

A Pilot Study on Factors Impacting Sustainable Competitive Advantage in Malaysian Private Universities

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ABSTRACT

This pilot study investigates the direct effect of student experience management determinants on sustainable competitive advantage (SCA) in Malaysian private universities. Specifically, the study examines the influence of five independent variables, namely Teaching and Learning Quality, Effectiveness of Communication, Student Engagement, Campus Facilities, and Program Innovation, on the Sustainable Competitive Advantage of Malaysian private universities. Malaysian private universities face increasing financial pressures stemming from declining international student enrolment, intensified domestic and global competition, and limited access to government funding, necessitating targeted strategies for building and sustaining competitive advantage. Drawing on the Resource-Based View (RBV) and Institutional Theory, this study adopts a quantitative research approach using a structured questionnaire administered to 30 respondents from admission, marketing, and student affairs departments of Malaysian private universities selected based on their SETARA ratings. The reliability of the research instrument was assessed using Cronbach's Alpha coefficient through SPSS version 30, while construct validity was confirmed through Pearson Bivariate Correlation. The findings indicate a high level of reliability for all constructs, with Cronbach's Alpha values ranging from 0.854 to 0.958, all exceeding the recommended threshold of 0.7. No items were deleted as all factor loadings met the acceptable cut-off of 0.5. The validity analysis reveals statistically significant positive correlations among all study variables, with Campus Facilities ($r = .749$, $p < .01$) and Effectiveness of Communication ($r = .668$, $p < .01$) exhibiting the strongest associations with Sustainable Competitive Advantage, supporting the validity of the proposed research framework. These results validate the conceptual framework and justify a larger-scale empirical investigation. The study contributes to the body of knowledge on higher education management in Malaysia and offers practical insights for university management and policymakers.

Keywords: Malaysian Private Universities, Sustainable Competitive Advantage, Student Experience Management, Teaching and Learning Quality, Pilot Study.

INTRODUCTION

The business of universities, especially private ones, has been severely impacted, showing significant decline in numbers of student recruitments, putting the universities in a financial strain, and forcing the universities to make major adjustments to their business model in order to survive the intense competition both domestically and internationally. Worldwide, many reports were produced about the damage taken by the universities, not only during the pandemic, but also throughout the recovering phase from it. According to the report of OECD (2024), even after these countries took many measures to ensure the universities are taking the recovery path out of the pandemic, Romania, Canada, Spain, and Costa Rica recorded high level of dropouts for many reasons like decreased engagement in learning due to their inability to study online, academic struggles and lack of support from the university management and faculty staff, and financial difficulties due to the increased tuition fees (OECD, 2024). In Australia, international student numbers have not fully recovered after 2020, leading to lower

revenues recorded by universities. In addition, the Australian universities reported facing financial strain, with operating profit margins at their lowest in five years, as universities overestimated the speed of revenue recovery post-2020 (KordaMentha, 2024).

The Office for Students (OfS) (2024) reported that higher education institutions in England are currently experiencing considerable financial pressure based on sector-wide financial data. Between the academic years 2021–22 and 2022–23, net operating cash flow declined sharply from £4,795 million (representing 11.6% of total income) to £2,907 million (6.5% of income). Similarly, the overall sector surplus fell significantly, decreasing from £2,290 million (5.6% of income) in 2021–22 to £1,284 million (2.9% of income) in 2023–24. In the 2022–23 academic year, 93 higher education providers reported operating deficits, indicating that their expenditures exceeded their revenues. This number is projected to increase to 108 institutions in 2023–24, before declining to 74 in 2024–25 and 57 in 2025–26 (OfS, 2024).

