Brand Ambidexterity and Commitment in Higher Education:

An Exploratory Study

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Abstract

The study investigates a university's *brand ambidexterity*-strategy and its effects on brand image, reputation, and commitment in higher education. A research model integrates the determinants of university-specific brand performance, and proposes that commitment towards a particular university is influenced by: (a) brand ambidexterity, that is, exploratory and exploitative orientations; and (b) student level responses, these being the students' perceptions with brand image and reputation leading to increased commitment with the university. Findings suggest that when students choose to commit for the study of a postgraduate degree, a variety of factors influence their decision, of which the brand performance and brand image constructs play major roles; interestingly, brand reputation is less important. The framework helps university managers in designing appropriate strategies to influence students' commitment towards the university to, for example, continue their post-graduate studies. Implications exist for broader brand management and customer management approaches that include up and cross-selling schemes.

Keywords – Brand ambidexterity, exploratory strategy, exploitative strategy, brand performance, brand image, brand reputation, commitment.

Introduction

When students decide on their postgraduate degree, they may choose to continue their studies at the same university if they are satisfied with the performance of the university. While many underlying elements pertain to this decision, from the university management perspective, an effective strategic orientation targeting these students is necessary (Dailey et al., 2006; Heslop & Nadeau, 2010). The present study investigates the university's brand performance, specifically in terms of its strategic orientations, to understand when students will remain committed to, for example, pursue their postgraduate studies at the same university. The study proposes that universities must adopt an entrepreneurial mindset and emphasize both *exploration* and *exploitation* type-opportunities in order to meet the complex challenges presented by globalization and technological change (Gedejlovic et al., 2012). Of these, exploration-type opportunities involve pursuing opportunities that are radically new to the university, whereas exploitation-type opportunities involve the pursuit of opportunities that refine and sustain competitive advantages in areas in which the university currently operates (March, 1991; Vorhies, Orr, & Bush, 2011).

Researchers generally agree that pursuing an *ambidextrous* orientation (i.e., the ability to attend to both exploration and exploitation-type opportunities) is highly desirable because such emphasis dynamically balances both the short and long-term needs (O'Reilly & Tushman, 2008). At the same time, such an ambidextrous orientation is also difficult to achieve because exploratory and exploitative opportunities often compete for the same scarce resources and place somewhat conflicting demands on organizational processes (March, 1991; Yu et al., 2014). As studies examine diverse factors pertinent to the efficacy of ambidexterity, the majority of these studies continue to adopt business sectors and industries as research samples, leading to more commercial –profits and performance– oriented implications (Harris & De Chernatony, 2001; Hsiao & Chen, 2013). The findings from these

studies seldom have much relevance and application in the higher education (HE) sector, such as the management of faculties, universities, and colleges (Hemsley-Brown & Goonawardana, 2007). To compete successfully in the HE sector, a topic of considerable debate and uncertainty is how universities can respond to competition in order to capitalize on the opportunities that globalization offers. The authors of this study propose that universities must make strategic decisions regarding the relative emphasis they place on competing organizational processes in order to develop an ambidextrous brand strategy. Brand ambidexterity is here conceptualized as the ability to pursue two contrasting strategic directions simultaneously (e.g., Beverland et al., 2015; Melewar & Nguyen, 2014). That is, these universities may emphasize and orient the organization to pursuit both types of opportunities, choose one type of opportunity over the other, or fail to develop a strategic orientation that attends to either opportunity type (Gedejlovic et al., 2012).

In the exploration of both the consequences of brand ambidexterity orientations as well as the mediating processes that account for some of the consequences' effects, the study focuses on the link between ambidexterity and brand performance, brand image, reputation, and commitment, which are considered key outcomes of any university branding strategy (Hankinson, 2012; Melewar & Akel, 2005). The research is conducted in the context of students' decisions on their postgraduate studies, since the examination of brand ambidexterity in relation to brand image, reputation, and commitment in particular, each influence the students in deciding on their subsequent studies. In doing so, the study extends the literature on ambidexterity and branding to an HE setting that has both theoretical and practical importance. University managers should, therefore, be interested in identifying factors that influence students to remain committed and continue their education with the university.

