

## The Impact of Student Value Co-Creation on Student Loyalty in Malaysia Private Higher Education Institutions: The Role of a Mediator

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**To Link this Article:** <http://dx.doi.org/10.6007/IJARBSS/v15-i1/23618> DOI:10.6007/IJARBSS/v15-i1/23618

**Published Date:** 02 January 2025

### **Abstract**

The research of co-creation within the framework of higher education is undermined by a lack of limitation. This research examined the influence of student value co-creation on student loyalty, utilizing the Service-Dominant Logic model. Judgmental sampling was employed to choose samples for the present research. A total of 314 participants from six private HEIs located in Kuala Lumpur. The research utilized bootstrapping to investigate the correlation between student value co-creation and student loyalty, with institutional brand equity as the mediator. The results showed a direct relationship between student loyalty, institutional brand equity, and student value co-creation. Institutional brand equity acts as a favorable mediating factor between student value co-creation and student loyalty. The implications of these findings were discussed and crucial to thoroughly investigate a variety of sectors that require further improvement in future research. The present research is limited by its narrow

survey methodology, which may have excluded certain data that is pertinent. The study's originality comes from examining how student value co-creation contributes to institutional brand equity and student loyalty in the Malaysian PHEIs industry. This study provides fresh perspective to the literature by elucidating the factors that influence student loyalty and institutional brand equity.

**Keywords:** Private University-College, Institutional Brand Equity, Student Loyalty, Student Value Co-Creation; Malaysia

## **Introduction**

Education is a service sector that primarily focuses on students (Manzoor et al., 2019). Global student enrolment is an emerging phenomenon, and education developments have certainly contributed to the rise in enrollment (Mat et al., 2021). Higher education institutions' (HEIs') organizational structure and functions are drastically changing as a result of the effects of globalization and economic restructuring on the education sector in both developed and developing nations (Othman et al., 2019). According to Mat et al. (2021), higher education institutions strive to acquire a competitive edge globally through branding and marketing.

The Ministry of Higher Education (MOHE) oversees all Malaysian higher education institutions and prioritizes internationalization (Othman et al., 2019). Malaysia's higher education system consists of 20 public universities, 434 private universities (including 54 universities, 10 campuses of foreign universities, 39 private university colleges, and 331 private colleges), 36 public polytechnics, and 105 public community colleges (Policy Planning and Research Division, 2022). However, Higher Education Institution (HEIs) in Malaysia has undergone a profound evolution and transformation. As a result, internationalization, the emergence of a knowledge-based society, novel approaches to teaching and learning, and new governance models have all contributed to significant improvements and developments in Malaysian education (Daud et al., 2020). Malaysian governments launched a strategic initiative to establish Malaysia as a regional "Education Hub" and a global center of educational excellence (Ahmad, 2019; Anwar et al., 2022; Mat et al., 2021; Muniandy, 2022; Othman et al., 2019). In Malaysia, (HEIs) are mandated to use relationship marketing features such as value co-creation behavior as a kind of marketing strategy for strategies in their daily activities in order to achieve a competitive advantage (Manzoor et al., 2019). Moreover, with the growing competition among higher education companies to draw in new students, higher education institutions are focusing on satisfying the needs and expectations of their students and developing marketing approaches as a means of enhancing the institution's reputation while simultaneously bringing in additional capital through the sale of recognizable and established services (Mat et al., 2021). The student loyalty is absolutely necessary for educational providers to maintain or grow their market share in the education industry (Daud et al., 2020). Malaysian higher education has grown due to increased student enrollment, (HEIs), government spending, education policies, and the need for human resources (Manzoor et al., 2019).

The aim of this research is threefold: firstly, to investigate the empirical connections between student value co-creation, institutional brand equity, and student loyalty among undergraduates in private university-colleges in Kuala Lumpur Malaysia; secondly, to analyze

the mediating effects of institutional brand equity on the relationship between student value co-creation and student loyalty; and thirdly, to offer recommendations for overcoming the enrollment challenges faced by Malaysian private higher education institutions (HEIs) due to low enrollment from prospective Nigerian students. This is particularly important as the field of HEIs has become highly competitive, and implementing these recommendations would lead to improved enrolment and sustainability of HEIs.

### Problem Statement

As shown in Figure 1, the data received from ministry of higher education under the conference conducted by United Nations Educational, Scientific and Cultural Organization (UNESCO) World Higher Education conference shows that the total number of students who enrolled in Malaysian private higher education institutions increased from 695,026 in 2016 and decreased to 517,580 in 2021. Therefore, the Ministry of (HEIs) in Malaysia must establish ambitious plans and enhance student enrollment in private higher education institutions (HEIs), resulting in an increase in the number of students enrolling in these institutions (Policy Planning & Research Division, 2022).