In Malaysia, the story was not different. The Malaysian universities faced significant challenges, particularly in international student enrolment. In 2019, Malaysia hosted around 81,953 international students (Trading Economics, 2022), with plans to increase this number to 200,000 in the following year. However, in 2020, Malaysia managed to only receive around 30,000 international students, representing a severe setback that undermined years of government efforts. After lifting restrictions, the numbers showed signs of recovery, reaching 104,315 international students in 2023 (Malay Mail, 2024). More recently, in 2024, the total number of international students reached around 131,000 students (MOHE, 2025). With the numbers not reaching the planned target, the pool of international students shrank to half, from 250,000 in the Ministry of Higher Education plans for the year 2024, to only 131,000 international students (Malay Mail, 2024; MOHE, 2025).

With the numbers not meeting the planned targets, and the pool of potential recruited international students reduced to half, it is clear that the competition for international students has become even harder on private universities, forcing any private university to implement various strategies to gain competitive advantages over its peers. Despite the implementation of various initiatives and support programs, these measures have not produced the expected outcomes. In response to ongoing financial pressures resulting from the COVID-19 pandemic and its associated economic downturn, private universities in Malaysia have increased tuition fees multiple times over the past two years (Ho, 2024). Furthermore, recent findings indicate a reduction in collaborative partnerships between Malaysian universities and industry, which has negatively influenced students' access to internship opportunities and graduate employment within the country (Williams, 2024). Additionally, evidence suggests that many private higher education institutions continue to face serious financial challenges, largely due to limited or absent government funding (Manickam, 2025).

Therefore, the aim of this research is to examine the direct effect of student experience management determinants on the sustainable competitive advantage of Malaysian private universities. These determinants include Teaching and Learning Quality, Effectiveness of Communication, Student Engagement, Campus Facilities, and Program Innovation. This competitive edge is anticipated to translate into increased international student enrolment with the purpose of ensuring the sustainable operation of these institutions over the long term within the highly competitive educational environment of Malaysia. This study will achieve this through conducting academic research investigating the challenges faced by private universities, supported by a comprehensive review of the existing literature, and by developing a conceptual framework that would effectively represent the phenomena under study.

LITERATURE REVIEW

Sustainable Competitive Advantage

The capacity of a corporation to outperform its rivals and to differentiate itself from them by producing greater economic value in the same market is what is meant by the term competitive advantage (Larabi, 2025). Building and sustaining a competitive edge should be the primary focus of strategic management, according to (Porter, 1985, 1989). It is possible for an organisation to achieve a competitive edge over its competitors via two distinct

approaches, which he differentiates between as the differentiation advantage, where a company offers superior goods or services in comparison to those offered by its rivals, and the cost advantage, where a company is able to supply the same goods or services as its rivals but at lower prices (Salman et al., 2025).

Sustainable Competitiveness can be understood as the ability to generate and preserve inclusive wealth while ensuring that future opportunities for economic expansion are not compromised (Shi et al., 2025). At the firm level, Sustainable Competitive Advantage depends on whether competitors are unable or unwilling to replicate value-generating strategies. If rivals can close the performance gap, the advantage cannot be sustained over time (Khalaf & El Mokadem, 2025). Accordingly, Sustainable Competitiveness reflects an organisation's capacity to remain adaptable under changing competitive conditions while preserving managerial efficiency and organisational integrity (Farea, 2025). From the Resource-Based View (RBV) perspective, universities achieve sustained competitive advantage when they possess valuable, rare, inimitable, and non-substitutable (VRIN) resources that competitors cannot easily replicate (Barney, 1991; Wernerfelt, 1984).

Teaching and Learning Quality and Sustainable Competitive Advantage

Teaching and Learning Quality is widely recognised as a core driver of sustainable competitive advantage in higher education institutions, particularly within the context of private universities operating in highly competitive markets. High-quality teaching and learning processes enhance students' academic outcomes, critical thinking abilities, and employability, which in turn strengthen institutional differentiation and value creation (Thurab-Nkhosi, 2024). Universities that consistently deliver effective pedagogy, well-designed curricula, qualified academic staff, and outcome-oriented assessment systems are more likely to attract and retain students and improve graduation rates, which are key dimensions of sustainable competitive advantage. Moreover, superior teaching and learning quality contributes to long-term institutional performance by fostering positive student perceptions, alumni advocacy, and employer recognition, enabling private universities in Malaysia to sustain their market position despite increasing competition and changing student expectations (Alselwi & Farea, 2022). Within this context, Teaching and Learning Quality contributes to Sustainable Competitive Advantage by strengthening student outcomes, enhancing institutional reputation, and supporting long-term differentiation within competitive higher education environments (Thurab-Nkhosi, 2024).