Theoretical Background and Research Model

The HE sector has much to gain from the benefits of successful branding, which is already well established in the private sector, but more research is needed that specifically relates to the branding efforts of public sector organizations, such as non-profit colleges and universities (Watkins & Gonzenbach, 2013). Branding research in HE is limited and evidence of research that examines how the role of ambidexterity strategies influence outcomes such as brand performance and brand image is lacking (Melewar & Nguyen, 2014). A research gap thus exists in studying the combining effects of institutions and organizational capabilities that influence opportunity identification and exploitation (Lubatkin et al., 2006). To fill this research gap, the authors develop a conceptual framework of university brand ambidexterity, as shown in Figure 1. In the proposed model commitment toward a particular university is influenced by: (a) *ambidexterity strategy variables*, namely, exploratory and exploitative orientations; and (b) *student level responses*, such as brand image and reputation perceptions towards the university. As depicted in Figure 1, the university's brand performance plays a central and mediating role in understanding the influence of the ambidexterity strategy and outcome level variables on commitment. Next, the rationale behind the hypothesized relationships in the research model is explained.

Figure 1 here.

Brand performance

The present study conceptualizes brand performance as encompassing the performance of brand attributes (such as price, product and service quality, competence, and distribution). Selnes (1993) suggests that a purchase decision is often made by evaluating *extrinsic* cues such as price and packaging because *intrinsic* cues such as service or product quality are not available at the time of purchase. In the conventional HE market, the product (e.g., degree, learning experience, etc.) is thought to be the heart of a brand (Argenti, 2000). Research

shows that the product's physical presence strongly influences on the students' experiences and how they perceive a brand (Han & Sung, 2008). Universities must, therefore, promote the tangible extrinsic attributes of their product. For example, Mudambi et al. (1997) emphasizes attributes of brand value that organizations can offer their customers. These brand values (e.g., product, distribution services, and support services) interrelate, revolve, and merge together in operations, indicating the brand's overall performance. Thus, designing and delivering a product that fully satisfies students' needs, requires both strategic and organizational capabilities such as those of exploratory/exploitative orientations, as prerequisites for success, regardless of the product form (Keller, 2008).

Exploratory strategy and brand performance

Universities that adopt an exploratory strategy seek radical changes, collect new resources, and expand aggressively through innovation in order to generate offerings that significantly transform existing products and services. Such universities are commonly engaged in exploring new opportunities, which involve opening off-shore campuses, developing new programs, through searching, discovering, experimenting, and risk-taking decisions related to their degrees and offerings, and other activities. An exploratory strategy requires new resources and information that (1) advance existing resources and knowledge; (2) offer new designs of services; (3) develop new channels of distribution to different groups of stakeholders; and (4) aims at meeting the needs of emerging markets (Benner & Tushman, 2003). Consequently, returns associated with an exploratory strategy are more variable and distant in time (He & Wong, 2004). Such organizations are often experts in the creation of new capabilities and are adaptive in their responses to turbulent environmental changes. However, when an organization overemphasizes exploration the risk of failing to achieve

appropriate returns increases due to costly searches and experimentation activities (Cao, Gedajlovic, & Zhang, 2009).

The relationship between exploratory strategy and performance has been somewhat well established in the traditional business setting (Gupta et al., 2006), however, the effect of an exploratory strategy has received relatively less attention in the HE literature. According to the resource-based view (RBV), adequate resources and information are antecedents of such organizations' effectiveness (Perataf, 1993). These organizations constantly integrate resources through internal accumulation or collection from the external market by identifying and shaping opportunities (Day, 1994). The present study posits that universities adopting the exploratory strategy focus on scanning, searching, exploring, and collecting information across technologies and markets, both 'local' and 'distant' in order to identify new development opportunities (Yu et al., 2014). Such behavior is in line with the exploratory strategy, which is characterized by risk-taking, innovation, search, discovery, and experimentation (March, 1991). As universities constantly try to redevelop themselves and acquire new resources in response to the changing environment, one might speculate that the relationship between the exploratory strategy and brand performance will be positive in the HE sector. Hence, the following hypothesis is advanced:

H_1: Exploratory strategy will have a positive impact on the university's brand performance.

