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ASSESSING THE IMPACT OF STRATEGIC RESILIENCE ON ORGANIZATIONAL PERFORMANCE: EVIDENCE FROM PRIVATE HIGHER EDUCATION INSTITUTIONS IN MALAYSIA

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Abstract
This study explores the effect of strategic resilience on the organizational performance of private higher education institutions in Malaysia. Using a quantitative research method, data were gathered through a structured questionnaire distributed to top management employees at various private universities. A total of 416 questionnaires were distributed, with 225 completed responses received, resulting in a 54% response rate. Partial Least Squares Structural Equation Modelling (PLS-SEM) was employed to assess the relationship between strategic resilience and organizational performance. The findings indicate that strategic resilience has a significant positive impact on the performance of private universities, enabling them to adapt to market changes and maintain a competitive edge swiftly. Practical implications recommend that universities prioritize resilience-building strategies to boost overall performance. However, the study's cross-sectional design and focus on private institutions limit its generalizability, encouraging future research to examine these dynamics in other sectors.

Keywords: Strategic Resilience, Organizational Performance, Private Institutions, Higher Education, Malaysia

1 Introduction

Strategic Resilience (SR) concepts have become essential for effective overall organizational performance in unstable situations, and sustainability in the dynamic organizational environment. Performance success in Malaysian private universities heavily depends on their ability to navigate and effectively overcome unanticipated challenges. Organizations closely tie this capacity to strategic resilience (SR), which is essential for anticipating, adapting to, and thriving in changing circumstances. As Lyn Chan and Muthuveloo (2021) noted, SR forms the foundation of an organization's ability to remain competitive and successful despite disruptions. It allows organizations not only to anticipate potential disruptions but also to respond swiftly and efficiently. According to Asare-Kyire et al. (2023), strategic resilience involves adjusting to gradual and abrupt interruptions, helping maintain the organization's stability, growth, and long-term sustainability. Therefore, Malaysian private universities' performance success depends on their SR, ensuring they can adapt to challenges and thrive in a dynamic environment.

The importance of institutions' ability to succeed and remain competitive is increasing in Malaysia's rapidly evolving higher education landscape, which is experiencing significant transformations in various aspects. The sector is undergoing changes driven by shifting government policies that affect funding systems, accreditation standards, and institutional governance (Bajunid & Wong, 2016). Simultaneously, student expectations are evolving, with a growing demand for flexible, technology-driven education and personalized learning experiences that align with global trends (Krishnaswamy et al., 2019; Ibrahim et al, 2024; Al-refaei et al., 2024). Additionally, socioeconomic factors such as income inequality and rising education costs complicate the dynamics within higher education, necessitating a more adaptable approach (Broer et al., 2019). Furthermore, the labor market is witnessing significant changes as emerging industries and technological advancements create new skill demands that universities must prioritize to ensure their graduates remain competitive (Koda

& Yuki, 2013; Garwe, 2016; Zumrah et al, 2021; Al-refaei et al, 2023; Ateeq et al., 2024; Al-refaei et al, 2024b).

Malaysian private institutions should give the most incredible attention to sustaining their competitiveness and achieving high educational standards in order to generate graduates who have not just knowledge but also the ability to achieve success in an international marketplace (Krishnaswamy et al., 2023; Al-refaei et al., 2024). Effective utilization of human resources is crucial for institutions to improve strategic resilience (SR) and organizational performance to respond to the fast-changing educational and labour market environment (Assaad et al., 2018). Given the insufficient performance of certain private universities, as emphasized by Indrawati and Kuncoro (2021), attention must be given to resolving this issue. Educational institutions can establish their position within the highly competitive education industry by prioritizing enhancing performance. By adopting this proactive strategy, education institutions can effectively address current demands, including changing student expectations and industry needs (Izumi et al, 2021; Baydarova, 2023). Strategic resilience would ultimately enhance Malaysia's global competitiveness and guarantee the long-term sustainability of the country's higher education system.