Effectiveness of Communication and Sustainable Competitive Advantage

Effectiveness of Communication plays a critical role in strengthening the sustainable competitive advantage of private universities by ensuring clarity, transparency, and consistency in interactions with students and other stakeholders. Effective communication facilitates timely dissemination of academic information, administrative procedures, institutional policies, and support services, thereby enhancing students' understanding, trust, and overall institutional experience. Karadal et al. (2021) describe effective communication as an interaction involving two or more individuals in which the intended message is accurately transmitted, received, and comprehended (Karadal et al., 2021). Universities that maintain clear and responsive communication channels are better positioned to reduce uncertainty, manage expectations, and foster stronger student-institution relationships, which contribute to higher retention rates and positive institutional image. Effective Communication contributes directly to Sustainable Competitive Advantage by improving organisational coherence and decision-making effectiveness (Addimando, 2024).

Student Engagement and Sustainable Competitive Advantage

Student engagement is a fundamental determinant of sustainable competitive advantage in private universities, as it reflects the extent to which students are actively involved in academic, social, and institutional activities (Y. Mutahar et al., 2022). Singha et al. (2024) define student engagement as the degree to which students demonstrate involvement, interest, and interaction with learning activities and academic content, thereby supporting meaningful and effective learning experiences. High levels of engagement promote deeper learning, stronger academic performance, and greater personal development, which enhance students' perceived value of their educational experience. Engaged students are more likely to persist in their studies, participate in co-

curricular initiatives, and develop a strong sense of belonging to the institution, leading to improved retention and completion rates (Singha et al., 2024). Furthermore, sustained student engagement contributes to positive word-of-mouth, stronger alumni relations, and an enhanced institutional reputation, all of which reinforce the long-term competitive positioning of Malaysian private universities in an increasingly competitive higher education market (Alzu'bi et al., 2017).

Campus Facilities and Sustainable Competitive Advantage

Campus facilities constitute a critical component of the student experience and significantly influence the sustainable competitive advantage of private universities. Well-developed physical and technological infrastructure—including classrooms, laboratories, libraries, learning spaces, accommodation, and recreational facilities—supports effective teaching and learning while enhancing students' comfort, safety, and overall satisfaction (Y. Mutahar et al., 2021). High-quality campus facilities signal institutional commitment to academic excellence and student well-being, thereby strengthening institutional attractiveness and differentiation in a competitive higher education market (Khalid et al., 2023). Modern and well-maintained facilities enable universities to deliver innovative programs, support research activities, and accommodate diverse learning needs, contributing to higher student retention and positive institutional image. According to Darman (2023), both teaching quality and campus facilities are significant factors that positively impact student learning motivation and overall institutional performance, collectively contributing to competitive advantage (Darman, 2023).

Program Innovation and Sustainable Competitive Advantage

Program innovation is a key strategic mechanism through which private universities can achieve and sustain competitive advantage in an increasingly dynamic higher education environment. Innovative academic programs that integrate industry relevance, interdisciplinary approaches, flexible delivery modes, and emerging knowledge areas enhance the employability and future readiness of graduates. By continuously updating curricula and introducing new programs aligned with market demands and technological advancements, universities can differentiate themselves from competitors and respond effectively to changing student and employer expectations (Rossoni et al., 2024). Furthermore, program innovation supports institutional adaptability and long-term relevance, contributing to increased student enrolment, stronger industry partnerships, and enhanced academic reputation. Higher education institutions have traditionally been recognised for established instructional practices and curriculum structures; however, recent developments driven by increasing recognition that conventional teaching approaches are insufficient for addressing diverse student needs have necessitated substantial changes in curriculum design and pedagogical approaches (Alt et al., 2023).