Exploitative strategy and brand performance

Universities, adopting an *exploitative* orientation, often possess highly refined routines that leverage clearly identified core competitive advantages. These organizations generate offerings that refine and reinforce existing products and services to meet the markets' needs (Bennett, 2007), by combining and recombining existing resources at hand. In doing so, the

organizations broaden existing knowledge and skills, improve established designs, expand existing products and services, and increase the efficiency of existing distribution channels. For example, universities may become better at attracting faculty that can enhance the research and teaching capabilities and subsequently improve the university ranking. Thus, to the exploitative strategy, returns are certain and closer in time (He & Wong, 2004). However, the success of such exploitative strategy may be short-lived and unsustainable in the face of significant environmental changes (O'Reilly & Tushman, 2008).

The authors, therefore, conceptualizes exploitative strategy as referring to a university's behavior that is characterized by refinement, implementation, efficiency, production, and selection (Yu et al., 2014). Such exploitative strategy focuses on exploiting existing resources and capabilities, for which they are more familiar with; that is, in refining and reinforcing existing products and services, for example, their degrees and programs. However, these universities are expected to maintain satisfactory performance by strictly controlling costs, products, and markets (Chapleo, 2004). They must expect continued control and regulations and ensure that their short-term performances are adequately achieved (March, 1991). This includes, for instance, constantly observing the student recruitment numbers and satisfaction levels. The inherent risks for universities in this case are that the performance targets are not met (Gray, Fam, & Llanes, 2003); however, if they are able to fulfill their performance targets through an exploitative strategy, despite the strong emphasis on existing procedures, this in turn, may lead to greater brand performance. Thus:

H_2: Exploitative strategy will have a positive impact on the university's brand performance.

Brand performance and brand image

Brand image, referring to both the tangible and intangible associations an individual have with the university brand, derives from the snapshot evaluation of the university's performance (Syed Alwi & Kitchen, 2014). Van Riel et al. (2005) explain that, when choosing a brand, the individual's initial concern is with the functional or rational values of the product or the brand image. According to Franzen and Bouwman (2001), this choice may be a dual process that includes both cognitive and emotional elements. The cognitive process takes place first, leading to an emotional or affective reaction. In other words, affect and emotional elements usually stem from a cognitive evaluation (Franzen & Bouwman, 2001), which in turn may lead to an overall attitude evaluation and subsequently, actual behavior.

The present study suggests that in the HE sector a student will generally assess a brand in a hierarchical sequence: the rational values first, before proceeding to a higher level – the emotional values (Lynch & De Chernatony, 2004). This progression represents a hierarchical structure in an individual's brand knowledge, so when the performance of a brand is appreciated, the student's brand image develops. Thus, understanding how the rational attribute impacts on the overall brand image will be useful for a clear direction for an effective brand performance. Accordingly, the following hypothesis is proposed:

H_3: Brand performance will have a positive impact on a university's brand image.

Brand performance and brand reputation

Given the importance of a university's reputation, it is worthwhile to further investigate the concept in order to harmonize with existing research. According to traditional knowledge, the crucial goal of university branding is to situate a favorable position in the minds of stakeholders consistently, one that is distinct from its competitors (Hemsley-Brown & Goonawardana, 2007; Ries & Trout, 1982). This objective can be achieved when an organization builds its own reputation. Chen et al. (2015) suggest that reputation consists of

three dimensions, namely, value creation, strategic resources, and corporate communication. First, the corporate reputation as a *value-creation* tool involves promising appropriate quality products and services to students and offering value based on the experience of the staff. Second, the reputation as a *strategic resource* includes its use as a strategic value or resource, that is, as a competitive advantage tool in order to send strong signals to its students. Third, the reputation as a *communication* tool embraces shaping the perception of stakeholders and influencing student choices in order to build long-term university-student relationships. Universities need to perform successfully to achieve a good reputation, however, some interesting results are in evidence in this respect. For example, Ewing et al. (2010) note that many firms are unable or unwilling to invest in long-term strategies designed to foster a positive reputation because their focus is centered more on short-term survival. Despite other similar results (e.g., Kotha et al., 2001), researchers commonly agree that greater brand performance results to a more positive reputation (e.g., Eberl & Schweiger, 2005; Roberts & Dowling, 2002). Accordingly, the study thus hypothesizes in the context of HE, that:

H_4: Brand performance will have a positive impact on a university's brand reputation.

