management should communicate with the internal and external stakeholders and a well-designed logo on the website can strongly convey meaning between sender and receivers. However, studies exploring logo elements and associated websites are limited. Based on the above, we postulate the following:

*H3: The favourable perception of employees and students towards the brand logo has a positive impact on their attitude toward the acceptance of a brand website.*

*Logo and co-creation* – The logo as a graphic image is the first crucial step in building CVI (Hagtvedt, 2011; Foroudi, 2019), while it also communicates corporate identity. As part of corporate identity management, managers should try to project their companies' logos in order to create or maintain a favourable reputation and value co-creation. People may have different perceptions of a company's identity due to their personal feelings, emotions, and beliefs (Foroudi *et al.*, 2014). Foroudi *et al.* (2019) stated that a corporate visual identity has a direct positive impact on stakeholders' co-creation behaviour. It has been also highlighted that people's perceptions of a company should match the organisational identity and represent the shared beliefs of what is enduring, distinctive, and central about this organisation (Dutton *et al.*, 1994). A well-designed corporate logo may evoke an emotional response and transfer a positive reaction, motivating and evaluating organisations more favourably. The creation of a logo and CVI is costly and challenging. This is why universities harmonise both internal and external communications to generate favourable images of the company for target audiences. According to the stakeholder theory:

“Managers determine those stakeholders as salient that possess one or more of three relational attributes - power, legitimacy, and urgency. However, the danger is that by

focusing exclusively on these criteria, management may overlook other relevant brand meaning co-creators” (Vallaster & von Wallpach, 2003, p.1506).

Co-creation can be defined as joint innovation of value and/or experiences of distinctive value through the participation of customers and internal-stakeholders, where the process focuses on continuous innovation and learning (Hatch and Schultz, 2010; Ind and Coates, 2013; Payne et al., 2009; Thatcher et al., 2016) in order to establish their reputation in an attractive field for prospective students (Lebeau & Bennion, 2014). From the CI perspective, stakeholders include any individual or group that shows an interest in a company, product, and services or brand. Senior management should view consumers as a vital part of the corporation which is or can be instrumental in ‘co-creating’ more sophisticated products and services (Hatch & Schultz, 2010, p.603). Organizations need to develop a social network of know-how by bringing together key stakeholders (such as customers, managers, and employees) in identity/brand redevelopment and potentially generating new brands (Ind & Coates, 2013, p.5). Coupland (2005) notes that the main players involved in co-creation are brand managers and stakeholders. As already identified, stakeholder theory underscores the importance of managing relationships with multiple stakeholders, that is, “groups or individuals who can affect or are affected by the achievement of organizational objectives” (Vallaster & Von Wallpach, 2013, p.1506). Value co-creation behavior by the employees and students through university logo embraces solicited and unsolicited information, which may help the HE organisations to advance service in the long-term. Drawing on this discussion, it can be claimed that employees’ and students’ attitudes towards a logo of an organisation exhibits how they evaluate the firm. Therefore, based on previous literature, it has been asserted that the corporate logo has a significant effect on value creation behaviour. Based on this, the following hypothesis has been derived:

*H4: The favourable perception of employees and students towards the brand logo has a positive impact on their attitude toward value creation behaviour.*

*University website and co-creation* – A website is an essential tool for organizational communication and interactions between firms and their customers, stakeholders and media (Ramaswamy and Gouillart, 2010). A corporate website is a communication channel that companies employ to reveal identity, manage external impressions (Abdullah et al., 2013; Bravo et al., 2012), reflect corporate image, signal uniqueness (AbuGhazaleh et al., 2012;

Tarafdar & Zhang, 2008), indicate reputation (Argyriou et al., 2006), enable brand loyalty (Kabadayi & Gupta, 2011), brings confidence to the users, and, underpin identification. Website images and their visual design are closely interwoven with subsequent satisfaction (Vance et al., 2008). Co-creation can be realised via websites and at social events (Ind et al., 2013, p.5), where stakeholders' interactions can take place. Muniz and O'Guinn (2001) define the concept of a brand community as "a specialized, non-geographically bound community" (p.412), established on a systematized collection of social interactions amid brand followers. Stakeholders participate in co-creation as a natural result of interest in a brand and/or belonging to a brand or corporate community (Schau et al., 2009), while engaging in dialogue and collaboration (Hafeez and Alghatas, 2007; Hatch and Schultz, 2010, p.592).

Corporate/brand communities offer broad social benefits to its members in an online manner, similar to mutual communication. These multiple collaborative interaction processes can co-create value (Yngfalk, 2013). According to Foroudi et al. (2019) and Yi and Gong (2013), stakeholders act as value co-creators by interacting during a service encounter and outlining their likes, dislikes, preferences and expectations. A university website and the associated social media are mechanisms for interaction and can co-create value with companies. In summary, the website is seen as an essential tool to be innovative and co-create value. Therefore, we assume that:

*H5: The favourable perception of employees and students towards the brand website has a positive impact on their attitude toward the value creation behaviour.*

*University co-creation and reputation* – The notion of co-creation as a central tenet of service-dominant marketing has been addressed in various studies (Lusch & Vargo, 2006). The literature trends toward the development of new and more efficient platforms for soliciting consumers' participation in branding and brand reputation (Fueller et al., 2011; Poetz & Schreier, 2012).

Value co-creation can be referred to "as a joint innovation of distinctive value and/or experiences through the participation of customers and other stakeholders" (Foroudi et al., 2019, p. 221). It is related to the continuous connections among the company and its

stakeholders, which create value by their participation. Also, it helps the company move the business forward and cultivate a strong reputation (Lebeau & Bennion, 2014). Consumers' participation in creating value can also influence other stakeholders' perceptions of the company (Ind & Coates, 2013).

The conceptualisation of brand reputation has been debated for decades. Still, though, the terms 'brand image' and 'brand reputation' are used interchangeably, and researchers have adopted different, sometimes even contrary definitions of both concepts. The corporate identity aims to create and develop a positive reputation among organizational stakeholders. The image has an evident external role-specific in higher education. Marketing studies consider image and reputation to indicate that the latter is perceived as dynamic, which takes time to build and manage (Gotsi & Wilson, 2001). It can be easily damaged, and image affects on-and off-line reputation, which affects consumer trust (Yoon, 2002). An enduring brand image ensures a favourable reputation and infuses stakeholders with positive attitudes toward an organization. A study by Wilkins and Huisman (2015) illustrates that the image of universities formed by prospective students' influences their choices. "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" (Wilkins & Huisman, 2015, pp.1256-1257). Given this research, it is likely that, if stakeholders have a positive image of a university, a university's reputation will be maintained or improved (Walsh et al., 2009). According to previous studies (Black & Veloutsou, 2016; Flores & Vasquez-Parraga, 2015), the well-organized and innovative website can inspire customers' participation actions in branding reputation building.

In fact, marketing and innovation management literature underpin the role of consumers in service/product co-creation (Kohler et al., 2011; Hoyer et al., 2010; Tanev et al., 2011) within the new service-dominant logic (Merz et al., 2009). Co-creation is a collaborative process where consumers participate in creating value (Ind and Coates, 2013), which influences other stakeholders' perceptions. According to social identity theory, Brand reputation is how an organization's managers want stakeholders to perceive an organization. Co-creation can be seen as a core company competence (Hafeez et al., 2002) that requires interaction between a firm and its consumers, where both parties combine and integrate (to some degree) resources to help move the business forward. Feedback via a higher education website includes

solicited and unsolicited information that customers (students and stakeholders) provide, which may aid employees, students and the university to improve service in the long term. To investigate this, we hypothesise that:

*H6: The favourable perception of employees and students towards the value co-creation has a positive impact on their attitude toward the brand reputation.*

## **Methods**

### *Data collection*

Data were collected employing different methods of collection among employees and students of UK universities, as the higher education (HE) sector has enjoyed significant growth for over a decade. The majority of HE provision is delivered by HEI's in receipt of public funding from government councils. Over the last five years, approximately 93% of HE provision has been delivered. Yet recent changes in policy may lead to a shift in the balance between HE and FE. Moreover, the government has recently signalled its intention to support the entry of new providers in the market (see educationuk.org, 2018; Foroudi et al., 2019; Thatcher et al., 2016; Wilson, 2012). Along with the expansion in terms of student numbers, growth has mainly come from a significant increase in international student numbers studying at UK universities, which can be considered a further highly complex and multidimensional task for HE (Zlatkin et al., 2015).

The UK has become a popular destination for international students, as it is considerably well established in the history of higher education and international reputation (Ayoubi & Massoud, 2007). According to various scholars (Jacob & Hellström, 2014; Taha and Cox, 2016, etc.), internationalisation is an important element of the marketing strategy of these institutions. Following Bolsmann and Miller (2008), HE has been identified by UK Government ministers as a strategic sector towards attracting international students. Also, UK aims to attract 600,000 international students by 2030, and to greatly increase the value of its education exports. In addition, the success of this strategy may hinge on further immigration reforms (assets.publishing.service.gov.uk, 2020; monitor.icef.com, 2020).

English language itself is an essential competitive advantage and, thus, one of the main providers and exporters of HE services. In addition, despite the recession, not only is there an

increasing proportion of the UK population that holds a higher education qualification, but also the percentage of the UK labor force aged 30-34 with a higher education qualification has increased (Patterns and Trends in UK HE, 2015). Overall, these market factors have facilitated HE institutional competition in the UK (Adcroft et al., 2010).

In this study, 650 questionnaires were printed by authors and research assistants. A total of 620 questionnaires were returned; 28 questionnaires were removed because of missing data or incomplete responses with missing values. Finally, 592 questionnaires were filled out (taking between 20 min to 25 min to be completed) in face-to-face meetings with employees and students. According to Churchill (1999), the face-to-face survey is the most frequently employed sampling method in large scale questionnaire studies, ensuring that the survey is completed by the target respondents. Based on previous studies' recommendations (Andriopoulos & Lewis, 2009; Bryman & Bell, 2015; Denzin & Lincoln, 1994) the current work used a non-probability 'snowballing' as the main distribution method, by inviting informants to propose others who might be able to offer additional insights in an attempt to improve the sample size and ensure that the sample involved the most well-informed participants. At the end of this process, 163 employees' and 429 students' usable completed surveys were received and examined.

Prior to administering the survey, qualitative studies took place in the form of in-depth interviews and focus groups. In particular, interviews were conducted with the participation of eight UK marketing and communication university managers and experts, as well as four focus group (total of 27 participants) discussions of employees, doctoral researchers and MBA students from a UK Business School. The details of the interviewees and focus group interviewees are provided in Table I.

Following the structural equation modelling approach, the qualitative research allowed data triangulation to increase the validity of findings and enhance data richness (Saunders *et al.*, 2007). Out of the usable responses, 63% were provided by women between 18 and 51 years old who were employees at the universities, while 79% of them held a PhD degree. On the other hand, 57% of students were male participants between 18 and 47 years old, with 68% of them studying in undergraduate programmes.



## “INSERT TABLE I HERE”

### Measures

The questionnaire used recognized and applied scales from previous research: i.e. the measures of brand logo and typeface (Foroudi et al., 2014), design (Foroudi et al., 2014; Henderson and Cote, 1998), colour (Aslam, 2006; Tavassoli, 2001), and brand name (Klink, 2003). The measurement of the brand website was based on previous studies (Alwi, 2009; Argyriou et al., 2006; Halliburton & Ziegfeld, 2009). Previous studies recognised antecedents of website design utilised here; these include navigation, visual identify; information; usability; customization; security; and availability.

The co-creation behaviour is a multidimensional third-order construct which was measured through customer participation behaviour (information seeking, information sharing, responsible behaviour, personal interaction) and customer citizenship behaviour (feedback, advocacy, tolerance, and helping) (Foroudi et al., 2019; Yi & Gong, 2013). In addition, image (Foroudi et al., 2014; Sen & Bhattacharya, 2001; Williams & Moffitt, 1997) and reputation (Chun, 2005; Fombrun et al., 2000; Foroudi et al., 2014; Helm, 2007) were also obtained from existing scales. The items employed in this study are presented in Appendix 1. According to Singh *et al.*'s (1990) recommendations, all items were measured using a seven-point Likert scale (1 = Strongly disagree, 7 = Strongly agree).

### Analysis and results

The initial research measurement items underwent a series of factor and reliability analyses as an initial examination of their performance within the entire sample. This study employed a two-step approach based on Anderson and Gerbing (1988). In the first stage of analysis, exploratory factor analysis was ran as a fundamental and useful technique towards reducing the numbers of observed variables (indicator) to a smaller and more controllable set (Hair *et al.*, 2006) aiming to attain the theoretically expected factor solutions; 23 (students) and 24 (employees) out of 167 items in total were excluded for multiple loadings on two factors, and the total correlation was less than 0.50 (Hair et al., 2006).

All a priori scales demonstrated acceptable reliability (Cronbach's alpha  $>.79$ ) (Nunnally, 1978). KMO's measure of sampling adequacy (employees:  $0.831 > 0.6$ ; students:  $0.937 > 0.6$ )

suggests suitability for EFA; moreover, the relationships between the items are statistically significant for both data sets and provide a parsimonious set of factors (Tabachnick & Fidell, 2007). In addition, Bartlett's test of Sphericity illustrates the relationship between the measurement items which is higher than 0.3 and is also appropriate for EFA (Hair *et al.*, 2006). The response rate obtained confirmed the requirements of the data analysis techniques (structural equation modeling, SEM) and illustrates an insignificant difference in non-response bias examination (i.e. using the Mann-Whitney-U-test). However, random selections of the participants and the response rate needs caution when interpreting the research results. According to the proportion of survey questionnaires which were returned, the first 50 observations were taken as early responses and the last 50 were taken as late responses. The findings reveal that significance value in any variable is not less than or equal to 0.5 probability value (i.e. insignificant); therefore, there is no statistically significant difference between early and late respondents. Consequently, non-response bias does not form a concern in the present study. In the second stage, we ran CFA (confirmatory factor analysis) which was carried out to evaluate the measurement properties of the present scales' validity (Hair *et al.*, 2006).