Conceptual Framework and Hypotheses

The current study focuses on the direct effect of five Student Experience Management Determinants—namely Teaching and Learning Quality (TLQ), Effectiveness of Communication (COM), Student Engagement (SE), Campus Facilities (CF), and Programs Innovation (PI)—as independent variables on the Sustainable Competitive Advantage (SCA) of Malaysian Private Universities as the dependent variable. The conceptual framework is grounded in the Resource-Based View (RBV), which posits that organisations achieve sustained competitive advantage through the effective deployment of valuable, rare, inimitable, and non-substitutable internal resources (Barney, 1991; Wernerfelt, 1984). Within this framework, student experience management determinants function as core institutional resources and organisational capabilities that differentiate Malaysian private universities from their competitors.

Based on the conceptual framework and review of existing literature, the following five hypotheses are proposed:

H1: There is a positive and significant effect of Teaching and Learning Quality on the Sustainable Competitive Advantage of Malaysian Private Universities.

H2: There is a positive and significant effect of Effectiveness of Communication on the Sustainable Competitive Advantage of Malaysian Private Universities.

H3: There is a positive and significant effect of Student Engagement on the Sustainable Competitive Advantage of Malaysian Private Universities.

H4: There is a positive and significant effect of Campus Facilities on the Sustainable Competitive Advantage of Malaysian Private Universities.

H5: There is a positive and significant effect of Program Innovation on the Sustainable Competitive Advantage of Malaysian Private Universities.

