FACTORS STRENGTHENING SMEs' INNOVATION PERFORMANCE: INSIGHTS FROM THE EMERGING ECONOMY

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Abstract

According to the resource-based view (RBV), innovation performance is a crucial element in enhancing the competitiveness of small and medium enterprises (SMEs) in the era of global competition and digitalization. This study aims to analyze the effect of learning organisation, business experience, government support, and academia support on SME's innovation performance within the triple helix framework. A quantitative approach was used by applying a survey questionnaire of SME actors from various business sectors in Central Java and obtaining 121 data sets. Employing partial least squares structural equation modeling (PLS-SEM), the results of the study indicate that learning organisations and government support have a positive and significant effect on innovation performance. This finding is consistent with most previous research findings (Cabrilo & Dahms, 2020; Acs et al., 2009; Zeng et al., 2010; Widyani et al., 2022). Additionally, business experience and academic support have no effect. The practical implications of this study are the need for policies that encourage innovation and improve the quality of interaction between SMEs, the government, and higher education institutions.

Keywords: Innovation Performance, Learning Organisation, Business Experiences

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1. INTRODUCTION

Small and medium enterprises (SMEs) constitute the foundation of the economy in most developing nations, including Indonesia. Data from the Ministry of Cooperatives and SMEs (2024) indicates that by 2023, SMEs will contribute over 60% of the national gross domestic product (GDP) and employ over 97

of the labour force. In the face of globalization, digitalization, and intricate market dynamics, the capacity of SMEs to innovate is essential for sustaining competitiveness and increasing market share. Innovation includes the creation of new products or services, as well as enhancements to processes, business models, and strategies for responding to external environmental changes.

One approach believed to be able to encourage innovation in the SME environment is the implementation of a learning organisation, namely the ability of an organisation to continuously learn, adapt, and transform itself. Furthermore, the business experience possessed by entrepreneurs also plays a crucial role in shaping innovative mindsets and more effective strategic decision-making. These two factors can theoretically strengthen the internal innovation capacity of SMEs. The resource-based view (RBV) approach provides a theoretical foundation for understanding how SMEs' competitive advantage can be built through valuable, rare, difficult-to-imitate, and non-substitutable internal resources (Barney, 1991).

According to the RBV, an organisation's competitive advantage is influenced not just by tangible assets but also by intangible assets, such as knowledge. Rowley and Gibbs (2008) assert that a learning organisation is a normative dimension of organisational learning. Learning organisation represents the optimal model for knowledge management, which is a crucial element for organisations (Abubakar et al., 2019). Research findings by Mai et al. (2023) indicate a favourable correlation between knowledge acquisition, knowledge interpretation, and organisational performance. Moreover, learning organisations exert a substantial mediating influence on the correlation between strategic change and organisational performance (Mohammad, 2019), have a strong correlation with business performance (Kochumadhavan & Gunasekaran, 2024), influence on financial performance (Hindasah & Nuryakin, 2020; Ramayanti et al., 2024; Mamo et al., 2024), and business performance (Nuryanti et al., 2018). Conversely, alternative empirical evidence indicates that learning organisations do not impact innovation (Hassan, 2024; Suroso et al., 2021; Blomson, 2023).

A further factor that may enhance innovation success is business experience. Business experience may encompass prior employment within the same industry or entrepreneurial endeavours, thereby enhancing practical knowledge and competencies in company management (Delmar & Shane, 2006). Business experience is highlighted as a crucial element in enhancing the likelihood of success for small enterprises, as seasoned entrepreneurs typically possess a superior comprehension of market dynamics, risk management, and strategic decision-making (Scarborough & Cornwall, 2015; Sun, 2024). The research findings are inconclusive. Numerous studies, like Boh et al. (2020), Chávez-Rivera et al. (2023), and Hallak et al. (2018), indicate that corporate experience affects innovation performance, as evidenced by the findings. Conversely, some research indicates that organisational inertia, stemming from historical experience, adversely impacts business model innovation (Moradi et al., 2021; Rahman & Siswowiyanto, 2018).