In the second stage of analysis, confirmatory factor analysis (CFA) was employed through Amos to assess the construct uni-dimensionality; the examination of each subset of items was internally consistent and validated the constructs on the basis of the measurement models (Gerbing & Anderson, 1988). Furthermore, convergent validity and discriminant validity were examined based on construct reliabilities (Anderson & Gerbing, 1988). Cronbach's alpha of all measures was higher than 0.860 (employees) and 0.909 (students), which shows adequate internal consistency (Bagozzi & Yi, 1988). Testing discriminant validity indicated that correlations among factors were lower than the recommended value of .92 (Kline, 2005). The homogeneity of the construct was also tested for convergent validity. The average variance extracted (AVE) for each construct ranged from 0.773 to 0.972 for students, and from 0.766 to 0.967 for employees. A good rule of thumb is that an AVE of .5 or higher indicates adequate convergent validity (Table II).

**“INSERT TABLE II HERE”**

In this stage, the structural model fit was examined through goodness-of-fit indices  $X^2$ -Chi-square; Df-degree of freedom (2.226); RMSEA-Root mean square error of approximation (students: 0.62; employees: 0.061); CFI-Comparative fit index (students: 0.909; employees: 0.913); IFI-Incremental Fit Index (students: 0.909; employees: 0.913); and TLI-Tucker-Lewis index (students: 0.905; employees: 0.909) the 'favourable' fit values provides a satisfactory fit to the data and therefore supports the uni-dimensionality of the measures (Anderson & Gerbing, 1988). Then, by employing hierarchical linear regression the research hypotheses were tested (Table III). To address multi-collinearity, this research established procedures to mean centre related variables before generating proposed interaction terms to assess the hypotheses.

**“INSERT TABLE III HERE”**

The results included in Table IV provide support for H1, i.e. that there exist relationships between colour and logo (H1a - students:  $\beta=0.137$ ,  $t=2.644$ ; employees:  $\beta=1.203$ ,  $t=2.933$ ), typeface and logo (H1b - students:  $\beta=0.106$ ,  $t=2.48$ ; employees:  $\beta=.646$ ,  $t=7.471$ ), name and logo (H1c - students:  $\beta=0.337$ ,  $t=8.009$ ; employees:  $\beta=.474$ ,  $t=4.724$ ), and design and logo (H1d - students:  $\beta=0.215$ ,  $t=3.906$ ; employees:  $\beta=.416$ ,  $t=4.947$ ). In the hypothesized model testing the effect of navigation design (H2a), the results reveal that employees believe the more favourably the navigation design is perceived by employees and students, the more favourable attitude they have towards the brand website ( $\beta=.377$ ,  $t=6.825$ ); however, students results did not support this relationship ( $\beta=0.091$ ,  $t=1.499$ ,  $p 0.134$ ). H2b and H2c address the impact of visual identity/design and information on website (H2b - students:  $\beta=0.313$ ,  $t=5.98$ ; employees:  $\beta=.197$ ,  $t=3.477$ ; H2c: students:  $\beta=0.115$ ,  $t=2.224$ ; employees:  $\beta=.308$ ,  $t=4.746$ , respectively) and the significant relationships were confirmed. In the hypothesized model, the effect of usability (H2d), customization (H2e), and website (employees: H2d -  $\beta=.307$ ,  $t=5.224$ ; H2e -  $\beta=.159$ ,  $t=2.735$ ) were significant from employees' perception. However, students felt that the brand websites are not usable and customized (Students: H2d -  $\beta=0.089$ ,  $t=1.794$   $p 0.073$ ; H2e -  $\beta=0.064$ ,  $t=1.06$   $p 0.289$ ). As a result, it can be a challenge for universities to design a favourable website which can influence students' attitude towards the HE institutions. Therefore, hypothesis H2d and H2e were rejected because the results were not statistically significant. Results also demonstrated that the more favourably availability is perceived by the employees and students (H2f - students:  $\beta=0.102$ ,  $t=2.252$ ; employees:

$\beta=.389$ ,  $t=5.998$ ) security and (H2g - students:  $\beta=0.103$ ,  $t=2.343$ ; employees:  $\beta=.272$ ,  $t=4.216$ ), the more favourable their attitude towards the brand website.

In the hypothesized model, the effect of logo and website (H3 - students:  $\beta=0.186$ ,  $t=2.702$ ; employees:  $\beta=.718$ ,  $t=8.586$ ) were significant from both samples. We found that the more favourably the brand logo is perceived by students, the more favourable the students' value creation behaviour is (H4 - students:  $\beta=1.657$ ,  $t=2.421$ ). Surprisingly, employees were not concerned about the logo of the universities (H4 - employees:  $\beta=.059$ ,  $t=.998$ ,  $p$  0.318). The standardized regression path between higher education employees' and students' perception towards the website and value co-creation behaviour (H5) is statistically significant (students:  $\beta=0.603$ ,  $t=2.417$ ; employees:  $\beta=.099$ ,  $t=2.605$ ). Hypothesis 6, which explains the relationship between co-creation behaviour and reputation, proved to be significant in the hypothesized direction (students:  $\beta=.153$ ,  $t=4.226$ ; employees:  $\beta=.561$ ,  $t=3.564$ ).

**“INSERT TABLE IV HERE”**

### *Discussion*

Based on the research aims, we investigated the association of logo with corporate reputation through website and co-creation from employees' and students' perspective based on social identity and stakeholders' theories. This investigation, therefore, confirms the position that a logo is an element of university corporate identity which can communicate the personality and values of a university to its employees and students. The empirical results demonstrate that colour, typeface, name, and design have been found to influence the corporate logo. These findings are relevant to the context of the current study. The above factors were estimated and exhibited a good fit of indices in the measurement model. These constructs were depicted as latent exogenous variables in the structural model and have been found to impact strongly on favourable corporate logo and contribute to enhancing the internal-stakeholders' perception. The following is an example retrieved from a focus group participant's answer:

"...there is a stronger relationship between our logo and image than between logo and reputation. Our logo fully mediates the relationship between logo and reputation. When you see the logo you perceive the image first and then [it]

remind[s] you of the reputation because the image is short term; reputation is built up, takes time to build up and takes time to fade; [an] image is more direct".

However, this research does not support students' point of view towards the navigation design. These findings confirm that some elements such as navigation design, usability, and customisation can bear positive or negative effects on attitudes toward the website (Beldad *et al.*, 2010; Flanagin *et al.*, 2014).

The research findings retrieved provide evidence for the discussion on relationships between CVI, image and reputation at a higher education internal stakeholder level marketing as introduced by marketing scholars and practitioners. In general, findings illustrated that, according to the research model adopted, logo consists of all four elements— typeface, name, design and colour. However, compared to Foroudi *et al.*'s (2014; 2018) study, stakeholders hold a more favourable perception of colour as used in the university's logo. A participant stated that,

"[The] logo is like [what] clothes are to a person. You can easily change your suit; however, it's extremely difficult to change your personality ... If the logo is used to deliver the personality and characteristics of a company, it will be persuasive to the customers and employees, such as our logo; everywhere it is the same".

The online experience that customers have impacts behaviour towards a website (Novak *et al.*, 2000) and can lead to greater online trust (Burt *et al.*, 2005). The result of this study is consistent with the findings of Tarafdar and Zhang (2008), who supported that the first visit is not influenced significantly by customization features; it becomes apparent only when repeated visits are made to a website. Perhaps the respondents' previous experiences with the university play a primary role in these perceptions. The following quotes reflect this idea also confirmed through the focus group:

"...after a couple of months [of] being a student, still I face some issues to find the right page and right information; I feel it is very confusing and time-consuming... I cannot find all the materials I need for my studies".

"To my experience, the university website is not functioning well, and I don't think it is customized as well... In addition, the layout of the website is not consistent, and uploading or downloading a file take[s] longer than usual".

In accordance with findings from previous studies (Lowry et al., 2014), the logo contributes significantly to the impact of the website. Besides some positive views considering the website an element of corporate identity, limited systematic research has examined to date the effect of the logo and its components on the website. This study provides a new outlook in conceptualizing logo and its relation to the relevant website. The analytical findings are supported by our qualitative data. Results show that the more favourably the logo and website are perceived by employees and students, the more students and employees get engaged in the value creation process. The findings are supported by the qualitative research as illustrated by the following excerpt from a brand manager's answer:

“As a university brand manager, I am responsible for our brand and how it can best communicate with our national and international audience. These days, we are trying to open ourselves and collaborate and co-create solutions with our consumers to deliver better value for our brand in this competitive market. We have community forums to engage with our students and employees, and we are sharing our courses and information through the website”.

In addition, another focus group participant added that

“the site provides just the right amount of text and is easy to navigate; good use of colours, not boring but neutral; but some information is difficult to find and not always easily accessible”.

As our study is the first scholarly work to examine the impact of a logo on co-creation, we found out students have different perception compared to employees. Interestingly enough, employees claim that the brand logo has no effect on their attitude towards the value creation behaviour and the regression path unexpectedly illustrated a significant negative relationship between these two variables. Furthermore, the adopted scales of measurement from the qualitative study and existing literature may create the unforeseen insignificant relationship between logo and co-creation behaviour. For a more critical consideration of the emerging insignificant relationship, the literature and the qualitative data were revisited. The structural model evaluation supported the discriminant validity of the constructs and confirmed that the measures of the constructs are truly distinct. The estimated correlations of discriminant validity were statistically significant, and the estimated correlations among factors were less than the recommended value of 0.92 (Kline, 2005).

The results confirmed the favourable perception employees and students hold towards the brand website, which has a positive impact on their attitude toward value creation behaviour. Co-creation value by the employees and students is an emergent phenomenon (Hatch & Schultz, 2010) and is linked to brand reputation. Our findings support these relationships. A focus group participant stated that “I feel more engaged with the university brand now, and this has given me self-fulfilment and more trust about the university”. Also, another employee mentioned that “I am more aware of the corporate branding for the university now and can explain [it] to external stakeholders”. Furthermore, a marketing consultant commented that “co-creation has improved the website. I can see the impact on this on the university image on the short to medium term”.

Brand reputation is considered to be the most important factor for sustainable competitive advantage (Firestein, 2006); therefore, the role of the employees is vital in the co-creation process (Yngfalk, 2013), a relationship also supported by our qualitative study. In consistency with prior studies (Chun, 2005; Helm, 2007; Fombrun et al., 2000) we found that a favourable perception of employees and students towards the value co-creation has a positive impact on their attitude toward the brand reputation.

#### *Implications for Marketing Theory*

Based on social identity and stakeholders’ theories, the present findings build upon research related to co-creating universities’ reputation through their employees’ and students’ social network in a higher education setting. The literature review (for instance, Henderson & Cote, 1998; Foroudi et al., 2014; Van der Lans et al., 2009) indicates that no theoretical models have described the adoption and evaluation of a favourable logo and website as key elements of co-creating CVI concerning brand reputation. The model developed to evaluate and assess the research constructs is a novel contribution attributed to this research. In addition, the model of co-creation can be appropriately extended and employed in other service sectors as well.

By investigating the proposed model of the relationship between the research constructs in the context of a UK-based University, this study provides a validated framework that discusses the relationship between logo, website, internal-stakeholders’ co-creation behaviour,

and reputation from the perspective of internal-stakeholders. In addition, we extend knowledge in the area by examining the employees' and students' evaluations of the effect of logos and website on consumers within a HE setting (Foroudi et al., 2014; Van der Lans et al., 2009). Because UK HE consumers may have distinctive characteristics which impact the results of this study, the results cannot be generalized across the sector. However, the model can be subject to further examination within the fields of reputation and co-creation in HE or other sectors. This study also carries implications for marketing theory. By engaging in CVI activities, organizations can communicate more favourably to internal stakeholders the essential characteristics of the company's corporate identity. Contrary to extant branding research, the emphasis of this work is not placed on brand identity resulting from managerial efforts to build up an intended internal or external image and reputation (Keller, 2003), but on the active role stakeholders can play in co-creating image and in enhancing its reputation (Hatch & Schultz, 2010).

This research also offers managerial contributions for decision-makers, brand managers, graphic and web designers who wish to explore in more depth the relationship between a logo and its antecedent factors (i.e. name, typeface, design, and colour); website and its associated antecedents (navigation and visual identity/design, information, usability, customisation, security, availability) from employees' and students' perspective. Also, co-creation behaviour was measured through the sub-constructs of stakeholder participation behaviour and stakeholder citizenship behaviour (Foroudi et al., 2018; Gronroos, 2011; Hatch & Schultz, 2010; Payne et al., 2009) and its impact on brand reputation.

Through our qualitative study we have explored how co-creation is present in the management of institutional reputation in a HE context. Based on the conceptual model already described, it is shown that brand experience has significant effects on co-creation and reputation, and that perceived quality significantly affects reputation. In addition, via the mixed method approach we have compared the differing views of employees and students in relation to a HE institution.