Brand performance and commitment

An intention to stay in a relationship is an important indicator of commitment (Morgan & Hunt, 1994). Commitment is an enduring desire to maintain a long-term relationship with higher education as well as towards a specific university. Such commitment reflects the student's motivation to continue the relationship with the university, for instance by continuing their post-graduate studies at the same institution. In general, researchers report evidence showing a positive relationship between brand performance and commitment. For example, Syed Alwi et al. (2015) suggest that a greater brand performance will result in greater customer commitment to the brand. Garbarino and Johnson (1999) also report a

positive relationship between brand performance and commitment in the entertainment industry. As noted by Moorman, Zaltman, and Deshpande (1992), commitment is only meaningful and beneficial when developed over time. Through continuity, students will become more loyal, as both parties will be motivated to achieve mutual goals. In the context of HE, the following hypothesis is proposed:

H_5: Brand performance will have a positive impact on a student's commitment to a university.

Brand image and reputation

Differences exist between brand image and reputation (e.g., Gray & Balmer, 1998). Stern et al. (2001) explain that image refers to external world perceptions (or impressions that reside in stakeholder minds), which represent 'gestalt' or the overall impressions of a brand. Such a global total impression relating to the brand, which is both stored in memory and shared by members of a culture or subculture (Franzen & Bouwman, 2001), can relate to the service offered, reliability, innovativeness, and brand trust/trustworthiness (Mudambi et al., 1997). For a university, identifying the overall attitude or intangible aspect of the brand is crucial as this could then lead the university to guide its positioning and sustainable differential advantage (Landrum, Turrisi, & Harless, 1998). Reputation, on the other hand, is considered as an extended view that reconciles the multiple images of an organization held by all its constituencies (Fombrun, 1996). Thus, while a brand image is an *immediate* mental picture of a university, a reputation is the result of the value judgment of that organization *over time* (Tran et al., 2014). Despite previous evidence of their relationship (e.g., Mudambi et al., 1997), the over-reliance of these studies on the brand image-reputation link alone does not fully explain the logic behind many business-to-business situations in the HE context.

Hence, to add further evidence from the HE context, the authors of the study hypothesize that:

H$_6$: Brand image will have a positive impact on the university's brand reputation.

Reputation and commitment

According to the commitment-trust theory (Morgan & Hunt, 1994), a social exchange relationship can develop through interaction. Thus, when a student interacts with the university and as the relationship strengthens over time, the reputation of the university's brand will grow in parallel. Trust and loyalty begin to build as part of this growth and the likelihood of being involved in calculative commitment will reduce significantly. Geyskens, Steenkamp, Scheer, and Kumar (1996) confirm this by reporting a negative relationship between calculative commitment and trust. This indirectly supports the argument that trust and commitment grow over time. Han and Sung (2008) suggest that individuals who place trust in a specific brand are likely to commit to the relationship with their suppliers. Keh and Xie (2008), examining the behavioral outcomes of reputation, find that one of the outcomes resulting from reputation is commitment. Therefore, reputation has a positive effect on customer commitment to a university in the HE sector, that is, a high reputable and trustable university leads to increased student commitment. Therefore, the following hypothesis is developed:

H$_7$: Reputation will have a positive impact on a student's commitment to a university.

Brand image and commitment

A strong student orientation and emphasis on creating student-valued innovation can enhance brand image (e.g., Aaker, 1996; Padgett & Allen, 1997). When these values are integrated into the brand image, with effective communication, students are more likely to

remain committed to a brand (the university or/and the product itself). A key factor relating to brand image results from the experience of the brand; from this experience, students develop an overall brand image about the university (Dacin & Brown, 2006).

A strong brand image is a strong driver of increased commitment (Davis et al., 2008). For example, one of the specific brand image attributes is the perceived quality of teaching or university facilities, which denotes the perception about the reliability, strength, and value of the university brand. Accordingly, the study proposes:

H_8: Brand image will have a positive impact on a student's commitment to a university.

Method

Sample and data collection

Data were collected by circulating a questionnaire among graduate students (MBAs, Masters, and Doctoral students) with business majors across seven reputed universities in the northeast region of China, using a survey. The graduate programs selected have a 2-year duration or longer and the student-respondents had to be in their second year to be included. With more experience of their affiliated university, they were in a better position to answer the questions related to the two types of university strategies. In addition, as research subjects, they have the experience of choosing a postgraduate degree, whether at a same institution or elsewhere.