Innovation performance is a crucial dynamic quality that allows firms to maintain competitiveness and adapt to changes in the business environment (Garrido-Moreno et al., 2024) and plays a crucial part in attaining corporate performance (Ferreira & Coelho, 2020). Within the framework of the national innovation system, the significance of external entities, like the government and academia, is essential. The triple helix model posits that collaboration across the three primary sectors, business, government, and academia, fosters a favourable innovation ecosystem (Etzkowitz, 2008). The government is responsible for formulating supportive regulations and offering incentives, whilst academics contribute by supplying information, technology, and applied research pertinent to the requirements of SMEs.

Empirical findings show that government support helps companies survive in the pandemic era (Nguyen et al., 2024). However, this study also shows that government support is sometimes selective, indicating that government support tends to be given to more innovative companies and shows higher resilience during the pandemic. The study by Prasannath et al. (2024) concluded that government funding does not directly influence entrepreneurial orientation or innovation performance; rather, it is significantly contingent upon regional environment, sector, and the internal preparedness of micro, small, and medium enterprises (MSMEs). Research in Eastern Europe indicates that government funding alone is insufficient to stimulate MSME innovation; an absorptive capacity framework, including managerial experience and internal research and development (R&D), is necessary for support to be effective (De Oliveira Paula & Ferreira Da Silva, 2019).

Furthermore, empirical evidence about academic support for innovative performance presents inconclusive outcomes. Numerous studies across several nations demonstrate that engagement with universities fosters innovation, as observed in the UK (Audretsch et al., 2023; Bishop et al., 2011), Denmark (Radziwon & Bogers, 2019), and Pakistan (Ullah et al., 2023). Conversely, research findings in Türkiye indicate that university-industry collaboration for innovation is impeded by insufficient knowledge and inadequate financial assistance (Kleiner-Schaefer & Schaefer, 2022).

Despite several studies on innovation performance, a holistic examination of the influence of learning organisations, business experience, government support, and academia support on SME innovation success within the RBV and triple helix frameworks is few. From the RBV perspective, strategic resources are the primary determinant of SME performance. However, SMEs' internal limitations make them highly dependent on external resources. The triple helix provides an ecosystem that enables SMEs to acquire knowledge, technology, and policy support. Interactions between universities, industry, and government strengthen SMEs' internal resources, thereby meeting valuable, rare, inimitable, non-substitutable (VRIN) criteria and contributing to competitive advantage and improved performance.

In the context of developing countries like Indonesia, learning capacity is often built through specific government-funded programs rather

than through internal organisational initiatives. Therefore, organisational learning here is "top-down", where the acquisition of new knowledge occurs due to formally regulated human resource development policies, rather than from a bottom-up learning culture, as found in the study (Ghebregiorgis & Negusse, 2022).

This research addresses this deficiency. The RBV framework underpins the significance of internal capabilities in fostering innovation, whereas the triple helix model highlights the relevance of external influences. This study's conclusions are anticipated to aid in developing methods to enhance innovation performance in the SME sector sustainably.

This article is structured as follows. Section 2 presents a literature review and hypotheses development. Section 3 explains research methodology. Section 4 introduces the results. Section 5 discusses the findings. Section 6 concludes the study with implications.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Resource-based view

The core premise of the RBV posits that a firm can attain a performance edge and enduring competitive advantage by acquiring valuable resources, possessing unique talents that are difficult to replicate, and demonstrating the capacity to assimilate and utilise these assets effectively (Barney, 1991). Resources may be classified as tangible or intangible. Recognising resources that form distinct core competencies enhances an entity's competitiveness. A corporation will have a competitive edge if it has superior resources or resources that are challenging and costly to replicate.