Strategic resilience is crucial in improving university performance as it allows companies to effectively absorb, react to, and take advantage of unexpected situations. Organizational resilience is a characteristic inherent in the routines and processes of an organization that enables it to recover from uncertainty and challenges, hence potentially fostering innovation and increasing growth (Lengnick-Hall & Beck, 2011). Organizations with solid resilience capabilities can fully recover from unexpected events and have the power to transform and survive by generating new opportunities (Lengnick-Hall, & Beck, 2016; Izumi et al, 2021). The level of resilience organizations exhibit varies from basic survival to recovery and, at its highest point, to significant transformation, enabling them to convert obstacles into enduring competitive advantages.

Despite the increasing demand for adaptive capabilities, the intricate link between organizational success and strategic resilience in Malaysian private universities remains insufficiently understood. These institutions must contend with both a competitive academic landscape and external pressures, yet the specific pathways through which strategic resilience influences their success are under-researched. This knowledge gap limits the ability of private universities to leverage strategic resilience to sustain growth, enhance academic quality, and address their stakeholders' evolving expectations (Ateeq et al., 2024). This study aims to address this gap by investigating the impact of strategic resilience on the performance of Malaysia's private higher education institutions.

2   Literature Review

Organizational strategic resilience has been a focal point in management studies, particularly in navigating complex and uncertain business environments. Vidal et al. (2014) identified eleven key elements that enhance organizational strategic resilience, with leadership and change capacity being central. The study underscores the critical role of adaptive leadership, fostering innovation, and promoting a culture of continuous learning, which together improve organizational flexibility and agility. Implementing these factors equips organizations to better prepare for, respond to, and overcome crises, enhancing their ability to thrive in an ever-evolving business environment. It has emphasized that fostering a culture of innovation and ongoing learning can improve adaptability and strategic agility (Alshuhumi et al, 2024). However, the link between employee well-being, performance, and resilience is further explored by Cantante-Rodrigues et al. (2021). Their research highlights the detrimental

impact of burnout on organizational resilience, noting that employees suffering from burnout are less capable of handling stress and adversity. This suggests that fostering a supportive and healthy work environment is essential for enhancing overall organizational resilience.

Khanzad and Gooyabadi's (2021) study examines the effect of strategic resilience on small and medium-sized enterprises (SMEs) during the COVID-19 pandemic. The research highlights that leadership, innovation, and strong stakeholder relationships are critical components that enable SMEs to adapt and sustain operations during crises. By managing financial risks and fostering community ties, strategic resilience is shown to significantly improve organizational performance, particularly in times of crisis, illustrating its essential role in maintaining operational stability and growth. In a similar vein, Pertheban et al. (2023) found that proactive resilience strategies had a substantial positive impact on the performance of Malaysian manufacturing SMEs. The study demonstrated that SMEs which proactively managed risks, adapted to shifting market dynamics, and built strong relationships with suppliers and customers experienced better financial outcomes, operational efficiency, and competitiveness. Furthermore, proactive resilience strategies helped these SMEs differentiate themselves, enhance their brand reputation, and increase market share and profitability both domestically and internationally.

Vargas-Hernández (2022) adds to this body of knowledge by emphasizing the role of innovative adaptation in fostering strategic resilience. According to the study, firms that proactively innovate and adapt to changing market conditions are better positioned to enhance their performance, competitiveness, and long-term resilience. Kyrdoda et al, (2023) argued that by adopting flexible resilience techniques and embracing innovation, organizations can maintain their relevance and competitiveness even in the face of adversity. However, collectively, these studies underscore the importance of strategic resilience in enhancing organizational performance, adaptability, and sustainability. Whether through leadership, innovation, or proactive risk management, resilience strategies provide a crucial framework for organizations to navigate crises and maintain competitiveness in an increasingly volatile business landscape. Therefore, based on the previous discussion, the current study assumed that, strategic resilience positively affects organizational performance in an unstable environment, therefore: strategic resilience positively affects organizational performance of private higher education in Malaysia

3   Methodology

This study aims to examine the impact of strategic agility on the performance of private higher education institutions in Malaysia, employing a quantitative approach through a structured questionnaire for data collection. The sample consisted of top management from various private higher education institutions, selected using a random sampling technique to ensure representation. Prior to distribution, the researcher obtained official support from Lincoln University College, which facilitated the dissemination of the questionnaire. Both the letter of support and the cover letter outlined the study's purpose, emphasizing its focus on assessing the influence of strategic agility on organizational performance. Questionnaires were sent to the human resource departments of the participating institutions, as they are responsible for internal communication and distributing surveys to relevant top management personnel. A total of 416 questionnaires were distributed across Malaysia's private universities, with data collection spanning six months. To improve response rates, the researcher included a cover letter guaranteeing anonymity and confidentiality. Furthermore, the researcher, along with research assistants, made personal visits to retrieve the completed

surveys from the human resource departments or respondents. These efforts resulted in the successful return of 225 completed questionnaires.