#### *Managerial implications*

By engaging with CVI activities, organizations communicate more favourably towards employees and students regarding important characteristics of the company's corporate



identity. Logo and website are positioned at the centre of the UK universities' effort to build a favourable reputation through co-creation. The more favourably the company's stakeholders are engaged in value co-creation with the company, the more favourable attitude employees and students have towards the brand reputation. Even though organizational management may claim that interactions among stakeholders are beyond their control, the present study exemplifies that managers need to invent appropriate strategies and tools to involve themselves in co-creation processes and ultimately improve their products and services offered.

Furthermore, this research contributes an integrated and detailed perspective which has been conceptualised to advance knowledge of the multidimensionality of the brand logo and website within the context of a higher education institution in the UK. The findings may be of value to HEI managers wishing to ensure they have a logo reliable enough to strengthen brand reputation. The result shows that respondents have different expectations regarding websites (Jones, 2005). This research contributes to the current belief among scholars that “anything a company does it expresses its characteristics” (Van den Bosch *et al.*, 2005). The qualitative evidence reveals that there is a relationship between a university logo and CVI, as well as university image and reputation.

Their logo is the “*heart and soul of a company*” (Chajet & Shachtman (1991, p.28). A brand logo is inexorably intertwined with corporate identity. Researchers (e.g. Melewar & Akel, 2005; Van den Bosch *et al.*, 2006) assert that the logo is used at the root of corporate identity, affecting people's judgements and behaviour. Given that students trust perceived institutional reputation (Wilkins & Huisman, 2015), it appears that institutions need to carefully manage their reputation and communications with all stakeholders, mainly those who influence directly students, parents and teachers. The institution's website is the key to communicate the institution's beliefs, ideas, feelings and impressions to stakeholders, and, in particular, it constitutes the best platform to transmit the institution services to potential international students.

According to Nguyen and LeBlanc (2001), in higher education being perceived as a service industry, it is challenging to recognize the relationship among institutional image and reputation and a company's offering because of the intangible nature of the service. From this

viewpoint, this study can be beneficial for the HE management to make the institutional image more discernible and easily perceived. In addition, this study can assist future researchers in higher education in better comprehending the meaning of institutional reputation from the consumers' perception; that way, they could recognize realistic and appropriate dimensions contributing to elaborate measurement scales for the constructs used in this study.

In today's higher education marketisation, universities are overtly conscious about branding and image building. University logos and websites are increasingly playing a significant role in recruiting students and attracting other stakeholders. The findings from this study can help university policymakers, IT directors and marketing directors to regard website co-creation as a crucial part of their brand-building and reputation enhancing strategy.

### **Limitations and future research directions**

This study represents an initial attempt to conceptualize co-creating brand image and reputation through an internal stakeholder's social network in a UK-based university context. However, the findings retrieved have some limitations that may relate to future research. The research pertains to a single HEI in the UK and it thus needs to be more widely spread. Though the research item measurements were adopted from previous studies and different settings, the distinctive characteristics of a UK-based University could have affected, to a greater or lesser degree, some aspects of the concepts examined. Hence, future studies could replicate this study in other contexts or countries in order to test the outcome generalizability.

Another limitation of the present study is associated with the type of logo and website employed by the university, which may lead to reservations concerning the generalizability of the research findings; as a result, future empirical research should be conducted to repeat this study in diverse settings. Although this study employed a mixed methods analysis, a more comprehensive study would help increase knowledge of the relationships between the constructs. Preferably, a probability sampling method should be opted for in future to allow researchers to evaluate the amount of sampling error present and eliminate any potential bias in terms of validity and generalizability of the scales.

Given that some of the results of this study were not anticipated, e.g. the direct effect of information, usability, and customisation on website, and they could relate to the type of business that the case company belongs to, future studies might usefully repeat this research in another sector or country in order to confirm the generalisability of the findings.

This research conceptualised co-creating brand reputation through internal stakeholder's social network in a UK-based university context. A future study may yield different findings from the same research scales and constructs. The increasing globalization of HEI and stakeholder markets provides a compelling reason for exploring the influence of culture on stakeholders' value co-creation behaviour. In addition, in this study researchers collected data from students and employees in higher education; it can also be recommended to collect data from other parties involved such as suppliers, owners, communities, government and other groups that can impact firm behaviour. In summary, this study focuses on value co-creation behaviour from internal-stakeholders' point of view as value creation is a collaborative work between students and employees.

## References:

- Abdullah, Z., Nordin, S. M. & Aziz, Y. A. (2013). Building a unique online corporate identity. *Marketing Intelligence and Planning*, 31(5), 451-471.
- AbuGhazaleh, N. M., Qasim, A. & Roberts, C. (2012). The determinants of web-based investor relations activities by companies operating in emerging economies: The case of Jordan. *Journal of Applied Business Research (JABR)*, 28(7), 209-226.
- Adcroft, A., Teckman, J., & Willis, J. (2010). Is higher education in the UK becoming more competitive? *International Journal of Public Sector Management*, 23(6), 578-588.
- Agarwal, R., & Venkatesh, V. (2002). Assessing a firm's web presence: a heuristic evaluation procedure for the measurement of usability. *Information Systems Research*, 13(2), 168-186.
- Ageeva, E., Melewar, T. C., Foroudi, P., & Dennis, C. (2019). Evaluating the factors of corporate website favorability: a case of UK and Russia. *Qualitative Market Research: An International Journal* (Just published).
- Ageeva, E., Melewar, T. C., Foroudi, P., Dennis, C., & Jin, Z. (2018). Examining the influence of corporate website favorability on corporate image and corporate reputation: Findings from fsQCA. *Journal of Business Research*, 89(Aug), 287-304.
- Alwi, S. (2009). Online corporate brand images and consumer loyalty. *International Journal of Business and Society*, 10(2), 1-19.

- Alwi, S., & Ismail, S. A. (2013). A framework to attain brand promise in an online setting. *Marketing Intelligence and Planning*, 31(5), 557-578.
- Anderson, J. C. & Gerbing, D.W. (1988). Structural equation modelling in practice: a review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Andriopoulos, C., & Lewis, M. W. (2009). Exploitation-exploration tensions and organizational ambidexterity: Managing paradoxes of innovation. *Organization Science*, 20(4), 696-717.
- Iftach, G., & Shapira-Lishchinsky, O. (2019). Principals' perceptions of school identity: logo, vision and practice. *International Journal of Educational Management*, 33(6), 1170-1184
- Ohme, R., & Boshoff, C. (2019). The role of implicit learning in logo substitution. *Journal of Consumer Marketing*, 36(5), 610–619.
- Angelakopoulos, G., & Mihiotis, A. (2011). E-banking: challenges and opportunities in the Greek banking sector. *Electronic Commerce Research*, 11(3), 297-319.
- Argenti, P.A. (2007). *Corporate communication*. New York: McGraw-Hill Higher Education.
- Argyriou, E., Kitchen, P. J., & Melewar, T. C. (2006). The relationship between corporate websites and brand equity-A conceptual framework and research agenda, *International Journal of Market Research*, 48(5), 575-599.
- Aslam, M. (2006) Are You Selling the Right Colour? A Cross-cultural Review of Colour as a Marketing Cue, *Journal of Marketing Communications*, 12(1), 15-30.
- assets.publishing.service.gov.uk. (2020).[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/799349/International\\_Education\\_Strategy\\_Accessible.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/799349/International_Education_Strategy_Accessible.pdf) (Assessed by 10 Feb 2020)
- Ayoubi, R.M., and Massoud, H.K. (2007). The strategy of internationalization in universities: A quantitative evaluation of the intent and implementation in UK universities. *International Journal of Educational Management*, 21(4), 329-349.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-94.
- Bart, Y., Shankar, V., Sultan, F., & Urban, G. L. (2005). Are the drivers and role of online trust the same for all web sites and consumers? A large-scale exploratory empirical study. *Journal of Marketing*, 69(4), 133-152.
- Belanger, F., Hiller, J. S., & Smith, W. J. (2002). Trustworthiness in electronic commerce: the role of privacy, security, and site attributes. *The Journal of Strategic Information Systems*, 11(3), 245-270.
- Beldad, A., De Jong, M., & Steehouder, M. (2010). How shall I trust the faceless and the intangible? A literature review on the antecedents of online trust. *Computers in Human Behaviour*, 26(5), 857- 869
- Black, I., & Veloutsou, C. (2017). Working consumers: Co-creation of brand identity, consumer identity and brand community identity. *Journal of Business Research*, 70, 416-429.

- Bolsmann, C., & Miller, H. (2008). International student recruitment to universities in England: discourse, rationales and globalisation. *Globalisation, Societies and Education*, 6(1), 75-88.
- Booth, N., & Matic, J. A. (2011). Mapping and leveraging influencers in social media to shape corporate brand perceptions. *Corporate Communications: An International Journal*, 16(3), 184-191.
- Bravo, R., DeChernatony, L., Matute, J., & Pina, J. M. (2013). Projecting banks' identities through corporate websites: A comparative analysis of Spain and the United Kingdom, *Journal of Brand Management*, 20(7), 533-557.
- Bravo, R., Matute, J., & Pina, J. M. (2012). Corporate social responsibility as a vehicle to reveal the corporate identity: a study focused on the websites of Spanish financial entities, *Journal of Business Ethics*, 107(2), 129-146.
- Bryman, A. & Bell, E. (2015). *Business research methods*. Oxford University Press.
- Bunzel, D. L. (2007). Universities sell their brands. *Journal of Product & Brand Management*, 16(2), 152-153.
- Campbell, D., & Beck, A. (2004). Answering allegations: The use of the corporate website for restorative ethical and social disclosure. *Business Ethics*, 13(2/3), 100-116.
- Casaló, L.V., Flavián, C., & Guinalfú, M. (2008). Promoting consumer's participation in virtual brand communities: A new paradigm in branding strategy. *Journal of Marketing Communications*, 14(1), 19-36.
- Chajet, C., & Shachtman, T. (1991). *Image by design: From corporate vision to business reality*. Boston: McGraw-Hill.
- Chen, Y. S. A., & Bei, L. T. (2019). Free the brand: How a logo frame influences the potentiality of brand extensions. *Journal of Brand Management*, 26(4), 349-364.
- Cherif, H., & Miled, B. (2013). Are brand communities influencing brands through co-creation? A cross-national example of the brand AXE: In France and in Tunisia. *International Business Research*, 6(9), 14-29.
- Cheung, C. M., & Lee, M. K. (2006). Understanding consumer trust in Internet shopping: A multidisciplinary approach. *Journal of the American Society for Information Science and Technology*, 57(4), 479-492.
- Chun, R. (2005). Corporate reputation: meaning and measurement. *International Journal of Management Reviews*, 7(2), 91-109.
- Clow, K. & Baack, D. (2010). *Integrated advertising, promotion, and marketing communications*. Upper Saddle River: Pearson Prentice Hall.
- Coupland, J. (2005). Invisible brands: An ethnography of households and the brands in their kitchen pantries. *Journal of Consumer Research*, 32(1), 106-118.
- Cyr, D. (2008). Modeling web site design across cultures: relationships to trust, satisfaction and e-loyalty. *Journal of Management Information Systems*, 24(4), 47-72.
- Delgado-Márquez, B. L., Hurtado-Torres, N. E., & Aragón-Correa, J. A. (2013). On the measurement of interpersonal trust transfer: Proposal of indexes. *Social Indicators Research*, 113(1), 433-449.

- Delgado-Márquez, B. L., Hurtado-Torres, N. E., & Aragón-Correa, J.A. (2012). The dynamic nature of trust transfer: Measurement and the influence of reciprocity. *Decision Support Systems*, 54(1), 226-234.
- DeNisco, A., & Napolitano, M. R. (2006). Entertainment orientation of Italian shopping centres: antecedents and performance. *Managing Service Quality*, 16, 145-166.
- Denzin, N. K. & Lincoln, Y. S. (1994). Handbook of qualitative research. Sage Publications, Inc.
- Ewing, T. M. (2006). Brands, artifacts and design theory: a call to action. *Journal of Product and Brand Management*, 15(4), 255-256.
- Firestein, P. J. (2006). Building and protecting corporate reputation. *Strategy and Leadership*, 34 (4), 25-31.
- Flanagin, A.J., Metzger, M.J., Pure, R., Markov, A. and Hartsell, E. (2014). Mitigating risk in e-commerce transactions: perceptions of information credibility and the role of user-generated ratings in product quality and purchase intention. *Electronic Commerce Research*, 14(1), 1-23.
- Flavian, C., Guinaliu, M., & Gurrea, R. (2006). The role played by perceived usability, satisfaction and consumer trust on website loyalty. *Information and Management*, 43(1), 1-14.
- Flores, J. and Vasquez-Parraga, A. Z. (2015). The impact of choice on co-produced customer value creation and satisfaction. *Journal of Consumer Marketing*, 32(1), 15-25.
- Fombrun, C. J., Gardberg, N. A. & Sever, J. M. (2000). The reputation quotient: A multi-stakeholder measure of corporate reputation. *The Journal of Brand Management*, 7(4), 241-255.
- Foroudi, P. (2019). Influence of brand signature, brand awareness, brand attitude, brand reputation on hotel industry's brand performance. *International journal of hospitality management*, 76(Jan), 271-285.
- Foroudi, P., Melewar, T.C., & Gupta, S. (2014). Linking corporate logo, corporate image, and reputation: An examination of consumer perceptions in the financial setting. *Journal of Business Research*, 67(11), 2269-2281.
- Foroudi, P., Yu, Q., Gupta, S., & Foroudi, M. M. (2019). Enhancing university brand image and reputation through customer value co-creation behaviour. *Technological Forecasting and Social Change*, 138(Jan), 218-227.
- Fuller, J., Hutter, K., & Faullant, R. (2011). Why co-creation experience matters? Creative experience and its impact on the quantity and quality of creative contributions. *R&D Management*, 41(3), 259-273.
- Füller, J., Matzler, K., & Hoppe, M. (2008). Brand community members as a source of innovation. *Journal of Product Innovation Management*, 25(6), 608-619.
- Gefen, D. (2000). E-commerce: the role of familiarity and trust, *OMEGA*, 28(6), 725-737.
- Gefen, D., Straub, D. W. & Boudreau, M. C. (2000). Structural equation modeling and regression: guidelines for research practice. *Communications of the Association for Information Systems*, 4(7), 1-78.

