

10-31-2023

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Lacap, Jean Paolo G. and Cortez, Jaime V. (2023) "Does Reputation Lead to Student Loyalty? The Case of a Private Higher Education Institution, a State University, and a Local College," *The South East Asian Journal of Management*: Vol. 17: No. 2, Article 2.

DOI: 10.21002/seam.v17i2.1343

Available at: <https://scholarhub.ui.ac.id/seam/vol17/iss2/2>

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Does Reputation Lead to Student Loyalty? The Case of a Private Higher Education Institution, a State University, and a Local College

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Abstract

Research Aims: The current research aims to analyse (1) the direct interrelationships of higher education institutions' (HEIs) reputation, student satisfaction, and student loyalty; (2) the mediating effect of student satisfaction on the relationship between HEI reputation and student loyalty; and (3) the moderating role of HEI type (private HEI [PHEI], state university/college [SUC], local university/college [LUC]) on the links between HEI reputation and student satisfaction, HEI reputation and student loyalty, and student satisfaction and loyalty.

Design/Methodology/Approach: All hypothesised relationships were analysed using partial least squares – structural equation modelling (PLS-SEM).

Research Findings: The results revealed that (1) HEI reputation has a significant effect on student satisfaction and loyalty; (2) student satisfaction mediates the relationship between HEI reputation and loyalty; (3) a significant difference exists in the effect of reputation on student satisfaction between PHEIs and SUCs; and (4) significant difference exists on the effect of student satisfaction on loyalty between PHEIs and SUCs, and between PHEIs and LUCs.

Theoretical Contribution/Originality: The current study lends credence to using the S-O-R model as an appropriate framework in conducting predictive-causal studies that employ the PLS-SEM as the tool for data analysis.

Managerial Implication in the South East Asian Context: The current study presents findings which may be used by policymakers and administrators in crafting effective, goal-directed marketing plans for higher education institutions.

Research Limitation & Implications: One limitation of this study is the geographic location of its sample. All of the participants were students in the Province of Pampanga, Philippines.

Keywords: Reputation, Student Satisfaction, Student Loyalty, Higher Education, Multigroup Analysis

INTRODUCTION

The changing landscape of academia brought about by technological improvements, the diminishing global boundaries, and the growing level of competition have impacted the existence and sustainability of higher education institutions (HEIs) (Lomer et al., 2018; Khoshtaria et al., 2020). More and more institutions of higher learning are now crafting various strategies to build better reputations, increase satisfaction, and establish loyalty among their students (Kaushal & Ali, 2019; Qazi et al., 2021). To remain internationally competitive, colleges and universities are expanding their academic offerings and improving their service quality by boosting their reputation to attract prospective learners (Khoshtaria et al., 2020). These intangible assets could create a competitive advantage which, in the long run, creates a financial performance (Balqiah et al., 2011).

The Philippines, an emerging country in Southeast Asia, has a total of 2,396 HEIs. These HEIs are classified as state universities and colleges (SUCs), local universities and colleges (LUCs), and private higher education institutions (PHEIs). An HEI is categorized as a SUC if the source of funding comes from the national government. On the other hand, a college or university classified as a LUC has a source of funds coming from a local government unit (LGU). And a PHEI is a type of HEI that is operated, owned, and funded by a private entity - sectarian or non-sectarian (Philippine Commission on Higher Education, 2020). With the competitive nature of the landscape of higher education, HEIs are doing their best in terms of positioning through brand reputation (Berndt & Hollebeek, 2019). Colleges and universities are continuously faced with the challenge of attracting and retaining students. Thus, HEI's reputation plays a huge factor in meeting the needs of the learners and in building a long-run effect of student loyalty (Retamosa et al., 2020).

Reputation is an important and critical factor that has a huge effect on the sustainability of a college or university. When their reputation is good, academic institutions can gain a competitive advantage (Miotto et al., 2020). One of the factors being considered by a prospective student in choosing an academic institution is reputation (Harahap et al., 2018). With a good academic reputation, an HEI can build lasting confidence, trust, and credibility among its stakeholders (Hemsley-Brown et al., 2016; Aledo-Ruiz et al., 2022; Rodriguito et al., 2022).

Several studies have identified the role of reputation in building customer satisfaction and loyalty. In the study of Bakrie et al. (2019), reputation was found to have a positive influence on satisfaction and loyalty among Indonesian private university students. Kaushal and Ali (2019) also found the influence of reputation on satisfaction loyalty among private university students in India.

Furthermore, Heffernan et al. (2018) argued that HEI reputation leads to better student identification, which in turn leads to satisfaction and loyalty. On the one hand, Qazi et al. (2021) contended that HEI reputation indirectly leads to student satisfaction, and student satisfaction positively affects loyalty. From these precedent studies, it can be noted that HEI's reputation in relation to student satisfaction and loyalty has been examined in the context of higher education without considering the classification or type of academic institutions. Given that the HEIs in the Philippines are broadly classified into three categories – SUCs, LUCs, and PHEIs, it is noteworthy to explore the effects of HEI reputation on student satisfaction and loyalty and identify whether there are differences in the interrelationships among the identified constructs. Using path modelling via multigroup analysis (MGA), the present study examines how HEI reputation leads to student loyalty through satisfaction and assesses whether the type of HEIs – SUCs, LUCs, and PHEIs – moderates the relationships between HEI reputation and student satisfaction, HEI reputation and student loyalty, and student satisfaction and loyalty.