A total of 547 questionnaires were distributed with the assistance of several professors, yielding 535 completed questionnaires. Of the 535 completed responses, 519 were usable, resulting in a response rate of 94.9%. Of the students surveyed, 58% were female, 62% of the students were MBA and Masters students while 38% were enrolled in doctoral degrees; 74% held a bachelor's degree from the same university and 26% from a different university. The

respondents were asked to think about their decision to study a postgraduate degree at their current university and to complete the questionnaire.

The original questionnaire was developed and written in English, utilizing previously validated items and constructs to help ensure the validity of the measures. The instrument was translated into Mandarin Chinese by two scholars competent in both languages and with substantial research experience in the subject field in China. By means of back-translation, translation equivalence was ensured to detecting any misunderstandings caused by the translation. In doing so, any cultural bias was avoided and validity ensured. Prior to the execution of the survey, 10 graduate students were selected for a series of exploratory interviews. Based on the feedback, the final version of the questionnaire was refined.

Measures

Seven-point Likert scales, with the anchors "strongly disagree" and "strongly agree", are used to measure all variables in order to increase the findings' reliability (see Appendix A). The study measures *exploratory* and *exploitative strategy* separately, each with four items adapted from He and Wong (2004), which have been empirically validated. *Brand performance* is represented by five dimensions, namely, (a) competence of brand (university); (b) distribution (of teaching); (c) product quality; (d) service quality, and (e) price, which in combination consist of 25 items (Cretu & Brodie, 2007; Syed Alwi et al., 2015). *Brand image* includes a total of seven items, operationalized and adapted from Cretu and Brodie (2007), Davis et al. (2008), and Mudambi et al. (1997). *Reputation* is measured with six items adapted from Wong and Saunders (1993). Finally, *commitment* is operationalized with four items based on previous conceptualizations, and is developed from Morgan and Hunt (1994). In total, the study employed 50 item measures for the constructs' measurement.

Data Analysis and Results

A two-step SEM approach (Anderson & Gerbing, 1988) was conducted to test the measurement model's validity and reliability (in step-one) and the nomological validity of the proposed theoretical model (step-two). The study also executed an item parceling procedure (Bandalos & Finney, 2001) on the brand performance construct. Following a partial aggregation procedure (Bagozzi & Heatherton, 1994), items were combined to create five indicators per factor. The research combines 25 items measuring five dimensions of brand performance (represented as a latent construct), namely (1) product quality, (2) service quality, (3) price, (4) competence, and (5) distribution, by averaging, to create five indicators of brand performance. By employing this procedure, the number of variables was reduced and hence the model's degree of freedom was kept reasonable.

First, the constructs' reliability and validity were tested. Cronbach's alpha values for all constructs ranged from 0.82 to 0.90, which is acceptable (Hair et al., 2006). The composite reliability of the constructs is also reported because this is a better measure of scale reliability than Cronbach's alpha according to Bagozzi & Yi, (1988). Table 1 shows that the composite reliability values of the constructs range from 0.86 to 0.89, which confirms the strengths of the constructs' reliability (Hair et al., 2006).

As shown in Table 1, the measurement model results indicated an acceptable model fit (χ^2 = 472.14, p<0.001; df = 196, GFI =.86; CFI = 0.90; IFI = 0.92; RMSEA = 0.06) (Hu & Bentler, 1999). All indicators have significant loadings onto their respective latent constructs (p < 0.001), and the AVE of each construct is greater than 0.50, which jointly provide support for the convergent validity of the constructs. The AVE values are also greater than the inter-construct correlations, which support the discriminant validity of the constructs (see Table 2).

Table 1 here.

Table 2 here.

Next, the hypotheses were tested with SEM using AMOS 20.0. Table 3 shows the results of the hypothesis testing, revealing that the model fit indices are acceptable (χ^2 = 480.211, p<0.001; *df* = 180, GFI = 0.88; CFI = 0.92; IFI = 0.90; RMSEA = 0.08).

