International Journal of Management in Education

ISSN online: 1750-3868 - ISSN print: 1750-385X
https://www.inderscience.com/ijmie

Better autonomy for better performance: the role of strategic planning capability mediating the relationship between financial autonomy and organisational performance in Indian private universities

Abdullah Yahia Al Gharsi, R. Nirmala, Mugaahed Abdu Kaid Saleh

DOI: 10.1504/IJMIE.2024.10059852

Article History:

Received:	02 February 2023
Last revised:	02 August 2023
Accepted:	03 August 2023
Published online:	01 December 2023

Better autonomy for better performance: the role of strategic planning capability mediating the relationship between financial autonomy and organisational performance in Indian private universities

Abdullah Yahia Al Gharsi*

Goa Business School,
Goa University,
Panaji, Goa, India
Email: mba.abdull@unigoa.ac.in
*Corresponding author

R. Nirmala

Goa Business School,
Goa University,
Panaji, Goa, India
Email: nirmala@unigoa.ac.in

Mugaahed Abdu Kaid Saleh

CMS Business School,
Jain University,
Bangalore, India
Email: mugaahed@yahoo.com

Abstract: Despite the essential theoretical role of financial autonomy, relatively little research has been discovered exploring the effect of financial autonomy on strategic planning capability and organisational performance, especially in Indian private universities. Thus, the current study contributes to the literature on higher education by investigating the impact of strategic planning capability on the organisational performance of Indian private universities caused by financial autonomy. Data were collected from 141 leaders of private universities in India using a survey. By using Partial Least Square Structural Equation Modelling (PLS-SEM), the findings of this study reveal that financial autonomy positively influences strategic planning capability and organisational performance. Moreover, the results show that strategic planning capability affects organisational performance positively. Further, strategic planning capability partially mediates the link between financial autonomy and organisational performance. The implications and future directions of this study's findings are also discussed.

Keywords: financial autonomy; strategy planning capability; organisational performance; private universities in India.

Reference to this paper should be made as follows: Al Gharsi, A.Y., Nirmala, R. and Saleh, M.A.K. (2024) 'Better autonomy for better performance: the role of strategic planning capability mediating the relationship between financial autonomy and organisational performance in Indian private universities', *Int. J. Management in Education*, Vol. 18, No. 1, pp.22–45.

Biographical notes: Abdullah Yahia Al Gharsi is a PhD student at the Goa School of Business, Goa University. His research interests include strategy, sustainability, HR and higher education policies. His background is in the Higher education field of research, and he has gained experience in higher education policies.

R. Nirmala is an Associate Professor at the Goa School of Business, Goa University. Her research interests include marketing, HR and sustainability.

Mugaahed Abdu Kaid Saleh is a Yemeni research fellow with a PhD degree in Business Administration from Kuvempu University, India. Currently he is a Post Doctorate Fellow at CMS Business School, Jain University, Bangalore, India. His research interest includes general management, sustainable development, entrepreneurship, SMEs development, entrepreneurial empowerment and business venturing.

1 Introduction

The multifaceted mandate of universities encompasses not only their traditional roles in research and teaching but also extends to a third mission devoted to fostering social, cultural and economic development (Della Volpe and Esposito, 2020). Consequently, universities emerge as prominent catalysts significantly influencing diverse facets of a nation's socioeconomic progress (Compagnucci and Spigarelli, 2020). The autonomy of universities exerts a profound influence on societies by affording them the capacity to adapt and respond to the exigencies, requisites and focal points of their stakeholders. This influence emanates from the cultivation of an academic milieu characterised by freedom of thought and creativity, thereby fostering a climate conducive to excellence and innovation in both research and teaching endeavours (Xia et al., 2023; Holmén 2022; Mekonnen et al., 2022; Choi, 2019).

Moreover, this prerogative empowers universities to delineate their objectives and devise strategic approaches for resource allocation in pursuit of their designated missions (Askling and Kristensen, 2000; Nguyen and Van Gramberg, 2018; Benneworth et al., 2017). Particularly, within the context of University Autonomy, Financial Autonomy (FA) emerges as a pivotal dimension critical for the endurance and expansion of academic institutions, as it endows them with the capacity to proficiently manage resources and ensure fiscal resilience (Piironen, 2013; Stachowiak-Kudła and Kudła, 2017; Ovchinnikova et al., 2022).

The literature demonstrates how FA contributes to universities' Strategic Planning Capability (SPC) and Organisational Performance (OP) (Estermann et al., 2009; Pruvot and Estermann, 2017). In contrast to public universities, which governments primarily finance, private universities rely on tuition fees paid by students as a central source of revenue in their financial structure (Abu-Rumman and Qawasmeh, 2021; Maun et al., 2022). Therefore, FA is considered essential for private universities in sustaining,

increasing (Carvalho and Diogo, 2018; Teixeira and Amaral, 2001; Guzmán et al., 2022) and making appropriate use of their resources (Jin et al., 2014) and advancing strategic capabilities (Pandey, 2004; Estermann et al., 2011) to achieve more satisfactory performance (Knott and Payne, 2004; Choi, 2019) by meeting rapidly dynamic demands (Dong et al., 2022) in the Higher education competitive market (Qasim et al., 2021). The aspect of FA and SPC among private universities is still under-researched. The present study attempts to explore the effect of FA on OP in the context of private universities in India. Further, the study intends to investigate whether FA directly affects SPC. Moreover, it aims to test the effect of SPC on OP. Finally, it intends to explore whether SPC has a mediating effect in the link between FA and OP of private universities in the current study model.

Given the limited body of higher education literature concerning FA and OP (Enders et al., 2013; Agasisti and Shibanova, 2022), particularly in the private universities' context, studies have yet to attempt to examine the extent to which FA enables private universities to improve their OP. Additionally, there is very scant literature investigating the link between SPC and OP in the field of Higher Education Institutions (HEIs), which is another contribution of the present study. Finally, to date, there is a substantial gap in the body of literature that has addressed the mediating role of SPC in the relationship between FA and OP. As such, the current study is designed to fill this gap.

The study is structures, after the introduction, into literature review, theoretical framework, hypotheses development, methodology, results and discussion.

2 Literature review

2.1 The context of Indian private universities

Indian Higher education is considered the third biggest system worldwide, after USA and China. Generally, Indian universities are categorised into central and state universities as public HEIs, and private and deemed to be universities as private HEIs. There are 54 state universities, 457 state universities, 430 are private universities and 127 are deemed to be universities (UGC). However, the degree of autonomy varies among these different types of universities (Gupta et al., 2023).

Despite their recent emergence, private universities currently account for 40% of the total universities in India.

The remarkable growth of private universities in India during the last two decades is mainly due to the increase in student enrolment (Tukdeo, 2022), the unmet demands for higher education in public universities and their distinguishing features, such as curriculum, teaching-learning methods for skill-enhancement and modern infrastructure facilities (Joshi, 2015; Prathap and Sriram, 2017). They have realised remarkable growth in offering various courses leading to degrees or diplomas focusing on modern fields of learning that offer better job prospects (Joshi, 2015).

In 2002, Sri Rawatpura Sakar International University became the first private university in India after being awarded licenses by the Chhattisgarh government and recognised by the University Grants Commission (UGC) (Varghese and Panigrahi, 2021).

Private universities are owned and run by individuals, foundations, families, companies or religious organisations (Varghese and Panigrahi, 2022). Therefore, they are self-funded and enjoy a high level of FA (Angom, 2021) since they are not being funded

from the government and can freely decide the students' tuition and registration fees (Joshi, 2015).

2.2 Financial autonomy

The concept of FA is significantly essential when it comes to modern universities. It is a key dimension of university autonomy which is widely considered a prerequisite for the survival and development (Enders et al., 2011; Pūraitė et al., 2017; Kohtamäki, 2022). FA is most associated with universities' capacity to generate income from different funding sources (Estermann et al., 2011) to respond to diverse and immense challenges (Sethy, 2021). In addition, FA lies in the availability of resources and the authority to utilise such resources within a general framework of a university's financial rules (Pandey, 2004).