LITERATURE REVIEW

This study uses the S-O-R (Stimulus-Organism-Response) model as its theoretical framework. This framework explains that human behaviour is an organism's response to the stimuli he receives from his environment (Mehrabian & Russel, 1974). A stimulus is “any agent, event, or situation—internal or external—that elicits a response from an organism;” an organism is “an individual living entity ... that is capable of reproduction and growth,” and a response is “any glandular, muscular, neural, or other reaction to a stimulus” (VandenBos, 2015). Although first used in the field of Psychology, the S-O-R model is also extensively used in marketing studies involving consumer behaviour (Chang et al., 2011).

Applying the S-O-R model in the context of the current study, S (stimulus) includes everything in the HEI's environment – internal and external, physical and social – that can potentially be caught by any of the student's senses and to which he may respond. It may thus include a variety of items, such as instructional program and processes, faculty, student services, governance and administration, physical plant and facilities, internal and external relations, internal and external communication, alumni experience, HEI's competitive standing in the industry, accreditation, research and publications, marketing interventions, and others. The O (Organism), in this case, the student, receives one or a combination of these stimuli, then processes them and gives them meaning. The resultant meaning or perception then gives rise to R (Response), which can be an emotion or behaviour. Depending on his/her perception of the stimuli, the student can form an impression on his/her HEI's reputation and, by consequent cause-and-effect relationships, be

satisfied or dissatisfied with his/her HEI and/or his/her educational experience and be loyal or not loyal to his/her college or university.

The SOR framework is a widely utilized theoretical framework in the realm of consumer behaviour (van Zeeland & Henseler, 2018). For instance, Wong et al. (2023) used the SOR model to explain the conceptual framework of student loyalty in higher education. Helgensen and Nettet (2007) further argued that aside from satisfaction, HEI reputation is considered an integral component of student loyalty. Kaushal and Ali (2020) likewise contended that HEI reputation and satisfaction are contributory factors in the formation of loyalty among university students. Thus, in the current study, HEI reputation was tested as the stimulus, student satisfaction as the organismic factor, and student loyalty as the response variable.

HEI Reputation

Company reputation is “a relatively stable, issue-specific aggregate perceptual representation of a company’s past actions and future prospects compared against some standard” (Walker, 2010, p. 370). It is an emotional capital that reflects the various stakeholders’ perceptions about an organization’s past and future actions and unique intangible assets (Esen, 2015). Two characteristics of these perceptions that form organizational reputation are observed: (1) they are shared by various sectors, and (2) they persist over time. HEI reputation is company reputation in the context of universities/colleges. It is the collective representation that the university/college’s internal and external constituents hold of the HEI over time (Alessandri et al., 2006).

Related studies reported various determinants of HEI reputation, such as university image, perceived quality, perceived value, satisfaction, and attachment (Kaushal et al., 2021); students’ quality, faculty expertise, media exposure, degree/program prestige, bonding, bridging and linking social capital (Rashid & Mustafa, 2022); research quality, teaching quality, employee empowerment, corporate social responsibility, and internationalization (Rashid & Mustafa, 2020).

In operationalizing the construct of reputation, Telci and Kantur (2014) found that reputable institutions have the following characteristics: (1) they have high academic quality; (2) they are well-established and recognised; (3) they are innovative and offer several physical and social advancement opportunities; (4) they are managed by a successful head; and (5) they are responsible to its external and internal stakeholders, including the environment. In the Philippines, the reputation of HEIs is partly indicated by the grant of autonomous or deregulated status by the government. Autonomous status is given to an HEI with outstanding institutional

quality assurance systems, excellent curricular programs, top-notch productivity in research, extension programs, linkages, and employability among graduates. On the other hand, a deregulated status is given to an HEI with very good quality assurance systems, curricular programs, and international certifications (Philippine Commission on Higher Education, 2012).

In the current study, in line with Kaushal and Ali (2019), HEI reputation is indicated by the students' overall impression of their institution as having a good reputation, their perception of their HEI's reputation as being better than many other HEIs, their belief on the financial soundness of their college or university, and their opinion of their HEI's strong prospects for future growth.

Student Satisfaction

Satisfaction is the evaluation of students on whether their expectations of educational services are met or exceeded (Wong & Chapman, 2022). It is a condition being felt by a student when his/her expectations towards services are fulfilled by an academic institution (Darawong & Widayati, 2022). Student satisfaction is dynamic; it changes over time depending on a student's perception of the favorability of his/her experiences across various facets of his/her education (Gruber et al., 2010).

Past studies identified sources of student satisfaction/dissatisfaction. Among these were: faculty services, academic experience, student support facilities, campus life, and social integration (Martirosyan, 2015); facilities, job prospects, cost of studying, and reputation (Hanssen & Solvoll, 2015); lecturers, program, assessment and feedback, resources, technology, facilities, and social life (Wilkins & Balakrishan, 2013); and teaching staff, teaching method, administration, enrollment, and infrastructures (Navarro et al., 2005). In the present research, following Kaushal and Ali (2019), as guided by Athiyaman (1997) and Helgessen and Nettet (2007), student satisfaction is indicated by students' level of satisfaction/dissatisfaction on the following: (1) decision to choose their HEI, (2) methods used in class, (3) feedbacks from teachers, (4) professional quality of lectures, (5) meeting expectations, and (6) practical experiences.