The results show that exploratory strategy and exploitative strategy both have direct and positive impacts on brand performance (exploratory, β = 0.525, p<0.001 and exploitative, β = 0.562, p<0.001). These results support H1 and H2. In addition, brand performance has significant effects on: brand image (β = 0.461, p<0.001); reputation (β = 0.437, p<0.001); and commitment (β = 0.588, p<0.001). These results support H3, H4, and H5 respectively. Next, brand image shows direct and positive effects on reputation (β = 0.404, p<0.001) and commitment (β = 0.478, p<0.001). These results support H6 and H8, respectively. Reputation is significantly associated with commitment (β = 0.445, p<0.001), which supports H7. Thus, all the hypothesized paths are supported.

<div align="center">Table 3 here.</div>

Tests of mediation

Following Zhao, Lynch, and Chen's (2010) method to test the mediation effects, the study tested role of brand performance between exploratory and exploitative and commitment. In addition, the study also tested for the mediating role of brand image and reputation between brand performance and commitment. Results are shown in Table 4. According to Zhao et al. (2010), the mediating effects can be established by testing the significance of the indirect effects between the constructs. If the indirect paths are significant, then the conclusion is that a significant mediating effect exists between the two constructs; if both direct and indirect paths are significant, a complementary (or partial) mediation is in evidence.

Table 4 shows that the indirect effect between exploratory strategy and exploitative strategy and commitment through brand performance is significant at p<0.001. This indicates

that brand performance mediates the relationship between firstly, exploratory strategy and commitment, and secondly, exploitative strategy and commitment.

Furthermore, the mediating role of brand image and reputation between brand performance and commitment was tested. Table 4 confirms that the indirect effects between brand performance and commitment through brand image and reputation are significant at $p<0.001$. Because these results also show the direct effect of brand performance on commitment is significant, a partial mediating effect of brand image and reputation between brand performance and commitment is therefore confirmed.

Table 4 here.

Discussion and Conclusion

The study's researchers propose and empirically test a model of brand ambidexterity in the context of higher education, focusing on students' commitment towards continuing their postgraduate studies at the same university. Ambidexterity variables (i.e., exploratory and exploitative) indirectly affect commitment through brand performance, which in turn, directly affect commitment as well as indirectly through its influence on variables associated with the student perceptions, that is, brand image and reputation. The study's results thus confirm that ambidexterity is possible within a non-profit institution and that such a strategy may lead to increased brand performance. As the study shows, such ambidexterity leads to improved brand image and reputation with both exploratory and exploitative strategies all directly affecting commitment. Several contributions are made to the existing literature in the field.

First, the study design has combined the literature on ambidexterity with branding and developed a comprehensive framework of brand ambidexterity, revealing a nuanced view on its effect on brand performance, brand image, reputation, and commitment. The study is the first to develop a conceptual model examining these relationships in a single study, thus, responding to a research gap in studying the combining effects of institutions and

organizational capabilities, arising from the influence of exploratory and exploitation strategies (Vorhies et al., 2011). The framework implies the increasingly importance of universities' opportunity identification and subsequent entrepreneurial behavior. As the framework demonstrates, brand performance, conceptualized as product and service quality, competence, price, and distribution, are all affected by an ambidexterity strategy.

Second, the study's findings broaden existing knowledge on the consequences of the ambidextrous organization on the students' commitment towards their university. The results indicate that commitment is influenced by a variety of factors, with some interesting findings. Judging by their path coefficients, the construct of brand performance appears to have the strongest effect on commitment ($\beta = .588$, $p<.001$), followed by brand image ($\beta = .478$, $p<.001$), and reputation ($\beta = .445$, $p<.001$). A university's reputation has always been regarded as an important indicator of its status (Ledden et al., 2007), however in this case, the performance and brand image is more important. This makes sense since, when continuing students decide on their postgraduate degrees, they are already familiar with the university reputation (Dailey et al., 2006), thus turn their attention to other aspects of the university, which play a more pivotal role; in this instance, these are shown to be the services, quality of teaching, administration, staff, brand image, and so on. This finding has important implications for university managers wanting to upsell and cross-sell their offerings to existing students.