- Gerbing, D. W. & Anderson, J. C. (1988). An updated paradigm for scale development incorporating unidimensionality and its assessment. *Journal of Marketing Research*, 25(2), 186-192.
- Gotsi, M., & Wilson, A. M. (2001). Corporate Reputation: Seeking a Definition, *Corporate Communications: An International Journal*, 6(1), 24-30.
- Gronroos, C. (2011). Value co-creation in service logic: A critical analysis. *Marketing Theory*, 11(3), 279-301.
- Ha, J., & Jang, S.S. (2010). Perceived values, satisfaction, and behavioural intentions: The role of familiarity in Korean restaurants. *International Journal of Hospitality Management*, 29(1), 2-13.
- Hafeez, K., & Aburawi, I. (2013). Optimizing human resource requirements to meet target customer service levels. *International Journal of Quality and Service Sciences*, 5(2), 230-252.
- Hafeez, K., & Alghatas, F. (2007). Knowledge management in a virtual community of practice using discourse analysis. *Electronic Journal of Knowledge Management*, 5(1), 29-42.
- Hafeez, K., Zhang, Y., & Malak, N. (2002). Identifying core competence. *Potentials*, 21(2), 2-8.
- Hagtvedt, H. (2011). The impact of incomplete typeface logos on perceptions of the firm. *Journal of Marketing*, 75(4), 86-93.
- Hair, J.F., William C.B., Barry B., Rolph, J., Anderson, E., & Tatham, R. L. (2006). *Multivariate data analysis*. Upper Saddle River, NJ: Pearson.
- Halliburton, C., & Ziegfeld, A. (2009). How do major European companies communicate their corporate identity across countries?-An empirical investigation of corporate internet communications. *Journal of Marketing Management*, 25(9/10), 909-925.
- Hatch, M. J., & Schultz, M. (2010). Toward a theory of brand co-creation with implications for brand governance. *Journal of Brand Management*, 17(8), 590-604.
- Helm, S. (2007). The role of corporate reputation in determining investor satisfaction and loyalty. *Corporate Reputation Review*, 10(1), 22-37.
- Henderson, P. W., & Cote, J. A. (1998). Guidelines for selecting or modifying logos. *Journal of Marketing*, 62(2), 14-30.
- Henderson, P. W., Cote, J. A., Meng, L. S., & Schmitt, B. (2003). Building strong brands in Asia: selecting the visual components of image to maximize brand strength. *International Journal of Research in Marketing*, 20(4), 297-313.
- Henderson, P. W., Giese, J., & Cote, J. A. (2004). Impression management using typeface design. *Journal of Marketing*, 68(4), 60-83.
- Hoyer, W. D., Chandy, R., Dorotic, M., Frafft, M., & Singh, S. S. (2010). Consumer cocreation in new product development. *Journal of Service Research*, 13(3), 283-296.
- Hughes, J. K. (2010). Supplying web 2.0: an empirical investigation of the drivers of consumer transmutation of culture-oriented digital information goods. *Electronic Commerce Research and Applications*, 9(5), 418-434.
- Hynes, N. (2009). Colour and meaning in corporate logos: An empirical study, *Journal of Brand Management*, 16(8), 545-555.

- Ind, N., & Coates, N. (2013). The meanings of co-creation. *European Business Review*, 25(1), 86-95.
- Ind, N., Iglesias, O., & Schultz, M. (2013). Building brands together. *California Management Review*, 55(3), 5-26.
- Jacob, M., and Hellström, T. (2014). Opportunity from crisis: a common agenda for higher education and science, technology and innovation policy research. *Studies in Higher Education*, 39(8), 1321-1331.
- Jones, R. (2005). Finding sources of brand value: Developing a stakeholder model of brand equity. *Journal of Brand Management*, 13(1), 10-32.
- Kabadayi, S., & Gupta, R. (2011). Managing motives and design to influence web site revisits. *Journal of Research in Interactive Marketing*, 5(2/3), 153-169.
- Keller, K.L. (2003). *Strategic brand management: Building, measuring, and managing brand equity*. Upper Saddle River, NJ: Prentice-Hall.
- Kharouf, H., Sekhon, H., & Roy, S. K. (2015). The components of trustworthiness for higher education: a transnational perspective. *Studies in Higher Education*, 40(7), 1239-1255.
- Kim, S., & Stoel, L. (2004). Apparel retailers: website quality, dimensions and satisfaction, *Journal of Retailing and Consumer Services*, 11(2), 109-117.
- Kitchen, P.J. (2010). *Integrated brand marketing and measuring returns*. Basingstoke: Palgrave-Macmillan,
- Kline, R.B. (2005). *Principles and practice of structural equation modelling*. New York: Guilford.
- Klink, R.R. (2003). Creating meaningful new brand names: The relationship between brand name and brand mark, *Marketing Letters*, 14(3), 143-157.
- Kohler, T., Fuller, J., Matzler, K., & Stieger, D. (2011). Co-creation in virtual worlds: the design of the user experience. *MIS Quarterly*, 35, 773-788.
- Lebeau, Y., & Bennion, A. (2014). Forms of embeddedness and discourses of engagement: a case study of universities in their local environment. *Studies in Higher Education*, 39(2), 278-293.
- Lichtlé, M. C. (2007). The effect of an advertisement's colour on emotions evoked by attitude towards the ad: The moderating role of the optimal stimulation level. *International Journal of Advertising*, 26(1), 37-62.
- Lin, Y. C., Yeh, C. H., & Wei, C. C. (2013). How will the use of graphics affect visual aesthetics? A user-centered approach for web page design. *International Journal of Human-Computer Studies*, 71(3), 217-227.
- Lowry, P.B., Wilson, D. W., & Haig, W. L. (2014). A picture is worth a thousand words: source credibility theory applied to logo and website design for heightened credibility and consumer trust. *International Journal of Human-Computer Interaction*, 30(1), 63-93.
- Lusch, R. F., & Vargo, S. L. (2006). Service-dominant logic: reactions, reflections and refinements. *Marketing Theory*, 6(3), 281-288.
- Macharia, J. K., & Pelsler, T. G. (2014). Key factors that influence the diffusion and infusion of information and communication technologies in Kenyan higher education, *Studies in Higher Education*, 39(4), 695-709.



- Mahmoud T., & Hafeez, K. (2013). Performance assessment of an e-learning software system for sustainability. *International Journal of Quality and Service Sciences*, 5(2), 208-229.
- Marston, C. (2003). Financial reporting on the Internet by leading Japanese companies. *Corporate Communications: An International Journal*, 8(1), 23-34.
- McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). The impact of initial consumer trust on intentions to transact with a web site: a trust building model. *The Journal of Strategic Information Systems*, 11(3), 297-323.
- Melewar, T. C. and Akel, S. (2005). Corporate identity in the higher education sector: A case study. *Corporate Communications: An International Journal*, 10(1), 41-27.
- Melewar, T. C., Foroudi, P., Dinnie, K., & Nguyen, B. (2018). The role of corporate identity management in the higher education sector: an exploratory case study. *Journal of Marketing Communications*, 24(4), 337-359.
- Merz, M. A., He, Y., & Vargo, S. L. (2009). The evolving brand logic: a service dominant logic perspective. *Journal of the Academy of Marketing Science*, 37(3), 328-344.
- Milliman, R. E., & Fugate, D. L. (1988). Using trust-transference as a persuasion technique: An empirical field investigation. *Journal of Personal Selling and Sales Management*, 8(2), 1-7.
- monitor.icef.com. (2020). <https://monitor.icef.com/2019/03/uk-announces-new-international-strategy-goal-host-600000-students-2030/> (Assessed by 10 Feb 2020)
- Muniz Jr, A. M., and O'Guinn, T. C. (2001). Brand community. *Journal of Consumer Research*, 27(4), 412-432.
- Nguyen, N., & LeBlanc, G. (2001). Image and reputation of higher education institutions in students' retention decisions. *International Journal of Educational Management*, 15(6), 303-311.
- Nielsen, J. (2000). *Designing web usability*. Indianapolis, IN: New Riders Publishing.
- Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.
- O'Loughlin, D., MacPhail, A., & Msetfi, R. (2015). The rhetoric and reality of research reputation: 'fur coat and no knickers'. *Studies in Higher Education*, 40(5), 806-820.
- O'Connor, Z. (2011). Logo colour and differentiation: A new application of environmental colour mapping. *Colour Research & Application*, 36(1), 55-60.
- Omar, M., & Williams, R. L. (2006). Managing and maintaining corporate reputation and brand identity: Haier Group logo. *Journal of Brand Management*, 13(4-5), 268-275.
- Pathak, A., Velasco, C., & Calvert, G. A. (2019). Identifying counterfeit brand logos: On the importance of the first and last letters of a logotype. *European Journal of Marketing*, 53(10), 2109-2125.
- Patterns and Trends in UK HE, 2015: [universitiesuk.ac.uk/highereducation/Pages/PatternsAndTrendsInUKHigherEducation2014.aspx#.VYfOylLkczc](http://universitiesuk.ac.uk/highereducation/Pages/PatternsAndTrendsInUKHigherEducation2014.aspx#.VYfOylLkczc) [Assessed by 20 February 2015]
- Payne, A.F., Storbacka K., Frow, P., & Knox, S. (2009). Co-creating brands: Diagnosing and designing the relationship experience. *Journal of Business Research*, 62(3), 379-389.

- Poetz, M.K., & Schreier, M. (2012). The value of crowdsourcing: can users really compete with professionals in generating new product ideas? *Journal of Product Innovation Management*, 29(2), 245-256.
- Raman, M., Stephenaus, R., Alam, N., & Kuppusamy, M. (2008). Information technology in Malaysia: E-service quality and uptake of internet banking. *Journal of Internet Banking and Commerce*, 13(2), 1-18.
- Ramaswamy, V., & Gouillart, F. (2010). Building the co-creative enterprise. *Harvard Business Review*, 88(10), 100-109.
- Read, B., Archer, L., & Leathwood, C. (2003). Challenging cultures? Student conceptions of 'belonging' and 'isolation' at a post-1992 university. *Studies in Higher Education*, 28(3), 261-277.
- Robbins, B. G. (2012). Institutional quality and generalized trust: A nonrecursive causal model. *Social Indicators Research*, 107(2), 235-258.
- Robins, D., & Holmes, J. (2008). Aesthetics and credibility in web site design. *Information Processing and Management*, 44(1), 386-399.
- Rousseau, D., Sitkin, M., Burt, S. B., & Camerer, R. S. (1998). Not so different after all: A cross-discipline view of trust. *Academy of Management Review*, 23(3), 393-404
- Saunders, M., Lewis, P., and Thornhill, A. (2007). *Research methods for business students*. London: Prentice Hall.
- Sayar, C., & Wolfe, S. (2007). Internet banking market performance: Turkey versus the UK. *International Journal of Bank Marketing*, 25(3), 122-141.
- Schau, H.J., Muniz, A.M.Jr., & Arnould, E. J. (2009). How brand community practices create value. *Journal of Marketing*, 73(5), 30-51.
- Sen, S., & Bhattacharya, C. B. (2001). Does doing good always lead to doing better? Consumer reactions to corporate social responsibility. *Journal of Marketing Research*, 38(2), 225-243.
- Shankar, V., Smith, A. K., & Rangaswamy, A. (2003). Customer satisfaction and loyalty in online and offline environments. *International Journal of Research in Marketing*, 20(2), 153-175.
- Simões, C., & Soares, A.M. (2010). Applying to higher education: Information sources and choice factors. *Studies in Higher Education* 35(4) 371-89.
- Soh, H., Reid, L. N., & King, K. W. (2009). Measuring trust in advertising. *Journal of Advertising*, 38(2), 83-104.
- Sojkin, B., Bartkowiak, P., & Skuza, A. (2012). Determinants of higher education choices and student satisfaction: the case of Poland. *Higher Education*, 63(5), 565-581.
- Srinivasan, S., Anderson, R., & Ponnayolu, K. (2002). Customer loyalty in e-commerce: an exploration of its antecedents and consequences, *Journal of Retailing*, 78(1), 41-50.
- Stewart, K. J. (2003). Trust transfer on the world wide web. *Organization Science*, 14(1), 5-17.
- Stuart, H., & Muzellec, L. (2004). Corporate makeovers: can a hyena be rebranded? *Journal of Brand Management*, 11(6), 472-484.
- Tabachnick, B. G., & Fidell, L.S. (2007). *Using multivariate statistics*. Boston: Allyn and Bacon,