Student Loyalty

In the context of business, loyalty comes from the engagement of an individual with a brand (Kaushal & Ali, 2019). Favourable behavioural intentions, such as positive word-of-mouth, are the outcomes of loyalty (Zhang et al., 2014). In the context of higher education, student loyalty takes place when learners are willing to remain associated with the HEIs, manifested through their willingness to study again with the institution for further studies, recommend the HEI to

others, and tell other individuals about good things regarding the university (Kalafatis & Ledden, 2013).

Many related studies found student loyalty to be driven by student satisfaction, among other variables (Sultan & Yin Wong, 2013; Annamdevula & Bellamkonda, 2016; Giner & Rillo, 2016; Austin & Pervaiz, 2017; Appuhamilage & Torii, 2019; Saoud & Sanseau, 2019). In this paper, consistent with Kaushal and Ali (2019), student loyalty is indicated by students' level of agreement/disagreement to (1) encourage their friends to study in their college/university, (2) recommend their HEI to others, (3) recommend their program to others, (4) continue to support the HEI as alumni, and (5) choose the same course in their college/university if they had to.

HEI Type as a Moderating Variable

In this study, HEI type is introduced as a moderating variable that may affect the hypothesized direct effect relationships between and among the constructs. As previously mentioned, there are three major types of HEIs in the Philippines – SUCs, LUCs, and PHEIs. Private HEIs (PHEIs) are institutions offering higher education programs and are duly operated, owned and operated by private entities. State universities and colleges (SUCs) are chartered public higher education institutions established by law, administered, and financially subsidized by the government. Local universities and colleges (LUCs) are public higher education institutions established by local governments through appropriate resolutions/ordinances and financially supported by the local government concerned (Philippine Commission on Higher Education, 2020).

Hypothesis Development

In analyzing the probable relationship between HEI reputation and student satisfaction, HEI reputation appears as the logical driver, and student loyalty is the outcome. Knowledge of HEI's reputation could act as a stimulus to activate the student's thought process, creating a positive perception of the school and eliciting a positive emotional response. Studying in a reputable institution ascribes good status to the student, the desire for which is a fundamental human motive (Hildreth & Rowland, 2015). It enhances the student's sense of pride, thereby satisfying his/her need for self-esteem (Maslow, 1943). Thus, the better the reputation of a university/college, the more likely that its students will be satisfied. This relationship was confirmed in studies by Alam et al. (2021), Kaushal and Ali (2019), Moslehpour et al. (2020), and Vo (2021). Thus, hypothesis 1 is proposed as:

H1: HEI reputation has a significant and direct effect on student satisfaction.

The sense of pride that a student derives from studying in an HEI of good reputation may give rise not only to a positive feeling but also to positive behaviours aimed at preserving the student's relationship with his/her university/college. The student is thus expected to identify himself/herself more with the institution, to stay with it, and to give it a positive endorsement, in other words, developing loyalty. With this, and with the related studies of Bakrie et al. (2019) and Kaushal and Ali (2019) reporting HEI reputation as driving student loyalty, hypothesis 2 is proposed:

H2: HEI reputation has a significant and direct effect on student loyalty.

In the foundational theory of the S-O-R framework, Thorndike's law of effect (1927), a behavioural response that is followed by pleasant consequences will most likely be repeated. In the current study, if enrollment and engagement with the HEI bring about satisfaction, then a student is expected to continue enrolling and engaging positively with the university/college in order to maintain his/her satisfaction. Given this, and the findings of related studies on the effect of student satisfaction on student loyalty (Sultan & Yin Wong, 2013; Annamdevula & Bellamkonda, 2016; Giner & Rillo, 2016; Austin & Pervaiz, 2017; Appuhamilage & Torii, 2019; Saoud & Sanseau, 2019), hypothesis 3 is proposed:

H3: Student satisfaction has a significant and direct effect on student loyalty.

It has been noted in previous studies that HEI reputation translates to student satisfaction (Kaushal & Ali, 2019; Moslehpour et al., 2020; Alam et al., 2021; Vo, 2021). Moreover, student satisfaction is said to be a predictor of student loyalty (Sultan & Yin Wong, 2013; Annamdevula & Bellamkonda, 2016; Giner & Rillo, 2016; Austin & Pervaiz, 2017; Appuhamilage & Torii, 2019; Saoud & Sanseau, 2019). Extending the foregoing theoretical underpinnings on the hypothesized relationships between HEI reputation and student satisfaction (H1) and student satisfaction and student loyalty (H3), and in line with the findings of Mulyono et al. (2020), Thomas (2011), and Kaushal and Ali (2019), hypothesis 4 is formulated as:

H4: Student satisfaction has an indirect effect on the relationship between HEI reputation and student loyalty.

Direct relationships hypothesized in H1, H2, and H3 may or may not be generalized across all sample participants. Sub-groups can influence the presence/absence and strength of the relationships between the independent and dependent variables, suggesting the need to add moderating variables that will account for the influence of subgroups (Forooq & Vij, 2017). Thus, in this study, the HEI type is introduced as a moderator in the model. The selection of

this variable is important because it reflects institutional typology that is unique in the Philippine higher education industry. There are three major HEI types in the Philippines: PHEIs, SUCs, and LUCs. With these in mind, hypotheses 5a, 5b, and 5c are proposed:

H5a: Significant difference exists on the effect of reputation on student satisfaction when grouped according to HEI type.