Finally, while most previous research has focused on ambidexterity in both developed economies and for-profit settings (e.g., Beverland et al., 2015) findings from this study have implications about strategic behavior in the non-profit HE sector in a transition economy, thus extending existing literature in a different context. The operationalization and validated measures of brand ambidexterity provided in the context of HE adds to existing ambidexterity research (Cao et al., 2009) in a non-profit setting. Although the research is

conducted in China's HE sector, the conceptual model on the 'ambidexterity-branding-strategy'-linkage may be applied with caution to other HE sectors in other transition economies, where the need for differing strategic roles in universities' strategic decision-making play a significant role, particularly in response to intense competition.

Limitations and directions for future research

The authors of this paper acknowledge some limitations, which provide fruitful avenues for future research. The study utilizes student responses in order investigate their perceptions of brand image, reputation, and commitment; however, this approach also relied on their perceptions of ambidexterity strategies. Although the respondents may have been with the university for several years, they may not be aware of all their university's strategies and operations (or simply uninterested), thus may be limited in reporting to some of the items related to the universities' strategies (e.g., costs). Future research should examine brand ambidexterity from the managerial perspective. Further, the model does not consider individual level variables that influence students' commitment, such as their grades and ambitions, whether they wish to look for a job, or study to a higher level. Future studies should note the impact of these other individual-level variables and measures as well as note the differences between first-time and continuing students (i.e., decision on enrolling at the university versus decision on continuing with the university), which may lead to more comprehensive models. The study identifies two types of strategies that influence brand performance and subsequent commitment. Future studies should investigate what specific capabilities universities need in order to achieve ambidexterity. In this vein, mediating variables may be included, such as communication, market orientation, and strategic capability. In addition, moderation variables should also be explored and operationalised, as there may be other factors that influence brand performance. For example, He & Wong

(2004) included an interaction variable to explore whether firms would end up worse when pursuing either strategy, or whether the two strategies would add value to each other. Future research might identify other relevant antecedents and mediation/moderation variables using other research methods such as qualitative interviews and approaches. Finally, future research could cross-validate the framework and examine the differences between non-profit and for-profit organizations and developed and developing countries in explaining commitment based on ambidexterity and brand performance.

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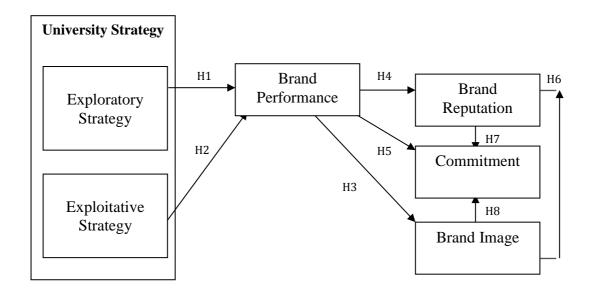**Figure 1** A model of university brand ambidexterity

Table 1 Measurement model results

Constructs	Measurement items	Loadings	p-value	AVE	Cronbach alpha	Composite reliability
Exploratory strategy	EPY1	0.88	***	0.65	0.89	0.88
	EPY2	0.84	***			
	EPY3	0.78	***			
	EPY4	0.76	***			
Exploitative strategy	EPE1	0.80	***	0.68	0.88	0.89
	EPE2	0.84	***			
	EPE3	0.76	***			
	EPE4	0.74	***			
Brand performance	BP1	0.84	***	0.55	0.82	0.86
	BP2	0.80	***			
	BP3	0.76	***			
	BP4	0.78	***			
	BP5	0.76	***			
Brand image	BI1	0.92	***	0.67	0.86	0.88
	BI2	0.95	***			
	BI3	0.82	***			
	BI4	0.78	***			
	BI5	0.80	***			
	BI6	0.82	***			
	BI7	0.90	***			
Reputation	RE1	0.82	***	0.62	0.90	0.89
	RE2	0.76	***			
	RE3	0.88	***			
	RE4	0.84	***			
	RE5	0.78	***			
	RE6	0.76	***			
Commitment	CO1	0.84	***	0.70	0.86	0.88
	CO2	0.82	***			
	CO3	0.90	***			
	CO4	0.80	***			

Note: *** $p<0.001$

Table 2 Discriminant validity

	1	2	3	4	5	6
Exploratory	**0.65**					
Exploitative	0.18	**0.68**				
Brand performance	0.26	0.20	**0.55**			
Brand image	0.14	0.30	0.16	**0.67**		
Reputation	0.06	0.16	0.23	0.16	**0.62**	
Commitment	0.18	0.28	0.32	0.20	0.32	**0.70**

Note: Diagonal elements are the AVE values; off-diagonal values are the inter-construct correlations.