- Taha, N., & Cox, A. (2014). International students' networks: a case study in a UK university. *Studies in Higher Education*, 41(1), 182-198.
- Tanev, S. (2011). How do value co-creation activities relate to the perception of firms' innovativeness? *Journal of Innovation Economics*, 1(7), 131-159.
- Tarafdar, M., & Zhang, J. (2008). Determinants of reach and loyalty, a study of Website performance and implications for Website design. *Journal of Computer Information Systems*, 48(2), 16-24.
- Tavassoli, N. T. (2001). Colour memory and evaluations for alphabetic and logographic brand names. *Journal of Experimental Psychology: Applied*, 7(2), 104-111.
- Thatcher, J., Alao, H., Brown, C. J., & Choudhary, S. (2016). Enriching the values of micro and small business research projects: co-creation service provision as perceived by academic, business and student. *Studies in Higher Education*, 41(3), 560-581.
- Urban, G. L., Sultan, F., & Qualls, W. J. (2000). Placing trust at the center of your Internet strategy. *Sloan Management Review*, 42(1), 39-48.
- Vallaster, C., & von Wallpach, S. (2013). An online discursive inquiry into the social dynamics of multi-stakeholder brand meaning co-creation, *Journal of Business Research*, 66(9), 1505-1515.
- Van den Bosch, A. L. M., De Jong, M. D. T., & Elving, W. J. L. (2005) How corporate visual identity supports reputation. *Corporate Communications: An International Journal*, 10(2), 108-116.
- Van den Bosch, A.L.M., Elving, W.J.L., & De Jong, M.D.T. (2006). The impact of organizational characteristics on corporate visual identity. *European Journal of Marketing*, 40(7/8), 870-885.
- Van der Lans, R., Cote, J.A., Cole, C.A., and Leong, S.M., Smidts, A., Henderson, P.M., Bluemelhuber, C., Bottomley, P.A., Doule, J.R., Fedorikhin, A., Janakiraman, M., Ramaseshan, B., and Schmitt, B.H. (2009). Cross-national logo evaluation analysis: an individual-level approach. *Marketing Science*, 28(5), 968-985.
- Van Riel, C. B. M. & Van Hasselt, J. J. (2002). *Conversion of organizational research findings into action. Corporate and organizational identities*. London: Routledge.
- Van Riel, C. B. M., Van den Ban, A., and Heijmans, E. J. (2001). The added value of corporate logos: an empirical study. *European Journal of Marketing*, 35(3/4), 428-440.
- Vance, A., Elie-Dit-Cosaque, C., & Straub, D.W. (2008). Framing trust in information technology artifacts: The effects of system quality and culture. *Journal of Management Information Systems*, 24(4), 73-100.
- Vidotto, G., Vicentini, M., Argentero, P., & Bromiley, P. (2008). Assessment of organizational trust: Italian adaptation and factorial validity of the organizational trust inventory. *Social Indicators Research*, 88(3), 563-575.
- Waeraas, A., & M. Solbakk (2008). Defining the essence of a university: Lessons from higher education branding, *Higher Education*, 57(4) 449-63.
- Walsh, G., Mitchell, V. W., Jackson, P. R., & Beatty, S. E. (2009). Examining the antecedents and consequences of corporate reputation: a customer perspective. *British Journal of Management*, 20(2), 187-203.

- Wang, N., Shen, X. L., & Sun, Y. (2013). Transition of electronic word-of-mouth services from web to mobile context: A trust transfer perspective. *Decision Support Systems*, 54(3), 1394-1403.
- Wilkins, S., & Huisman, J. (2015). Factors affecting university image formation among prospective higher education students: the case of international branch campuses. *Studies in Higher Education*, 40(7), 1256-1272.
- Williams, S. L., & Moffitt, M. A. (1997). Corporate image as an impression formation process: Prioritizing personal, organizational, and environmental audience factors. *Journal of Public Relations Research*, 9(4), 237-258.
- Wilson, T. (2012). A Review of Business-University Collaboration. 1–89. <http://www.wilsonreview.co.uk/wilson-review/wilson-review.pdf>
- Woodall, T., Hiller, A., & Resnick, S. (2014). Making sense of higher education: students as consumers and the value of the university experience. *Studies in Higher Education*, 39(1), 48-67.
- Xingyuan, W., Li, F., & Wei, Y. (2010). How do they really help? An empirical study of the role of different information sources in building brand trust. *Journal of Global Marketing*, 23(3), 243-252.
- Yi, Y., & Gong, T. (2013). Customer value co-creation behaviour: Scale development and validation. *Journal of Business Research*, 66(9), 1279-1284.
- Yngfalk F.A. (2013). It's not us, it's them! Rethinking value co-creation among multiple actors. *Journal of Marketing Management*, 29(9/10), 1163-1181.
- Yoon, S. J. (2002). The antecedents and consequences of trust in online-purchase decisions. *Journal of Interactive Marketing*, 16(2), 47-63.
- Yu, B., & Wright, E. (2016). Socio-cultural adaptation, academic adaptation and satisfaction of international higher degree research students in Australia. *Tertiary Education and Management*, 22(1), 49-64.
- Zlatkin-Troitschanskaia, O., Shavelson, R. J., & Kuhn, C. (2015). The international state of research on measurement of competency in higher education. *Studies in Higher Education*, 40(3), 393-411.

**Table I: The details of participants in interview and focus groups**

| <b>Number of participants</b> | <b>Interview occupation</b>                                    | <b>Age range</b> | <b>Gender</b>    | <b>Interview approx. length</b> |
|-------------------------------|--|------------------|------------------|---------------------------------|
| 8                             | UK marketing and communication university managers and experts | 45-62            | 6 men<br>2 women | 90 min.                         |
| 6                             | Employees  | 25-48            | 2 men<br>4 women | 56 min                          |
| 7                             | Employees  | 27-56            | 4 men<br>3 women | 49 min                          |
| 6                             | Doctoral researchers   | 25-35            | 5 men<br>1 women | 74 min                          |
| 8                             | MBA students   | 23-37            | 4 men<br>4 women | 92 min                          |

**Table II: Exploratory factor analyses and reliability of measures**

| Construct                 | Item             | Fac. loading | Mean   | S. Deviation | Cronb. alpha | Item            | Fac. loading | Mean   | S. Deviation | Cronb. alpha |
|---------------------------|------------------|--------------|--------|--------------|--------------|-----------------|--------------|--------|--------------|--------------|
|                           | <b>Employees</b> |              |        |              |              | <b>Students</b> |              |        |              |              |
| <b>University logo</b>    | 0.961            |              |        |              |              | 0.949           |              |        |              |              |
|                           | L1               | 0.755        | 5.2681 | 1.62786      |              | L3              | 0.819        | 5.3804 | 1.38870      |              |
|                           | L3               | 0.776        | 5.3403 | 1.59315      |              | L5              | 0.771        | 5.1350 | 1.49697      |              |
|                           | L4               | 0.800        | 5.2914 | 1.64244      |              | L6              | 0.784        | 5.1534 | 1.50547      |              |
|                           | L7               | 0.783        | 5.2774 | 1.65054      |              | L8              | 0.826        | 5.4908 | 1.37602      |              |
|                           | L8               | 0.804        | 5.4639 | 1.56233      |              | L9              | 0.815        | 5.4294 | 1.35158      |              |
|                           | L11              | 0.789        | 5.3543 | 1.54386      |              |                 |              |        |              |              |
| <b>Typeface</b>           | 0.980            |              |        |              |              | 0.980           |              |        |              |              |
|                           | LT1              | 0.841        | 5.5804 | 1.64947      |              | LT2             | 0.803        | 5.9387 | 1.39529      |              |
|                           | LT4              | 0.850        | 5.5385 | 1.62818      |              | LT3             | 0.791        | 5.8282 | 1.39042      |              |
|                           | LT5              | 0.839        | 5.4988 | 1.63293      |              | LT4             | 0.823        | 5.9141 | 1.29290      |              |
|                           | LT6              | 0.846        | 5.4685 | 1.68890      |              | LT6             | 0.820        | 5.7914 | 1.38088      |              |
|                           | LT7              | 0.853        | 5.4965 | 1.71118      |              | LT7             | 0.836        | 5.9141 | 1.39399      |              |
|                           |                  |              |        |              |              |                 |              |        |              |              |
| <b>Design</b>             | 0.961            |              |        |              |              | 0.956           |              |        |              |              |
|                           | LD2              | 0.764        | 5.4336 | 1.55833      |              | LD1             | 0.734        | 5.6871 | 1.39009      |              |
|                           | LD3              | 0.766        | 5.6993 | 1.55297      |              | LD3             | 0.775        | 5.9571 | 1.36241      |              |
|                           | LD5              | 0.771        | 5.5804 | 1.54563      |              | LD4             | 0.797        | 5.7055 | 1.43988      |              |
|                           | LD6              | 0.764        | 5.2960 | 1.54935      |              | LD5             | 0.738        | 5.3558 | 1.43450      |              |
|                           | LD7              | 0.773        | 5.4406 | 1.54204      |              | LD7             | 0.829        | 5.6074 | 1.44203      |              |
|                           |                  |              |        |              |              |                 |              |        |              |              |
| <b>Colour</b>             | 0.936            |              |        |              |              | 0.909           |              |        |              |              |
|                           | LC1              | 0.723        | 5.6270 | 1.44553      |              | LC1             | 0.765        | 5.9877 | 1.18628      |              |
|                           | LC2              | 0.779        | 5.5268 | 1.46049      |              | LC2             | 0.820        | 5.8712 | 1.33401      |              |
|                           | LC3              | 0.793        | 5.3520 | 1.54515      |              | LC4             | 0.830        | 5.6871 | 1.42518      |              |
|                           | LC5              | 0.782        | 5.2727 | 1.46381      |              | LC5             | 0.684        | 5.4601 | 1.34827      |              |
|                           |                  |              |        |              |              |                 |              |        |              |              |
| <b>Name</b>               | 0.978            |              |        |              |              | 0.981           |              |        |              |              |
|                           | LN1              | 0.725        | 5.4802 | 1.68631      |              | LN1             | 0.855        | 5.5583 | 1.51982      |              |
|                           | LN2              | 0.757        | 5.4965 | 1.68365      |              | LN2             | 0.853        | 5.5031 | 1.57282      |              |
|                           | LN3              | 0.775        | 5.5291 | 1.66105      |              | LN3             | 0.869        | 5.5828 | 1.51460      |              |
|                           | LN4              | 0.769        | 5.5221 | 1.66957      |              | LN4             | 0.873        | 5.5521 | 1.52814      |              |
|                           |                  |              |        |              |              |                 |              |        |              |              |
| <b>University website</b> | 0.994            |              |        |              |              | 0.992           |              |        |              |              |
|                           | W2               | 0.857        | 5.3450 | 1.98295      |              | W1              | 0.925        | 5.5521 | 1.92499      |              |

|                               |       |       |        |         |       |       |       |        |         |  |       |
|-------------------------------|-------|-------|--------|---------|-------|-------|-------|--------|---------|--|-------|
|                               | W3    | 0.859 | 5.3450 | 1.98649 |       | W3    | 0.926 | 5.5460 | 1.92194 |  |       |
|                               | W4    | 0.857 | 5.3193 | 1.98078 |       | W4    | 0.924 | 5.4969 | 1.91928 |  |       |
|                               | W5    | 0.857 | 5.3310 | 1.98063 |       | W5    | 0.923 | 5.4908 | 1.91926 |  |       |
|                               | W6    | 0.816 | 5.2797 | 1.97912 |       | W6    | 0.872 | 5.4969 | 1.90637 |  |       |
| <b>Navigation design</b>      |       |       |        |         | 0.991 |       |       |        |         |  | 0.991 |
|                               | WND1  | 0.868 | 5.5221 | 1.71786 |       | WND1  | 0.875 | 5.6503 | 1.51345 |  |       |
|                               | WND2  | 0.865 | 5.4755 | 1.71782 |       | WND2  | 0.852 | 5.5767 | 1.50676 |  |       |
|                               | WND3  | 0.859 | 5.5385 | 1.71757 |       | WND3  | 0.850 | 5.6564 | 1.50874 |  |       |
|                               | WND4  | 0.857 | 5.5548 | 1.69107 |       | WND4  | 0.849 | 5.6012 | 1.50530 |  |       |
|                               | WND8  | 0.867 | 5.4779 | 1.71377 |       | WND6  | 0.852 | 5.6135 | 1.52480 |  |       |
|                               | WND10 | 0.874 | 5.4709 | 1.72318 |       | WND9  | 0.860 | 5.5890 | 1.53450 |  |       |
|                               | WND13 | 0.830 | 5.4336 | 1.76635 |       | WND11 | 0.865 | 5.5276 | 1.54885 |  |       |
| <b>Visual identity/design</b> |       |       |        |         | 0.990 |       |       |        |         |  | 0.973 |
|                               | WV2   | 0.830 | 5.4639 | 1.88990 |       | WV1   | 0.865 | 5.7055 | 1.50691 |  |       |
|                               | WV3   | 0.839 | 5.4779 | 1.89505 |       | WV2   | 0.892 | 5.7975 | 1.51600 |  |       |
|                               | WV4   | 0.838 | 5.4918 | 1.88651 |       | WV4   | 0.895 | 5.8160 | 1.49170 |  |       |
|                               | WV5   | 0.830 | 5.5128 | 1.87157 |       | WV5   | 0.877 | 5.8344 | 1.50006 |  |       |
|                               | WV6   | 0.836 | 5.5245 | 1.90118 |       | WV6   | 0.888 | 5.7239 | 1.58421 |  |       |
| <b>Information</b>            |       |       |        |         | 0.990 |       |       |        |         |  | 0.989 |
|                               | WI8   | 0.814 | 5.4755 | 1.83743 |       | WI8   | 0.886 | 5.6196 | 1.65630 |  |       |
|                               | WI4   | 0.821 | 5.4499 | 1.84706 |       | WI1   | 0.880 | 5.5828 | 1.68441 |  |       |
|                               | WI17  | 0.792 | 5.5315 | 1.83223 |       | WI16  | 0.859 | 5.6871 | 1.65373 |  |       |
| <b>Usability</b>              |       |       |        |         | 0.979 |       |       |        |         |  |       |
|                               | WU3   | 0.805 | 5.3217 | 1.91868 |       | WU2   | 0.833 | 5.5890 | 1.62439 |  |       |
|                               | WU6   | 0.815 | 5.2984 | 1.92852 |       | WU5   | 0.835 | 5.5583 | 1.64466 |  |       |
|                               | WU9   | 0.797 | 5.3380 | 1.91037 |       | WU9   | 0.789 | 5.6503 | 1.54574 |  |       |
| <b>Customisation</b>          |       |       |        |         | 0.860 |       |       |        |         |  | 0.951 |
|                               | WCU3  | 0.732 | 5.4802 | 2.89903 |       | WCU2  | 0.891 | 5.5215 | 1.45015 |  |       |
|                               | WCU4  | 0.668 | 5.3776 | 1.64119 |       | WCU4  | 0.796 | 5.4969 | 1.46302 |  |       |
|                               | WCU5  | 0.702 | 5.3263 | 1.66064 |       | WCU5  | 0.900 | 5.5276 | 1.45853 |  |       |
|                               | WCU6  | 0.701 | 5.3939 | 1.63948 |       | WCU6  | 0.893 | 5.5521 | 1.45786 |  |       |
| <b>Security</b>               |       |       |        |         | 0.985 |       |       |        |         |  | 0.969 |
|                               | WS1   | 0.830 | 5.3520 | 1.91395 |       | WS1   | 0.805 | 5.4847 | 1.77206 |  |       |
|                               | WS2   | 0.841 | 5.3147 | 1.93982 |       | WS2   | 0.814 | 5.3558 | 1.84485 |  |       |
|                               | WS3   | 0.847 | 5.2681 | 1.94802 |       | WS3   | 0.800 | 5.3497 | 1.86433 |  |       |
| <b>Availability</b>           |       |       |        |         | 0.990 |       |       |        |         |  | 0.974 |