H5b: Significant difference exists on the effect of reputation on student loyalty when grouped according to HEI type.

H5c: Significant difference exists on the effect of student satisfaction on loyalty when grouped according to HEI type.

Based on the reviewed precedent studies and the formulated research hypotheses, the conceptual framework of the present study is established (see Figure 1).

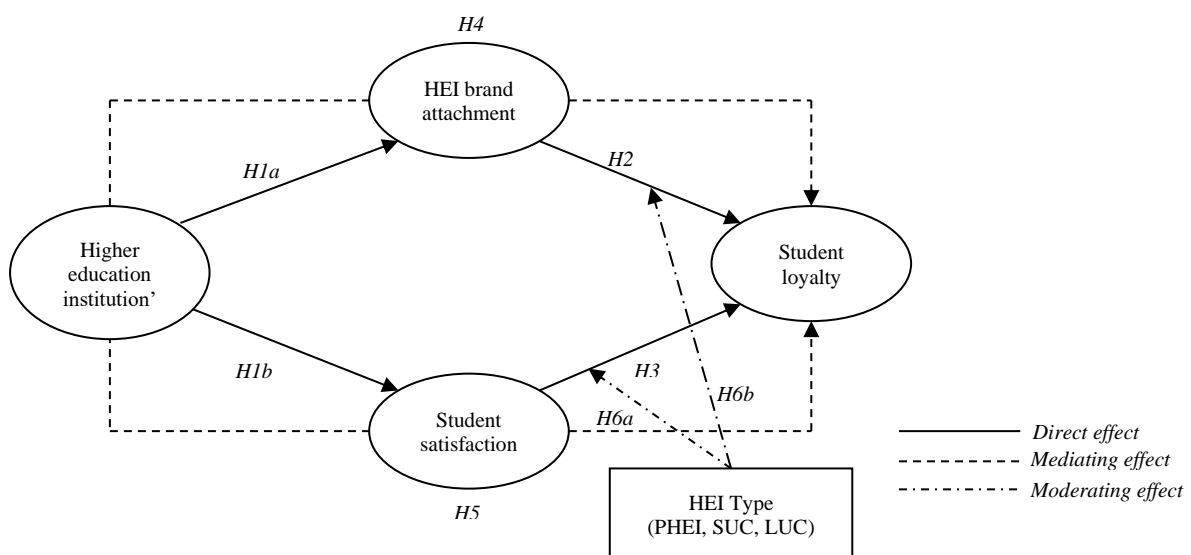


Figure 1. Proposed Conceptual Framework

RESEARCH METHOD

Participants of the Study

The participants in this study were higher education students enrolled in three Philippine HEIs during the second semester of the academic year 2021-2022. They were chosen based on the sole selection criterion of being actively enrolled in a Philippine PHEI, SUC, or LUC. A purposive sampling technique was employed in identifying the respondents of the study. The student respondents were current students at a private university, a state university, and a local college located in Pampanga, one of the largest provinces in the Philippines.

All target respondents were requested to accomplish an online instrument. Valid responses totalled 889. To determine the sufficiency of this sample size, an a priori power assessment via GPower (Memon et al., 2020) was done. With $f^2 = 0.15$, $\alpha = 5\%$, power = 95%, and number of predictors = 5, the computed sample size was 138. An additional power analysis was performed to double-check the sufficiency of the sample size. Using inverse-square root and gamma-exponential methods via WarpPLS 8.0 software (Kock & Hadaya, 2018; Kock, 2022) – with 0.413 as the lowest significant beta coefficient in the model (see Table 4), 5% level of significance, and 95% power – 46 to 64 sample size was recommended. Thus, the actual sample size (889) in the current study was bigger than the calculated sample sizes of the priori power assessment (138) and of the posthoc power analysis (46 to 64), establishing robustness in hypothesis testing.

Table 1 shows the characteristics of the participants. Out of 889 total respondents, 613 were female, 45.2% were in the age group of 20 to 21 years old, and 25.6% were 18 to 19 years old. In terms of HEI enrollment distribution, 36.3% were enrolled in an LUC, 34.3% in an SUC, and the rest in a PHEI. Ninety-five-point three percent (95.3%) are bachelor's degree students, and only 42 are either graduate or post-graduate students.

Table 1. The Study's Respondents

Respondents' Profile	n	%
Sex		
Male	259	29.1
Female	613	69.0
Prefer not to say	17	1.9
Age		
18-19	228	25.6
20-21	402	45.2
22-23	169	19.0
>23	90	10.1
HEI classification		
Private HEI	261	29.4
SUC	305	34.3
LUC	323	36.3
Student type		
Bachelor's degree level	847	95.3
Graduate & post-graduate level	42	4.7

Instrumentation

The current study adopted the instrument used by Kaushal and Ali (2019). The instrument measures the constructs through a Likert scale ranging from 5.0 to 1.0, with 5.0 meaning strongly agree for HEI reputation and student loyalty, and highly satisfied for student satisfaction; and 1.0 meaning strongly disagree for HEI reputation and student loyalty, and highly dissatisfied for student satisfaction. In preparing their instrument, Kaushal and Ali (2019) drew items from other studies, notably from Nguyen and LeBlanc (2001) and Sung and

Yang (2008) for their reputation scale; Athiyaman (1997), and Helgesen and Nettet (2007) for their student satisfaction scale; and Alves and Raposo (2010), Alves and Raposo (2006), Athiyaman (1997), Rauschnabel et al. (2016), and Hennig-Thurau et al. (2001) for their student loyalty scale.