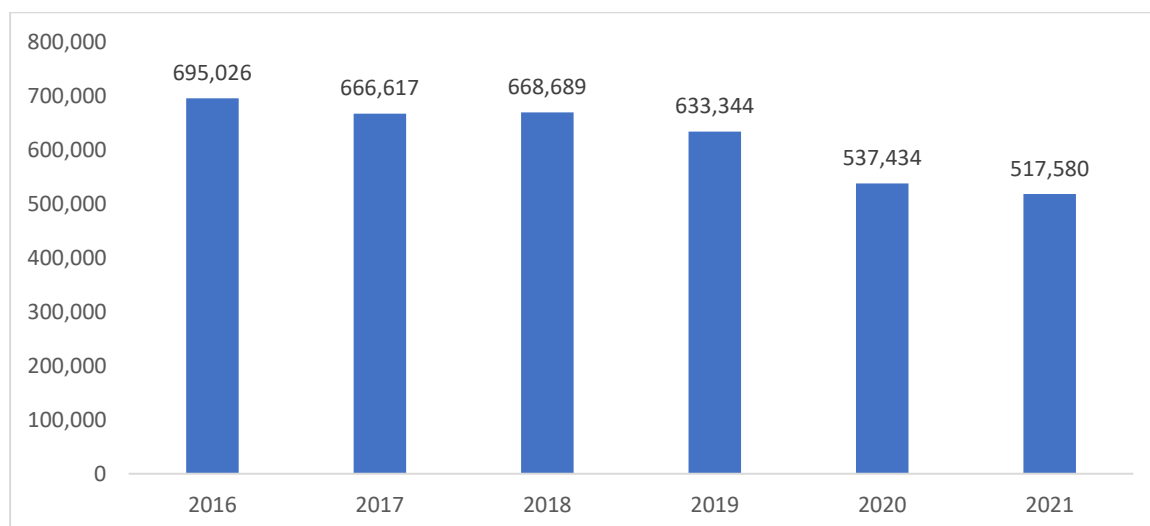


Figure 1.1: Student Enrolment in Private (PHEIs) in Malaysia

Based on empirical studies, PHEIs with strong student brand awareness, quality perception, and brand loyalty would have higher enrolment rates. Thus, in order to uphold their reputations and attract the most outstanding students and faculty, universities face the difficulty of enhancing their branding strategies in the midst of fierce rivalry in the higher education sector (Yusoff et al., 2023). Malaysian education privatization has led to the growth of Private Higher Education Institutions (PHEIs), creating new challenges for industry players through increased space and opportunities for prospective students (Anwar et al., 2022). Thus, the role of brand equity together with brand image is crucial for (PHEIs) in Malaysia; in order for them to become a top educational hub that attract foreign students (Mat et al., 2021).

The advancement of Malaysian higher education can be attributed to factors such as a rise in student enrollment, the establishment of (HEIs), increased government spending, educational programs, and the demand for skilled human resources (Manzoor et al., 2019). The major challenge faced by Malaysia (HEIs) is how to efficiently attract and engage students

in value co-creation processes, while ensuring their continued involvement in these initiatives (Al-Kumaim et al., 2021). However, (PHEIs) faced constant decline in the annual student enrollment during the past five (5) years, from 2016-2020 (Policy Planning and Research Division, 2022). Moreover, although Malaysia's PHEIs rely heavily on international students, the number of students from Nigeria, Yemen, and Iran has drastically dropped (Manzoor et al., 2019). Present studies have proposed using student value co-creation in conjunction with institutional brand equity to influence student loyalty in higher education.

## **Literature Review**

### *Student Loyalty*

Student loyalty is essential for the higher education sector; since it can lead to enhanced loyalty and market share advantage (Latif et al., 2021). According to Çavusoglu et al. (2021), (PHEIs) rely on student loyalty as a steady and predictable source of revenue. Globalization has led to a significant evolution of the human revolution, and student loyalty is essential for (HEIs) to attract and retain students (Haeruddin et al., 2020). Loyalty is essential for obtaining a competitive edge in a dynamic and competitive environment (Negussie, 2019). However, loyalty is not viewed as a crucial element of brand equity in this research; rather, it is analyzed individually. Haeruddin et al. (2020), stated that indicators like retention, recommendation, and referrals are frequently used to gauge loyalty. Todea et al. (2022), elaborated that the effectiveness of an academic institution relies on the level of loyalty demonstrated by its prospective students and graduates. In (HEIs), loyal students will not transition to another institution until they have successfully completed their studies. Therefore, loyal students are additionally inclined to recommend the same (HEIs) to their loved ones, acquaintances, and significant others (Wong et al., 2023). Kaushal and Ali (2020), posited that improved facilities, pedagogy, industry connections, placements, and outreach are some of the ways that (HEIs) foster loyalty. Loyal student alumni will provide support to their university in a number of ways, such as through financial contributions, internship placements, joint course creation, and recruiting new students (Jhantasana, 2022).

### *Student Value Co-creation*

The theoretical framework regarding student value co-creation in the higher education institution context may lack consistency (Elsharnouby, 2015; Ranjan & Read, 2016). student value co-creation comprises two (2) dimensions: coproduction and value-in-use; scholars who focus on either dimension generally call it value co-creation (Dollinger et al., 2018; Jhantasana, 2022). Thus, the conclusive outcomes of several prior studies do not show the beneficial outcome of substantial student value co-creation (Ranjan & Read, 2016). According to Jhantasana (2022) and Sholehuddin et al. (2023), the integration of the student value co-creation model is an essential component of the third-order construction framework. On the other hand, the notions of satisfaction and image are constructed that are based on second-order models, specifically aspect designs consisting of three stages and two (2) stages, respectively. Thus, relationships, knowledge sharing, equity, engagement, experience, personalization, and equity comprise the first stage of co-creation. The second stage consists of coproduction and value-in-use. Lastly, student value co-creation itself comprises the third(3<sup>rd</sup>) stage.

Student value co-creation is a new method to value creation in which students and higher education institutions work together to create value (Farrokhi, 2020), with the student

as the center of attention (Tariq et al., 2022; Wang, 2021). Dziwanowska (2018), stated that students and lecturers assume dual primary responsibilities in the co-creation of value in (HEIs) services; as a result, resource integration primarily transpires through interactions among these entities. Student value co-creation facilitates the sharing of knowledge and skills between (HEIs) and students, leading to activities that generate value (Harandi et al., 2023). Despite the wide range of demands and wants that students may have, institutions face financial constraints that hinder their capacity to satisfy student preferences and expectations (Baehaqi et al., 2023). Establishing a stronger connection between the (HEIs) and its students is made possible by the value co-creation process's core (Dollinger et al., 2018; Johansson et al., 2019). (HEIs) ought to promote the practice of students contributing their resources for the purpose of knowledge and information exchange, which will not only benefit the university but also attract freshman students (Ranjan & Read, 2016). Ghorbanzadeh and Sharbatiyan (2022), universities can benefit from implementing a student value co-creation approach in a variety of ways, including facilitating knowledge acquisition, expanding ownership, resolving conflicts, fostering innovation, enabling comprehensive decision-making, promoting equality, creating social capital from an ethical standpoint, facilitating dialogue, presenting individual values and attitudes, and fostering the development of shared attitudes and goals from a social learning perspective.