However, FA refers to 'the ability of universities to act as independent financial entities' (Nokkala, 2009). This implies the capacity to make independent decisions concerning financing aspects. Pruvot and Estermann (2017) coined core indicators for measuring FA. According to them, a university is considered autonomous if it has the ability to decide on internal funding allocation, identify the length of the funding period, keep the surplus, borrow money from different sources, build, buy and sell buildings or other facilities, set up the tuition fees for local and international students, determine the salaries of both its academics as well as administrative staff members. However, these indicators are all interdependent.

Based on the above, it can be concluded that private universities enjoy significant FA over public universities as they mainly rely on the tuition and registration fees that are paid by students, in contrast to public universities, which depend on public funds (Lee, 2017; Qasim et al., 2021).

2.3 Strategic planning capability

SPC is considered a core of organisational capabilities that reflects a joint and constant action-oriented approach (Thoenig and Paradeise, 2016; Muneeb, et al., 2022b) for the future operations of organisations (Hughes and Hodgkinson, 2020). Yam et al. (2004) described SPC as 'the ability of an organisation to identify internal strengths and weaknesses and external opportunities and threats, formulate plans under corporate vision and missions and acclimatise the plans to implementation'.

It is evident in the literature that an effective SPC includes scrutinising the internal and external environment to utilise strengths for benefiting from opportunities and minimising weaknesses to avoid threats (Lau et al., 2013; Shafia et al., 2016). Further, it involves identifying the long-term goals and annual objectives stemming from the organisation's vision and mission and developing strategies (Peng and Prybutok, 2015; Hughes and Hodgkinson, 2020). Finally, it encloses establishing initiatives and programs (García et al., 2017) for implementing the established strategies (Yam et al., 2011; Lau et al., 2013).

SPC is crucial for HEIs since it helps them to deal with rapid external changes (Muneeb et al., 2022a) as it depends on internal analysis. Moreover, Universities' SPCs lie to a great extent in how departments, schools, colleges, administrative departments and other different councils are able to implement strategies which were developed based on analysing their environment through well-defined initiatives and programs (Thoenig and Paradeise, 2016). Accordingly, this study measures SPC based on the ability of

private universities to set clear long-term goals and annual objectives, assess the external and internal environment to achieve a good fit between them, develop strategies, initiatives and projects, harness the necessary budget to implement these strategies, and finally evaluate the strategies and take corrective action if needed.

2.4 Organisational performance

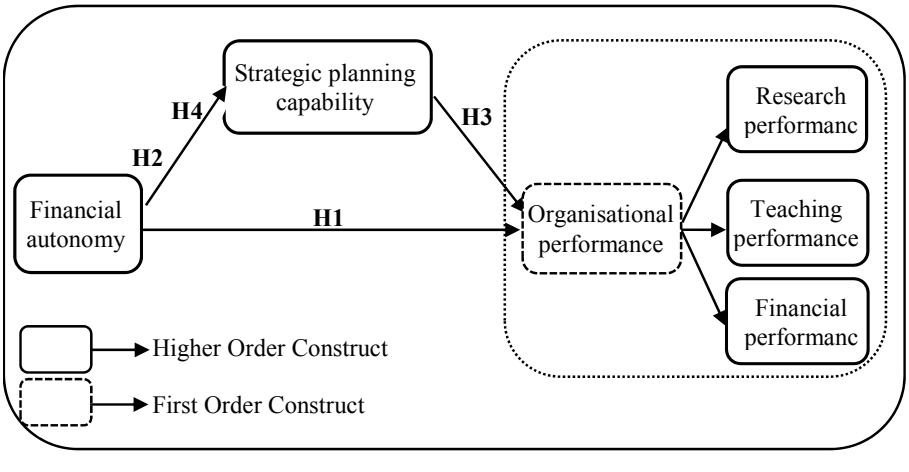
OP is described 'set of financial and non-financial indicators, which offer information on the degree of achievement of objectives and results' (Lebans and Euske, 2006). The OP concept is mainly multidimensional since it relates to assessing different aspects of HEIs (Enders et al., 2013; Rehman and Iqbal, 2020). OP is essential for HEIs and the private HEIs in particular important concept and a key-dependent construct, particularly for private HEIs (Lyn and Muthuveloo, 2019).

In the literature, OP was measured by different approaches. Since HEIs are described as multiple-product organisations (Enders et al., 2013), several indicators have been used to measure the OP of private HELs. For instance, financial and non-financial performance, teaching methods, curriculum development, research publications and citations, the productivity of students, generated income from research grants, consultation and tuition fees (Asif and Searcy, 2014; Rehman and Iqbal, 2020). According to the above, the present study measures OP in three dimensions: research, teaching and financial performance in the Indian context. However, the present research intends to expand the HEIs literature on OP within private universities in India.

3 Theoretical background and hypotheses development

The conceptual research model (see Figure 1) is established in view of the extant literature and the formulation of hypotheses that we empirically examine in the current study.

Figure 1 The conceptual framework



3.1 Theoretical underpinning

This study uses a Resource-based view as a theoretical base to explain how FA influences SPC and OP. Resource-based view assumption is that an organisation competes for valuable resources (Barney, 1991). Such resources are categorised as tangible, intangible and personal-based resources (Grant, 1991). Tangible resources involve physical assets and financial capital, while intangible resources include service or product quality, image and reputation. Finally, personal-based resources encompass assets such as cultural and technical assets. These resources cooperate to produce Organisational capabilities (Barney, 2001). Capabilities, therefore, refer to organisations' abilities to assemble, combine and distribute such resources for the purpose of conceiving, choosing and implementing strategies and thus enhancing their performance (Priem and Butler, 2001).

3.2 Financial autonomy and strategic planning capability

The strategic abilities of universities rely to a great extent on the availability of resources (Alexiadou and Rönnberg, 2022; Kohtamäki, 2022). FA refers to 'the ability and capability of an institution to spend money according to its strategic and operating priorities to achieve its stated goals' (Pandey, 2004). According to Estermann et al. (2011), FA is a prerequisite for universities to run and control their resources and thus increase their capabilities to analyse the internal and external environment and achieve a good fit between them, develop goals and objectives and design and implement adequate strategies. In addition, FA improves the planning capabilities of universities by allowing them to profile and position themselves through strategic planning (Antonowicz and Jongbloed, 2015; Shin et al., 2022) and respond to surrounding circumstances (Pruvot and Estermann, 2017). Therefore, any financial restrictions limit universities' strategic capabilities (Estermann et al., 2011).

In line with the above discussion, the current study argues that SPC can be improved with effective FA. Thus, the following statement is hypothesised:

H1: FA has a positive and significant effect on OP.

3.3 Financial autonomy and organisational performance

FA implies that universities can freely decide on the tuition fees for students, buy, sell and build buildings, borrow from banks, and set up the salaries for them (Nokkala, 2009). The existing literature demonstrates that FA is the most important predictor of universities' OP (Eykamp, 1995; Enders et al., 2011, 2013; Adam, 2020; Agasisti and Shibanova, 2022). Hence, effective FA brings positive improvement to OP in a way that encourages universities to act more effectively and efficiently concerning their resources (Maassen et al., 2017).

However, there have been few attempts to examine the impact of FA on OP – most specifically, Carvalho and Diogo's (2018) study which pointed out that FA positively and significantly affects the universities' OP. Considering the above literature, the researcher's hypothesise that:

H2: FA has a positive and significant effect on OP.

3.4 Strategic planning capability and organisational performance

SPC is one of the essential organisational capabilities (Bhatti et al., 2020) that helps organisations to define and implement specific strategies that are designed to deliver outcomes being in line with vision and mission (Yam et al., 2004).

It is evident that the lack of SPC in HEIs leads to a decline in their quality standards (Fernandes and Singh, 2021) and performance because they become less responsive to external environmental conditions (Muneeb et al., 2022a) and their effects on different areas of their performance (Soliman and Noorliza, 2022). The previous investigation of SPC and OP was centred around manufacturing organisations and thus the HEIs context was neglected. Mixed results are obtained from the literature, on the one hand, Yam et al. (2011) revealed that there is no evidence of the link between SPC and financial permeance. On the other hand, some studies present positive association between them (Lang et al., 2012; Charles, 2014; Koufteros et al., 2014). Further, Ashrafi and Mueller (2015) found that SPC has a positive influence on the firms' financial performance.

However, the present study follows the evidence that argues SPC strongly affects OP for the reasons that organisations with a high SPC can design an explicit direction of the course of action needed to predict and respond to environmental changes and maintain their OP (Muneeb et al., 2022a). Given the above literature, the study hypothesises that:

H3: SPC has a positive and significant effect on OP.