HEI reputation was measured through four items: (1) The college/university has a good reputation. (2) I believe that the reputation of this is better than many other universities/colleges. (3) This university/college is financially sound. (4) This university/college looks like a university/college with strong prospects for future growth. Student satisfaction was quantified through students' ratings on their levels of satisfaction/dissatisfaction on six items: (1) decision to choose university/college, (2) methods used in class, (3) feedbacks from teachers, (4) professional quality of lectures, (5) meeting expectations, and (6) practical experiences. Student loyalty was gauged through ratings on five factors: (1) I encourage my friends to study in this university/college. (2) I will support this university/college as an alumnus. (3) I recommend the programs of this university/college. (4) I recommend this university/college to others. (5) I would choose the same course in this university/college if I had to.

Data Analysis

The current study used the predictive-causal model for its research design and PLS-SEM (partial least squares – structural equation modelling) for its statistical test. A predictive model estimates the quantity of a dependent variable for a given quantity of an independent variable, while a causal model tests whether the independent variable is the cause of the dependent variable, that is if the former has an effect on the latter. PLS-SEM accomplishes both purposes – prediction and causation (Shmueli, 2010; Schubring et al., 2016; Chin et al., 2020).

Guided by Hair et al. (2019), PLS-SEM was considered the appropriate test because of the following reasons: (1) The study was conducted from a prediction perspective; (2) the structural model is complex as it includes a number of constructs, indicators, and relationships; and (3) moderation analysis using multigroup analysis (MGA) was used to measure the interaction of effects of the moderator used in the study.

Testing the effect of the moderating variable was done through MGA by way of the constrained latent growth method in WarpPLS 8.0 (Kock, 2020).

RESULTS AND DISCUSSION

Outer Model Evaluation

Table 2 shows the results in assessing the convergent validity and internal consistency of the outer model, while Table 3 presents the results in assessing discriminant validity.

In convergent validity assessment, Fornell and Lacker (1981) and Kock and Lynn (2012) recommended 0.50 as threshold for average variance extracted (AVE). For indicator loadings, Hair et al. (2019) and Kock (2014) suggested that each item must reflect a load of at least 0.50 and be significant (p-value of < 0.05). In Table 2, AVE equals to 0.622 for HEI reputation, 0.718 for student loyalty, and 0.716 for HEI reputation. All indicator loadings were greater than 0.50 and had a p-value < 0.01 . Thus, convergent validity of the outer model was well established.

To assess internal consistency, Kock (2014) and Kock and Lynn (2012) suggested a conservative threshold of at least 0.70 for composite reliability (CR). With CR values exceeding this threshold (0.868 for HEI reputation, 0.927 for student loyalty, and 0.938 for student satisfaction) as seen in Table 2, the condition of internal consistency of the items for all latent reflective constructs was met.

Table 2. Indicator loading, AVE, and Composite Reliability

Construct/Item	Indicator Loading
HEI reputation: AVE = 0.622; CR = 0.868	
REP1.	0.789
REP2.	0.804
REP3.	0.732
REP4.	0.828
Student loyalty: AVE = 0.718; CR = 0.927	
LOY1.	0.872
LOY2.	0.873
LOY3.	0.887
LOY4.	0.896
LOY5.	0.691
Student satisfaction: AVE = 0.716; CR = 0.938	
SAT1.	0.769
SAT2.	0.853
SAT3.	0.857
SAT4.	0.859
SAT5.	0.869
SAT6.	0.867

Indicator loadings are significant ($p < .001$); AVE – average variance extracted; CR – composite reliability.

Finally, to establish discriminant validity, HTMT2 (heterotrait-monotrait) – a measure endorsed recently by Roemer et al. (2021) – was used. Henseler et al. (2015) and Voorhees et al. (2016)

recommended an HTMT2 threshold of 0.90. With all HTMT2 values in Table 3 lower than this threshold, discriminant validity was shown to be acceptable.

Table 3. Discriminant validity using HTMT2

	HEI Reputation	Student Loyalty	Student Satisfaction
HEI reputation	-	-	-
Student loyalty	0.892	-	-
Student satisfaction	0.834	0.824	-

Inner Model Assessment

Table 4 summarizes the results of hypothesis testing, in particular, the direct and indirect effects of the structural model. Moreover, the effect sizes of each path were calculated using the criterion set by Cohen (1988) – an $f^2 = 0.02$ indicating a small effect; $f^2 = 0.15$, showing medium influence; and $f^2 = 0.35$ manifesting a large effect.

Analysis of the data showed that HEI reputation has a significant, direct, and substantial effect on student satisfaction ($\beta = 0.714$; $p < 0.001$; $f^2 = 0.510$) and on student loyalty ($\beta = 0.463$; $p < 0.001$; $f^2 = 0.351$). Moreover, student satisfaction and loyalty were found to be significantly and directly related with moderate effect ($\beta = 0.413$; $p < 0.001$; $f^2 = 0.307$). On the other hand, indirect effect analysis showed that student satisfaction mediates the relationship between HEI reputation and student loyalty ($\beta = 0.295$; $p < 0.001$) with a medium effect size ($f^2 = 0.224$). Therefore, H1, H2, H3, and H4 were all supported.