#### *Institutional Brand Equity*

As the result of globalization and competitiveness, branding and brand equity initiatives are gaining focus, with the ultimate goal of building strong brand equity (Pinar et al., 2014). Thus, past researchers have examined brand equity from a variety of perspectives. The concept of brand equity has been examined independently as an antecedent to loyalty (Ali, 2015). Pinar et al. (2014) the two (2) categories of brand equity dimensions are core and supporting. The core dimensions of university brand equity include brand awareness, perceived quality, brand association, brand trust, learning environment, emotional environment and university reputation (Pinar & Kelimeler, 2020; Salwa & Soad, 2020). Additionally, there are supporting dimensions of university brand equity, which encompass library services, dining services, residence hall, and physical facilities (Pinar & Kelimeler, 2020). Pham et al. (2022), stated that consumers who exhibit higher levels of engagement with a brand contribute to the enhancement of brand value and equity. Thus, to establish brand equity, institutions establish associations between brands and various entities like as individuals, locations, and things, hence influencing customers' cognitive, affective, and behavioral responses towards these brands (Keller, 2020). (PHEIs) build their brand equity on their strengths rather than their public/private status (Khoshtaria et al., 2020). HEIs with better public and student value have stronger brand equity than others (Asriati et al., 2022; Basalamah et al., 2022). Thus, (HEIs) with high brand awareness has stronger brand equity than one with low brand awareness. Positive brand equity is linked to several advantages, including enhanced communication efficacy, increased consumer preferences, and stronger purchase intentions (Salwa & Soad, 2020). According to Farrokhi (2020), brand equity plays a pivotal role in determining the overall performance of an institution.

#### *Student Value Co-creation and Student Loyalty*

Student value co-creation has become a well-known theoretical paradigm in the field of customer behavior research (Baehaqi et al., 2023). Baehaqi et al. (2023), as a tangible asset, loyalty has been widely recognized for its importance to organizations. Conversely, an

institution of HEIs may attain a competitive advantage by enabling students to collaborate in the development of unique academic experiences (Dziewanowska, 2018), thereby encouraging fruitful interactions that strengthen student loyalty (Tariq et al., 2022). Consequently, the process of student co-creating values is based on fostering relationships between students and HEIs, which may eventually lead to an increase in student loyalty and trust (Dollinger et al., 2018; Yi et al., 2023). Brand loyalty results from the endowment of a service made possible through co-creation (Johansson et al., 2019). Student loyalty is impacted by how service consumption affects customer perceptions and brand associations, which contributes to the co-creation process (Pharr, 2016). However, higher student value co-creation; the stronger the student loyalty to the HEI (Baehaqi et al., 2023). Prior research has shown student value co-creation to be positively associated with student loyalty in the context of HEI (Jhantasana, 2022); mobile legend game players (Arissaputra et al., 2023); and Sampoerna Retail Community (Baehaqi et al., 2023). This research argued that an increase in student value co-creation will consequently lead to a boost in student loyalty. As a result, the following hypothesis was developed.

**H<sub>1</sub>:** There is a positive relationship between student value co-creation and student loyalty

#### *Student Value Co-creation and Institutional Brand Equity*

Student co-creating value increases an HEIs overall value, which leads into stronger brand equity (Farrokhi, 2020; Salwa & Soad, 2020). Turning students into brand ambassadors can improve value co-creation, brand value and boost equity (Pham et al., 2022). Salwa and Soad (2020), posited that student value co-creation can explain brand equity and consumer behavior relationship. There is a positive relationship between student value co-creation and brand equity in the context of hospitality (Bordian et al., 2023; Farrokhi, 2020; González-Mansilla et al., 2019), destination branding in social commerce (Pham et al., 2022); and mass market (Kristal et al., 2016). This research proposed that an increase in student value co-creation will correspondingly lead to an enhancement in institutional brand equity. As a result, the following hypothesis was developed.

**H<sub>2</sub>:** There is a positive relationship between student value co-creation and brand equity

#### *Institutional Brand Equity and Student Loyalty*

Haeruddin et al. (2020), the implementation of a brand equity plan is an effective way for (PHEIs) to cultivate and enhance student loyalty. The Institution can attract loyal students by focusing on brand equity, which makes them feel at home (Basalamah et al., 2022). High brand loyalty is only possible in countries with strong brand awareness, image, and perceived quality in higher education (Herrero-Crespo et al., 2016). The impacts of service usage on consumers' perceptions and brand associations plays an important role in the co-creation process and influence customer loyalty (Pharr, 2016). Prior studies has indicated that there was favorable effect of brand equity on student loyalty in the context of HEIs (Haeruddin et al., 2020); HEIs work loyalty of lecturers (Basalamah et al., 2022); advertising on national television channel TvOne (Aspizain, 2016); 5 Star hotels in China (Yuanwei & Lertbuasin, 2018); Lebanese SMEs (Tabiaat, 2023); ICB Bumiputera bank (Sriyani, 2019); Indonesia minimarts (Rohani et al., 2022); and service companies' courier (Chairuddin et al., 2022). This research suggests that when the level of institutional brand equity rises, there will be a corresponding growth in student loyalty. As a result, the following hypothesis was developed.

**H<sub>3</sub>:** There is a positive relationship between institutional brand equity and student loyalty



### *Mediating Role of Institutional Brand Equity between Student Value Co-Creation and Student Loyalty*

Creating as much value as possible for customers is essential to staying competitive, retaining customers, and obtaining recommendations (González-Mansilla et al., 2019). Participation in the value co-creation behavior (VCB) initiative by students is advantageous to both the business and the customer, and it additionally fosters student loyalty (Baehaqi et al., 2023). The purpose of building brand equity is not solely to enhance the institution's brand image, but rather to cultivate loyalty of the student towards the brand (Basalamah et al., 2022; Pinar & Kelimeler, 2020) and lends legitimacy to related items (Asriati et al., 2022). There is a positive correlation between student value co-creation and student loyalty (Arissaputra et al., 2023). Furthermore, a direct correlation exists between student value co-creation and institutional brand equity (Bordian et al., 2023). Moreover, there is a direct relationship between an institutional brand equity and student loyalty (Haeruddin et al., 2020). When there is a direct and causal relationship between the variables being studied, there is a possibility of a mediating effect (Hayes & Preacher, 2014). Present research suggests that the institutional brand equity acts as a mediator in the connection between student value co-creation and student loyalty. As a result, the following hypothesis was developed.