|                                    |       |       |        |         |       |       |       |        |         |  |       |
|------------------------------------|-------|-------|--------|---------|-------|-------|-------|--------|---------|--|-------|
|                                    | WA3   | 0.892 | 5.3916 | 1.90928 |       | WA3   | 0.886 | 5.6564 | 1.63820 |  |       |
|                                    | WA4   | 0.884 | 5.4079 | 1.91868 |       | WA4   | 0.878 | 5.6810 | 1.64694 |  |       |
|                                    | WA5   | 0.889 | 5.3497 | 1.93078 |       | WA5   | 0.883 | 5.6319 | 1.65536 |  |       |
| <b>Stak. co-creation behaviour</b> |       |       |        |         |       |       |       |        |         |  |       |
| <b>Information seeking</b>         |       |       |        |         | 0.960 |       |       |        |         |  | 0.989 |
|                                    | CPOI  | 0.822 | 5.3170 | 1.80659 |       | CPOI  | 0.801 | 5.7362 | 1.34636 |  |       |
|                                    | CPO2  | 0.839 | 5.3916 | 1.82545 |       | CPO2  | 0.855 | 5.7423 | 1.32212 |  |       |
|                                    | CPO3  | 0.848 | 5.1422 | 1.83955 |       | CPO3  | 0.845 | 5.5644 | 1.42308 |  |       |
| <b>Information sharing</b>         |       |       |        |         | 0.935 |       |       |        |         |  | 0.923 |
|                                    | CPIS1 | 0.798 | 5.5967 | 1.54620 |       | CPIS1 | 0.864 | 5.9509 | 1.29006 |  |       |
|                                    | CPIS2 | 0.814 | 5.4918 | 1.61710 |       | CPIS2 | 0.896 | 5.9141 | 1.39841 |  |       |
|                                    | CPIS3 | 0.808 | 5.4452 | 1.48510 |       | CPIS3 | 0.864 | 5.8282 | 1.26976 |  |       |
| <b>Responsible behaviour</b>       |       |       |        |         | 0.963 |       |       |        |         |  | 0.932 |
|                                    | CPRB1 | 0.841 | 5.5175 | 1.65558 |       | CPRB1 | 0.879 | 5.8221 | 1.32367 |  |       |
|                                    | CPRB2 | 0.842 | 5.4779 | 1.68905 |       | CPRB2 | 0.892 | 5.8098 | 1.34050 |  |       |
|                                    | CPRB3 | 0.820 | 5.4499 | 1.71318 |       | CPRB3 | 0.832 | 5.6994 | 1.33858 |  |       |
| <b>Personal interaction</b>        |       |       |        |         | 0.973 |       |       |        |         |  | 0.946 |
|                                    | CPPI1 | 0.838 | 5.4476 | 1.65201 |       | CPPI1 | 0.837 | 5.9448 | 1.28741 |  |       |
|                                    | CPPI2 | 0.838 | 5.5548 | 1.64627 |       | CPPI2 | 0.840 | 6.0798 | 1.19144 |  |       |
|                                    | CPPI3 | 0.865 | 5.5385 | 1.60796 |       | CPPI3 | 0.836 | 6.0061 | 1.22976 |  |       |
|                                    | CPPI4 | 0.858 | 5.4592 | 1.63956 |       | CPPI4 | 0.862 | 5.9018 | 1.32504 |  |       |
|                                    | CPPI5 | 0.865 | 5.5221 | 1.63564 |       | CPPI5 | 0.856 | 5.9877 | 1.32864 |  |       |
| <b>Feedback</b>                    |       |       |        |         | 0.955 |       |       |        |         |  | 0.965 |
|                                    | CCF1  | 0.838 | 5.4149 | 1.68289 |       | CCF1  | 0.822 | 6.0000 | 1.23228 |  |       |
|                                    | CCF2  | 0.838 | 5.4569 | 1.57407 |       | CCF2  | 0.809 | 5.8957 | 1.28435 |  |       |
|                                    | CCF3  | 0.833 | 5.3497 | 1.59259 |       | CCF3  | 0.843 | 5.9080 | 1.30908 |  |       |
| <b>Advocacy</b>                    |       |       |        |         | 0.933 |       |       |        |         |  | 0.951 |
|                                    | CCA1  | 0.853 | 5.5361 | 1.57276 |       | CCA1  | 0.800 | 5.8160 | 1.31581 |  |       |
|                                    | CCA2  | 0.884 | 5.6527 | 1.54167 |       | CCA2  | 0.837 | 5.9264 | 1.31261 |  |       |
|                                    | CCA3  | 0.852 | 5.4825 | 1.59227 |       | CCA3  | 0.787 | 5.8098 | 1.35424 |  |       |
| <b>Tolerance</b>                   |       |       |        |         | 0.927 |       |       |        |         |  | 0.940 |
|                                    | CCT1  | 0.804 | 5.3590 | 1.43611 |       | CCT1  | 0.856 | 5.5460 | 1.50391 |  |       |
|                                    | CCT2  | 0.834 | 5.4196 | 1.46651 |       | CCT2  | 0.868 | 5.5337 | 1.50834 |  |       |
|                                    | CCT3  | 0.819 | 5.3520 | 1.54515 |       | CCT3  | 0.855 | 5.5031 | 1.56889 |  |       |
| <b>Helping</b>                     |       |       |        |         | 0.963 |       |       |        |         |  | 0.943 |
|                                    | CCH1  | 0.856 | 5.0956 | 1.63281 |       | CCH1  | 0.729 | 5.4847 | 1.28791 |  |       |



|                              |      |       |        |         |       |                              |       |        |         |  |       |
|------------------------------|------|-------|--------|---------|-------|------------------------------|-------|--------|---------|--|-------|
|                              | CCH2 | 0.856 | 5.0093 | 1.68831 |       | CCH2                         | 0.805 | 5.4356 | 1.38349 |  |       |
|                              | CCH3 | 0.888 | 4.9883 | 1.64270 |       | CCH3                         | 0.817 | 5.3742 | 1.41022 |  |       |
|                              | CCH4 | 0.891 | 5.1189 | 1.64270 |       | CCH4                         | 0.832 | 5.4785 | 1.37139 |  |       |
| <b>University reputation</b> |      |       |        |         | 0.979 | <b>University reputation</b> |       |        |         |  | 0.927 |
|                              | R1   | 0.827 | 5.5408 | 1.49026 |       | R1                           | 0.801 | 5.7730 | 1.29720 |  |       |
|                              | R2   | 0.853 | 5.7226 | 1.51626 |       | R2                           | 0.869 | 6.0675 | 1.31059 |  |       |
|                              | R3   | 0.860 | 5.7273 | 1.50629 |       | R3                           | 0.894 | 6.0798 | 1.31460 |  |       |
|                              | R4   | 0.851 | 5.6970 | 1.51519 |       | R4                           | 0.874 | 6.0798 | 1.29091 |  |       |
|                              | R5   | 0.829 | 5.6200 | 1.52017 |       | R5                           | 0.858 | 6.0123 | 1.32398 |  |       |

**Table III: Desciminant validity, AVE, and CR (Students)**

|                | CR    | AVE   | MSV   | Feedback     | Name         | Logo         | Website      | Rep.         | Design       | Colour       | Navigation D. | Visual I.    | Information  | Usability    | Custom.      | Security     | Availability | Info. Seeking | Info. Sharing | Responsible B. | Personal I.  | Helping      | Tolerance    | Advocacy     | Typeface     |
|----------------|-------|-------|-------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|----------------|--------------|--------------|--------------|--------------|--------------|
| Feedback       | 0.956 | 0.877 | 0.303 | <b>0.937</b> |              |              |              |              |              |              |               |              |              |              |              |              |              |               |               |                |              |              |              |              |              |
| Name           | 0.979 | 0.921 | 0.406 | 0.215        | <b>0.960</b> |              |              |              |              |              |               |              |              |              |              |              |              |               |               |                |              |              |              |              |              |
| Logo           | 0.960 | 0.799 | 0.386 | 0.174        | 0.621        | <b>0.894</b> |              |              |              |              |               |              |              |              |              |              |              |               |               |                |              |              |              |              |              |
| Website        | 0.993 | 0.964 | 0.360 | 0.196        | 0.354        | 0.512        | <b>0.982</b> |              |              |              |               |              |              |              |              |              |              |               |               |                |              |              |              |              |              |
| Reputation     | 0.980 | 0.907 | 0.245 | 0.363        | 0.423        | 0.384        | 0.348        | <b>0.952</b> |              |              |               |              |              |              |              |              |              |               |               |                |              |              |              |              |              |
| Design         | 0.959 | 0.824 | 0.471 | 0.251        | 0.546        | 0.551        | 0.457        | 0.472        | <b>0.908</b> |              |               |              |              |              |              |              |              |               |               |                |              |              |              |              |              |
| Colour         | 0.939 | 0.794 | 0.471 | 0.249        | 0.588        | 0.601        | 0.500        | 0.392        | 0.686        | <b>0.891</b> |               |              |              |              |              |              |              |               |               |                |              |              |              |              |              |
| Navigation D.  | 0.991 | 0.942 | 0.406 | 0.179        | 0.637        | 0.599        | 0.523        | 0.359        | 0.462        | 0.574        | <b>0.971</b>  |              |              |              |              |              |              |               |               |                |              |              |              |              |              |
| Visual I.      | 0.989 | 0.948 | 0.360 | 0.169        | 0.439        | 0.411        | 0.600        | 0.438        | 0.491        | 0.507        | 0.535         | <b>0.974</b> |              |              |              |              |              |               |               |                |              |              |              |              |              |
| Information    | 0.990 | 0.972 | 0.347 | 0.183        | 0.433        | 0.486        | 0.520        | 0.398        | 0.445        | 0.499        | 0.491         | 0.589        | <b>0.986</b> |              |              |              |              |               |               |                |              |              |              |              |              |
| Usability      | 0.980 | 0.941 | 0.347 | 0.213        | 0.488        | 0.535        | 0.498        | 0.383        | 0.446        | 0.464        | 0.509         | 0.497        | 0.466        | <b>0.970</b> |              |              |              |               |               |                |              |              |              |              |              |
| Customisation  | 0.929 | 0.773 | 0.398 | 0.198        | 0.586        | 0.553        | 0.487        | 0.470        | 0.631        | 0.592        | 0.580         | 0.475        | 0.500        | 0.538        | <b>0.879</b> |              |              |               |               |                |              |              |              |              |              |
| Security       | 0.985 | 0.957 | 0.299 | 0.200        | 0.488        | 0.500        | 0.466        | 0.339        | 0.477        | 0.474        | 0.547         | 0.475        | 0.452        | 0.428        | 0.463        | <b>0.978</b> |              |               |               |                |              |              |              |              |              |
| Availability   | 0.990 | 0.970 | 0.347 | 0.223        | 0.422        | 0.546        | 0.520        | 0.340        | 0.400        | 0.412        | 0.573         | 0.546        | 0.533        | 0.589        | 0.486        | 0.446        | <b>0.985</b> |               |               |                |              |              |              |              |              |
| Info. Seeking  | 0.961 | 0.891 | 0.335 | 0.463        | 0.181        | 0.184        | 0.234        | 0.399        | 0.178        | 0.225        | 0.201         | 0.205        | 0.216        | 0.166        | 0.162        | 0.198        | 0.207        | <b>0.944</b>  |               |                |              |              |              |              |              |
| Info. Ssharing | 0.936 | 0.831 | 0.245 | 0.436        | 0.241        | 0.287        | 0.308        | 0.495        | 0.338        | 0.278        | 0.184         | 0.429        | 0.342        | 0.256        | 0.307        | 0.244        | 0.308        | 0.414         | <b>0.911</b>  |                |              |              |              |              |              |
| Responsible B. | 0.964 | 0.899 | 0.303 | 0.550        | 0.195        | 0.200        | 0.171        | 0.409        | 0.184        | 0.142        | 0.168         | 0.206        | 0.200        | 0.126        | 0.193        | 0.195        | 0.155        | 0.549         | 0.485         | <b>0.948</b>   |              |              |              |              |              |
| Personal I.    | 0.974 | 0.881 | 0.335 | 0.500        | 0.218        | 0.254        | 0.225        | 0.454        | 0.310        | 0.274        | 0.189         | 0.255        | 0.223        | 0.247        | 0.264        | 0.241        | 0.230        | 0.579         | 0.434         | 0.495          | <b>0.939</b> |              |              |              |              |
| Helping        | 0.962 | 0.864 | 0.257 | 0.469        | 0.180        | 0.181        | 0.131        | 0.327        | 0.196        | 0.123        | 0.128         | 0.107        | 0.156        | 0.194        | 0.141        | 0.121        | 0.158        | 0.428         | 0.414         | 0.462          | 0.507        | <b>0.929</b> |              |              |              |
| Tolerance      | 0.930 | 0.816 | 0.251 | 0.374        | 0.368        | 0.378        | 0.304        | 0.445        | 0.501        | 0.472        | 0.345         | 0.305        | 0.306        | 0.398        | 0.454        | 0.278        | 0.345        | 0.291         | 0.298         | 0.262          | 0.433        | 0.314        | <b>0.903</b> |              |              |
| Advocacy       | 0.928 | 0.810 | 0.315 | 0.510        | 0.287        | 0.258        | 0.309        | 0.371        | 0.358        | 0.361        | 0.268         | 0.296        | 0.216        | 0.240        | 0.252        | 0.250        | 0.222        | 0.392         | 0.421         | 0.370          | 0.561        | 0.427        | 0.460        | <b>0.900</b> |              |
| Typeface       | 0.978 | 0.901 | 0.358 | 0.311        | 0.519        | 0.493        | 0.407        | 0.446        | 0.598        | 0.595        | 0.427         | 0.367        | 0.359        | 0.380        | 0.484        | 0.349        | 0.285        | 0.249         | 0.361         | 0.256          | 0.294        | 0.321        | 0.350        | 0.313        | <b>0.949</b> |