Table 4. Direct and Mediating Effects

Hypothesis	β	p	f^2	Decision
Direct effects				
H1. REP \rightarrow SAT	0.714	<0.001	0.510	Supported
H2. REP \rightarrow LOY	0.463	<0.001	0.351	Supported
H3. SAT \rightarrow LOY	0.413	<0.001	0.307	Supported
Indirect effect				
H4. REP \rightarrow SAT \rightarrow LOY	0.295	<0.001	0.224	Supported

REP – HEI reputation; SAT – student satisfaction; LOY – student loyalty; β – path value; p – p-value; f^2 – effect size.

Measurement Invariance Test

Table 5 presents the assessment of measurement invariance or measurement equivalence of the model. This is the initial step in testing the moderating effects of HEI type (PHEI, SUC, and LUC) on the direct hypothesised relationships in the study. In evaluating measurement invariance, the primary focus is the comparison of either indicator loadings or weights (Kock, 2014). Using full latent growth analysis in WarpPLS 8.0 (Kock, 2020; Hubona & Belkhamza, 2021) in the current study, loadings were utilised as the foci of comparison. Based on the results, absolute latent growth coefficients (ALGCs) for loadings do not change significantly between

PHEI and SUC, between PHEI and LUC, and between SUC and LUC. Therefore, no variance was detected in the measurement model.

Table 5. Measurement Invariance Assessment

Items	PHEI vs. SUC		PHEI vs. LUC		SUC vs. LUC	
	ALGC for loadings	P	ALGC for loadings	P	ALGC for loadings	P
REP1	0.011	0.788	0.024	0.558	0.035	0.376
REP2	0.007	0.874	0.027	0.520	0.020	0.622
REP3	0.019	0.655	0.015	0.716	0.034	0.395
REP4	0.012	0.774	0.036	0.387	0.024	0.554
LOY1	0.045	0.283	0.021	0.604	0.027	0.496
LOY2	0.012	0.766	0.016	0.695	0.030	0.453
LOY3	0.017	0.679	0.025	0.539	0.008	0.835
LOY4	0.014	0.745	0.007	0.873	0.022	0.585
LOY5	0.039	0.356	0.006	0.877	0.031	0.439
SAT1	0.050	0.234	0.030	0.474	0.020	0.607
SAT2	0.014	0.738	0.004	0.931	0.010	0.799
SAT3	0.039	0.356	0.020	0.628	0.018	0.651
SAT4	0.013	0.758	0.013	0.753	0.000	1.000
SAT5	0.015	0.728	0.024	0.554	0.010	0.809
SAT6	0.009	0.837	0.008	0.844	0.000	0.991

ALGC – absolute latent growth coefficients; p – p-value, two-tailed; PHEI – private higher education institution; SUC – state university/college; LUC – local university/college.

Multigroup Analysis

Since no variance was found in the measurement model, Multigroup Analysis (MGA) was performed via the constrained latent growth method in WarpPLS 8.0 (Kock, 2020). The MGA identifies whether significant differences exist in the three direct hypothesised relationships (H5a, H5b, and H5c) of the study. As shown in Table 6, a significant difference was found in the effect of student satisfaction on loyalty between PHEI and SUC (ALGC = 0.079, $p < .05$) and between PHEI and LUC (ALGC = 0.101, $p < .01$). Furthermore, the findings indicate that there is a significant difference on the influence of HEI reputation on student satisfaction between PHEI and SUC (ALGC = 0.032, $p < .05$). Thus, H5a and H5c were supported, while H5b was not confirmed.

The results of the MGA signify that the significant and positive effect of HEI reputation on student satisfaction and of student satisfaction on loyalty is much evident between PHEI and SUC. Furthermore, data analysis also indicates that the significant and positive effect of student satisfaction on loyalty is apparent between PHEI and LUC.

Table 6. Multigroup analysis (MGA)

Hypothesis	PHEI	SUC	LUC	ALGC			T-ratios		
	β_1	β_2	β_3	PHEI vs. SUC	PHEI vs. LUC	SUC vs. LUC	PHEI vs. SUC	PHEI vs. LUC	SUC vs. LUC
H5a: REP \rightarrow SAT	0.755	0.697	0.669	0.032*	0.047	0.015	0.767	1.136	0.375
H5b: REP \rightarrow LOY	0.423	0.417	0.504	0.076	0.062	0.015	1.816	1.507	0.386
H5c: SAT \rightarrow LOY	0.494	0.426	0.339	0.079*	0.101**	0.023	1.896	2.464	0.575

* $p < .05$, ** $p < .01$, one-tailed; β – path coefficient; ALGC – absolute latent growth coefficients; REP – HEI reputation; SAT – student satisfaction; LOY – student loyalty; PHEI – private higher education institution; SUC – state university/college; LUC – local university/college.

Common Method Bias, Explanatory Power, and Predictive Validity

Three additional measures were included in the analysis of the structural model – the common method bias test, the coefficient of determination, and the predictive relevance. In testing common method bias, Kock (2015) recommended the use of a full collinearity variance inflation factor (FCVIF) and set 3.30 as the threshold. Based on the results in Table 7, HEI reputation (FCVIF = 2.663), student loyalty (FCVIF = 2.918), and student satisfaction (FCVIF = 2.521) all had FCVIFs below the 3.30 threshold, signifying that all latent constructs are free from collinearity, whether vertical or lateral.