Table 3 Standardized parameter estimates of the hypothesized paths

Hypothesized Paths	Path Coefficients	Results
Exploratory → Brand performance	0.525*	H1 (supported)
Exploitative → Brand performance	0.562*	H2 (supported)
Brand performance → Brand image	0.461*	H3 (supported)
Brand performance → Reputation	0.437*	H4 (supported)
Brand performance → Commitment	0.588*	H5 (supported)
Brand image → Reputation	0.404*	H6 (supported)
Reputation → Commitment	0.445*	H7 (supported)
Brand image → Commitment	0.478*	H8 (supported)

Note: * Significant at $p < 0.001$

Table 4 Tests of mediation

Paths	Path Coefficients	*p*-value	Results
Exploratory → Brand performance → Commitment (indirect path) *Exploratory → Commitment (direct path)(β = 0.033, p<.764)*	Path1: β = 0.53 Path2: β = 0.59	*** ***	Significant[a]
Exploitative → Brand performance → Commitment (indirect path) *Exploitative → Commitment (direct path)(β = 0.08, p<.766)*	Path1: β = 0.56 Path2: β = 0.59	*** ***	Significant[a]
Brand performance → Reputation → Commitment (indirect path) *Brand performance → Commitment (direct path)(β = 0.59)*	Path1: β = 0.44 Path2: β = 0.45	*** ***	Significant[b]
Brand performance → Brand image → Commitment (indirect path) *Brand performance → Commitment (direct path)(β = 0.59)*	Path1: β = 0.46 Path2: β = 0.48	*** ***	Significant[b]

Note: *** p<0.001

a: Full mediation occurs as only indirect path is significant.

b: Complementary (or partially) mediated occurs as both direct and indirect paths are significant (Zhao et al., 2010).

Appendix A − Full list of measurement items

Item description	
Brand Ambidexterity	The university has introduced new generation of products.
Exploratory Strategy	The university has extended their product range.
	The university has opened up new markets.
	The university has entered new technology fields.
Exploitative Strategy	The university has improved existing product's quality.
	The university has improved their offering flexibility.
	The university has reduced their operations cost (e.g., cutting back on expenses, outsourcing, etc.).
	The university has improved their yield (i.e., improved financially).
Brand Performance	The university brand is reliable.
Product quality	The university brand is strong.
	The university brand is consistent in quality.
	The university brand is synonym to high quality in overall.
Service quality	The university technical support provided is to my satisfaction.
	The university brand has highly skilled staff.
	The university is professional and helpful.
	The university is responsive to emerging problems.
	The university has excellent service quality.
Price	The fees (cost) of this degree are worth for what I have paid.
	The fees (cost) of this degree are better in terms of value for money.
	The fees (cost) of the university's products are at reasonable levels.
	The degree of this university is great deal.
	I will pay more to buy this degree.
Competence	The university tells exactly what product(s) will be supplied to us.
	The university delivers their promises promptly and correctly.
	The university gives high quality teaching.
	The university invests time and energy in their research and development.
	The university has excellent administrative management.

	The university understands my specific needs.
Distribution	The university makes it convenient for students to attend their classes.
	The university staff is available when needed.
	The university is able to meet service requests (networking, assistance, etc.).
	The university is able to offer teaching channel(s) that satisfy my needs (online).
	The teaching is supplied in a reliable way.
Brand Image	I perceive the university as technically advanced.
	I perceive the university as a trustworthy brand.
	I perceive the university as an innovative brand.
	I perceive the university as a product focused brand.
	I perceive the university as a student focused brand.
	I perceive the university as a well-managed brand.
	I perceive the university as a rich in history and experience.
Reputation	The university has a good reputation of providing appropriate courses and services.
	Our university's reputation is based on offering value from the experience of the staff.
	At our university, the reputation serves as a competitive advantage.
	Our university's reputation sends a strong signal to its students.
	Our university's reputation shapes the perceptions of stakeholders.
	Our university's reputation influences student choices.
Commitment	I feel committed in maintaining a relationship with the university.
	I feel that the relationship with the university is important.
	I intend to continue my relationship with the university.
	I plan to maintain a relationship with the university.