

Journal homepage: http://iieta.org/journals/ijsdp

# Factors Contributing to Sustainable Growth Performance in Indonesian SMEs: The Role of Business Incubators



Muafi<sup>1\*</sup>, Prasetyo Hadi<sup>2</sup>

<sup>1</sup> Department of Management, Faculty of Business and Economics, Universitas Islam Indonesia, Yogyakarta 55283, Indonesia <sup>2</sup> Department of Management, Faculty of Economics, and Business, Universitas Pembangunan Nasional "Veteran" Jakarta, Depok 12450, Indonesia

Corresponding Author Email: muafi@uii.ac.id

https://doi.org/10.18280/ijsdp.181029

Received: 26 March 2023 Revised: 15 July 2023 Accepted: 16 August 2023 Available online: 31 October 2023

#### Keywords:

external network, entrepreneurial learning, innovation process, enterprise sustainable growth performance, business incubators

# ABSTRACT

Sustainable growth performance is crucial for the development and success of small and medium-sized enterprises (SMEs), particularly in the context of business incubators. Companies must put into practice a number of measures that will promote enterprise sustainable growth performance in order to accomplish this. This study intends to investigate the impact of numerous factors, including external networks, entrepreneurial learning, and the innovation process, on the sustainable growth performance of SMEs. This study also examines how the innovation process mediates the relationship between the sustainable growth performance of an enterprise's development, entrepreneurial learning, and external networks. To understand the impact of each element, we use quantitative approaches in surveys by providing questionnaires to respondents via online platforms. Out of 320 SMEs chosen by purposive sampling technique with several criteria, 290 SMEs in the Province of DKI Jakarta, Indonesia, returned the questionnaire completely and the data can be analyzed further (90% response rate). We use structural equation modeling to process the data with AMOS 7 software. The results of this study show that the innovation process is positively influenced by external networks and entrepreneurial learning, and it positively influences sustainable growth performance of SMEs. Between external network and entrepreneurial learning, the one with stronger influence to innovation process is entrepreneurial learning, although both are found to be significant. Furthermore, this study also proven that innovation process acts as the mediator in the influence of external network and entrepreneurial learning on sustainable growth performance of SMEs. Ultimately, this study has been demonstrated that SMEs who join business incubators can maximize their potentials to innovate and obtain sustainable growth performance through utilizing their external network and carrying out entrepreneurial learning

#### **1. INTRODUCTION**

Small and medium-sized businesses that have recently been established face a multitude of opportunities and challenges, particularly in terms of financial issues [1-3] and knowledge limitations [4, 5]. These growing firms require special attention and assistance to build a sustainable enterprise and continue to experience positive growth [6]. One approach to aid in this expansion is the use of business incubator strategies. The primary goals of a business incubator are to promote entrepreneurship, grow businesses, and assist in solving problems related to business operations [7].

The growth of business incubators is currently still in a consolidation phase that not only commits to establishing and cultivating strong business and social capacities to give information for business actors but also places a focus on business networking capabilities [8-10]. Also, numerous studies have demonstrated the significance of networks for business and their continued profitability [11-13]. A network can be established through a company incubator and used by business players to achieve sustainable growth performance [4, 8, 14].

In this regard, today's business organizations or companies have engaged in several collaborative efforts through the utilization of networks in the business environment to increase their chances of success. This was also conveyed by several previous studies. For example, Liu and Yang [15] examined a company's commitment to building a network with its suppliers in order to achieve sustainable growth performance. These sustainability-related initiatives tend to go beyond company boundaries to focus on the company's suppliers, customers, and competitors [16].

Therefore, researchers have also started to investigate the antecedents and consequences of external knowledge and collaborative learning to achieve innovation in a sustainable manner [17, 18]. Through collaboration, business overcome seize organizations can challenges and opportunities for business growth [19]. Moreover, previous research has linked many factors with sustainable innovation, including business models [20, 21], innovation [22, 23], digital learning [24], and relational aspects [25]. A number of scholars have also highlighted the role of business incubators in developing external knowledge as a means of achieving business sustainability [4, 26, 27].

In addition to the crucial role of networks to enhance the innovation process in the context of SMEs, entrepreneurial learning can also be an important factor that determines success [28, 29]. Entrepreneurial learning refers to the acquisition and development of information, insights, or knowledge about entrepreneurial activities. So far, the role of entrepreneurial learning has been proven to have a positive impact on business growth [30], service innovation [31], digital innovation [32], to business performance incorporated in business incubators.

Del Campo Villares et al. [33] stated that the role of business incubators in developing knowledge can help facilitate the communication and exchange of knowledge of business people in achieving innovative business sustainability. Relationships with these incubators can provide more opportunities for business people to be able to work with partners to increase growth [34, 35], share knowledge with external entities [15], and encourage innovation [36].

# 1.1 Business incubators in Indonesia

In Indonesia, business incubators exist in universities, while some are also provided by large firms and facilitated by the government. These institutions work together with the Ministry of Cooperatives and SMEs, as they provide guidance and coaching to develop business ideas, for one or two years [37]. In addition, business incubator also assists new firms to obtain capital for their business, introduce investment management and the use of technology, as well as information sharing between the members [38]. Several incubators are also grouped in an association named Indonesian Business Incubator Association. However, the role of business incubators in aiding SMEs is still regarded as not optimal due to the number of the platform itself compared to SMEs [39, 40].