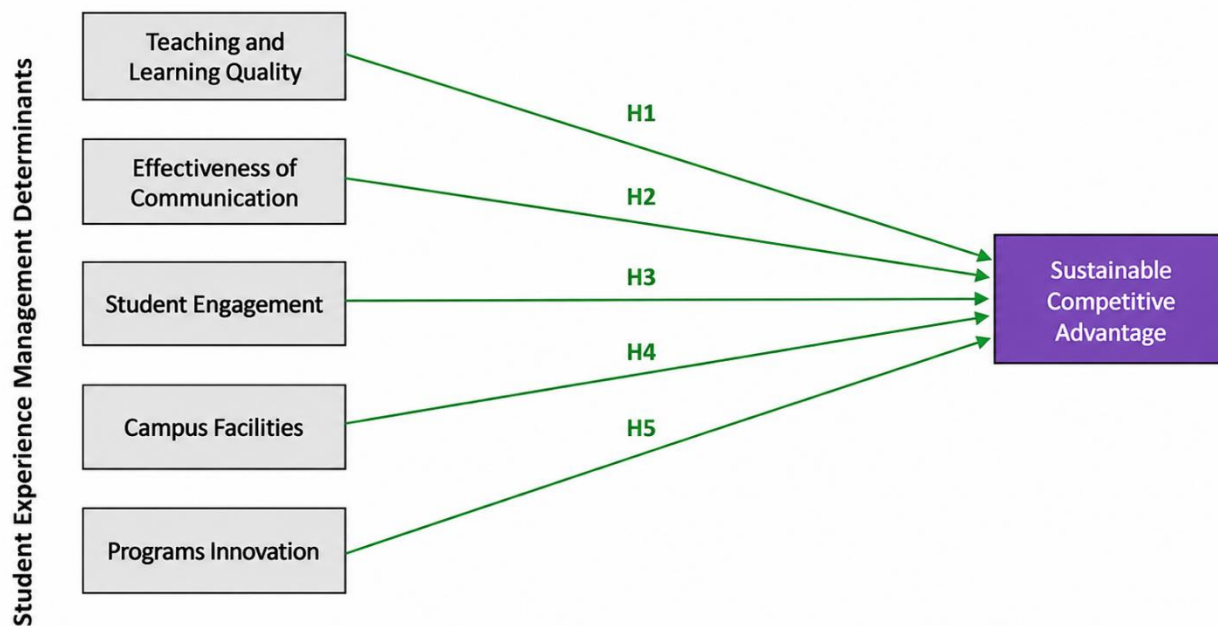


Figure 1: Research Framework

RESEARCH METHODOLOGY

In this research, the researcher utilised quantitative research methods. Primary data was collected from employees working in the admissions, marketing, and/or student affairs departments of private universities in Malaysia. These participants were specifically selected due to their active involvement in the recruitment of both local and international students. The private universities included in the study were chosen based on their SETARA ratings, which is a national rating system administered by the Malaysian Ministry of Higher Education to assess universities and colleges across three core functions: teaching and learning, research and innovation, and services to the community and industry. The SETARA rating system is critical for international recognition, as it reflects the institutional quality that international students often consider when selecting a university. This study included private universities across all SETARA rating categories of 5, 4, 3, and 2 stars (SETARA, 2025).

Since there are no official statistics published regarding the number of employees working specifically in Admissions, Marketing, and Student Affairs departments in private universities, the researcher estimated the population size based on industry norms and organisational needs. It was reasonably assumed that each private university would employ at least 10 staff across these departments. As per SETARA (2025), 71 private universities are rated in Malaysia between 2 and 5 stars, yielding an estimated population size of 710 employees.

Based on Krejcie and Morgan (1970), the required sample size for a population of 710 (rounded to 750) is 254 (Krejcie & Morgan, 1970). This was further confirmed using the Raosoft (2004) sample size calculator, which indicated a minimum sample size of 250 (Raosoft, 2004). Following Anderson (2019), the minimum sample size was increased by 30% to account for unsuitable and incomplete responses, resulting in a final distribution of 332 questionnaires (Anderson, 2019).

The sampling technique employed in this study is stratified random sampling. The population was stratified by SETARA rating: 32 universities rated 5-stars (strata sample $n = 149$), 23 universities rated 4-stars (strata sample $n = 107$), 14 universities rated 3-stars (strata sample $n = 65$), and 2 universities rated 2-stars (strata sample $n = 9$), using proportional allocation as described by Cochran (1977). This approach ensures that universities with varying levels of institutional performance are proportionately represented in the sample, enhancing the generalisability and representativeness of the findings (Cochran, 1977).

The questionnaire used in the study was developed by adopting and adapting items from established instruments in previous studies. Once the data is collected in the main study, it will be analysed using both SPSS 30 and SmartPLS 4 software. SPSS 30 will be utilised for preliminary analyses such as descriptive statistics and reliability tests, while SmartPLS 4 will be employed for Partial Least Squares Structural Equation Modelling (PLS-SEM) to test the hypothesised direct relationships between variables and assess the overall model fit (Creswell, 2022; Sekaran & Bougie, 2019). In this pilot study, a sample of 30 respondents was used to assess the reliability and validity of the research instrument using Cronbach's Alpha and Pearson Bivariate Correlation tests respectively (Y. M. A. Mutahar & Farea, 2024).

Measurement Of Variables

The development of instruments was carefully executed in order to reflect the nature of this study. As such, the questionnaire was designed to include 30 items and the variables were measured using the five-point Likert scale, with five standing for 'Strongly Agree' and one standing for 'Strongly Disagree' (Brislin, 1970). Furthermore, the validated instruments shown in Table 1 are adopted from related previous studies to measure the variables of this study.