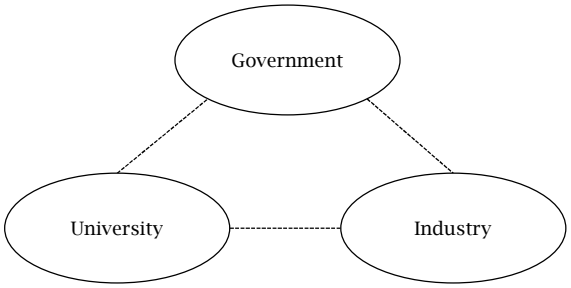
In previous decades, tangible assets may have been the predominant factor in a company's success. Nonetheless, with the progression of science and technology, the significance of intangible resources has escalated. Among the intangible resources that affect performance is innovation (Hilmersson & Hilmersson, 2021; Varis & Littunen, 2010).

The RBV aids SMEs in comprehending their resource standings to cultivate competitive advantage. Nonetheless, a comprehensive comprehension of resources alone is insufficient. A comprehension of the external environment is essential for equipping SMEs with a more thorough insight into the factors that affect their performance. The factors influencing corporate success can be elucidated by concurrently integrating the industry and resource perspectives (Spanos & Lioukas, 2001).

2.2. Triple helix

The triple helix is a framework that depicts the interplay among three principal entities in innovation and economic advancement: 1) government, 2) business (the private sector), and 3) higher education (Etzkowitz, 2008). This concept posits that social and economic advancement cannot be attained by depending exclusively on a single entity, but rather necessitates collaboration across all three parties. The government is essential in formulating policies that facilitate R&D, while also supplying the necessary infrastructure and laws that promote innovation. Universities provide updated knowledge through research and develop skilled human resources. The industry offers feedback to academia regarding market demands and pertinent technology for further advancement. Industries typically attempt to convert research findings into commercially viable products or services.

Figure 1. Triple helix framework



Source: Etzkowitz (2008, p. 13).

SMEs typically lack R&D initiatives due to constrained resources, particularly prevalent among those in low and medium-technology sectors (Mayho et al., 2024). The triple helix provides a theoretical framework for understanding how innovation arises through interactions between governments, firms, and universities. The rise of the knowledge-based economy is the antithesis of the traditional view that the economy is the result of capital and labour inputs driving innovation (Cai & Etzkowitz, 2020). Universities occupy a vital and distinctive position within the triple helix framework. They produce and disseminate useful knowledge with industry partners, both formally and informally, while cultivating a pool of future educated personnel, thereby fostering innovation outcomes (Mayho et al., 2024).

2.3. Innovation performance

Innovation performance denotes the capacity of an organisation, firm, or institution to conceive, cultivate, and execute novel ideas that enhance value. Successful innovation is not the outcome of a solitary initiative, but an integrated and iterative system encompassing the entire organisation (de Jong et al., 2013). Innovation is classified into product, process, marketing, and organisational categories (Organisation for Economic Co-operation and Development [OECD] & Statistical Office of the European Communities, 2005). Product innovation entails enhancing customer advantages by functional or other enhancements in a product or service (Zaefarian et al., 2017), and process innovation refers to doing business in new and innovative ways (Akgün & Keskin, 2014). Organisational innovation refers to the implementation of new business practices, workplace policies, decision-making processes, and methods for managing external relations. Innovation in marketing employs new techniques that entail substantial alterations in product design, placement, packaging, promotion, and pricing strategies (Afriyie et al., 2019). Innovation performance serves as a crucial metric for evaluating an entity's long-term viability within a dynamic and competitive business landscape.

2.4. Learning organisation and innovation performance

Establishing a learning organisation enhances this viewpoint by augmenting competencies, motivation, and internal information systems. The learning organisation represents the normative dimension of organisational learning (Rowley & Gibbs, 2008). A learning organisation represents the optimal model for knowledge management. Knowledge management is a managerial activity or process designed to enhance knowledge processing in an organisation by establishing a sustainable innovation system. Knowledge management is a crucial component for an organisation alongside strategic decision-making (Abubakar et al., 2019).