4   Measure:

Strategic Resilience: Resilience, as defined in the literature, refers to the ability to react more promptly, recuperate more swiftly, or devise more unconventional approaches to conducting business when faced with adversity, surpassing the capabilities of others (Linnenluecke, 2017). Strategic resiliencein this study was measured by 8 items developed by Kurniawan et al. (2017); Lee and Rha (2016), and adapted from (Pertheban et al., 2023). Instances of these items include sentences such as "Sharing academic-related challenges for continuous improvement", and" Identifying significant opportunities to enhance academic activities. A Likert scale consisting of five points was utilized, ranging from 1 (strongly disagree) to 5 (strongly agree). The reliability of the scale, as indicated by Cronbach's alpha, was 0.87 as shown in the previous study (Pertheban et al., 2023).

Organizational Performance: organizational performance was assessed using a 12-item scale originally developed by Lin (2014), and later utilized in studies such as Sengottuvel (2017) and Shea et al. (2023). The evaluation covered four dimensions: financial performance, operational performance, customer satisfaction, and learning and growth, with three items allocated to each category. Instances of these items include sentences such as "In my institution, the net benefit was increased", "In my institution, added economic value services improved",. A five-point Likert scale (1 = strongly disagree, 5 = strongly agree) was used for responses. The reliability of the scale, as indicated by Cronbach's alpha, exceeded 0.70 (Shea et al., 2023).

5   Data Analysis and Results

5.1   Descriptive Analysis

The profiles of the respondents were analysed through descriptive statistics, emphasizing their gender, age, education, position, and experience, as detailed in Table 1. The data indicates that 48.1% of respondents identified as male, whereas 51.9% identified as female. The predominant age group was 31-35 years, comprising 21.2% of the total, followed by those aged above 41 years at 20.8% and individuals aged 26-30 years at 20.3%. The majority of people (28.8%) had master's degrees, followed by PhDs (25.5%) and bachelor's degrees (25.0%). Approximately 20.8% possessed professional degrees, indicating a range of educational backgrounds. The predominant job title among respondents was director (30.2%), followed by vice-chancellors (25.9%), managers (22.2%), and chancellors (21.7%). This indicates that a majority of respondents occupied senior positions with decision-making authority. In terms of work experience, 23.1% of respondents reported having 5-10 years of experience, while 21.2% had over 30 years. Additionally, 19.3% had 10-20 years, 19.3% had less than 5 years, and 17.0% had 20-30 years of experience, indicating a diverse range of expertise among the participants.

Table 1: The Profile of Respondents

	Category	Number	Percentage
Gender	Male	102	48.1
	Female	110	51.9
Age	Less than 26	39	18.4
	26-30	43	20.3
	31-35	45	21.2
	36-40	41	19.3

	above 40	44	20.8	
Education	Bachelor's Degree	53	25.0	
	Professional Degree	44	20.8	
	Master	61	28.8	
	PhD	54	25.5	
Position	Chancellor	46	21.7	
	Vice Chancellor	55	25.9	
	Director	64	30.2	
	Manager	47	22.2	
Experience	Less than 10	41	19.3	
	10-20	49	23.1	
	20-30	41	19.3	
	30 -40	36	17.0	
	Above 40	45	21.2	

5.2 PLS-Structural Equation Path Model

The assessment of a PLS-SEM path model comprises two principal phases: initially, the evaluation of the measurement (or outer) model, succeeded by the analysis of the structural (or inner) model (Al-Zubaidi et al., 2024; Becker et al., 2023). Prior to initiating this procedure, researchers must ascertain whether the measuring model is formative or reflective (Abdulsamad et al., 2020; Becker et al., 2023; Jandab et al., 2019; Ringle et al., 2020). This study utilises the reflective measurement model. The model's validation is performed via confirmatory factor analysis (CFA), assuring adherence to particular cut-off values to establish its reliability and validity (Al-Zubaidi et al., 2022; Ringle et al., 2023). Upon validation of the measurement model, attention transitions to evaluating the structural model and the presented hypotheses.