Table 1: Questionnaire Development

Variable	No. of Items	Reference
Teaching and Learning Quality	5	(Wafudu et al., 2022)
Effectiveness of Communication	5	(Stratone et al., 2022)
Student Engagement	5	(Burch et al., 2015)
Campus Facilities	5	(Shaikh et al., 2018)
Programs Innovation	5	(Khan et al., 2021)
Sustainable Competitive Advantage	5	(Qiu et al., 2020)

RESULTS

Reliability Pilot Test

The aim of the pilot study is to measure the reliability and validity of the research instrument, as the questionnaire items were derived from previous literature. Reliability refers to the consistency of measurement or the degree to which an instrument measures consistently under the same conditions with the same subjects (Sekaran & Bougie, 2019). In this study, a pilot test involving 30 respondents was conducted, and SPSS software version 30

was used to assess the reliability of the research instrument by calculating Cronbach's Alpha values. According to Hair et al. (2022), a cut-off point of 0.7 is considered acceptable at the pilot study level for internal consistency. Cronbach's Alpha values below 0.6 are considered poor and unacceptable, values above 0.7 are acceptable, above 0.8 are excellent, and values above 0.9 are considered very high (Hair et al., 2022). Table 2 presents the results of the reliability test for the instrument across the study constructs.

Table 2: Results of Scale Reliability

Items	Factor Loadings	Cronbach's Alpha if Item Deleted	Cronbach's Alpha	N of Items
TLQ1	0.540	0.873	0.868	5
TLQ2	0.765	0.821		
TLQ3	0.835	0.800		
TLQ4	0.750	0.832		
TLQ5	0.616	0.862		
COM1	0.826	0.817	0.875	5
COM2	0.731	0.843		
COM3	0.576	0.876		
COM4	0.741	0.846		
COM5	0.686	0.853		
SE1	0.777	0.901	0.917	5
SE2	0.864	0.886		
SE3	0.868	0.882		
SE4	0.792	0.899		
SE5	0.698	0.922		
CF1	0.594	0.846	0.854	5
CF2	0.638	0.832		
CF3	0.722	0.814		
CF4	0.644	0.830		
CF5	0.764	0.797		
PI1	0.634	0.857	0.870	5
PI2	0.683	0.847		
PI3	0.702	0.841		
PI4	0.833	0.806		
PI5	0.637	0.858		
SCA1	0.863	0.951	0.958	5
SCA2	0.932	0.939		

SCA3	0.855	0.952		
SCA4	0.849	0.954		
SCA5	0.922	0.940		

Validity Pilot Test

Criterion-related validity reflects the success of measures employed for estimation or prediction. To achieve the validity of the research model, the researcher utilised Pearson Bivariate Correlation using SPSS 30.0 (Schindler, 2021). The Pearson correlation coefficient is a standardised measurement of covariance. According to Pallant (2020), a correlation test with a Sig. value of less than 0.05 indicates a relationship between the two variables and statistically significant unique contribution to the equation (Pallant, 2020). Table 3 shows the value of Pearson Bivariate Correlation alongside the significance of the association between the variables, which highlights the validity of the research model of the current study.

Table 3: Results of Construct Validity

	TLQ	COM	SE	CF	PI	SCA
TLQ	1	.838**	.728**	.654**	.653**	.483**
COM	.838**	1	.669**	.708**	.703**	.668**
SE	.728**	.669**	1	.690**	.473**	.520**
CF	.654**	.708**	.690**	1	.806**	.749**
PI	.653**	.703**	.473**	.806**	1	.627**
SCA	.483**	.668**	.520**	.749**	.627**	1

****.** Correlation is significant at the 0.01 level (2-tailed).

DISCUSSION

The findings from the pilot study have shown that the research instrument used to measure the direct effect of student experience management determinants on sustainable competitive advantage in Malaysian private universities is reliable and valid. The Cronbach's Alpha coefficient of all the constructs was higher than the recommended threshold of 0.7 for pilot studies (Hair et al., 2022), with several constructs exceeding 0.9, confirming the scales' excellent reliability. Specifically, the Sustainable Competitive Advantage construct showed the highest reliability ($\alpha=0.958$), followed by Student Engagement ($\alpha=0.917$), indicating the effectiveness of the scales used to measure these constructs. All 30 items were retained as every factor loading met the acceptable cut-off of 0.5, confirming the internal consistency of all measurement scales.