**H<sub>4</sub>:** Institutional brand equity mediates the relationship between student value co-creation and student loyalty

### *Underlying Theory of Service-Dominant Logic Model*

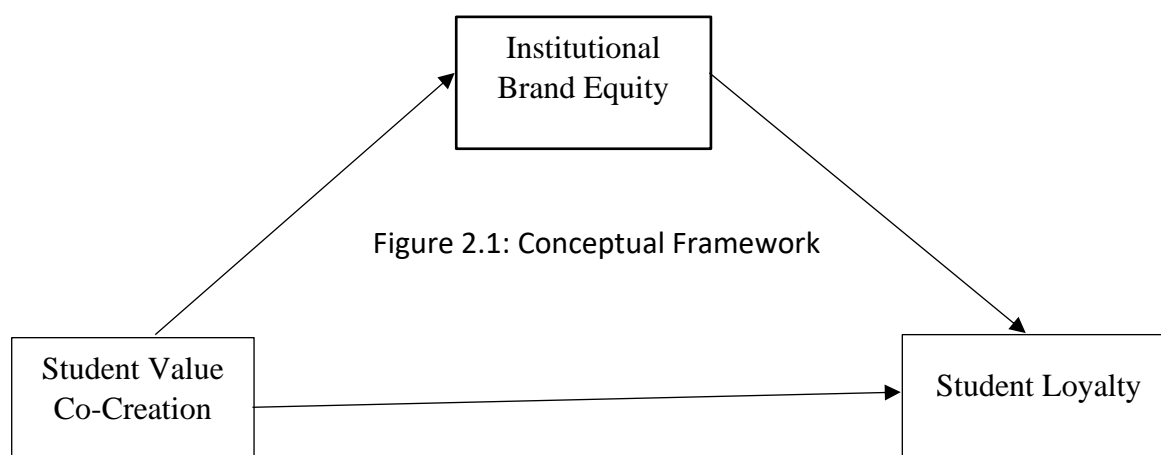
Based on the service dominant logic paradigm (Vargo & Lusch, 2004), proposed that institutional brand equity improves through student value co-creation and increase student loyalty. Vargo and Lusch (2004), differentiated value-in-use and value-in-exchange proposition; value-in-use being represented by price and serving as an intermediary concept in the process of creating value, while the concept of value-in-exchange is rooted in the service being exchanged. According to Jhantasana (2022), product serves as the value proposition, while the client actively participates in the process by presenting, negotiating, responding, committing, and interacting with the service. The value of a service is exclusively and experientially established by the recipients, emphasizing the significance of comprehending the students' requirements from the (HEIs) by engaging them in a process of student value co-creating (Vargo & Lusch, 2017). However, (HEIs) should establish mechanisms to foster the exchange of information and knowledge between itself and its students, thereby motivating the students to contribute their resources to the university (Jhantasana, 2022). The student value co-creation process combines student resources with institutional resources to customize educational services according to students' specific needs. This approach enhances the learning experience and improves the academic performance of students (Walidayni et al., 2023).

According to Vargo and Lusch (2004), brand equity model has been utilized to incorporate the service marketing perspective, specifically emphasizing the student co-creation value-in-use of retaining student loyalty. Students are now seen as an active co-creator, rather than a passive recipient, and are actively involved in creating brand value; and thus, the brand's role has also changed from passive resource to active resource (Chekalina et al., 2015; Vargo & Lusch, 2008). Moreover, the way students perceive the resources of an institution has a positive correlation with the value they receive in return for their money (Chekalina et al., 2015). This value, known as value-in-exchange (Vargo & Lusch, 2004), is an

important factor in a student's decision to choose or quit an institution. Hence, the value for a student is generated through the interaction between an institution and a student, encompassing all aspects of the student experience, including the HEI's resources such as physical goods, information, employee interactions, systems, infrastructures, and other students.

### Conceptual Framework

The empirical framework has been developed to act as a model in this research, drawing on the observed phenomenon, applicable theoretical ideas, and previously conducted supporting research. Student loyalty is the dependent variable under research; student value co-creation is one of the antecedent factors; institutional brand equity is the mediating variable.



### Methodology

#### *Sampling*

This research utilized a positivistic approach to examine the connection between student value co-creation, student loyalty, and the mediating influence of institutional brand equity. The assessments were based on measurable facts, notably numerical data, in order to ensure objectivity in line with the ontological concept. The researchers embraced a realist viewpoint and upheld objectivity by maintaining a distance from personal values and ideas throughout our research. Furthermore, the aim of this research was to clarify the influence of particular variables. Hence, the deductive approach is the most appropriate way for constructing theories in this research. This involves developing hypotheses based on existing research and then assessing them using actual data from PHEIs (university-college) in Kuala Lumpur, Malaysia. The data collecting technique entailed conducting a cross-sectional questionnaire survey, employing a metric scale to quantify the variables. Employing a quantitative survey as a research methodology is considered appropriate for achieving the objectives of this research, since it has major importance in investigating matters such as public sentiment, while also having the capacity to reach a significantly wider range of individuals. Thus, generalizing findings becomes easier. This method can be used to interpret statistical data in order to make future forecasts or describe historical characteristics. The research population was unknown. The sample size of 327 was obtained using the G\*power statistical analysis. Moreover, to ensure the inclusion of a diverse variety of respondents, the research used a nonprobability sampling technique, primarily targeting undergraduate students from private higher education educational institutions (university-college) located in



the Kuala Lumpur region. Table 1 illustrated the names of the six (6) private university-college in Kuala Lumpur.