5.2.1 Measurement Model Assessment

The measurement model, often called the outer model, is evaluated through several key processes, including the assessment of item reliability, internal consistency reliability, and both convergent and discriminant validity (Hair & Alamer, 2022; Ringle et al., 2023). The evaluation of item reliability involves examining the outer loadings of individual items, which are retained if their values exceed 0.708, corresponding to an average variance extracted (AVE) of over 0.50 (Abdulhadi et al., 2022; Al-Zubaidi et al., 2023; Jandab et al., 2020). However, Hair et al. (2019) suggest that loadings between 0.40 and 0.70 are acceptable if they still contribute to an AVE above 0.50. In this study, all items met these criteria, ensuring an AVE greater than 0.50 (see Table 2).

Table 2: Factor Loadings, Reliability, and Validity

Construct	Item	Factor Loading	VIF	α	CR	AVE
OP	**OP1**	0.792	2.421	**0.962**	**0.966**	**0.706**
	OP2	0.874	3.652			
	OP3	0.844	3.264			
	OP4	0.846	3.090			
	OP5	0.844	3.150			
	OP6	0.845	3.017			
	OP7	0.838	2.937			
	OP8	0.822	2.676			

	OP9	0.859	3.390			
	OP10	0.835	2.935			
	OP11	0.844	3.193			
	OP12	0.836	2.999			
S. RES	S. RES1	0.827	2.467	**0.926**	**0.939**	**0.66**
	S. RES2	0.811	2.347			
	S. RES3	0.794	2.133			
	S. RES4	0.822	2.493			
	S. RES5	0.834	2.607			
	S. RES6	0.808	2.264			
	S. RES7	0.786	2.151			
	S. RES8	0.814	2.373			

Internal consistency reliability measures how consistently the items in a measurement tool represent the same construct (Abdulhadi et al., 2023; A. M. Al-Sharif et al., 2023). This is typically evaluated using Cronbach's alpha and composite reliability (Becker et al., 2023; Hair Jr et al., 2022; Ringle et al., 2023). While Cronbach's alpha assumes all items have equal reliability, which may not always be accurate (Ringle et al., 2020), composite reliability is preferred in PLS-SEM for a more precise assessment. A composite reliability scores above 0.70 is considered acceptable for exploratory research (Becker et al., 2023; Ringle et al., 2023). In this study, the composite reliability scores ranged from 0.939 and 0.966, all of which exceed the minimum required threshold, thus confirming the model's internal consistency (see Table 2).
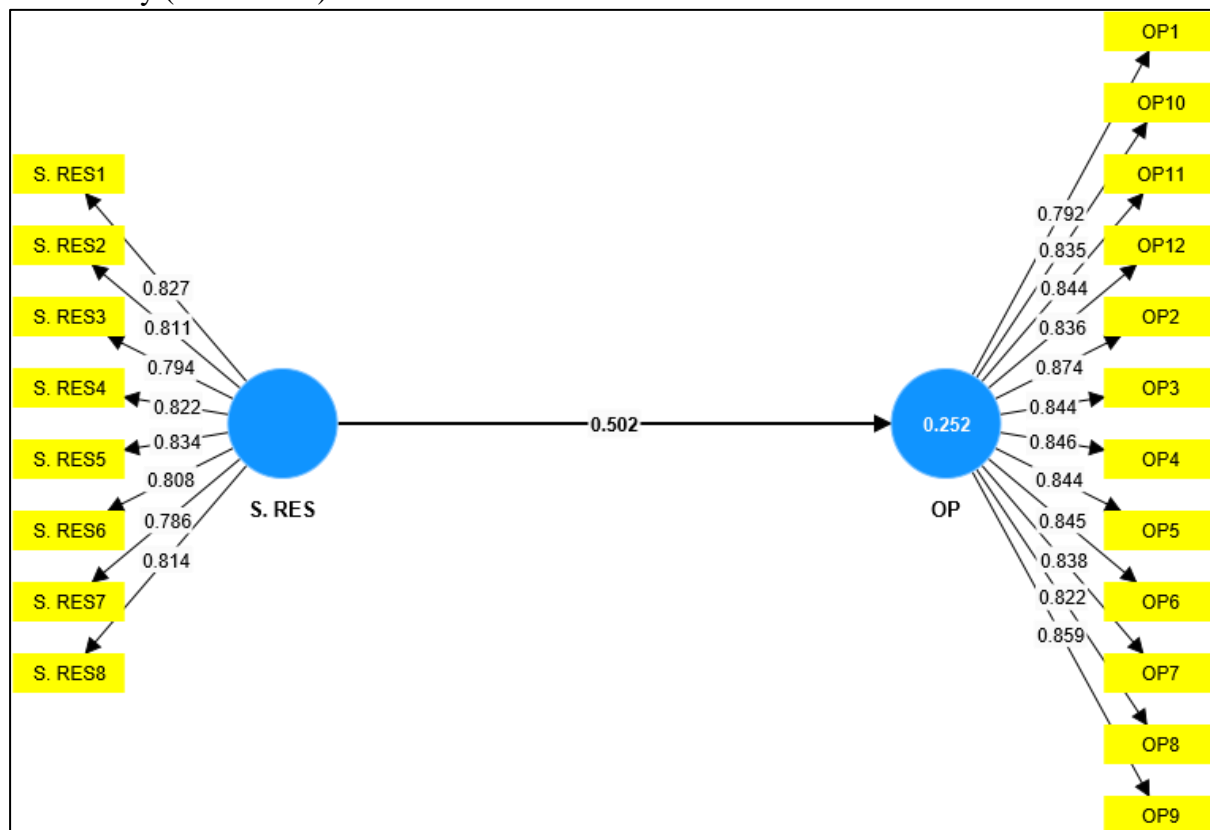