3.5 Mediation effect of strategic planning capacity

FA is generally seen as essential for financial stability and a basis for SPC to influence the activities of universities (Unger et al., 2020). OP is expected to improve as universities become strategically effective and able to self-regulate their financial affairs (Enders et al., 2013). Therefore, FA can provide desirable strategic behaviour to respond to challenges and efficient use of revenue for better research and teaching performance (Goedegebuure et al., 1994; Aghion et al., 2010; Adam, 2020). In the same vein, FA helps universities translate their resources into crafted strategies, initiatives, programs and activities through SPC for fostering high OP (Estermann et al., 2011). Based on this, we predict that FA indirectly affects the OP of private universities through the mediating role of SPC. Therefore, we proposed that:

H4: SPC mediates the relationship between FA and OP.

4 Methodology

The present study is primarily empirical research based on a questionnaire survey to collect the primary data relying on the drop-off and pick-up technique and the online via email technique.

4.1 Participants and procedures

This study employed a non-probability purposive sampling technique for collecting the data from Private universities in India that were identified Using Government Websites (UGC). This study emphasises the perspective of leaders working in Indian private

universities who are part of the management council or the planning board since they were in an excellent position to provide the required information and further because of their broad management perspective and involvement in universities' financial, planning and performance aspects. One leader from each private university was invited to participate in the survey of the current study on behalf of the university. In the end, the survey was sent to 250 leaders, of which 141 questionnaires were obtained with a response rate of 56.4%.

As seen in Table 1, the majority of the leaders were male (72.3%), and (46.8%) are deans of schools. Having experience of more than 15 years is common among respondents (89.4%). (80.1%) of respondents are full professors and 1 pro-vice-chancellor and one registrar.

Table 1 The respondents' demographic characteristics

Variable	*Category*	*Frequency*	*Percentage*
Gender	Male	102	72.3
	Female	39	27.7
Years of Experience	10 to 15 years	15	10.6
	More than 15 years	126	89.4
Administrative Role	Pro VC	1	0.7
	Registrar	1	0.7
	Dean	66	46.8
	Assistant Dean	7	5.0
	Director	8	5.7
	HOD	58	41.1
Designation	Professor	113	80.1
	Associate Professor	22	15.6
	Assistant Professor	6	4.3
	Total	141	100.0

4.2 Measurements

The scales used in this study were extracted from various pre-tested scales. The constructs of this study are operationalised, as seen in Table 2 where FA is measured using seven items developed by Pruvot and Esterman (2017). The participants in the current study were asked to determine the level of FA that their universities enjoy. The SPC construct is measured using 14 items selected from previous studies (Boyd and Reuning-Elliott, 1998; Bailey et al., 2000; Elbanna, 2008, 2013; Elbanna et al., 2016). Respondents were requested to specify their views about a set of items that measure the SPC of universities. Finally, OP construct is measured using 12 items based on existing measures (Cameron, 1978; Chen et al., 2009; Zangoueinezhad and Moshabaki, 2011; Asif and Searcy, 2014) where respondents are asked to specify the extent their universities achieved in research, teaching and financial performance indicators over the previous three years.

Table 2 The survey scales

Constructs	*Items labels*	*Description*
Financial autonomy	FA1	Our university has no restrictions on allocating its funding.
	FA2	The length of funding is more than one year.
	FA3	The ability to keep surplus.
	FA4	The ability to borrow money without restrictions.
	FA5	the ability to own/sell buildings without restrictions.
	FA6	Our university has the ability to charge tuition fees for Indian and non-Indian students.
	FA7	Our university has the capacity to decide on the salaries of senior academic and administrative staff.
Strategic planning capability	SPC1	The availability of clear long-term goals.
	SPC2	The availability of annual objectives.
	SPC3	The ability to assess the external environment.
	SPC4	The ability to assess the internal environment.
	SPC5	The ability to achieve a good fit between the external environment and the internal capabilities.
	SPC6	The ability to meticulously assess many alternatives when deciding on strategies.
	SPC7	The ability to develop strategies gradually to respond to the need to change.
	SPC8	The ability to develop specific initiatives and projects to put our strategic plan into action.
	SPC9	The availability of an annual budget to strongly support the objectives and priorities established in the strategic plan.
	SPC10	The ability to use performance measures to track the implementation of initiatives and projects called for by the strategic plan.
	SPC11	The ability to take corrective actions based on reported performance measures.
Research performance	RP1	The number of research publications.
	RP2	The number of research projects obtained.
	RP3	The percentage of our university's faculty attending conferences and seminars.
	RP4	The number of our university's faculty members are represented on editorial boards of major journals in the field.
Teaching performance	TP1	The number of our university's faculty members who receive awards for teaching.
	TP2	The average subjects per course offered.
	TP3	The number of new courses offered.
	TP4	The number of courses incorporating new technology introduced.
Financial performance	FP1	The income generated from research projects.
	FP2	The income generated from tuition.
	FP3	The total teaching and research cost.
	FP4	The grants/endowments garnered.

5 Data collection and analysis

The data was abstained via a self-administered questionnaire, where university leaders were approached in person or through email. The questionnaire is structured into two sections, basic demographic information, and statements to measure FA, SPC and OP. The research tool used five-point Likert scale for collecting responses.

In order to avoid any chances of bias in the data, the questions were shuffled in the questionnaire. To analyse the collected data of the current study, Partial Least Square-Structural Equation Modelling (PLS-SEM) is adopted to explore and test the theoretical model of the current study and test its hypothesis. PLS-SEM is chosen due to its robustness regarding small sample size and normality violation, which is a rooted debate among scholars when it comes to Likert scale data (Hair et al., 1998; Cohran et al., 2010).

5.1 Common method variance

In survey-based research, Common Method Bias (CMB) is regarded as a critical concern because the data are collected from point-in-time (Podsakoff et al., 2003). In the current study, two separate statistical techniques were employed to ensure that the data had no issues relating to CMB. The first technique used was Harman's single factor (1976) to identify whether a single factor explains the major part of the variance. Accordingly, all the indicators of this study were placed in one extracted factor. The results revealed that the variance extracted from the unrotated single factor is 37.01% of the total variances, which is below the threshold of 50.0%, showing that CMB is not a matter of great concern in the data. The second test conducted is the Full Collinearity Test (FCT) (Kock and Lynn, 2012; Kock, 2015) to find out whether the model of this study is free or contaminated by common method bias grounded to Variance Inflation Factors (VIFs).

As seen in Table 3, the FCT results revealed that all constructs' VIF values are below the maximum limit value of 3.3. This indicates that the model of the current study can be regarded as free from CMB. Given that multicollinearity assessment was performed utilising PLS algorithms, the reporting of the tolerance threshold value is deemed unnecessary.

Table 3 Full collinearity test

Constructs	*VIF*	*Cut-off value*
Financial autonomy	1.400	
Strategy planning capability	1.259	
Research performance	1.263	< 3.3
Teaching performance	1.858	
Financial performance	1.782	

5.2 Non-response bias

Non-Response Bias (NRB) is a concern in cross-sectional surveys (Ramke et al., 2018). Hence, the NRB test is used as a rigorous approach to detect response bias by identifying whether early and late respondents answer a questionnaire in the same systematic way (Lewis et al., 2013; Lindner et al., 2001). In the current study, a comparison of early and late respondents was employed through the independent-sample *t*-test, in line with the

recommendations of Armstrong and Overton (1977). The results revealed no statistical difference at the significance level of 0.05, indicating no major concern regarding NRB.