Organisations that foster and promote learning among their members are termed learning organisations. Organisations have the problem of acquiring new skills and procedures, as well as establishing systems that involve their staff in ongoing capability development programs (Šebestová & Rylková, 2011). Consequently, employee involvement in fostering a learning culture and transforming the company into a learning organisation is essential (Qin et al., 2024). Learning organisations promote self-organisation and are essential to the innovation process (Patro, 2020). Employees have to support innovation and continuous learning to enhance service quality and facilitate the transition to a learning organisation. The elements of communication, motivation, achievement, and flexibility exhibit a substantial correlation with employee leadership competencies and abilities. Empirical evidence demonstrates that a learning organisation positively influences work engagement, which in turn positively affects employee inventive behaviour (Anwar & Niode, 2017). The notion of a learning organisation is highly pertinent for SMEs as it promotes a flexible and adaptive culture of learning (Senge, 1990). A learning culture that adopts learning organisation methods, including knowledge exchange and continual learning, exhibits a significant degree of innovation (García-Morales et al., 2007; Qin et al., 2024; Darroch & McNaughton, 2002), organisational innovation (Allouzi et al., 2018), and improves innovation capabilities and performance (Ismail, 2005; Hung et al., 2010; Gil et al., 2018; Jiménez-Jiménez & Sanz-Valle, 2011; Mai et al., 2024).

H1: Learning organisation influences innovation performance.

2.5. Business experience and innovation performance

Business experience is an essential advantage for MSMEs in cultivating innovation capabilities. Business experience encompasses the breadth and diversity of involvement in initiating, overseeing, or participating in entrepreneurial endeavours, which equips entrepreneurs to be more attentive to opportunities (Ucbasaran et al., 2009). Business experience may encompass prior employment within the same industry or entrepreneurial endeavours as a founder of another enterprise, thereby enhancing practical knowledge and competencies in business management (Delmar & Shane, 2006). Business experience is highlighted as a crucial element in enhancing the likelihood of success for small enterprises, as seasoned company individuals typically possess a superior comprehension of market dynamics, risk management, and strategic decision-making (Scarborough & Cornwall, 2015).

Dynamic capabilities theory suggests that firms with more extensive experience have a higher capacity to adapt to changes in market conditions. An empirical study by Rosenbusch et al. (2011) on MSMEs in Germany revealed that extended business experience substantially enhances product innovation capabilities through the acquisition of market information and business networks. This finding is supported by the study of Agyapong et al. (2016) in Ghana, which indicates that MSMEs with over five years of experience are more adept at fostering sustainable innovation than newly established MSMEs. Consequently, the higher the maturity of an MSME's business experience, the more proficient it becomes in attaining excellent innovation performance (Chen & Wu, 2024; Atallah et al., 2023; Vaillant & Lafuente, 2019).

H2: Business experience has a positive effect on innovation performance.

2.6. Triple helix and innovation performance

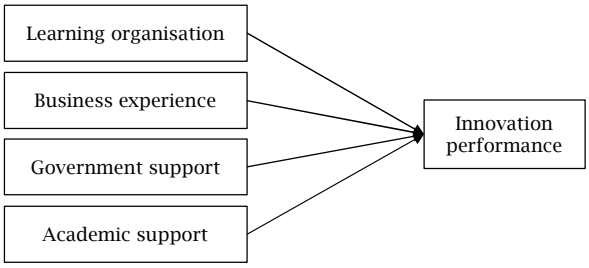
The triple helix model emphasizes the importance of collaboration between the business, academic, and government sectors in fostering innovation, including among SMEs (Etzkowitz & Leydesdorff, 2000). Each party in the encounter may possess varying degrees of involvement. Research conducted in Latin America demonstrated that government funding programs substantially enhanced innovation activities among MSMEs in the technology sector (Acs et al., 2009). Likewise, support from the Chinese government, shown through R&D subsidies and technical training, demonstrated a favourable correlation with enhanced innovation output (Zeng et al., 2010). Empirical research findings on SMEs in Bali, Indonesia, indicate that enhancements in business performance driven by innovation in business activities are predominantly influenced by academic support, whereas the attainment of business outcomes based on business capabilities is more likely influenced by government support (Widyani et al., 2022).