\* p<.05. \*\* p<.01.

**Table IV: Desciminant validity, AVE, and CR (Employees)**

|                | CR    | AVE   | MSV   | Helping      | Typeface     | Design       | Colour       | Name         | Logo         | Navigation D. | Visual I.    | Information  | Usability    | Customisation | Security     | Availability | Website      | Info. Seeking | Info.Sharing | Responsible B. | CPPI         | CCF          | Advocacy     | Tolerance    | Rep          |
|----------------|-------|-------|-------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|---------------|--------------|----------------|--------------|--------------|--------------|--------------|--------------|
| Helping        | 0.910 | 0.771 | 0.218 | <b>0.878</b> |              |              |              |              |              |               |              |              |              |               |              |              |              |               |              |                |              |              |              |              |              |
| Typeface       | 0.985 | 0.956 | 0.261 | 0.014        | <b>0.978</b> |              |              |              |              |               |              |              |              |               |              |              |              |               |              |                |              |              |              |              |              |
| Design         | 0.956 | 0.814 | 0.205 | 0.215        | 0.449        | <b>0.902</b> |              |              |              |               |              |              |              |               |              |              |              |               |              |                |              |              |              |              |              |
| Colour         | 0.924 | 0.803 | 0.207 | 0.023        | 0.323        | 0.327        | <b>0.896</b> |              |              |               |              |              |              |               |              |              |              |               |              |                |              |              |              |              |              |
| Name           | 0.980 | 0.925 | 0.212 | 0.051        | 0.460        | 0.350        | 0.441        | <b>0.962</b> |              |               |              |              |              |               |              |              |              |               |              |                |              |              |              |              |              |
| Logo           | 0.929 | 0.766 | 0.325 | 0.140        | 0.511        | 0.357        | 0.253        | 0.332        | <b>0.875</b> |               |              |              |              |               |              |              |              |               |              |                |              |              |              |              |              |
| Navigation D.  | 0.992 | 0.943 | 0.325 | 0.105        | 0.460        | 0.453        | 0.455        | 0.346        | 0.570        | <b>0.971</b>  |              |              |              |               |              |              |              |               |              |                |              |              |              |              |              |
| Visual I.      | 0.973 | 0.879 | 0.194 | 0.079        | 0.195        | 0.388        | 0.252        | 0.283        | 0.179        | 0.352         | <b>0.938</b> |              |              |               |              |              |              |               |              |                |              |              |              |              |              |
| Information    | 0.990 | 0.970 | 0.205 | 0.156        | 0.309        | 0.316        | 0.222        | 0.136        | 0.284        | 0.453         | 0.404        | <b>0.985</b> |              |               |              |              |              |               |              |                |              |              |              |              |              |
| Usability      | 0.952 | 0.869 | 0.239 | 0.036        | 0.318        | 0.268        | 0.436        | 0.363        | 0.198        | 0.489         | 0.441        | 0.275        | <b>0.932</b> |               |              |              |              |               |              |                |              |              |              |              |              |
| Customisation  | 0.972 | 0.897 | 0.176 | 0.145        | 0.406        | 0.362        | 0.414        | 0.420        | 0.284        | 0.379         | 0.154        | 0.257        | 0.294        | <b>0.947</b>  |              |              |              |               |              |                |              |              |              |              |              |
| Security       | 0.975 | 0.928 | 0.194 | 0.110        | 0.327        | 0.441        | 0.267        | 0.223        | 0.215        | 0.391         | 0.409        | 0.309        | 0.349        | 0.233         | <b>0.963</b> |              |              |               |              |                |              |              |              |              |              |
| Availability   | 0.989 | 0.967 | 0.233 | 0.148        | 0.227        | 0.275        | 0.192        | 0.181        | 0.309        | 0.483         | 0.435        | 0.298        | 0.307        | 0.174         | 0.265        | <b>0.983</b> |              |               |              |                |              |              |              |              |              |
| Website        | 0.992 | 0.960 | 0.231 | 0.144        | 0.254        | 0.343        | 0.220        | 0.091        | 0.351        | 0.481         | 0.247        | 0.350        | 0.394        | 0.216         | 0.433        | 0.318        | <b>0.980</b> |               |              |                |              |              |              |              |              |
| Info. Seeking  | 0.925 | 0.806 | 0.190 | 0.426        | 0.065        | 0.151        | 0.026        | -0.026       | 0.054        | 0.163         | 0.155        | 0.082        | 0.103        | 0.012         | 0.116        | 0.144        | 0.175        | <b>0.898</b>  |              |                |              |              |              |              |              |
| Info.Sharing   | 0.933 | 0.823 | 0.109 | 0.297        | 0.057        | 0.247        | -0.039       | 0.066        | 0.034        | 0.115         | 0.330        | 0.214        | 0.154        | 0.036         | 0.211        | 0.314        | 0.110        | 0.264         | <b>0.907</b> |                |              |              |              |              |              |
| Responsible B. | 0.949 | 0.860 | 0.218 | 0.467        | 0.181        | 0.240        | 0.048        | 0.066        | 0.080        | 0.094         | 0.101        | 0.217        | 0.078        | 0.082         | 0.118        | 0.068        | 0.107        | 0.389         | 0.236        | <b>0.928</b>   |              |              |              |              |              |
| CPPI           | 0.966 | 0.848 | 0.190 | 0.329        | 0.149        | 0.332        | 0.200        | 0.269        | 0.049        | 0.170         | 0.264        | 0.223        | 0.120        | 0.188         | 0.235        | 0.149        | 0.151        | 0.436         | 0.323        | 0.333          | <b>0.921</b> |              |              |              |              |
| CCF            | 0.952 | 0.868 | 0.182 | 0.388        | 0.113        | 0.338        | 0.285        | 0.143        | 0.083        | 0.230         | 0.163        | 0.134        | 0.180        | 0.034         | 0.117        | 0.184        | 0.184        | 0.339         | 0.107        | 0.324          | 0.427        | <b>0.932</b> |              |              |              |
| Advocacy       | 0.942 | 0.845 | 0.183 | 0.393        | 0.118        | 0.304        | 0.207        | 0.091        | 0.107        | 0.116         | 0.136        | 0.088        | 0.116        | 0.119         | 0.096        | 0.132        | 0.154        | 0.327         | 0.173        | 0.415          | 0.428        | 0.403        | <b>0.919</b> |              |              |
| Tolerance      | 0.944 | 0.850 | 0.163 | 0.222        | 0.214        | 0.332        | 0.348        | 0.293        | 0.179        | 0.249         | 0.213        | 0.161        | 0.205        | 0.221         | 0.174        | 0.102        | 0.240        | 0.277         | 0.091        | 0.260          | 0.372        | 0.372        | 0.404        | <b>0.922</b> |              |
| Rep            | 0.976 | 0.889 | 0.227 | 0.185        | 0.476        | 0.440        | 0.198        | 0.257        | 0.214        | 0.326         | 0.292        | 0.234        | 0.289        | 0.155         | 0.216        | 0.203        | 0.182        | 0.266         | 0.209        | 0.125          | 0.355        | 0.204        | 0.159        | 0.291        | <b>0.943</b> |

**Table IV: Structural Equation Model Result**

| Hypothesized relationships |                        |      |                       | Employees |      |       |      |                | Students |       |       |       |                |
|----------------------------|------------------------|------|-----------------------|-----------|------|-------|------|----------------|----------|-------|-------|-------|----------------|
|                            |                        |      |                       | Estimate  | S.E  | C.R   | p    | Hypothesis     | Estimate | S.E   | C.R   | p     | Hypothesis     |
| H1a                        | Colour                 | ---> | University logo       | 1.203     | .410 | 2.933 | .003 | Supported      | 0.137    | 0.052 | 2.644 | 0.008 | Supported      |
| H1b                        | Typeface               | ---> | University logo       | .646      | .086 | 7.471 | ***  | Supported      | 0.106    | 0.043 | 2.48  | 0.013 | Supported      |
| H1c                        | Name                   | ---> | University logo       | .474      | .100 | 4.724 | ***  | Supported      | 0.337    | 0.042 | 8.009 | ***   | Supported      |
| H1d                        | Design                 | ---> | University logo       | .416      | .084 | 4.947 | ***  | Supported      | 0.215    | 0.055 | 3.906 | ***   | Supported      |
| H2a                        | Navigation design      | ---> | University website    | .377      | .055 | 6.825 | ***  | Supported      | 0.091    | 0.061 | 1.499 | 0.134 | Not- Supported |
| H2b                        | Visual identity/design | ---> | University website    | .197      | .057 | 3.477 | ***  | Supported      | 0.313    | 0.052 | 5.98  | ***   | Supported      |
| H2c                        | Information            | ---> | University website    | .308      | .065 | 4.746 | ***  | Supported      | 0.115    | 0.051 | 2.224 | 0.026 | Supported      |
| H2d                        | Usability              | ---> | University website    | .307      | .059 | 5.224 | ***  | Supported      | 0.089    | 0.05  | 1.794 | 0.073 | Not- Supported |
| H2e                        | Customization          | ---> | University website    | .159      | .058 | 2.735 | .006 | Supported      | 0.064    | 0.06  | 1.06  | 0.289 | Not- Supported |
| H2f                        | Security               | ---> | University website    | .389      | .065 | 5.998 | ***  | Supported      | 0.102    | 0.045 | 2.252 | 0.024 | Supported      |
| H2e                        | Availability           | ---> | University website    | .272      | .065 | 4.216 | ***  | Supported      | 0.103    | 0.044 | 2.343 | 0.019 | Supported      |
| H3                         | University logo        | ---> | University website    | .718      | .084 | 8.586 | ***  | Supported      | 0.186    | 0.069 | 2.702 | 0.007 | Supported      |
| H4                         | University logo        | ---> | Co-creation behaviour | .059      | .059 | .998  | .318 | Not- Supported | 1.657    | .684  | 2.421 | .015  | Supported      |
| H5                         | University website     | ---> | Co-creation behaviour | .099      | .038 | 2.605 | .009 | Supported      | 0.603    | 0.25  | 2.417 | 0.016 | Supported      |
| H6                         | Co-creation behaviour  | ---> | University reputation | .561      | .157 | 3.564 | ***  | Supported      | .153     | .036  | 4.226 | ***   | Supported      |

Notes: Path=relationship between independent variable on dependent variable;  $\beta$ =standardized regression coefficient; S.E.=standard error; p=level of significance. \*\*\*p <0.05.