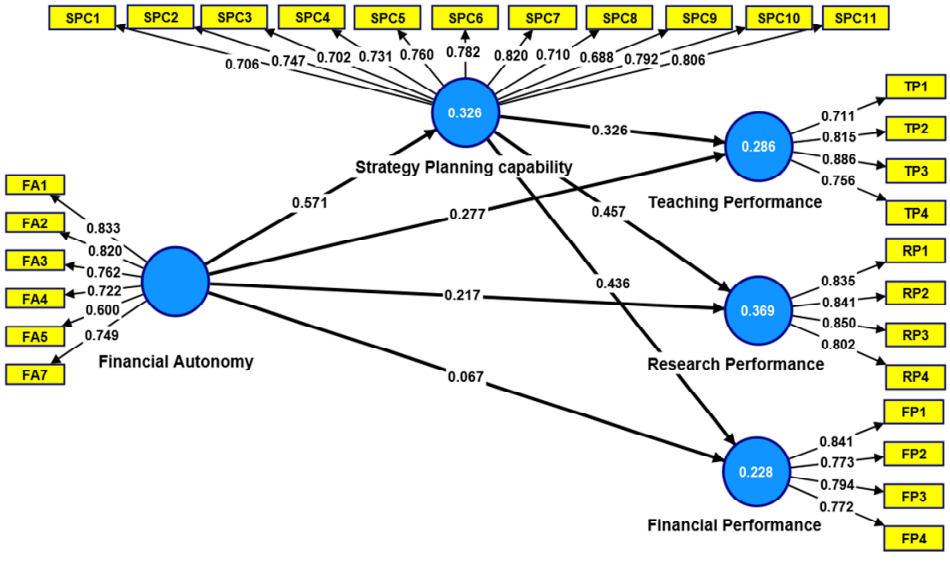
5.3 Assessment of measurement model

In the current study, PLS-SEM was employed in order to evaluate both convergent reliability and discriminant validity of the First-Order Construct (FOC) and Second-Order Construct (SOC). Convergent validity refers to 'the extent to which the construct converges to explain the variance of its items' (Hair et al., 2019). The metrics applied to evaluate the convergent validity involve factor loadings, Cronbach's Alpha (α), MacDonald Omega (ω), Composite Reliability (CR), Dijkstra and Hensler's rho_A (rho_A) and Average Variance Extracted (AVE). Discriminant validity is described as 'the extent to which a construct is empirically distinct from other constructs in the structural model' (Hair et al., 2019). The metrics used to assess the discriminant validity of the first-order and second-order construct include Cross-loadings, Fornell & Larcker criterion and Heterotrait-Monotrait (HTMT) ratio.

5.3.1 Measurement model assessment of first-order constructs

As seen in Table 4 and Figure 2, the results show that α-values range from 0.802 to 0.934, while CR values range from 0.872 to 0.943. This implies that all the α and CR values of all first-order reflectively measured constructs are greater than the minimum cut-off value of 0.708 (Hair et al., 2016, 2020), indicating a relatively high FOC reliability.

Figure 2 The measurement model (PLS algorithm)



In addition to Cronbach's alpha measure, Macdonald's Omega (ω) was used to estimate the reliability of all constructs (Hayes and Coutts, 2020), which revealed that the ω-values for all construct range from 0.809 to 0.936, indicating comparatively high

reliability for each construct in the FOC measurement model (Dunn et al., 2014). Dijkstra and Henseler's (2015) rho_A is assessed where the values of rho_A for all the constructs from between 0.816 to 0.940, which all are above the minimum limit value of 0.70, indicating high convergent validity (Hair et al., 2020). The factor loadings of all items from between 0.605 to 0.891, indicating acceptable items' reliability (Hair et al., 2016). Finally, the results show that AVE values from between 0.553 to 0.606, above the lower cut-off value of 0.50 (Hair et al., 2020). Hence, this suggests that the convergent validity of FOC is well established.

Table 4 The measurement model of FOC

LOCs	*Items*	*Loading*	*α*	*ω*	*CR*	*rho-A*	*EVA*
FA	FA1	0.819	0.867	0.867	0.896	0.880	0.553
	FA2	0.822					
	FA3	0.741					
	FA4	0.729					
	FA5	0.605					
	FA6	0.730					
	FA7	0.740					
SPC	SPC1	0.707	0.922	0.923	0.934	0.929	0.564
	SPC2	0.748					
	SPC3	0.703					
	SPC4	0.731					
	SPC5	0.761					
	SPC6	0.783					
	SPC7	0.821					
	SPC8	0.708					
	SPC9	0.687					
	SPC10	0.791					
	SPC11	0.805					
RP	RP1	0.836	0.854	0.855	0.900	0.870	0.692
	RP2	0.840					
	RP3	0.851					
	RP4	0.801					
TP	TP1	0.704	0.802	0.809	0.872	0.812	0.631
	TP2	0.818					
	TP3	0.888					
	TP4	0.756					
FP	FP1	0.839	0.816	0.813	0.873	0.879	0.633
	FP2	0.773					
	FP3	0.795					
	FP4	0.773					

Note: FA, Financial autonomy; SPC, Strategic planning capability; RP, Research performance; TP, Teaching performance; FP, Financial performance.

As seen in Tables 5, 6 and 7, the discriminant validity results demonstrate whether the respondents were able to distinguish between the items across the constructs while replying to the study's questionnaire.

Table 5 reveals that Fornell and Larcker criterion (1981), for each construct, the square root of the AVE value presented on the diagonal is higher than the corresponding-item correlation indicating that the discriminant validity among the constructs of the model is well established. For instance, the value of the square root of AVE of the First Construct (FA) is greater than the values of its correlation with other constructs. Similarly, in other constructs, the square root values of AVE values are above all the other concerned correlations (see Table 5). This implies that each construct in the study is well established to be distinguished from other constructs in the model.

Table 5 Fornell & Larcker criteria

No	*LOC*	*1*	*2*	*3*	*4*	*5*
1	FA	0.744				
2	SPC	0.570	0.751			
3	RP	0.467	0.582	0.832		
4	TP	0.451	0.484	0.651	0.795	
5	FP	0.314	0.474	0.537	0.611	0.796

In addition, the HTMT ratio is applied to measure the similarity across constructs to assess the discriminant validity of the construct in the model. According to Hair et al. (2019), the HTMT value must be lower than the cut-off value of 0.90 for the constructs that are conceptually similar or less than the critical value of 0.85 for constructs that are conceptually distinct in a model. The results of HTMT in Table 6. reveal that values of HTMT for all constructs are less than the critical value of 0.85, establishing the discriminant validity in the model.

Table 6 HTMT

No	*LOC*	*1*	*2*	*3*	*4*	*5*
1	FA					
2	SPC	0.591				
3	RP	0.500	0.622			
4	TP	0.509	0.550	0.809		
5	FP	0.314	0.494	0.598	0.739	

The last measure for discriminant validity is cross-loadings. Table 7 shows that all the items' loadings are greater on their parent constructs compared with the other items' loadings in the corresponding constructs indicating discriminant validity as satisfactory. Based on the results of the above measures, discriminant validity is established.

Table 7 Cross-loading

LOC	*Items*	*FA*	*SPC*	*RP*	*TP*	*FP*
FA	FA1	**0.819**	0.492	0.363	0.404	0.210
	FA2	**0.822**	0.442	0.358	0.323	0.200
	FA3	**0.741**	0.449	0.360	0.343	0.214
	FA4	**0.729**	0.385	0.407	0.286	0.263
	FA5	**0.605**	0.169	0.121	0.150	0.047
	FA6	**0.730**	0.386	0.264	0.252	0.209
	FA7	**0.740**	0.494	0.420	0.455	0.363
SPC	SPC1	0.507	**0.707**	0.557	0.384	0.352
	SPC2	0.344	**0.748**	0.499	0.279	0.376
	SPC3	0.329	**0.703**	0.332	0.232	0.256
	SPC4	0.396	**0.731**	0.390	0.380	0.358
	SPC5	0.388	**0.761**	0.325	0.290	0.271
	SPC6	0.474	**0.783**	0.410	0.391	0.330
	SPC7	0.553	**0.821**	0.535	0.457	0.498
	SPC8	0.456	**0.708**	0.407	0.353	0.314
	SPC9	0.255	**0.687**	0.373	0.370	0.364
	SPC10	0.432	**0.791**	0.418	0.309	0.310
	SPC11	0.468	**0.805**	0.465	0.466	0.405
RP	RP1	0.441	0.553	**0.836**	0.493	0.409
	RP2	0.361	0.483	**0.840**	0.408	0.417
	RP3	0.413	0.524	**0.851**	0.632	0.464
	RP4	0.311	0.317	**0.801**	0.679	0.530
TP	TP1	0.358	0.323	0.530	**0.704**	0.530
	TP2	0.377	0.387	0.471	**0.818**	0.403
	TP3	0.401	0.428	0.514	**0.888**	0.566
	TP4	0.294	0.395	0.565	**0.756**	0.445
FP	FP1	0.385	0.513	0.632	0.570	**0.839**
	FP2	0.153	0.241	0.316	0.470	**0.773**
	FP3	0.198	0.311	0.321	0.500	**0.795**
	FP4	0.167	0.338	0.301	0.371	**0.773**

5.3.2 Second-order measurement model assessment

After calculating the correlation statistics using the PLS-SEM algorithm, a high correlation was found among first-order constructs: research, teaching and financial performance (see Table 8). Therefore, the Second-Order Construct (SOC) for the OP construct was modelled using the scores of these latent first-order constructs (Hair et al., 2017). It is worth noting that these constructs are dimensions of OP, and we considered the guidelines that Jarvis et al. (2003) recommended in forming the SOC.