Academia's support in MSMEs promotes the dissemination of information and technology essential for innovation. Collaboration with universities may improve the innovation capacities of MSMEs by using the most recent findings. (Audretsch & Lehmann, 2005). Empirical research indicates that collaboration among university MSMEs in the UK enhances product innovation by providing access to technological knowledge and laboratory facilities (Bishop et al., 2011). A study in Denmark also found that academic mentoring programs for MSMEs contributed to improving the quality of innovation (Radziwon & Bogers, 2019). A study on MSMEs in Pakistan indicates that participation from universities and government in business incubation programs markedly enhances product innovation (Ullah et al., 2023).

H3: Government support influences innovation performance.

H4: Academic support influences innovation performance.

Figure 2. Research model



3. RESEARCH METHODOLOGY

This study employs primary data collected using the Google Forms platform. The questionnaire was distributed via WhatsApp to SMEs in Central Java, who voluntarily completed it. Although the convenience sampling questionnaire instrument suffers from self-selection bias, it allows for data collection from respondents spread across a wide geographic area.

In this study, the dependent variable is innovation performance, assessed by indices of product innovation, process innovation, marketing innovation, and organisational innovation (Afriyie et al., 2019). The independent factors include learning organisation, business experience, academic support, and government support. The measurement of a learning organisation is based on the following indicators: continuous learning, discussion and inquiry, team learning, embedded systems, empowerment, system connections, and leadership (Ismail, 2005; Weldy & Gillis, 2010). The duration of operation of an SME serves as a metric for assessing business experience (Spanjer & van Witteloostuijn, 2017; Peng et al., 2020). Simultaneously, the government support variable employs policy indicators that benefit SMEs (such as training, halal labelling, exhibits, and assistance in obtaining a business identification number), whereas academic performance is assessed using the following indicators: offering innovative concepts and technologies, assisting SMEs based on their specialisation, and supplying research infrastructure (adapted from Singh et al., 2022).

A questionnaire was created to assess each variable by aggregating statements to gauge respondents' impressions using a Likert scale. Responses varied from strong disagreement (1) to strong agreement (5). The variable of business experience was quantified by the duration of the company's operation within the industry, measured in years. The variable indicators have reflected the variables being measured, with loading factors greater than 0.6. This justifies these indicators in measuring each variable.

Data was acquired from 121 SME respondents who completed the questionnaire using convenience sampling. The data analysis employed partial least squares structural equation modeling (PLS-SEM). The testing steps in PLS are: 1) outer model to test the relationship between indicators and latent variables, and 2) inner model to test the relationship between research variables.

4. RESEARCH RESULTS

4.1. Respondent profile

The demographics of respondents categorised by gender, age, business sector, business experience, and business age are presented in Table 1.

Table 1. Respondent demographics

Characteristics	*Description*	*Amount*	*Percentage*
Gender	Female	73	60.3%
	Male	48	39.7%
	Total	121	100%
Age	≤ 30 years old	21	17.4%
	31–40 years old	50	41.3%
	> 40 years old	50	41.3%
	Total	121	100%
Business fields	Culinary	46	38.0%
	Food processing	17	14.0%
	Shops/restaurants	8	6.6%
	Herbal products	4	3.3%
	Clothing	7	5.8%
	Crafts	6	5.0%
	Trade	17	14.0%
	Services	16	13.2%
	Total	121	100%
Business experience	≤ 5 years	57	47.1%
	6–10 years	42	34.7%
	11–15 years	14	11.6%
	> 15 years	8	6.6%
	Total	121	100%

Source: Authors' elaboration.

4.2. Descriptive statistics

Respondents' answers to the questionnaire are presented in Table 2. The average respondent's answer for the learning organisation measurement indicator was 3.85, indicating that respondents agreed that their SMEs are learning organisations. The average SME has been established and operating for 7.88 years, reflecting SME business experience. Academic support showed an average of 2.99, reflecting low academic support. Government support showed an average of 4.49, indicating high support for SMEs. Meanwhile, innovation had an average respondent answer of 4.02, indicating that SME innovation performance is important and is reflected in these indicators.