Table 1

*Private University-College in Kuala Lumpur*

Nos	Names of the University Colleges	2019	2020	2021
1	Kuala Lumpur Metropolitan University College (KLMUC)			
2	Berjaya University College			
3	Tunku Abdul Rahman University College	33,430	32,111	32,381
4	Geomatika University College			
5	Kolej Universiti Poly-Tech MARA			
6	PICOMS International University College			

**Measurement Instruments**

The survey questionnaire was constructed through the integration of items derived from previous research within the pertinent field. The purpose of implementing this measure was to augment the questionnaire's reliability and expand the generalizability of the results to a wider range of contexts. In order to assess the items' content validity, the opinions of three academic professors specializing in the discipline of student loyalty were sought. In response to their feedback, modifications were implemented to the questionnaire in order to ensure its suitability for the social context of Malaysia. In addition, a four-item scale was modified for the purpose of assessing student loyalty (Helgesen & Nettet, 2007; Rojas-Méndez et al., 2009). The assessment of institutional brand equity was conducted using a four-item scale (Yoo & Donthu, 2001). In conclusion, present research employed a modified scale comprising 18 items to evaluate the notion of student value co-creation (Ranjan & Read, 2016). The evaluation of the responses to the items in the questionnaire was conducted utilizing a seven-point Likert scale. This scale offered a spectrum of options ranging from "1 = Strongly disagree" to "7 = Strongly agree."

**Results and Discussion***Descriptive Analysis*

In the research a total of 340 questionnaires were distributed and 327 were collected, yielding a response rate of 92 percent. During the data refinement phase, 13 questionnaires were eliminated from the research, while 314 surveys underwent coding to facilitate later data analysis. The male respondents comprised 188 individuals, constituting 59.9 percent of the total, whilst the female respondents comprised 126 individuals, constituting 40.1 percent. The age group with the highest proportion of respondents, precisely 36.3%, was persons between the ages of 21 and 25. The second greatest proportion, comprising 22.6%, was observed among individuals in the age range of 18 to 20 years. The respondents in this research consist of students in Kuala Lumpur who are presently enrolled in the private tertiary institutions classified as university-college pursuing their undergraduate degrees.

*Assessment of Measurement Model*

Internal consistency reliability, convergent validity, and discriminant validity are just a few of the factors that are evaluated in measurement models. Factor loading, composite

reliability, Cronbach Alpha, and AVE are examples of convergent validity. Moreover, the assessment of discriminant validity requires taking into account a number of factors, such as the Heterotrait-Monotrait ratio of Correlations (HTMT), cross-loading, and Fornell and Larcker's criterion. Twelve items related to student value co-creation, however, were eliminated from the research because their results fell below the predetermined threshold value of 0.70.

Table 1

*Convergent Validity and Reliability*

Constructs	Item Code	Factor Loading	Cronbach Alpha	CR	AVE
Institutional Brand Equity	IBE1	0.753	0.773	0.853	0.593
	IBE2	0.783			
	IBE3	0.783			
	IBE4	0.760			
Student Loyalty	SL1	0.856	0.892	0.925	0.755
	SL2	0.858			
	SL3	0.891			
	SL4	0.870			
Student Value Co-creation	SVC10	0.900	0.970	0.973	0.753
	SVC11	0.889			
	SVC12	0.886			
	SVC13	0.866			
	SVC14	0.900			
	SVC15	0.842			
	SVC16	0.706			
	SVC18	0.901			
	SVC19	0.897			
	SVC20	0.870			
	SVC22	0.881			
	SVC24	0.856			

Chin (2010), suggested that the magnitude of item loading should exceed that of cross-loading. The research showcased discriminant validity by employing HTMT, cross-loadings, and the Fornell-Larcker criterion. The present research demonstrated that item factor loadings that were higher than cross-loadings were a reliable indicator of discriminant validity.

Table 2

*Cross Loading*

Item Code	IBE	SL	SVC
IBE1	<b>0.753</b>	0.391	0.525
IBE2	<b>0.783</b>	0.432	0.520
IBE3	<b>0.783</b>	0.637	0.615
IBE4	<b>0.760</b>	0.484	0.548
SL1	0.576	<b>0.856</b>	0.657
SL2	0.554	<b>0.858</b>	0.655
SL3	0.546	<b>0.891</b>	0.699
SL4	0.568	<b>0.870</b>	0.660
SVC10	0.687	0.721	<b>0.900</b>
SVC11	0.635	0.682	<b>0.889</b>
SVC12	0.655	0.716	<b>0.886</b>
SVC13	0.644	0.702	<b>0.866</b>
SVC14	0.688	0.714	<b>0.900</b>
SVC15	0.564	0.591	<b>0.842</b>
SVC16	0.458	0.442	<b>0.706</b>
SVC18	0.668	0.706	<b>0.901</b>
SVC19	0.656	0.715	<b>0.897</b>
SVC20	0.627	0.685	<b>0.870</b>
SVC22	0.619	0.663	<b>0.881</b>
SVC24	0.571	0.598	<b>0.856</b>

Past research recommend that the obtained value of Average Variance Extracted (AVE) should exceed 0.50 of the variances of the relevant indicators (Fornell & Larcker, 1981). The present research revealed that the value exceeds the criterion of 0.50. Hence, the establishment of discriminant validity was accomplished successfully.

Table 3

*Fornell-Larcker*

Item Code	IBE	SL	SVC
IBE	<b>0.770</b>		
SL	0.645	<b>0.869</b>	
SVC	0.722	0.769	<b>0.868</b>

Hair et al. (2019) HTMT value of 0.90 or lower is regarded appropriate for conceptions that demonstrate conceptual similarity. Present research showed that the observed values are lower than the threshold of 0.90, thereby meeting the HTMT criteria. Hence, the validity of discrimination has been successfully proven.