The explanatory power of the structural model was gauged using the coefficient of determination (R^2). Chin (1998) suggested the following rules in interpreting the value of R^2 : 0.67 (substantial), 0.33 (moderate), and 0.19 (weak). Based on Table 7., student satisfaction as an outcome variable (where HEI reputation is the predictor) reflected $R^2 = 0.510$, signifying a moderate effect. Additionally, student loyalty as a dependent variable (where HEI reputation and student satisfaction are the antecedents) showed $R^2 = 0.658$, indicating a moderate effect as well.

Lastly, predictive validity using Q^2 was determined. Kock (2022) recommended that the value of Q^2 for each outcome latent variable must be bigger than zero. Thus, based on Table 7, both student loyalty ($Q^2 = 0.658$) and student satisfaction ($Q^2 = 0.509$), as dependent variables, manifest predictive validity on the structural model.

Table 7. FCVIF, R^2 , and Q^2

Latent construct	Full collinearity variance inflation factor (FCVIF)	Determination coefficient (R^2)	Predictive relevance (Q^2)
HEI reputation	2.663		
Student loyalty	2.918	0.658	0.658
Student satisfaction	2.521	0.510	0.509

Discussion

Analysis of the data revealed that HEI's reputation has a significant, direct and substantial effect on student satisfaction. Support for this finding is consistent with the earlier findings of Alam et al. (2021), Moslehpour et al. (2020), Vo (2021), Chang (2013), and Kaushal and Ali (2019) on the significant and direct effect of HEI reputation on student satisfaction. This suggests that students enrolled in universities and colleges with good reputations tend to be more satisfied than students in HEIs with average or poor reputations. They are generally satisfied with their decision to choose the university/college, in the methods used in class, in the feedback they receive from their teachers, in the professional quality of lectures, in the meeting of their expectations about their institution and their education, and in the practical experiences they get out of their studies.

Furthermore, it was also found that HEI's reputation has a significant, direct, and substantial effect on student loyalty. This means that students from reputable universities and colleges tend to be more loyal to their institutions. Bakrie et al. (2019) and Kaushal and Ali (2019) likewise claimed that the reputation of an academic institution plays an important role in the formation of loyalty among learners. They will most likely exhibit supportive behaviours and give positive word-of-mouth about the HEI and their education, such as recommending the HEI to others, encouraging their friends to study in their university/college, recommending their program of study in the university/college, choosing the same course in the HEI if they had to, and supporting the university/college as alumni. To elicit student loyalty, HEIs must thus strive to develop and maintain a general perception of a good reputation among its stakeholders, especially students, over a sustained period of time. They should strive to develop a perception of superiority compared to other HEIs, achieve financial stability, and project favourable prospects for future growth.

The results also showed that student satisfaction has a significant, direct, and moderate effect on student loyalty. This propounds the idea that satisfied students tend to be more loyal to their HEIs. Thus, if universities and colleges were to enjoy the supportive behaviours and positive word-of-mouth of loyal students, they should strive to meet and/or exceed student expectations of their institution and education so that students would be generally satisfied with their decision to choose the university/college. Students should be satisfied with the way classes are conducted, lectures are delivered, and feedback from professors is given. They should also be given ample practical experiences to enhance their learning. The result is consistent with the earlier findings of Chandra et al. (2019), Appuhamilage and Torii (2019), Shahsavar and Sudzina (2017), Saoud and Sanseau (2019), Annamdevula and Bellamkonda (2016), Austin and

Pervaiz (2017), Giner and Rillo (2016), and Sultan and Yin Wong (2013) on the significant and direct effect of student satisfaction on student loyalty.

Additionally, the result also revealed that student satisfaction has an indirect effect on the relationship between HEI reputation and student loyalty, with a medium effect size. This reveals that one way to foster student loyalty is by promoting the satisfaction he/she derives from his/her mere enrollment or inclusion in a reputable university/college. Reputation enhances satisfaction, which, in turn, causes loyalty. The result is in line with the earlier findings of Mulyono et al. (2020), Thomas (2011), and Kaushal and Ali (2019). Additionally, the findings prove the relevance of the SOR framework in explaining how an organismic factor, in this case, student satisfaction integrates the link between HEI reputation (the stimulus) and student loyalty (the response) (van Zeeland & Henseler, 2018; Ali, 2020; Wong et al., 2023).

Following the moderation analysis done, a significant difference exists in the effect of reputation on student satisfaction when grouped according to HEI type (PHEI, SUC, and LUC), specifically between PHEIs and SUCs, but not between PHEIs and LUCs, and between SUCs and LUCs. Improving institutional reputation would thus have a greater effect in increasing student satisfaction in PHEIs than in SUCs, but the effect will be the same between institution types in all other HEI pairings. On the other hand, no significant difference exists in the effect of institutional reputation on student loyalty when grouped according to HEI classification. Thus, HEI reputation has the effect of building student loyalty similarly, regardless of whether a student is enrolled in a PHEI, SUC, or LUC. It is something that policymakers and administrators of all school types must build and protect equally well in order to foster student loyalty. With the level of competition among educational institutions of higher learning, the reputation of the HEI is a critical factor with regard to positioning (Berndt & Hollenbeek, 2019). Therefore, HEI, regardless of their classification, must put emphasis on building loyalty through reputation (Retamosa et al., 2020) via student satisfaction.