Table 2. Descriptive statistics of respondents' feedback

No.	*Variable*	*Indicators*	*Description*	*Mean*	*SD*
1	Learning organisation (Ismail, 2005; Weldy & Gillis, 2010)	*LO1*	Employees are given time to support learning	3.95	0.717
		LO2	Employees provide honest and open feedback to each other	4.01	0.758
		LO3	Teams/groups are rewarded for their performance as a team/group	4.01	0.801
		LO4	Maintenance of an up-to-date database of employee skills	3.59	0.972
		LO5	Employee problem-solving	3.72	0.897
		LO6	Employee task selection	3.59	0.955
		LO7	Employee coaching by superiors	4.08	0.726
	Total			3.85	0.832
2	Business experience (Spanjer & van Witteloostuijn, 2017; Peng et al., 2020)	*BE*	The length of time an SME has been established/ conducting business	7.88	5.959
3	Academic support (Singh et al., 2022)	*ACD1*	Collaboration between SMEs and researchers/academics	2.88	1.299
		ACD2	Academics provide new ideas/products, or technologies	2.98	1.307
		ACD3	Academics assist SMEs based on their expertise	3.11	1.328
	Total			2.99	1.310
4	Government support (Singh et al., 2022)	*GS1*	Policies that favor MSMEs	3.79	1.042
		GS2	Subsidies for MSMEs	3.64	1.094
		GS3	Tax incentives for MSMEs	3.04	1.387
	Total			4.49	1.174
5	Innovation performance (Afriyie et al., 2019)	*IP1*	The importance of product innovation	4.43	0.864
		IP2	The importance of process innovation	3.98	0.885
		IP3	The importance of marketing innovation	4.18	1.103
		IP4	The importance of organisational innovation	3.76	0.958
		IP5	Implementation of product innovation	4.40	0.832
		IP6	Implementation of process innovation	4.02	0.917
		IP7	Implementation of marketing innovation	3.88	1.077
	Total			4.02	0.948

Note: N = 121, SD = standard deviation.
Source: Authors' elaboration.

4.3. Measurement model

Partial least squares structural equation modeling analysis comprises two phases: outer model evaluation and inner model evaluation. The outer model results demonstrate that all indicators are valid for assessing the variables, as indicated by loading factor values exceeding 0.4 (Hulland, 1999). The loading factor values for each instrument indicator are presented in Table 3.