Accordingly, this results in more parsimony and decreases the complexity of structural model paths (Hair et al., 2021).

Table 8 The correlation across constructs

Constructs	*RP*	*TP*	*FP*
RP	1.000		
TP	0.651	1.000	
FP	0.540	0.612	1.000

Note: RP, Research performance; TP, Teaching performance; FP, Financial performance.

The measurement model of SOC was assessed following FOC. First, we tested the convergent validity of the SOC by factor loading, α, CR, rho_A and AVE. As seen in Table 9. α and CR values are above the critical value of 0.708. The rho_A value is found satisfactory (>0.708). AVE value is above the minimum threshold value of 0.50. This indicates that the reliability and convergent validity of SOC were achieved. Second, we tested the discriminant validity of the SOC using Cross-loading Fornell and Larcker criterion and HTMT ratio. Table 10 presents that the AVE's square root value is higher than its intra-correlation with the other constructs indicating that the SOC indicators are distinct. The values of HTMT were less than the recommended maximum cut-off value of 0.85, indicating the presence of discriminant validity.

Table 9 The measurement model of SOC

SOC	*FOCs*	*Loading*	*α*	*CR*	*rho-A*	*EVA*
	RP	0.874				
OP	TP	0.879	0.818	0.891	0.831	0.732
	FP	0.813				

Note: OP, Organisational Performance.

Table 10 Fornell & Larcker Criterion and HTMT ratio of SOC

Fornell-Larcker Criterion				
No	*Construct*	*1*	*2*	*3*
1	FA	0.744		
2	SPC	0.571	0.751	
3	OP	0.485	0.603	0.856
HTMT Ratio				
No	*Construct*	*1*	*2*	*3*
1	FA			
2	SPC	0.591		
3	OP	0.533	0.667	

As seen in Table 11, the cross-loadings of the indicators of SOC are higher on their respective construct than the other constructs. Accordingly, these results indicated that discriminant validity is established for the SOC. After the measurement model assessment of both FOC and SOC has been found satisfactory, we pursue to investigate the structural model of the current study (Hair et al., 2019, 2021).

Table 11 Cross-loadings of SOC

No	*FOCs*	*FA*	*SPC*	*OP*
1	RP	0.466	0.581	0.874
2	TP	0.450	0.584	0.874
3	FP	0.313	0.473	0.813

5.4 Assessment of structural model

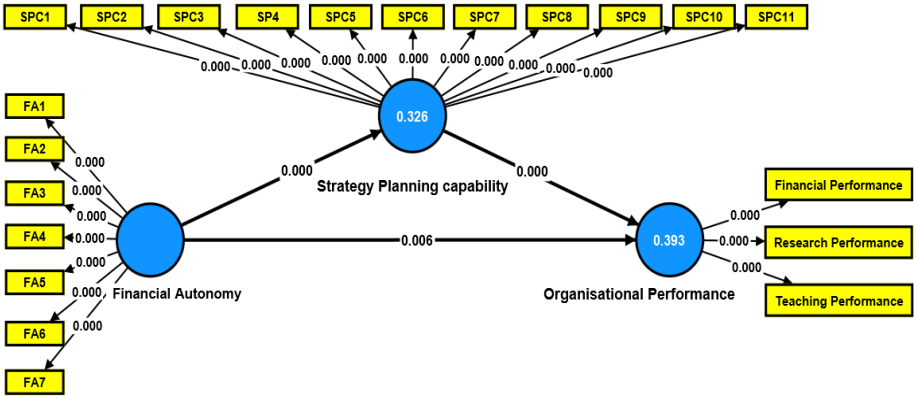
5.4.1 Hypothesis testing

Following the recommended guidelines by Hair et al. (2019), the structural model was assessed using the bootstrapping technique with 10,000 sub-samples (Ringle et al., 2020) in order to determine *p*-value, *t*-values and Confidence Interval (CI) for examining the hypotheses. As seen in Table 12 and Figure 3. the results reveal that FA has a significant positive impact on OP (β 0.215, *t*-value 2.855, $p < 0.004$) and SPC (β 0.570 *t*-value 7.010, $p < 0.000$). Hence, hypotheses H1 and H2 are supported. Further, the results reveal that SPC has a direct and significant effect on OP (β 0.476, *t*-value 6.001, $p < 0.000$). Thus, hypothesis H3 is supported.

Table 12 The structural model's outcomes

Path	*β*	*SD*	*t-value*	*p-value*	*CI*		*Decision*
					2.50%	*97.50%*	
H1: FA -> OP	0.21	0.08	2.75	0.006	0.07	0.37	Supported
H2: FA -> SPC	0.57	0.08	7.34	0.000	0.42	0.72	Supported
H3: SPC -> OP	0.48	0.08	5.96	0.000	0.32	0.63	Supported
H4: FA -> SPC ->OP	0.28	0.06	4.33	0.000	0.16	0.41	Supported

Figure 3 Structural model (PLS-SEM bootstrapping)



5.4.2 The mediating role of strategic planning capability

The data were analysed to examine whether SPC plays a mediating role in the link between FA and OP (see Table 12 and Figure 3). As a rule of thumb, in the case of partial mediation, the direct link between an independent and a dependent construct is statistically significant, and the indirect relationship through a mediator is significant. In the case of full mediation, the direct relationship between an independent and a dependent construct is statistically insignificant, but the indirect relationship through the mediator is statistically significant. Finally, no mediation occurs when both the direct and the indirect relationships are insignificant (Hair et al., 2017).

The results in Table 12 reveal that SPC mediates the relationship between FA and OP (β 0.271, t-value 4.324, $p < 0.000$). This leads to support hypothesis H4.

Since the direct effect of FA on OP is significant (β 0.215, $p < 0.004$), and the effect of FA on OP through SPC is also significant (β 0.271, $p < 0.000$) (see Table 13), it can be established that SPC partially mediates the link between FA on OP (Hair et al., 2021).

Table 13 Mediation test

Path	*Direct effect*		*Indirect effect*		*Decision*
	β	*p-value*	*β*	*p-value*	
FA -> SPC -> OP	0.209	0.006	0.276	0.000	Partial mediation

5.4.3 The explanatory power of the model

The model's explanatory power was assessed via the coefficient of determination (R^2). R^2 is in sample predictive power (Rigdon, 2012) that assesses the variance that is explained in the key-dependent construct/s (Shmueli and Koppius, 2011). As presented in Table 14, the values of R^2 for the endogenous constructs, SPC is (0.325) and OP is (0.390), indicating a moderate explanatory power of the study's model (Henseler et al., 2009; Hair et al., 2011).

Table 14 The explanatory power of the model

Constructs	R^2	R^2 *adjusted*
OP	0.393	0.384
SPC	0.326	0.321

5.4.4 The predictive power of structure model

The PLS-predict technique was applied with ten folds and ten repetitions to ensure a more accurate estimate of the PLS path predictive performance of the model (Shmueli et al., 2016). Since PLS-SEM prediction error distribution of OP scores is not symmetrically distributed, we select the Mean Absolute Error (MAE) statistic over the Root Mean Squared Error (RMSE) to compare PLS-SEM MAE with LM MAE and estimate the predictive power of the study's model.

As per the role of thumb, if prediction error values in PLS-SEM MAE are lower than in LM MA, this implies that the model's predictive power is high (Shmueli et al., 2019). In a comparison of PLS-SEM MAE prediction errors with LM MAE prediction errors via this procedure. It can be observed in Table 15. that the majority of OP items in PLS-SEM

MAE prediction errors are lower than the prediction error in LM MAE. This means that the model of this study has medium predictive power in measuring the OP of private universities in India.