Table 4

*HTMT*

Variables	IBE	SL	SVC
IBE			
SL	0.759		
SVC	0.823	0.820	

Variance Inflation Factor (VIF) value below five (5) indicates the lack of collinearity issues (Hair et al., 2019). Therefore, the present research has confirmed that there is no problem of multicollinearity in the research, as the VIF value is less than five (5).

Table 5

*Multicollinearity Assessment*

Predictors	VIF
IBE -> SL	2.091
SVC -> IBE	1.000
SVC -> SL	2.091

*Assessment of Structural Model*

SmartPLS 4, a partial least squares (PLS) component structural equation modeling (SEM) approach, was utilized in this research to evaluate the proposed measurement model and assumptions. The t-statistic obtained from the bootstrapping test using the SmartPLS tool was examined in order to perform the hypothesis test. A bootstrapping method was used to estimate the path coefficients. In order to accurately capture the construct correlations within the model, the research employed the bootstrapping technique. Table 6 presents the findings of the statistical t-test at a 95% significant level (t-table value of 1.96). According to Sarstedt et al. (2021) the following standards were set for classifying R<sup>2</sup> values: values less than 0.02 were deemed weak, values over 0.15 were deemed moderate, and values above 0.35 were deemed strong.

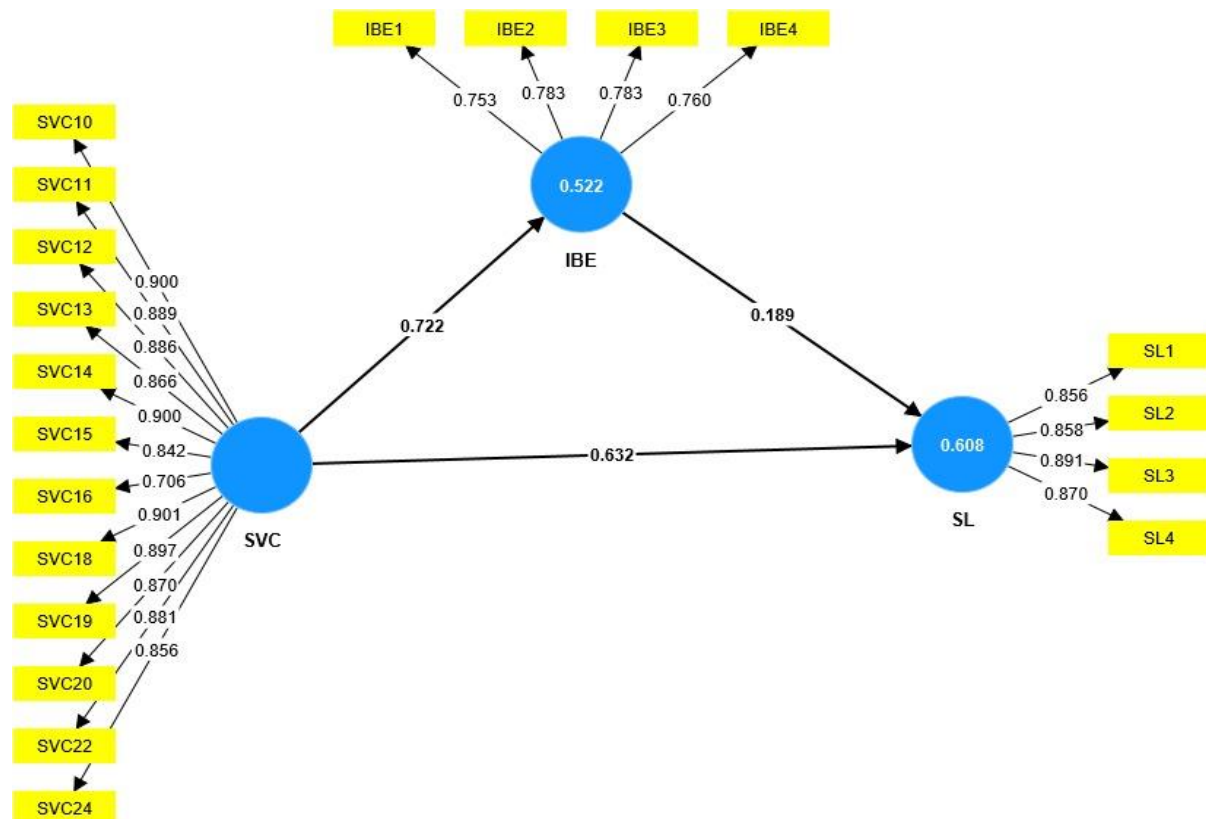


Figure 3: Measurement model

The research's structural model highlighted important values related to direct links, which were shown in Table 6.

**H<sub>1</sub>:** There is a positive relationship between student value co-creation and student loyalty.

The first hypothesis (**H<sub>1</sub>**) stated that there is a favorable correlation between student value co-creation and student loyalty. Based on the results in Table 6. ( $\beta = 0.030$ ,  $t$ -value = 25.236,  $p$ -value 0.000), **H<sub>1</sub>** was supported. This finding is consistent with prior studies that indicated a positive connection between student value co-creation and student loyalty (Arissaputra et al., 2023; Baehaqi et al., 2023; Jhantasana, 2022).

**H<sub>2</sub>:** There is a positive relationship between student value co-creation and institutional brand equity.

The second hypothesis (**H<sub>2</sub>**) posited that there exists a positive correlation between the student value co-creation and institutional brand equity. In accordance with Table 6's results, **H<sub>2</sub>** was found to be supported ( $\beta = 0.033$ ,  $t$ -value = 21.671,  $p$ -value < 0.000). These findings are in line with earlier studies that established a favorable correlation between student value co-creation and institutional brand equity (Bordian et al., 2023; Farrokhi, 2020; Pham et al., 2022).

**H<sub>3</sub>:** There is a positive relationship between institutional brand equity and student loyalty.

Hypothesis three (**H<sub>3</sub>**) posited a direct correlation between institutional brand equity and student loyalty. In accordance to the results shown in Table 6; ( $\beta = 0.049$ ,  $t$ -value = 3.824,  $p$ -value < 0.000), **H<sub>3</sub>** was supported. Present findings are consistent with prior studies

indicating a positive correlation between institutional brand equity and student loyalty (Basalamah et al., 2022; Chairuddin et al., 2022; Haeruddin et al., 2020; Tabiaat, 2023).