Figure 3. SEM-PLS model

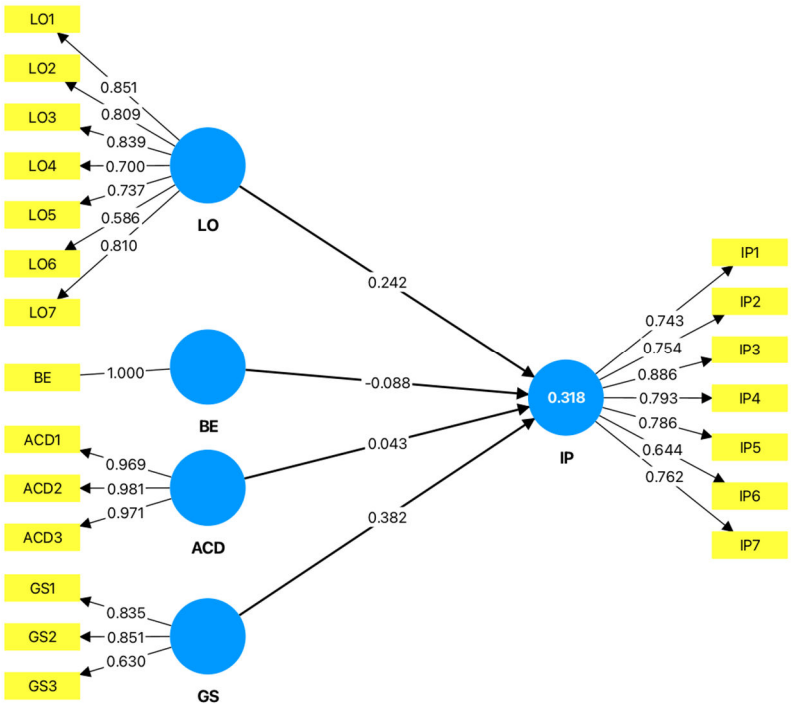


Table 3. Cross loadings between constructs

Variables	*ACD*	*BE*	*GS*	*IP*	*LO*
ACD1	0.969				
ACD2	0.981				
ACD3	0.971				
BE		1.000			
GS1			0.835		
GS2			0.851		
GS3			0.630		
IP1				0.743	
IP2				0.754	
IP3				0.886	
IP4				0.793	
IP5				0.786	
IP6				0.644	
IP7				0.762	
LO1					0.851
LO2					0.809
LO3					0.839
LO4					0.700
LO5					0.737
LO6					0.586
LO7					0.810

Source: Authors' elaboration.

Table 5 demonstrates that all indicators are valid and reliable in assessing the construct, hence allowing for the continuation of evaluating the inner model. An instrument is deemed reliable if Cronbach's alpha of ≥ 0.7, composite reliability (CR) of ≥ 0.7, or average variance extracted (AVE) is above 0.5 (Hair et al., 2018).

Construct validity is also supported by discriminant validity in Table 4, which shows that each construct's discriminant validity is greater than the highest correlation value of that construct with other constructs in the model presented.

Table 4. Discriminant validity (Fornell-Larcker criterion)

Variables	*ACD*	*BE*	*GS*	*IP*	*LO*
ACD	0.974				
BE	-0.154	1.000			
GS	0.554	-0.110	0.778		
IP	0.373	-0.174	0.496	0.770	
LO	0.435	-0.156	0.333	0.402	0.767

Source: Authors' elaboration.

Table 5. Reliability test

Variables	*Cronbach's alpha*	*CR*	*AVE*
ACD	0.973	0.982	0.948
GS	0.680	0.819	0.606
IP	0.886	0.910	0.592
LO	0.884	0.908	0.588

Source: Authors' elaboration.

4.4. Structural model

The inner model examines the influence of independent variables on the dependent variable. Table 6 below presents the findings of the inner model.

Table 6. Effect size

Variables	*ACD*	*BE*	*GS*	*IP*	*LO*
ACD				0.002	
BE				0.011	
GS				0.146	
IP					
LO				0.068	

Source: Authors' elaboration.

Table 7. Structural model results

Relationship	*Coeffisient*	*t statistics*	*p-values*	*Description*
LO → IP	0.242	2.143	0.032	Supported
BE → IP	-0.088	1.369	0.171	Not supported
GS → IP	0.382	3.561	0.000	Supported
ACD → IP	0.043	0.341	0.733	Not supported
R^2	0.288			
Adjusted R^2	0.295			

Note: Significant on p-value < 0.05.
Source: Authors' elaboration.

The inner model test displayed in Table 7 indicates that learning organisation and government assistance affect innovation success, with a p-value of less than 0.05. The contribution or influence of one independent variable on the dependent endogenous variable is indicated by the effect size value, as shown in Table 6. The results of this research show that government support and learning organisation provide a fairly strong contribution to variations in innovation performance.

5. DISCUSSION

The resource-based view posits that resources are the basis for competitive advantage, with innovation capabilities identified as one such resource. Research indicates that employees are afforded the opportunity to learn and to offer candid and transparent feedback. Nevertheless, regarding employee skills databases, the adaptability of employees to seek organisational input for problem-solving, and the availability of options in employee

duties and responsibilities, these factors exhibit low levels. This suggests that SME employees lack the flexibility to enhance their problem-solving knowledge and the autonomy to cultivate skills in executing restricted jobs. Facilitating chances for staff to acquire and disseminate knowledge and experience in problem-solving would promote organisational growth and learning within the balanced scorecard framework. These results align with previous studies, such as Cabrilo and Dahms (2020). A learning culture that adopts learning organisation methods, including knowledge exchange and continual learning, exhibits a significant degree of innovation (García-Morales et al., 2007; Qin et al., 2024). The capacity for organisational learning is favourably associated with innovation performance (Ismail, 2005).