Table 15 The predictive power of the structural model

Items	*Q^2predict*	*PLS-SEM_MAE*	*LM MAE*	*PLS-ML*
RP1	0.175	0.469	0.506	–0.037
RP2	0.112	0.659	0.664	–0.005
RP3	0.153	0.580	0.598	–0.018
RP4	0.078	0.717	0.721	–0.004
TP1	0.110	0.716	0.641	0.075
TP2	0.125	0.575	0.600	–0.025
TP3	0.140	0.643	0.665	–0.021
TP4	0.067	0.643	0.670	–0.027
FP1	0.116	0.775	0.753	0.022
FP2	–0.001	0.638	0.665	–0.027
FP3	0.022	0.729	0.749	–0.020
FP4	0.009	0.606	0.611	–0.004

6 Discussion

This study aims to explore the direct effect of FA on OP and SPC. In addition, it intends to investigate the mediation role of SPC in the link between FA and OP. The results conclude that OP is positively affected by FA. Thus, the first hypothesis is supported. This is consistent with previous studies that emphasise the essential role of FA as a vehicle for enhancing the OP of universities (Carvalho et al., 2022). Further, the findings can be demonstrated, i.e., by the fact that high FA can provide universities with the ability to invest in research, teaching, faculty and infrastructure development, which ultimately reflects on their performance (Choi, 2019).

Similarly, FA has a positive impact on SPC. Hence, the second hypothesis is supported. This demonstrates the role of FA in improving the SPC of private universities to respond to the competitive markets of HEIs. This study confirms that SPC tends to enhance OP as proposed. Thus, the third hypothesis is supported. This is consistent with the previous research (Ashrafi and Mueller, 2015) demonstrating that a high level of SPC can strengthen private universities in creating a unique position in uncertain settings. Finally, the results present a partial mediating role of SPC on FA and OP relationship as proposed in the fourth hypothesis. This can be demonstrated by the fact that a high level of FA that private universities enjoy provides them with the freedom to control their own resources and ensure financial ability and stability, which in turn helps them in building SPC as a driving force to determine the strengths and weaknesses, evaluate and prioritise different alternatives to deal with the various environmental scenarios and eventually lead to enhancing their OP.

6.1 The research implications

The current study has two implications for leaders of private universities. First, private universities should benefit from the FA they enjoy by strengthening their financial position. For instance, they can diversify income streams instead of relying heavily on one funding source by offering high-quality courses and degrees that focus on the labour market requirement, offering consulting services and attracting sponsored research.

The second implication relates to the essential role of FA in increasing SPC and improving OP. Leaders need to consider the advantage of having FA and how it helps universities with the necessary resources to anticipate external and internal environmental changes, hence providing the means to develop and implement well-thought-out strategies for achieving their objectives. Moreover, leaders need to consider the crucial role of FA in enhancing the OP of the universities, which allows them to allocate resources to support the various aspect of their OP, such as research, teaching and financial performance. In addition, FA enhances the universities' responsiveness to the needs of their stakeholders, including students, academic and administrative staff, which leads to improved OP.

6.2 Limitations and future directions

Despite the effort in designing the current study, it has different existing limitations that suggest potential opportunities for future research. The first limitation is related to the study model, where other relationships could be included in the current model, such as investigating the possible moderating role of governmental policies on the link between FA, SPC and OP. Second, the relationships investigated in the current study depended on cross-sectional data collected at a particular time, which limits the causality and variation. Thus, future research should use a longitudinal design to capture changes in the constructs of this study over time. Third, the sample size of this study is restricted to either one dean of the school or one head of department from each private university. Thus, future research should include a large number of respondents (who are part of the decision-making process) to give robust support for the links examined. Fourth, OP was measured based on subjective measures where discrepancies between subjective and objective measures may be observed. Thus, future research could use objective measures for capturing OP. Finally, the current study was carried out in a specific type of university in a specific context, private universities in India. The results may need to be more generalisable to other types of universities in other contexts. Therefore, future research could investigate the model of this study in the context of public universities.

References

Abu-Rumman, A. and Qawasmeh, R. (2021) 'Assessing international students' satisfaction of a Jordanian university using the service quality model', *Journal of Applied Research in Higher Education*.

Adam, E. (2020) ''Governments base performance-based funding on global rankings indicators': a global trend in higher education finance or a global rankings literature fiction? A comparative analysis of four performance-based funding programs', *International Journal of Educational Development*, Vol. 76. Doi: 10.1016/j.ijedudev.2020.102197.

Agasisti, T. and Shibanova, E. (2022) 'Actual autonomy, efficiency and performance of universities: insights from the Russian case', *International Journal of Public Administration*, Vol. 45, No. 2, pp.121–134.

Aghion, P. et al. (2010) 'The governance and performance of universities: evidence from Europe and the US', *Economic Policy*, Vol. 25, No. 61, pp.7–59.

Alexiadou, N. and Rönnberg, L. (2022) 'Reading the internationalisation imperative in higher education institutions: external contexts and internal positionings', *Higher Education Policy*, pp.1–19.

Angom, S. (2021) *Autonomy and Academic Freedom in Indian Private Universities*, *IRSFOE 2021*, Routledge, Taylor & Francis Group, p.16.

Antonowicz, D. and Jongbloed, B.W.A. (2015) *University governance reform in the Netherlands, Austria, and Portugal: Lessons for Poland*, Sprawne Panstwo Program EY.

Armstrong, J.S. and Overton, T.S. (1977) 'Estimating nonresponse bias in mail surveys', *Journal of Marketing Research*, Vol. 14, No. 3, pp.396–402.

Ashrafi, R. and Mueller, J. (2015) 'Delineating IT resources and capabilities to obtain competitive advantage and improve firm performance', *Information Systems Management*, Vol. 32, No. 1, pp.15–38.

Asif, M. and Searcy, C. (2014) 'A composite index for measuring performance in higher education institutions', *International Journal of Quality and Reliability Management*, Vol. 31, No. 9, pp.983–1001.

Askling, B. and Kristensen, B. (2000) 'Towards 'the learning organisation': implications for institutional governance and leadership', *Higher Education Management*, Vol. 12, No. 2, pp.17–42.

Bailey, A., Johnson, G. and Daniels, K. (2000) 'Validation of a multidimensional measure of strategy development processes', *British Journal of Management*, Vol. 11, No. 2, pp.151–162.

Barney, J. (1991) 'Firm resources and sustained competitive advantage', *Journal of Management*, Vol. 17, No. 1, pp.99–120.

Barney, J.B. (2001) 'Is the resource-based 'view' a useful perspective for strategic management research? Yes', *Academy of Management Review*, Vol. 26, No. 1, pp.41–56.

Benneworth, P., Young, M. and Normann, R. (2017) 'Between rigour and regional relevance? Conceptualising tensions in university engagement for socio-economic development', *Higher Education Policy*, Vol. 30, No. 4, pp.443–462.

Bhatti, A., Rehman, S.U. and Rumman, J.B.A. (2020) 'Organizational capabilities mediates between organizational culture, entrepreneurial orientation, and organizational performance of SMEs in Pakistan', *Entrepreneurial Business and Economics Review*, Vol. 8, No. 4, pp.85–103.

Boyd, B.K. and Reuning-Elliott, E. (1998) 'A measurement model of strategic planning', *Strategic Management Journal*, Vol. 19, No. 2, pp.181–192.

Cameron, D.R. (1978) 'The expansion of the public economy: a comparative analysis', *American Political Science Review*, Vol. 72, No. 4, pp.1243–1261.

Carvalho, A., Leitão, J. and Alves, H. (2022) 'Leadership styles and HEI performance: relationship and moderating factors', *International Journal of Leadership in Education*, pp.1–37.

Carvalho, T. and Diogo, S. (2018) 'Exploring the relationship between institutional and professional autonomy: a comparative study between Portugal and Finland', *Journal of Higher Education Policy and Management*, Vol. 40, No. 1, pp.18–33.

Charles, A. (2014) 'The impact of technological innovation on organizational performance', *Industrial Engineering Letters*, Vol. 4, No. 3, pp.24–36.

Chen, S., Wang, H. and Yang, K. (2009) 'Establishment and application of performance measure indicators for universities', *The TQM Journal*, Vol. 21, No. 3, pp.220–235.