**H<sub>4</sub>:** Institutional brand equity mediates the relationship between student value co-creation and student loyalty.

Hypothesis four (**H<sub>4</sub>**) suggested that institutional brand equity acts as a mediator in the connection between student value co-creation and student loyalty. Based to the findings shown in Table 6; ( $\beta = 0.037$ ,  $t$ -value = 3.714,  $p$ -value < 0.000), the **H<sub>4</sub>** was supported. Hence, these findings align with prior studies that established institutional brand equity as a mediator in the connection between student value co-creation and student loyalty.

Table 6

*Direct Effects*

Hypothesis	Relationship	Standard deviation	t-value	p-value	Decisions
H <sub>1</sub>	SVC -> SL	0.030	25.236	0.000	Accepted
H <sub>2</sub>	SVC -> IBE	0.033	21.671	0.000	Accepted
H <sub>3</sub>	IBE -> SL	0.049	3.824	0.000	Accepted

Prior research has suggested that **R<sup>2</sup>** values of 0.75, 0.5, and 0.25 should be classified as substantial, moderate, and weak, respectively (Sarstedt et al., 2020). The results of the coefficient of determination are shown in Table 7. However, more than 0.35 percent of the research model's predictive effectiveness was demonstrated in regard to student loyalty and institutional brand equity. Thus, this result implies that additional factors could be employed as indicators, accounting for 60.8% of student loyalty and 52.2% of institutional brand equity.

Table 7

*R<sup>2</sup>*

Variables	R-square	R-square adjusted
IBE	0.522	0.520
SL	0.608	0.605

Table 8 indicates that the bootstrapping analysis's results, which are illustrated in Figure 4.2, supported the hypothesis four (**H<sub>4</sub>**) that institutional brand equity plays a mediating role in the relationship between student value co-creation and student loyalty. The results of the mediation research done on the institutional brand equity demonstrate a strong correlation between student value co-creation and student loyalty, as represented by a  $t$ -value of 3.714 and a  $p$ -value of 0.000.



Table 8  
Indirect Effects

Hypothesis	Relationship	Standard deviation	t-value	p-value	Decision
H <sub>4</sub>	SVC-> IBE -> SL	0.037	3.714	0.000	Accepted

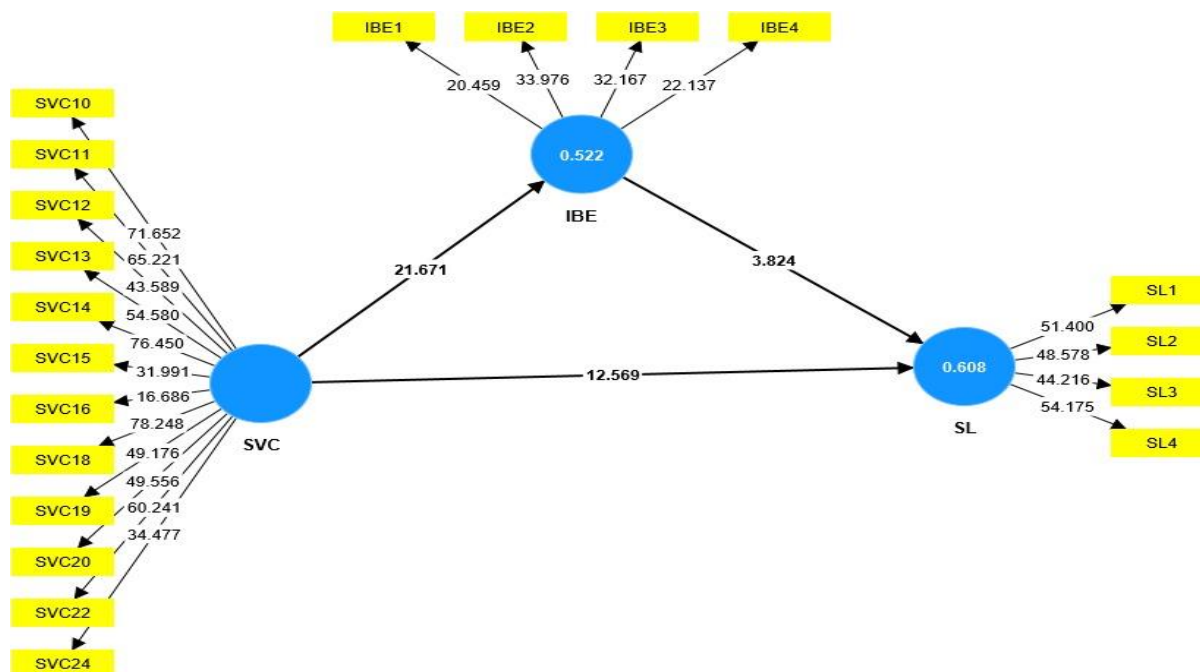


Figure 4.2: PLS Bootstrapping findings for the Structural model

**Conclusions**

*Discussion*

The results of this research offer evidence in favor of the hypothesis one (H<sub>1</sub>), which suggests that there is a significant correlation between student value co-creation and student loyalty. The results of the Partial Least Square (PLS) analysis confirm the hypothesis (H<sub>1</sub>) that student value co-creation has a significant impact on student loyalty. Therefore, a rise in the level of student value co-creation will signify a higher level of student loyalty.

Hypothesis 2 (H<sub>2</sub>) posited a positive correlation between student value co-creation and institutional brand equity. Therefore, this result indicates that increased levels of student co-creation in creating value with a brand result in greater institutional brand equity. Thus, this result implies that when students actively participate in the process of creating value, it has a favorable impact on their perception of an institution. Therefore, the previously described variable explains 52.2% of the variation seen in the institutional brand equity.