Figure 1: Evaluation of Measurement Model

Convergent validity ensures that the items in a study accurately measure the intended construct and are appropriately correlated with related constructs (Abdulhadi et al., 2023; Al-Refaei et al., 2024; A. Al-Sharif et al., 2023). This is commonly assessed using the AVE, where values of 0.50 or higher indicate that the construct explains a substantial portion of the variance in its indicators (Hair Jr et al., 2022). Following the guidelines of Fornell and Larcker (1981), this study found AVE values exceeding 0.50, confirming both the reliability and validity of the constructs (see Table 2).

Discriminant validity ensures that each construct in a model is distinct from others, preserving their unique characteristics and preventing overlap (Becker et al., 2023; Ringle et al., 2023). It can be assessed using methods like the comparison of indicator and cross-loadings, and the Fornell-Larcker criterion. According to Chin's (1998) method, discriminant validity is confirmed when indicator loadings are greater than their corresponding cross-loadings, as shown in Table 3, where all indicator loadings surpass their respective cross-loadings.

Table 3: Cross Loading

Items	OP	S. RES
OP1	**0.792**	0.371
OP2	**0.874**	0.429
OP3	**0.844**	0.390
OP4	**0.846**	0.416
OP5	**0.844**	0.386
OP6	**0.845**	0.492
OP7	**0.838**	0.385
OP8	**0.822**	0.424
OP9	**0.859**	0.415
OP10	**0.835**	0.431
OP11	**0.844**	0.431
OP12	**0.836**	0.464
S. RES1	0.426	**0.827**
S. RES2	0.395	**0.811**
S. RES3	0.429	**0.794**
S. RES4	0.423	**0.822**
S. RES5	0.389	**0.834**
S. RES6	0.439	**0.808**
S. RES7	0.349	**0.786**
S. RES8	0.399	**0.814**

The Fornell-Larcker criterion (Fornell & Larcker, 1981) offers another evaluation method by comparing the squared correlations between constructs with the average variance extracted (AVE) for each construct. As per Hair Jr et al. (2022), the square root of the AVE should exceed the correlations between constructs. In Table 4, AVE values range from 0.706 to 0.660, all higher than the correlations between components, confirming discriminant validity according to the Fornell-Larcker criterion (Ringle et al., 2023).