Choi, S. (2019) 'Identifying indicators of university autonomy according to stakeholders' interests', *Tertiary Education and Management*, Vol. 25, No. 1, pp.17–29.

Cohran, J.K., Steed, L. and Ong, C. (2010) *SPSS: Analysis Without Anguish: Version 17 for Window*, John Wiley & Sons Australia.

Compagnucci, L. and Spigarelli, F. (2020) 'The Third Mission of the University: a systematic literature review on potentials and constraints', *Technological Forecasting and Social Change*, Vol. 161. Doi: 10.1016/j.techfore.2020.120284.

Della Volpe, M. and Esposito, F. (2020) 'Discursive practices about third mission: a survey from Italian universities' official websites', *Quality in Higher Education*, Vol. 26, No. 2, pp.224–239.

Dijkstra, T.K. and Henseler, J. (2015) 'Consistent partial least squares path modeling', *MIS Quarterly*, Vol. 39, No. 2, pp.297–316.

Dong, H., Cortazzi, M. and Shen, L. (2022) 'Making sense of the unexpected: critical incident training in three Chinese universities', *Language and Intercultural Communication*, Vol. 22, No. 5, pp.583–598.

Dunn, T.J., Baguley, T. and Brunsden, V. (2014) 'From alpha to omega: A practical solution to the pervasive problem of internal consistency estimation', *British Journal of Psychology*, Vol. 105, No. 3, pp.399–412.

Elbanna, S. (2008) 'Planning and participation as determinants of strategic planning effectiveness: evidence from the Arabic context', *Management Decision*, Vol. 46, No. 5, pp.779–796.

Elbanna, S. (2013) 'Processes and impacts of strategic management: evidence from the public sector in the United Arab Emirates', *International Journal of Public Administration*, Vol. 36, No. 6, pp.426–439.

Elbanna, S., Andrews, R. and Pollanen, R. (2016) 'Strategic planning and implementation success in public service organizations: evidence from Canada', *Public Management Review*, Vol. 18, No. 7, pp.1017–1042.

Enders, J. et al. (2011) *Reform of Higher Education in Europe*, Brill Sense, pp.1–10.

Enders, J., De Boer, H. and Weyer, E. (2013) 'Regulatory autonomy and performance: the reform of higher education re-visited', *Higher Education*, Vol. 65, No. 1, pp.5–23.

Estermann, T., Nokkala, T. and Steinel, M. (2009) *University autonomy in Europe*. European University Association Brussels.

Estermann, T., Nokkala, T. and Steinel, M. (2011) *University Autonomy in Europe II*, The Scorecard, European University Association, Brussels.

Eykamp, P.W. (1995) *Political Control of State Research Universities: The Effect of the Structure of Political Control on University Quality and Budget*, University of California, San Diego.

Fernandes, J.O. and Singh, B. (2021) 'Accreditation and ranking of higher education institutions (HEIs): review, observations, and recommendations for the Indian higher education system', *The TQM Journal*, Vol. 34, No. 5, pp.1013–1038.

Fornell, C. and Larcker, D.F. (1981) *Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics*, Sage Publications Sage CA, Los Angeles, CA.

García, J.S., Álvarez, C.A.A., Gómez, J.M.C. and Toro, J.J.A. (2017) 'Measuring organizational capabilities for technological innovation through a fuzzy inference system', *Technology in Society*, Vol. 50, pp.93–109.

Goedegebuure, L. et al. (1994) 'International perspectives on trends and issues in higher education policy', *Higher Education Policy: An International Comparative Perspective*, Elsevier, pp.315–348.

Grant, R.M. (1991) 'The resource-based theory of competitive advantage: implications for strategy formulation', *California Management Review*, Vol. 33, No. 3, pp.114–135.

Gupta, J., Dash, I. and Tiwari, H. (2023) 'A study on disruption to recovery in business school of India during COVID-19 using appreciative inquiry approach from a multi-stakeholder perspective', *International Journal of Management in Education*, Vol. 17, No. 2, pp.157–178.

Guzmán, P., Véliz, D., Uslu, B., Berríos, P. and Seggie, F.N. (2022) 'Does the public-private higher education institution distinction influence academics' societal engagement? Evidence from Chile and Turkey', *International Journal of Comparative Education and Development*, *ahead-of-print*.

Hair, J.F. et al. (1998) *Multivariate Data Analysis Upper Saddle River*, 5th ed., pp. 207–219.

Hair, J.F. et al. (2016) 'Identifying and treating unobserved heterogeneity with FIMIX-PLS: part I–method', *European Business Review*, Vol. 28, No. 1, pp.63–76.

Hair, J.F. et al. (2017) 'Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods', *Journal of the Academy of Marketing Science*, Vol. 45, No. 5, pp.616–632.

Hair, J.F. et al. (2019) 'When to use and how to report the results of PLS-SEM', *European Business Review*, Vol. 31, No. 1, pp.2–24.

Hair, J.F. et al. (2021) 'Executing and interpreting applications of PLS-SEM: updates for family business researchers', *Journal of Family Business Strategy*, Vol. 12, No. 3. Doi: 10.1016/j.jfbs.2020.100392.

Hair, J.F., Howard, M.C. and Nitzl, C. (2020) 'Assessing measurement model quality in PLS-SEM using confirmatory composite analysis', *Journal of Business Research*, Vol. 109, pp.101–110.

Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011) 'PLS-SEM: indeed a silver bullet', *Journal of Marketing Theory and Practice*, Vol. 19, No. 2, pp.139–152.

Harman, H.H. (1976) *Modern Factor Analysis*, University of Chicago Press.

Hayes, A.F. and Coutts, J.J. (2020) 'Use omega rather than Cronbach's alpha for estimating reliability. But…', *Communication Methods and Measures*, Vol. 14, No. 1, pp.1–24.

Henseler, J., Ringle, C.M. and Sinkovics, R.R. (2009) 'The use of partial least squares path modeling in international marketing', *New Challenges to International Marketing*, Emerald Group Publishing Limited.

Holmén, J. (2022) 'The autonomy of higher education in Finland and Sweden: Global management trends meet national political culture and governance models', *Comparative Education*, Vol. 58, No. 2, pp.147–163.

Hughes, P. and Hodgkinson, I. (2020) 'Knowledge management activities and strategic planning capability development', *European Business Review*, Vol. 33, No. 2, pp.238–254.

Jarvis, C.B., MacKenzie, S.B. and Podsakoff, P.M. (2003) 'A critical review of construct indicators and measurement model misspecification in marketing and consumer research', *Journal of Consumer Research*, Vol. 30, No. 2, pp.199–218.

Joshi, K.M. (2015) 'Higher education, social demand, and social equity in India', *Higher Education in the BRICS Countries*, Springer, pp.125–147.

Knott, J.H. and Payne, A.A. (2004) 'The impact of state governance structures on management and performance of public organizations: A study of higher education institutions', *Journal of Policy Analysis and Management*, Vol. 23, No. 1, pp.13–30.

Kock, N. (2015) 'Common method bias in PLS-SEM: a full collinearity assessment approach', *International Journal of e-Collaboration (IJEC)*, Vol. 11, No. 4, pp.1–10.

Kock, N. and Lynn, G. (2012) 'Lateral collinearity and misleading results in variance-based SEM: an illustration and recommendations', *Journal of the Association for Information Systems*, Vol. 13, No. 7. Doi: 10.17705/1jais.00302.

Kohtamäki, V. (2022) 'Autonomy-driven segmentation for competition among Finnish universities: leaders' perceptions', *Studies in Higher Education*, Vol. 47, No. 1, pp.67–79.

Koufteros, X., Verghese, AJ and Lucianetti, L. (2014) 'The effect of performance measurement systems on firm performance: a cross-sectional and a longitudinal study', *Journal of Operations Management*, Vol. 32, No. 6, pp.313–336.

Lang, T.M., Lin, S.H. and Vy, TNT (2012) 'Mediate effect of technology innovation capabilities investment capability and firm performance in Vietnam', *Procedia-Social and Behavioral Sciences*, Vol. 40, pp.817–829.

Lau, A.K.W. et al. (2013) 'The effects of innovation sources and capabilities on product competitiveness in Hong Kong and the Pearl River Delta', *Asian Journal of Technology Innovation*, Vol. 21, No. 2, pp.220–236.