And lastly, the finding revealed that a significant difference exists in the effect of student satisfaction on loyalty when grouped according to HEI classification, but only between PHEIs and SUCs, and between PHEIs and LUCs, and not between SUCs and LUCs. With SUCs and LUCs being both public schools, this finding thus suggests that between private school students and public school students, student satisfaction has a greater effect in building student loyalty in the former than in the latter. One possible explanation for this is the value-seeking behaviour of customers when they pay for a service. Tuition-paying private school students, more than their tuition-free public school counterparts, might be more likely to stay with their institution

only if they are satisfied. If dissatisfied, they may transfer to another school that offers a better promise of delivering their money's worth in their education. Kaushal and Ali (2020) also argued that when students are dissatisfied, their level of loyalty diminishes. The value-seeking behaviour of tuition-paying private school students would only exhibit favourable behaviour, such as loyalty when they are satisfied.

MANAGERIAL IMPLICATIONS IN THE SOUTH EAST ASIAN CONTEXT

The current study presents findings which may be used by policymakers and administrators in crafting effective, goal-directed marketing plans for higher education institutions in Southeast Asia. It suggests the development of student loyalty as a viable way to increase first-time enrollment and maintain repeat enrollment. Furthermore, it propounds the promotion of student loyalty by way of improving institutional reputation and ensuring student satisfaction. In addition, the study also reveals the indirect effect of reputation in enhancing student loyalty through its role in increasing student satisfaction.

Another contribution of this study is its consideration of the moderating effect of type of HEI where a student is enrolled to the direct relationships between reputation and satisfaction, reputation and loyalty, and satisfaction and loyalty. The new knowledge generated may be used by marketing planners as inputs in the preparation of differentiated marketing strategies that are cognizant of the peculiar characteristics and sensitivities of PHEI, SUC, and LUC students. Marketing plans that make use of the findings in this study are very timely, given the stiff competition in the Philippine higher education industry. With about 3,000 HEIs serving an estimated 3.5 million students (Philippine Commission on Higher Education, 2020), well-directed marketing strategies are needed to capture and maintain/enlarge market share.

The findings from moderation analysis via MGA showed how HEI reputation plays a vital role in the formation of satisfaction and loyalty among students in various HEI types – PHEI, SUC, and LUC. Regardless of classification, academic institutions should put emphasis on building a favourable reputation. Several strategies can be done to improve HEI's reputation. First, HEIs may engage university students in the affairs of the institution by providing them with the necessary environment where students may feel a sense of belongingness, as this will have long-term impacts on the institution, such as the formation of satisfaction and loyalty. Second, HEIs must continuously listen to students' opinions. Academic institutions must have a mechanism where students are heard, such as their sentiments towards the university/college. HEIs must conduct surveys so that students may feel that they are valued, and their opinions are heard. Third, they

must re-engineer the curricular offerings of the institution, evaluate the needs of the industry and tailor fit the academic programs based on these needs, and encourage multisectoral participation in re-engineering the curricular programs so that graduates will be more employable. Fourth, they must put a premium on research and other scholarly works. Today, research is the new metric of quality higher education. Hence, HEIs may boost their reputation by investing in scientific undertakings. And fifth, HEIs must invest in people by hiring the best talent. Aside from the students and graduates, academic and non-academic personnel represent the HEI. Thus, it is important that academic institutions should invest in people to increase their reputation.

THEORETICAL IMPLICATIONS

On the theoretical side, the current study lends credence to the use of the S-O-R model as an appropriate framework for conducting predictive-causal studies that employ the PLS-SEM as the tool for data analysis. It also confirms the Philippines findings of related studies done in foreign settings, thereby contributing to the increased usability of the findings of research done in different settings, at different times, and with different participants. Lastly, the current study's use of a newer technique, the MGA, provides support for the use of advanced analytical tools in conducting moderation analysis in PLS-SEM.

CONCLUSION

Overall, the present study concludes that HEI reputation has a significant effect on student satisfaction and loyalty. It was also found that student satisfaction significantly and positively influences loyalty. Moreover, the results showed that student satisfaction mediates the relationship between HEI reputation and loyalty. Using MGA, it was revealed that a significant difference exists in the effect of reputation on student satisfaction between PHEIs and SUCs. And significant difference exists in the effect of student satisfaction on loyalty between PHEIs and SUCs and between PHEIs and LUCs.

One limitation of this study is the geographic location of its sample. All of the participants were students in the Province of Pampanga, Philippines. Future research may therefore be done to cover more provinces in the Philippines. The second is on the number of moderating variables. Although the HEI type proved to be a good choice in discovering inter-group differences in the relationships of the constructs studied, using other variables as moderators can enrich the study results. Variables such as level of higher education (undergraduate vs graduate students), academic

achievement (high, average, low), and gender (males, females) can potentially be used as additional moderators.

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Appendix

Items used in measuring each of the latent constructs used in the study:

University Reputation

- REP1. This university has a good reputation
- REP2. I believe that the reputation of this is better than many other universities.
- REP3. This university is financially sound
- REP4. This university looks like a university with strong prospects for future growth

Student Loyalty

- LOY1. I encourage my friends to study in this university.
- LOY2. I support this university as an alumnus.
- LOY3. I recommend the programmes of this university.
- LOY4. I recommend this university to others.
- LOY5. I would choose same course in this university if I had to.

Student Satisfaction

- SAT1. Decision to choose university
- SAT2. Methods used in class
- SAT3. Feedbacks from teacher
- SAT4. Professional quality of lectures
- SAT5. Meeting expectations
- SAT6. Practical experiences