## Appendix: Item measurements

| <b>UNIVERSITY LOGO (L)</b>  |                              |     |
|---|------------------------------|-----|
| The University logo is recognizable   | Foroudi <i>et al.</i> (2014) | L1  |
| The University logo is appropriate  |                              | L2  |
| The University logo is familiar   |                              | L3  |
| The University logo communicates what the University stands for                     |                              | L4  |
| The University logo evokes positive effect  |                              | L5  |
| The University logo makes me have positive feelings towards the University          |                              | L6  |
| The University logo is distinctive  |                              | L7  |
| The University logo is attractive   |                              | L8  |
| The University logo is meaningful   |                              | L9  |
| The University logo is memorable  |                              | L10 |
| The University logo is visible  |                              | L11 |
| The University logo is high quality   |                              | L12 |
| The University logo communicates the University's personality                       |                              | L13 |
| The University logo is interesting  |                              | L14 |
| I like the University logo  |                              | L15 |
| <b>TYPEFACE (LT)</b>  |                              |     |
| The University's typeface is attractive   | Foroudi <i>et al.</i> (2014) | LT1 |
| The University's typeface is interesting  |                              | LT2 |
| The University's typeface is artistic   |                              | LT3 |
| The University's typeface is potent   |                              | LT4 |
| The University's typeface is honest   |                              | LT5 |
| The University's typeface communicates with me when the logo is simply not feasible |                              | LT6 |
| The University's typeface is immediately readable                                   |                              | LT7 |
| The University's typeface makes me have positive feelings towards the University    |                              | LT8 |
| <b>DESIGN (LD)</b>  |                              |     |

|  |  |      |
|--|--|------|
| The design of the logo is familiar   | Foroudi <i>et al.</i> (2014); Henderson and Cote (1998)  | LD1  |
| The design of the logo is meaningful   |  | LD2  |
| The design of the logo communicates the University's identity  |  | LD3  |
| The design of the logo reflects the personality of the University  |  | LD4  |
| The design of the logo is distinct   |  | LD5  |
| The design of the logo helps memorability  |  | LD6  |
| The design of the logo communicates clear meanings   |  | LD7  |
| The design of the logo communicates the University message   |  | LD8  |
| I like the design of the logo  |  | LD9  |
| <b>COLOUR (LC)</b>   |  |      |
| The colour of the logo affects my judgments and behaviour  | Aslam (2006); Foroudi <i>et al.</i> (2014); Tavassoli (2001)   | LC1  |
| The colour of the logo is recognizable   |  | LC2  |
| The colour of the logo is unique   |  | LC3  |
| The colour of the logo affects my mood   |  | LC4  |
| The colour of the logo is pleasant   |  | LC5  |
| The colour of the logo is meaningful   |  | LC6  |
| <b>UNIVERSITY NAME (LN)</b>  |  |      |
| The University's name is easy to remember  | Foroudi <i>et al.</i> (2014); Klink (2003); McCarthy and Perreault (1987)  | LN1  |
| The University's name is unique versus the competition   |  | LN2  |
| The University's name is always timely (does not get out of date)  |  | LN3  |
| The University's name communicates about the University and the product's benefits and qualities                   |  | LN4  |
| The University's name is short and simple  |  | LN5  |
| The University's name is promotable and advertizable   |  | LN6  |
| The University's name is pleasing when read or heard and easy to pronounce   |  | LN7  |
| The University's name is recognizable  |  | LN8  |
| The University's name is easy to recall  |  | LN9  |
| I like the University name   |  | LN10 |
| <b>UNIVERSITY WEBSITE (W)</b>  |  |      |
| The University website portrays University's identity  | Alwi (2009); Argyriou <i>et al.</i> (2006); Argyriou <i>et al.</i> (2006); Halliburton and Ziegfeld (2009); Robbins and Stylianou (2002) | W1   |
| The University website allow businesses to convey a socially desirable and "managed" impression of their companies |  | W2   |
| The University website a status symbol for the organization  |  | W3   |
| The University website projects the image that organization  |  | W4   |

|   |  |       |
|---|--|-------|
| wants to portray  |  |       |
| The University website provides accurate information  |  | W5    |
| The University website is a virtual storefront of the University  |  | W6    |
| The University website is a means to strengthen the image of the brand  |  | W7    |
| <b>Navigation design (WND)</b>  |  |       |
| I can easily navigate the University website  | Cyr (2008 and 2013); Harris and Goode (2010); Tarafdar and Zhang (2005 and 2008) | WND1  |
| I find the University website easy to use   |  | WND2  |
| The University website provides good navigation facilities to information content                             |  | WND3  |
| The University website provides directions for using the website  |  | WND4  |
| Navigation through the University website is intuitively logical  |  | WND5  |
| There are useful navigational aids on the University website  |  | WND6  |
| There are meaningful hyperlinks on the University website   |  | WND7  |
| The links are consistent  |  | WND8  |
| I can easily know where I am at the University website  |  | WND9  |
| This University website provides useful cues and links for me to get the desired information                  |  | WND10 |
| It is easy to move around at the University website by using the links or back button of the browser          |  | WND11 |
| The links at the University website are well maintained and updated.  |  | WND12 |
| Placement of links or menu is standard throughout the University website and I can easily recognize them      |  | WND13 |
| <b>Visual identify/design (WV)</b>  |  |       |
| The degree of interaction (video, demos selected by the user) offered by the University website is sufficient | Cyr (2008 and 2013)  | WV1   |
| This University website allowed me to efficiently tailor the information for my specific needs                |  | WV2   |
| This University website looks professionally designed   |  | WV3   |
| The screen design (i.e. colours, images, layout, etc.) is attractive  |  | WV4   |
| The University website animations are meaningful  |  | WV5   |
| The University website displays visually pleasing design  |  | WV6   |

|   |   |      |
|---|---|------|
| The University website is visually appealing  |   | WV7  |
| <b>Information design (WI)</b>  |   |      |
| The information provided at the University website is complete  | Cyr (2008 and 2013); Kim and Stoel (2004); Tarafdar and Zhang (2005 and 2008)                 | WI1  |
| The information provided at the University website is sufficient  |   | WI2  |
| The information provided at the University website is effective   |   | WI3  |
| The University website adequately meets my information needs  |   | WI4  |
| The information on the University website is pretty much what I need to carry out my tasks                            |   | WI5  |
| The University website produces the most current and up-to-date information   |   | WI6  |
| The information provided by the University website is accurate  |   | WI7  |
| In general, the University website provides me with high-quality information  |   | WI8  |
| The range of information is high  |   | WI9  |
| The information is applicable to the University website's activities  |   | WI10 |
| The information is detailed   |   | WI11 |
| The information is current  |   | WI12 |
| It is easy to locate the information  |   | WI13 |
| The information is useful   |   | WI14 |
| The information is systematically organized   |   | WI15 |
| The meaning of the information is clear   |   | WI16 |
| The layout of the information is easy to understand   |   | WI17 |
| <b>Usability (WU)</b>   |   |      |
| It is easy to move within the University website  |   | WU1  |
| The organization of the contents of the University website makes it easy for me to know where I am when navigating it | Casalo <i>et al.</i> (2008); Flavian <i>et al.</i> (2006); Tarafdar and Zhang (2005 and 2008) | WU2  |
| When I am navigating the University website, I feel that I am in control of what I can do                             |   | WU3  |
| Downloading pages from the University website is quick  |   | WU4  |
| The University website is entertaining (it's fun to use)  |   | WU5  |
| The University website is exciting and interesting  |   | WU6  |



|   |  |      |
|---|--|------|
| The University website is easy to use                                     |  | WU7  |
| The use of multimedia is effective for my tasks at the University website |  | WU8  |
| The University website has an attractive layout                           |  | WU9  |
| <b>Customization (WCU)</b>  |  |      |
| The University website customizes information to match my needs           | Kabadayi and Gupta (2011); Srinivasan <i>et al.</i> (2002); Tarafdar and Zhang (2005 and 2008) | WCU1 |
| The University website offers information that is tailor made to my needs |  | WCU2 |
| The University website makes me feel that I am a unique consumer          |  | WCU3 |
| I believe that the University website is customized to my needs           |  | WCU4 |
| The University website has personalization characteristics                |  | WCU5 |
| The University website offers customized information                      |  | WCU6 |
| The University website has provisions for designing customized products   |  | WCU7 |
| <b>Security (WS)</b>  |  |      |
| I feel safe in my transactions with the University website.               | Wolfenbarger and Gilly (2003); Tarafdar and Zhang (2005 and 2008);                             | WS1  |
| The University website has adequate security features.                    |  | WS2  |
| The University to which the website belongs has a well-known brand        |  | WS3  |
| The University website has provisions for a secure monetary transaction   |  | WS4  |
| The University website has an information policy                          |  | WS5  |
| The University website has provisions for user authentication             |  | WS6  |
| Availability of secure models for transmitting information                |  | WS7  |
| Provision for alternate, non-online models for financial transactions     |  | WS8  |
| Opportunity to create individual account with logon-id and password       |  | WS9  |
| Overall concern about security of transactions over the Internet          |  | WS10 |
| <b>Availability (WA)</b>  |  |      |
| The University website is always available for business                   | Alwi and Ismail (2013); Tarafdar and Zhang (2008)  | WA1  |
| The University website launches and runs right away                       |  | WA2  |
| The University website does not crash                                     |  | WA3  |

|  |   |       |
|--|---|-------|
| Pages at this website do not freeze after I enter my order information   |   | WA4   |
| It is easy to read off the contents of the University website.   |   | WA5   |
| The University website is well-maintained so that the information is easy to acquire (no dead links, for example). |   | WA6   |
| The University website is available  |   | WA7   |
| <b>CUSTOMER CO-CREATION BEHAVIOUR</b>  |   |       |
| <b>Customer participation behaviour</b>  |   |       |
| <b>Information seeking (CPO)</b>   |   |       |
| I have asked others for information on what the University service offers.   | Foroudi et al. (2019); Yi and Gong (2013) | CPO1  |
| I have searched for information on where this service is located.  |   | CPO2  |
| I have paid attention to how others behave to use this service well  |   | CPO3  |
| <b>Information sharing (CPIS)</b>  |   |       |
| I clearly explained what I wanted the University's employee to do.   | Foroudi et al. (2019); Yi and Gong (2013) | CPIS1 |
| I gave the University's employee proper information.   |   | CPIS2 |
| I provided necessary information so that the University's employee could perform his or her duties.                |   | CPIS3 |
| I answered all the University's employee's service-related questions.  |   | CPIS4 |
| <b>Responsible behaviour (CPRB)</b>  |   |       |
| I performed all the tasks that are required.   | Foroudi et al. (2019); Yi and Gong (2013) | CPRB1 |
| I adequately completed all the expected behaviours   |   | CPRB2 |
| I fulfilled responsibilities to the University's.  |   | CPRB3 |
| I followed the University's employee's directives or orders.   |   | CPRB4 |
| <b>Personal interaction (CPPI)</b>   |   |       |
| I was friendly to the University's employee.   | Foroudi et al. (2019); Yi and Gong (2013) | CPPI1 |
| I was kind to the University's employee.   |   | CPPI2 |
| I was polite to the University's employee.   |   | CPPI3 |
| I was courteous to the University's employee.  |   | CPPI4 |
| I didn't act rudely to the University's employee.  |   | CPPI5 |
| <b>Customer citizenship behaviour</b>  |   |       |
| <b>Feedback (CCF)</b>  |   |       |
| If I have a useful idea on how to improve the University's service, I let the employee know.                       | Foroudi et al. (2019); Yi and Gong (2013) | CCF1  |

|   |   |      |
|---|---|------|
| When I receive good service from the University's employee, I comment about it.                         |   | CCF2 |
| When I experience a problem, I let the University's employee know about it.                             |   | CCF3 |
| <b>Advocacy (CCA)</b>   |   |      |
| I said positive things about the University and the employee to others.                                 | Foroudi et al. (2019); Yi and Gong (2013)   | CCA1 |
| I recommended the University and the employee to others.  |   | CCA2 |
| I encouraged friends and relatives to attend the University.  |   | CCA3 |
| <b>Tolerance (CCT)</b>  |   |      |
| If the University's service is not delivered as expected, I would be willing to put up with it.         | Foroudi et al. (2019); Yi and Gong (2013)   | CCT1 |
| If the University's employee makes a mistake during service delivery, I would be willing to be patient. |   | CCT2 |
| If I have to wait longer than I normally expected to receive the service, I would be willing to adapt.  |   | CCT3 |
| <b>Helping (CCH)</b>  |   |      |
| I assist other colleagues if they need my help.   | Foroudi et al. (2019); Yi and Gong (2013)   | CCH1 |
| I help other colleagues if they seem to have problems.  |   | CCH2 |
| I teach other colleagues to use the service correctly.  |   | CCH3 |
| I give advice to other colleagues.  |   | CCH4 |
| <b>UNIVERSITY REPUTATION (R)</b>  |   |      |
| I have a good feeling about the University  | Chun (2005); Fombrun <i>et al.</i> (2000); Foroudi <i>et al.</i> (2014); Helm (2007)                        | R1   |
| I admire and respect the University   |   | R2   |
| The University offers products and services that are good value for money                               |   | R3   |
| The University has excellent leadership   |   | R4   |
| The University is a well-managed  |   | R5   |
| The University is an environmentally responsible University   |   | R6   |
| I believe the University offers high quality services and products                                      |   | R7   |
| I trust the University  | Chun (2005); Fombrun <i>et al.</i> (2000); Foroudi <i>et al.</i> (2014); Helm (2007); Kharouf et al. (2015) | R8   |

**Figure I: research conceptual model**