The dynamic capabilities theory (Teece et al., 1997) posits that firms with greater experience exhibit superior flexibility to market fluctuations. Nonetheless, concerning innovation, the findings of this study suggest that company experience does not affect innovation performance. Business experience is quantified by the duration of firm existence, reflecting the operational tenure of the MSME within the industry. The demographics of respondents indicate that most MSMEs are relatively still developing, with 47.1% having one to five years of operational experience, followed by 34.7% with five to ten years of experience. This study concludes that business experience does not influence the creativity of MSMEs, as all MSMEs recognise the necessity of generating new ideas for operating their enterprises. MSMEs with all levels of business experience acknowledge the necessity and significance of discovering and executing innovations. The findings of this study diverge from prior research (Atallah et al., 2023; Agyapong et al., 2016; Rosenbusch et al., 2011; Chen & Wu, 2024).

The triple helix concept necessitates the involvement of government and academia to enhance industrial innovation performance. The findings of this study demonstrate that governmental assistance substantially influences innovation performance. Government assistance for MSMEs is manifested through policies that benefit them, as well as through subsidies and incentives. This encompasses promoting business legitimacy, training, government expenditure on MSME products, facilitating intellectual property rights and halal certification, and offering subsidies via financing schemes like the People's Business Credit and tax benefits. This outcome aligns with the research findings (Acs et al., 2009; Zeng et al., 2010; Widyani et al., 2022).

The study revealed that academic support did not influence innovative performance. The majority of SME respondents had not yet formed collaborative networks with academics. It seems that concepts and research outcomes from universities have not been adequately utilised to foster innovation in SMEs. Limited SMEs engage in collaboration with research institutions or universities in comparison to regional government agencies and other entities. In addition, even though academics provide technology transfer, SMEs often fail to adopt it due to low digital literacy and managerial skills. Internal factors, such as a lack of managerial skills and digital literacy, are the main obstacles, despite the availability of external support (including from universities) (Ratnaningtyas et al., 2025). Although universities have a strategic role, around 72% of SMEs still face innovation challenges because collaboration often does not focus on solving SME-specific problems, but rather on fulfilling academic outputs (Saiful, 2025). In addition, academic support is often only sporadic (short training) without the long-term mentoring needed to change business behaviour (Franky et al., 2025). This outcome aligns with the findings of a study conducted in Türkiye (Kleiner-Schaefer & Schaefer, 2022). Nonetheless, this contrasts with other data indicating that the involvement of academics affects innovation performance (Audretsch et al., 2023; Bishop et al., 2011; Radziwon & Bogers, 2019; Ullah et al., 2023).

6. CONCLUSION

According to the RBV theory, organisational performance is affected by both tangible and intangible resources. The capacity of a corporation to innovate, be it in products, processes, marketing, or organisational structures, constitutes a key driver of competitive advantage. The performance of innovation is affected by multiple aspects, including the learning organisation. A learning organisation has demonstrated a beneficial impact on innovation performance. Facilitating educational components and offering candid feedback between employees and leaders promotes employee learning and exploration of new concepts. Implementing innovation will promote the growth and development of SMEs. This study's results reveal that government funding positively influences innovation performance, whereas business experience has no impact. Simultaneously, the function of academia and universities is extensive, as the dissemination of ideas and the application of research findings, together with guidance for SMEs, remain inconsistent. These findings underscore the necessity of enhancing collaboration among government, academia, and business to elevate the innovation performance of SMEs across a broader spectrum.

This study has limitations that also highlight potential areas for further research. First, business experience was measured solely by the duration since company establishment (Peng et al., 2020). Future research could distinguish between time as an entrepreneur and time working in the current industry, as used by Spanjer and van Witteloostuijn (2017). Second, this study examined only government and academic support as external factors influencing innovation performance. Future research could analyze the influence of other entities, such as large firms or social organizations with SME coaching or mentoring programs. Third, this study used a limited sample, so future research should include a larger, more representative sample of MSMEs to strengthen generalizability. Fourth, data collection relied solely on questionnaires, which may introduce response bias. Future research could incorporate additional methods, such as focus group discussions, to gain deeper insights into SME innovation performance.

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