Table 4: The Results of Fornell-Larcker Method

Dimensions	AVE	OP	S. RES
OP	**0.706**	**0.840**	
S. RES	**0.660**	0.502	**0.812**

5.2.2 Structural Model Assessment

5.2.2.1 Evaluation of the Structural Model

To evaluate the structural model, this study uses a standard bootstrapping technique via Partial Least Squares (PLS) with a subsample of 5,000, applying a two-tailed test at a 0.05 significance level to determine the significance of the path coefficients (Ali et al., 2023; Becker et al., 2023; Ringle et al., 2023). According to the recommendations of Al-Zubaidi et al. (2024); Becker et al. (2023); Hair et al. (2021); Ringle et al. (2023), the evaluation process must meet several criteria. These include verifying the statistical significance of the hypothesized relationships within the model and examining the R-squared (R^2) and Q-squared (Q^2) values to assess the model's predictive relevance.

The analysis of the structural model, focusing on direct effects, was conducted to address the research questions and test the hypotheses. According to the guidelines of Hair Jr et al. (2017), a significant direct relationship between variables is indicated when the p-value is less than 0.05 ($p < 0.05$, corresponding to a 95% Confidence Interval) and the t-value is greater than 1.96 ($t > 1.96$ for a two-tailed test). The results demonstrate that Strategic Resilience (S. RES) has a statistically significant positive effect on the performance of private universities (OP) in Malaysia, with a path coefficient of ß = 0.502, t = 7.589, and p < 0.001. As the p-value does not exceed the 0.05 threshold, the relationship between S. RES and OP is considered significant, thus supporting the study's hypothesis.

Table 5: Results of Direct Relationship (Hypothesis Test)

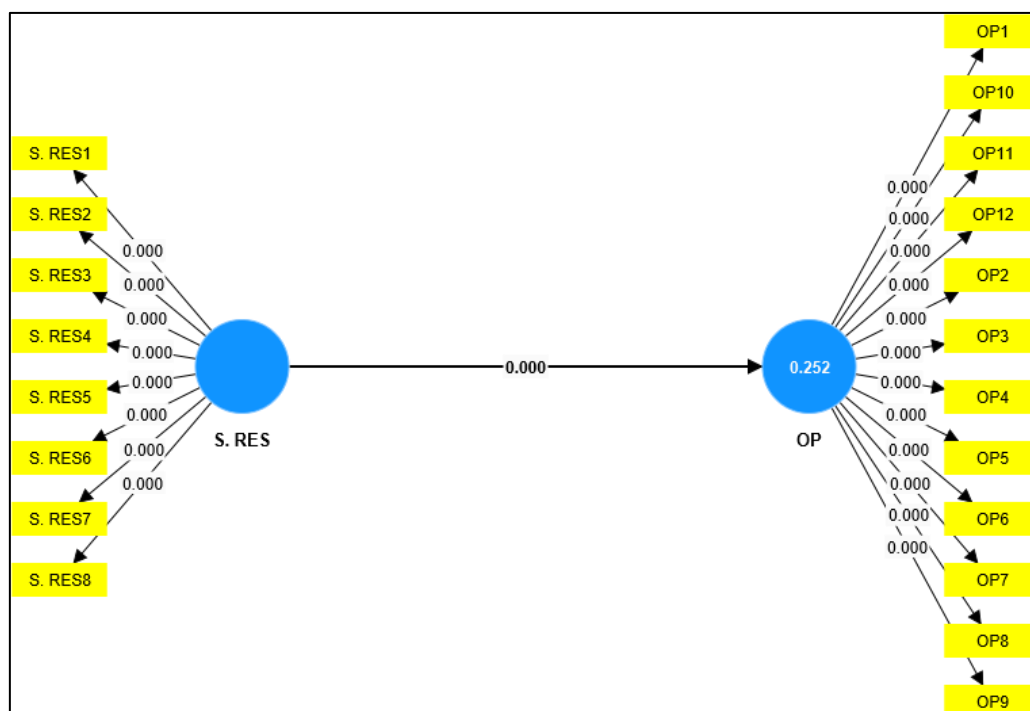| H	Relationships	Path Coefficient	STDEV	T statistics	P values
H1	S. RES -> OP	0.502	0.066	7.589	0.000