Lebans, M. and Euske, K. (2006) *A Conceptual and Operational Delineation of Performance: Business Performance Measurement*, Cambridge University Press Cambridge.

Lee, Y. (2017) 'Understanding higher education institutions' publicness: do public universities produce more public outcomes than private universities?', *Higher Education Quarterly*, Vol. 71, No. 2, pp.182–203.

Lewis, E.F., Hardy, M. and Snaith, B. (2013) 'An analysis of survey reporting in the imaging professions: is the issue of non-response bias being adequately addressed?', *Radiography*, Vol. 19, No. 3, pp.240–245.

Lindner, J.R., Murphy, T.H. and Briers, G.E. (2001) 'Handling nonresponse in social science research', *Journal of Agricultural Education*, Vol. 42, No. 4, pp.43–53.

Lyn, J.C.I. and Muthuveloo, R. (2019) 'Investigating technology and organizational performance of private higher learning institutions in Malaysia', *The International Journal of Information and Learning Technology*, Vol. 36, No. 5, pp.453–466.

Maassen, P., Gornitzka, Å. and Fumasoli, T. (2017) 'University reform and institutional autonomy: a framework for analysing the living autonomy', *Higher Education Quarterly*, Vol. 71, No. 3, pp.239–250.

Maun, D., Belousova, T. and Mukherjee, M. (2022) 'Students' experiences with online teaching and learning: Perspectives from India', *Global Higher Education During and Beyond COVID-19: Perspectives and Challenges* (pp. 81–101). Springer.

Mekonnen, G.T., Kilpatrick, S. and Kenny, J. (2022) 'Constrained autonomy: academics and institutional leaders empowerment in Ethiopia in the context of the Bologna Process', *Journal of Further and Higher Education*, Vol. 46, No. 2, pp.143–158.

Muneeb, D. and Ahmad, S.Z., et al. (2022b) 'Empowering resources recombination through dynamic capabilities of an enterprise', *Journal of Enterprise Information Management*, Vol. 36, No. 1, pp.1–21.

Muneeb, D. and Khattak, A. et al. (2022a) 'Dynamic capabilities as a strategic flexibility enabler: organizational responsiveness to COVID-19', *Journal of Asia Business Studies*, Vol. 17, No. 4, pp.824–849.

Nguyen, H.T.L. and Van Gramberg, B. (2018) 'University strategic research planning: a key to reforming university research in Vietnam?' *Studies in Higher Education*, Vol. 43(12), pp.2130–2147.

Nokkala, T. (2009) *University Autonomy in Europe I, Exploratory Study*, The European University Association, p.45.

Ovchinnikova, O., Kokuytseva, T. and Butrova, E. (2022) 'Financial Stability of University as Factor Improving the Competitive Ability of the National Economy', *Proceeding of the International Science and Technology Conference 'FarEastCon 2021'*, pp.583–589.

Pandey, I.M. (2004) 'Governance of higher education institutions', *Vikalpa*, Vol. 29, No. 2, pp.79–84.

Peng, X. and Prybutok, V. (2015) 'Relative effectiveness of the Malcolm Baldrige national quality award categories', *International Journal of Production Research*, Vol. 53, No. 2, pp.629–647.

Piironen, O. (2013) 'The transnational idea of university autonomy and the reform of the finnish universities act', *Higher Education Policy*, Vol. 26, pp.127–146.

Podsakoff, P.M. et al. (2003) 'Common method biases in behavioral research: a critical review of the literature and recommended remedies.', *Journal of Applied Psychology*, Vol. 88, No. 5, p. 879.

Prathap, G. and Sriram, P. (2017) 'Mega private universities in India: prospects and promise for world-class performance', *Current Science*, pp.2165–2167.

Priem, R.L. and Butler, J.E. (2001) 'Is the resource-based 'view' a useful perspective for strategic management research?', *Academy of Management Review*, Vol. 26, No. 1, pp.22–40.

Pruvot, E.B. and Estermann, T. (2017) *University Autonomy in Europe III*, The Scorecard, p.76.

Pūraitė, A., Pranevičienė, B. and Vasiliauskienė, V. (2017) 'State financing impact on autonomy of HEIs and its link with economic activities of universities', *Engineering Economics*, Vol. 28, No. 5, pp.564–574.

Qasim, A.M. et al. (2021) 'Student university choice in Kurdistan-Iraq: what factors matter?', *Journal of Further and Higher Education*, Vol. 45, No. 1, pp.120–136.

Rehman, U.U. and Iqbal, A. (2020) 'Nexus of knowledge-oriented leadership, knowledge management, innovation and organizational performance in higher education', *Business Process Management Journal*, Vol. 26, No. 6, pp.1731–1758.

Rigdon, E.E. (2012) 'Rethinking partial least squares path modeling: in praise of simple methods', *Long Range Planning*, Vol. 45, Nos. 5/6, pp.341–358.

Ringle, C.M. et al. (2020) 'Partial least squares structural equation modeling in HRM research', *The International Journal of Human Resource Management*, Vol. 31, No. 12, pp.1617–1643.

Sethy, S.S. (2021) 'Academic freedom' in Indian higher education setting', *Asian Journal of University Education (AJUE)*, Vol. 7, No. 2, pp.39–49.

Shafia, M.A. et al. (2016) 'Mediating effect of technological innovation capabilities between dynamic capabilities and competitiveness of research and technology organisations', *Technology Analysis and Strategic Management*, Vol. 28, No. 7, pp.811–826.

Shin, J.C. et al. (2022) 'Institutional autonomy and capacity of higher education governance in South Asia: a comparative perspective', *Higher Education Policy*, Vol. 35, No. 2, pp.414–438.

Shmueli, G. and Koppius, O.R. (2011) 'Predictive analytics in information systems research', *MIS Quarterly*, pp.553–572.

Shmueli, G. et al. (2016) 'The elephant in the room: predictive performance of PLS models', *Journal of Business Research*, Vol. 69, No. 10, pp.4552–4564.

Shmueli, G. et al. (2019) 'Predictive model assessment in PLS-SEM: guidelines for using PLSpredict', *European Journal of Marketing*, Vol. 53, No. 11, pp.2322–2347.

Soliman, M. and Noorliza, K. (2022) 'Adopting enterprise resource planning (ERP) in higher education: A SWOT analysis', *International Journal of Management in Education*, Vol. 16, No. 1, pp.20–39.

Stachowiak-Kudła, M. and Kudła, J. (2017) 'Financial regulations and the diversification of funding sources in higher education institutions: selected European experiences', *Studies in Higher Education*, Vol. 42, No. 9, pp.1718–1735.

Teixeira, P. and Amaral, A. (2001) 'Private higher education and diversity: An exploratory survey', *Higher Education Quarterly*, Vol. 55, No. 4, pp.359–395.

Thoenig, J-C. and Paradeise, C. (2016) 'Strategic capacity and organisational capabilities: a challenge for universities', *Minerva*, Vol. 54, No. 3, pp.293–324.

Tukdeo, S. (2022) *Historical Developments, Influences of International Actors, and Education Reforms in India*, Oxford Research Encyclopedia of Education.

Unger, M. et al. (2020) 'New challenges for universities in the knowledge triangle', *The Journal of Technology Transfer*, Vol. 45, No. 3, pp.806–819.

Varghese, N.V. and Panigrahi, J. (2021) *India Higher Education Report 2021: Private Higher Education: An Overview*, Routledge, Taylor & Francis Group, pp.1–16.

Xia, C., Li, X. and Cao, S. (2023) 'Challenges for the government-controlled higher education system in China', *International Journal of Educational Development*, Vol. 97, 102721.

Yam, R.C.M. et al. (2004) 'An audit of technological innovation capabilities in Chinese firms: some empirical findings in Beijing, China', *Research Policy*, Vol. 33, No. 8, pp.1123–1140.

Yam, R.C.M. et al. (2011) 'Analysis of sources of innovation, technological innovation capabilities, and performance: an empirical study of Hong Kong manufacturing industries', *Research Policy*, Vol. 40, No. 3, pp.391–402.

Zangoueinezhad, A. and Moshabaki, A. (2011) 'Measuring university performance using a knowledge-based balanced scorecard', *International Journal of Productivity and Performance Management*, Vol. 60, No. 8, pp.824–843.