Hypothesis 3 (H<sub>3</sub>) suggested that there is a direct and positive relationship between the institutional brand equity and students’ loyalty. Furthermore, it is crucial to emphasize that the elements of student value co-creation and institutional brand equity contributed to 60.8% of the variation in student loyalty. This result indicated that private university-colleges have the ability to prioritize the development of a university branding strategy that fosters

loyalty, ultimately enhancing the relationship between students and the educational institutions. Thus, this promotes the perception of lifelong loyalty among students. However, an institution's price, market share, profitability, and student perception about and acting toward a brand are all indicators of brand equity, which is an additional value to services. When students show greater devotion to a brand, student groups are less susceptible to brand threats and attacks. Loyal students are less likely to drop out or switch to other institutional brands.

Hypothesis 4 (**H<sub>4</sub>**) suggests that the relationship between student value co-creation and student loyalty is influenced by institutional brand equity acting as a mediator. This research indicates that the influence of student value co-creation on student loyalty is mediated by institutional brand equity. The process of students actively participating in the creation of value tends to strengthen student loyalty. However, the level of awareness and recognition of the institution's brand can further enhance the connection between student value co-creation and student loyalty towards higher education institutions.

### **Conclusion**

The results showed a robust and statistically significant correlation between student loyalty and institutional brand equity and student value co-creation. Student loyalty is positively and significantly impacted by the institution's brand equity. Additionally, there is a relationship between students' value co-creation and student loyalty to the institution that is mediated by the institutional brand equity. From a one-way viewpoint that sees students as mostly passive recipients of value, private higher education institutions must change to one where students are more actively participated in shared value co-creation. Higher education institutions marketers that want to attract students to HEIs should strive for improved customer orientation, focusing on the practical factors that important to students, such as course quality (and possibly also social life). However, higher education institutions administrators should provide opportunities for students to interact and form healthy peer relationships, as well as introduce new students to both the online learning environment and campus social life when teaching off-campus. Thus, this research seeks to help other academic scholars and practitioners by offering critical instructions for the private higher education sector to use value co-creation and brand equity strategies in order to improve their student loyalty.

Theoretically, the current study indicates that Malaysian private higher education institutions should recognize that students are not merely consumers but collaborators in the brand-building process, actively influencing their own experiences and, consequently, the institution's reputation. Students' loyalty, shaped by their experiences, significantly impacts the perceived brand equity of the institution through their role as co-creators. Nevertheless, Malaysian institutions should not merely offer services to students but rather incorporate their experiences, interactions, and contributions into the brand-building process.

### *Theoretical and Managerial Implications*

The student's perspective is not thoroughly examined, despite the fact that co-creation is not a novel concept and has been extensively explored and debated. The implications of this research, both theoretically and in terms of managerial utilization, are significant. From a theoretical standpoint, the results of this research offer empirical evidence

that supports the research framework. This research established the mediating role of institutional brand equity and the direct connection between student value co-creation, institutional brand equity, and student loyalty. Implementing institutional brand equity as a brand management mediator is another contribution made by this research. This research examined the enhanced model of student value co-creation effect on university brand equity in accordance with the body of previous studies. As a result, it added significant knowledge to the body of knowledge by elucidating the function of institutional brand equity in mediating the relationship between student loyalty and student value co-creation.

When adopting a co-creation strategy into brand management, Higher Education Institutions (HEIs) should recognize the impact of brand equity on students who feel disconnected and do not identify strongly with the institution, which represents the majority of the target market. Furthermore, by emphasizing the significance of value co-creation in brand management, the research's findings provide valuable insights for Malaysian institutions, both public and private, in developing effective branding initiatives. In addition to the research's conclusions, HEIs that are not currently engaged in value co-creation initiatives or are reluctant to take the plunge are encouraged and supported to make that commitment. Higher education institutions (HEIs) should strategize to enhance student participation in co-creation initiatives in order to elevate the level of institutional brand equity. Above all, administrators of higher education institutions should be transparent regarding the positive outcomes or improvements that students will experience; this will increase student engagement and participation, bolster brand equity, and strengthen student loyalty. Value co-creation is of greater importance in private institutions compared to public institutions, as it directly impacts student loyalty and contributes to an intake of students. In a highly competitive academic environment, private university owners and management in Malaysia ought to concentrate on implementing value co-creation as a crucial element to enhance their university's brand equity and student loyalty, and to outperform their rivals. In order to improve the reputation and image of their university, as well as brand equity and loyalty, managers and staff members of private universities, including both academic and non-academic workers, must adhere to the principles of value co-creation.

### **Limitations**

The results should be approached with caution due to the constraints of this research. The research employed a judgmental sample collected from diverse undergraduate students at 6 private university-colleges in Kuala Lumpur, Malaysia. Obtaining a comprehensive list of students may be challenging due to privacy concerns and the stringent standards of Malaysia Higher Education Institutions (HEIs). However, future research that employ probability sampling techniques may provide a more accurate representation of the university student population. Furthermore, the research was carried out at six privately-funded university-colleges in Malaysia. To increase the generalization of the results, we suggest that further research should compare and contrast numerous private and public universities, as well as universities from other nations, in order to cross-validate the results. Furthermore, undergraduate students from university-colleges formed the sample for the research. Further studies may benefit from incorporating the viewpoints of various stakeholders, including alumni, postgraduate students, students' parents, faculty and staff, and donors, alongside those of current students.

Further studies should examine the inclusion of mediating and moderating factors to gain a broader knowledge of the factors that drive the impact of student value co-creation, institutional brand equity, and student loyalty. However, this research only concentrates on institutional brand equity as a mediator. In addition, augmenting this model with additional variables including commitment, satisfaction, promotion, and experience (Alkhalwaldeh et al., 2016). In order to further comprehend the mechanisms underlying this effect, a more complete collection of variables should be included. To gain a better understanding of the impact of student value co-creation on institutional brand equity and student loyalty, further studies might examine at additional pertinent mediators and moderators. Thus, future research can examine university image, university green image as a mediator. Finally, further research can extend this research by including country of origin, internationalization, age and tuition fee as the moderators.

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