Figure 2: The Results of the Structural Model

5.2.2.2 Coefficient of determination

Interpreting R^2 values depends on the study's context and the complexity of the model being tested (Alghamdi et al., 2021b; Ringle et al., 2023). Falk and Miller (1992) considered an R^2 value of at least 0.10 acceptable, while Chin (1998) classified R^2 values of 0.67, 0.33, and 0.19 as indicators of strong, moderate, and weak relationships, respectively. Cohen (1988) provided different thresholds for PLS-SEM, categorizing R^2 values of 0.26, 0.13, and 0.02 as substantial, moderate, and weak. Hair and Alamer (2022) suggested benchmarks of 0.75, 0.50, and 0.25 for substantial, moderate, and weak explanatory power of endogenous latent variables. The R^2 values in Table 6 show that the independent variable, Strategic Resilience (S. RES), explains 25.20% of the variance in the performance of private universities. These R^2 values are within the acceptable range suggested by Falk and Miller (1992) and align with Chin's (1998); Hair Jr et al. (2022) criteria as weak, while according to Cohen (1988), the R^2 value of 25.20 in this study is considered moderate.

Table 6: Coefficient of determination (R^2), and Construct Cross- Validated Redundancy

Coefficient of Determination (R^2)		
Endogenous	**R^2 Value**	**Rating**
SMEs-PERF	0.252	**Moderate***

* Chen & Myagmarsuren (2013)

5.2.3 Assessing the Model's Predictive Relevance (Q^2)

To evaluate a model's effectiveness, it is essential to consider predictive relevance (Q^2) alongside R^2 (Alghamdi et al., 2021a; Jandab et al., 2019). The blindfolding technique, applied to independent variables with reflective indicators, is a commonly used method for assessing predictive relevance (Abdulsamad et al., 2021; Alzoraiki et al., 2023). Cross-validated redundancy examines both the measurement and structural models, while cross-validated communality focuses only on the measurement model (Al-refaei et al., 2023; Hair et al., 2021). A Q^2 value greater than zero for a dependent variable indicates that the model has predictive relevance, with higher Q^2 values reflecting greater relevance (Akter et al., 2011; Becker et al., 2023; Ringle et al., 2023; Sarstedt et al., 2022). The Stone-Geisser test calculates Q^2 using the formula $Q^2 = 1 - SSE/SSO$ (Akter et al., 2011). In this study, the blindfolding method, with a d-value of 7 as recommended by Ringle et al. (2023), was employed to assess Q^2 for organizational performance. The cross-validated redundancy Q^2 value for organizational performance (OP) was found to be 0.174, as shown in Table 7, indicating that the model has a satisfactory level of predictive accuracy.

Table 7: Coefficient of determination (R^2), and Construct Cross- Validated Redundancy

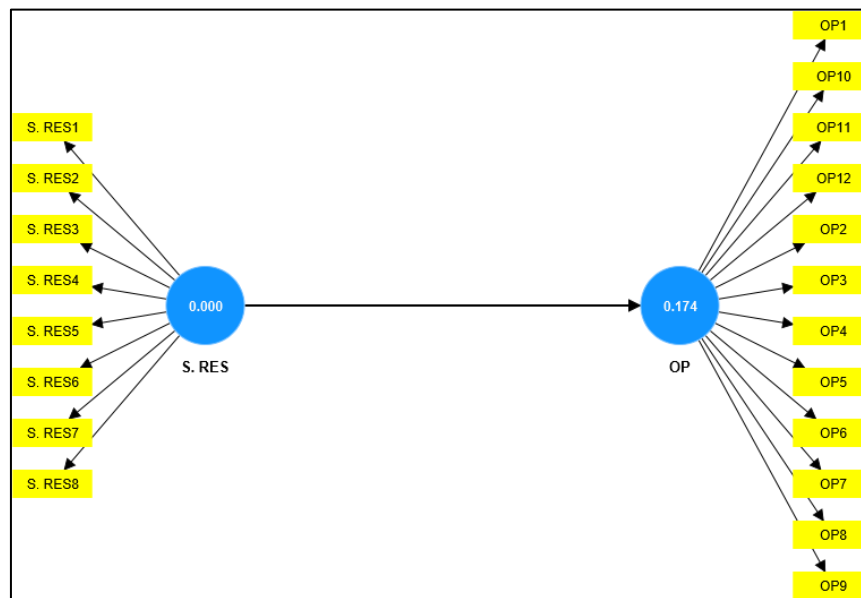| Construct Cross- Validated Redundancy				
Variable	**Type of Variable**	**SSO**	**SSE**	**Q2(=1-SSE/SSO)**
OP	**Endogenous**	**2544.000**	**2101.338**	**0.174**

Figure 3: The Predictive Relevance Model (Q2) (Construct Cross-Validated Redundancy).