The validity results also confirm the appropriateness of the research model. The results of the Pearson Bivariate Correlation reveal statistically significant positive relationships between all five student experience management determinants and Sustainable Competitive Advantage, supporting criterion-related validity. Campus Facilities exhibited the strongest positive correlation with Sustainable Competitive Advantage ($r=.749$, $p<.01$), highlighting the importance of well-maintained and accessible physical and technological infrastructure in building institutional competitiveness. Effectiveness of Communication also demonstrated a strong positive correlation with Sustainable Competitive Advantage ($r=.668$, $p<.01$), underlining the critical role of clear and efficient communication practices in supporting student recruitment and retention, which are core drivers of private university competitiveness.

Student Engagement ($r = .520, p < .01$) and Program Innovation ($r = .627, p < .01$) also showed significant positive associations with Sustainable Competitive Advantage, indicating that universities which actively engage students and continuously develop innovative academic programs are better positioned to sustain their competitive standing. Teaching and Learning Quality showed a statistically significant positive correlation with Sustainable Competitive Advantage ($r = .483, p < .01$), confirming that instructional effectiveness and pedagogical quality are essential institutional resources that contribute to competitive differentiation. These findings are consistent with the Resource-Based View framework, which emphasises that superior organisational resources and capabilities drive sustainable competitive advantage (Barney, 1991; Wernerfelt, 1984).

Furthermore, the strong inter-correlations among all five independent variables suggest that student experience management determinants are interrelated institutional capabilities that collectively strengthen competitive advantage. In particular, Campus Facilities and Program Innovation demonstrated the highest inter-correlation ($r = .806, p < .01$), indicating that innovative programs are most effective when supported by adequate physical and technological infrastructure. In conclusion, the pilot study validates the conceptual framework of the research and justifies the empirical study on a larger scale. The findings align with Malaysia's higher education development goals, which prioritise quality improvement, innovation, and institutional competitiveness in the private higher education sector.

FUTURE RECOMMENDATIONS

Future research should conduct the main study with the full sample size of 332 respondents from Malaysian private universities across all SETARA rating categories to enhance the generalisability and statistical power of the findings. This expanded sample would enable more robust hypothesis testing of the five proposed direct relationships and improve the representativeness of the results across different levels of institutional performance.

The pilot study instrument should be utilised in the main study using SmartPLS 4 for Partial Least Squares Structural Equation Modelling (PLS-SEM) to formally test the five hypothesised direct relationships between the student experience management determinants and Sustainable Competitive Advantage. This advanced analytical approach will provide rigorous statistical evidence regarding the significance and magnitude of each direct effect and will allow for comprehensive assessment of the model's predictive power.

Given the strong correlation observed between Campus Facilities and Sustainable Competitive Advantage ($r = .749$) in the pilot study, future research should examine in greater depth the specific aspects of campus infrastructure that contribute most significantly to competitive advantage. Understanding which facility dimensions—physical, digital, or support-related—have the greatest impact would provide actionable guidance for university management when making capital investment decisions.

Future studies should also consider extending the current framework by exploring additional constructs that may influence sustainable competitive advantage in Malaysian private universities, such as University Reputation and Student Satisfaction as mediating variables, and IT Capability as a moderating variable. Incorporating these variables in subsequent research would provide a more comprehensive explanation of how student experience management determinants translate into long-term competitive outcomes.

Policymakers and university management should prioritise investment in campus facilities, development of innovative academic programs, and strengthening institutional communication strategies to enhance student experiences and institutional competitiveness. These measures would support Malaysia's higher education development goals and contribute to the sustainable growth of private universities in an increasingly competitive global education market.

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