6   Discussion

This study proposed that strategic resilience has positive impacts on organizational performance in private higher education in Malaysia. The results of the data obtained from respondents and analysis previously revealed that, strategic resilience has insignificant impacts on organizational performance in private higher education in Malaysia. The possible reason for this finding is that. When private universities adopt resilience as a strategic approach in dealing with and adapting to the unstable external environment, it can enhance universities' abilities and assist them in effectively addressing issues within unexpected and uncertain work contexts (such as COVID-19), which enables them to continue improving their organizational performance and maintain relevance, competitiveness (Lee & Rha, 2016; Wangenge-Ouma, & Kupe, 2022; Taghavy et al, 2024). private universities remain relevant, and competitive, therefore adopting resilience as a strategic approach may in the appropriate level that can affect the performance significantly.

In the context of private universities, strategic resilience may play a pivotal role in streamlining various processes, including procurement of educational resources, managing student services, and facilitating academic operations. Enhanced resilience allows universities to coordinate more effectively with suppliers, ensuring timely delivery of essential materials, textbooks, and equipment necessary for academic programs (Asibey et al, 2023). This improved coordination leads to better inventory management, reduces stockouts, and enhances the overall efficiency and performance of the university. Other ways, when private universities do not adopt resilience as an important strategic planning, may have no significant effect on all previous aspects, and then overall performance.

The finding of the current study of the effect of strategic resilience on organizational performance is consistent with previous studies that found that strategic resilience has dramatically enhanced the overall performance of organizations, such as Pertheban et al. (2023), which found that strategic proactive resilience found has direct positive effect on organizational performance in SEM in Malaysia, and an indirect effect through the mediating role of ambidextrous capabilities. The current result aligns with Khuan's (2024) research, which revealed that strategic proactive resilience guarantees long-term viability and performance under unstable circumstances. The current study may differ from previous

studies in that it was conducted in different sectors, cultures, and economies. It may be challenging to generalize to previous studies in different countries, such as Malaysia.

7   Practical implication

First, recognizing the value of strategic resilience highlights the need for higher education institutions in Malaysia to emphasize the development of strategies that promote resilience. This entails the creation of strong organizational frameworks, procedures, and mechanisms that can successfully endure and adjust to external obstacles and uncertainties (Munir et al, 2020). By allocating resources to strategic resilience, higher education institutions can strengthen their ability to sustain stability and continuity in the presence of unexpected events, ultimately leading to enhanced organizational performance (Pertheban et al.,2023).

Furthermore, the practical implication of this study indicates that higher education institutions need to focus on the development of a resilient culture among their staff and stakeholders. This entails advocating for behaviors that prioritize resilience, such as adaptation, teamwork, and proactive problem-solving (Okumu, 2023). Leadership is crucial in promoting a culture that encourages resilience-building initiatives by offering assistance, direction, and resources (Cameron, Quinn, DeGraff, & Thakor, 2022; Nasser et al, 2024). By fostering a robust organizational culture, higher education institutions can enable their staff to skillfully manage obstacles and seize advantageous situations, therefore bolstering the overall performance of the business.

8   Limitation

The study has several limitations that should be acknowledged. Firstly, data were collected at a single point in time using a cross-sectional design methodology. This approach raises concerns regarding the issue of reverse causality, as causality cannot be determined definitively (Kloutsiniotis & Mihail, 2018). To address this limitation, future research could employ a longitudinal study design, allowing for the examination of the dynamic influence of strategic resilience on organizational performance over time. Longitudinal studies offer a stronger basis for making causal inferences and testing the hypothesized relationships more rigorously. Furthermore, future research could explore additional mediating variables, such as innovation capability, or work engagement, or a moderator of using electronic service in the relationship between strategic resilience and organizational performance (Sabahi & Parast, 2020; Al-Muhrami et al, 2021; Kyrdoda et al, 2023). Investigating these variables could offer a more comprehensive understanding of the mechanisms through which SR and SA impact organizational outcomes.

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