Aside from the imbalance of numbers between business incubators and SMEs in the country, the problems of business incubators in implementing their activities rests on several aspects. Wajdi et al. [41] in their study mentioned that some business incubators have not yet carried out optimum socialization for their activities, thus unable to reach the desired targets, such as SMEs. In addition, the training provided by business incubators for SMEs are still not suitable with the needs or conditions of SMEs itself, and that the incubators have not been able to give access to capital for the SMEs [41]. Indeed, similar problems is also found in the joint research carried out by the Research and Development Center in the Ministry of Communication and Information of Indonesia together with Incubie [42], one of the university business incubators. Their results indicate that many business incubators only have small number of administrators and they have not established clear organization structure for their organization. These become several problems that cause the practice of business incubators in Indonesia still not optimal.

#### 1.2 Research gap, questions, and objectives

The study on business incubators and SMEs in Indonesia is currently growing. The topic mostly focuses on the factors that improves the success and effectiveness of business incubators itself [43, 44], as well as how business incubators play a role in developing startups business [45-47]. For SMEs, the research is directed to how SMEs can maintain their position through sustainability and competitive advantage [48]. So far, the existing studies have not analyzed how business, especially SMEs are able to take advantage of being in a business incubator, specifically by emphasizing on the external network and entrepreneurial learning they gain in driving their innovation process and sustainable growth performance. The existing literatures have not yet addressed how business incubators can provide networks and learning opportunities for these SMEs that lead them to carry out innovation process and have higher sustainable performance. Most of it examined the underlying condition for SMEs without highlighting the role of business incubators [47, 48]. In previous studies, SMEs are mostly considered to expand their external networks by themselves, and obtaining the opportunities of entrepreneurial learning through various means, but not within the context of business incubators. Based on these gaps, we will seek the answers for these research questions:

RQ1: How does external networks and entrepreneurial learning provided by business incubators leads SMEs in Indonesia to have sustainable growth performance?

RQ2: What is the role of innovation process carried out by SMEs within the whole relationships and the context of SMEs and business incubators in Indonesia?

To fill the gaps that exist in both the literature and practice, as well as systematically explore the role of incubator networks, we attempt to analyze the impact of external networks and entrepreneurial learning gained from business incubators on SMEs innovation processes and their interactions in enhancing sustainable growth performance. The novelty of this study is that there has not been research in Indonesia that directly links the innovation process with external networks and entrepreneurial learning simultaneously in increasing sustainable growth performance, by specifically looking at the interaction between SMEs and business incubators. Thus, the aim of this study is to attempt to develop a model to increase sustainable growth performance by looking at the variable of external network, entrepreneurial learning, and innovation processes.

# 2. LITERATURE REVIEW AND HYPOTHESIS

#### 2.1 External network and innovation process

Currently, social capital is regarded as one of the fundamental components of economic growth and the financial success of businesses [49]. Social capital is a resource produced by the public relations, values, and norms systems that groups and organizations have access to. These systems are adjusted to allow for the improvement of the collaboration benefits, which is based on interpersonal trust [50]. One of the components of social capital is external network, which refers to the collaboration of various external organizations such as customers, suppliers, competitors, and business partners [51]. This component is one of the basic capitals of the firm, which enable them to acquire and integrate knowledge and various skills needed to innovate [52, 53]. External networks can be a key factor in fostering innovation and business expansion, claim Johan et al. [13]. Businesses can increase their capacity more quickly and take advantage of growth opportunities if they have a diverse external network of relationships. Also, external networks can expand the area of business operations and boost their potential, particularly in the knowledge sector [54]. Additionally, Liakh and Spigarelli [55] suggested that external networks also provide diverse resources that allow information flow to gain in-depth understanding of trends.

In essence, the external network is made up of a variety of elements that can give enterprises the knowledge and resources they need to operate better [56, 57]. The complementarity between firms can be increased by close collaboration while forming a network, which will greatly help with innovation [55]. Also, personal contact can significantly improve the flow of information, innovation, and expertise and further boost business success. According to Hattam and Greetham [57], external networks can assist businesses' business continuity in addition to facilitating information sharing. Based on this assumption and previous studies, the first hypothesis is proposed as follows:

H1. External network has a positive influence of innovation process of small and medium business actors.

## 2.2 Entrepreneurial learning and innovation process

Learning is a series of processes that are oriented towards generating knowledge from the internal and external environment of the organization [30, 31]. Xia and Liu [58] stated that learning can emerge through various methods, such as research, development, and relationships with various partners as a means of forming knowledge. Bae and Choi [59] state that entrepreneurial learning in organizations can be a factor in forming innovation. Wu et al. [4] viewed entrepreneurial learning as an organizational capability that contributes to creating innovation. The knowledge gained can enhance development for the organization itself which can directly improve business performance [29, 60]. Learning is a critical element that can impact innovation and organizational performance, claims organizational learning theory [56]. Moreover, Wu et al. [4] distinguished between exploratory and exploitative learning when defining entrepreneurial learning. Exploratory learning refers to learning through exploring the environments, reality, and their surroundings, whereas exploitative learning is value-added learning that focuses on purifying and recycling current knowledge. Both helps organizations gain and increase short-term competitive advantages which further influence the innovation process [4, 61].

Exploitative learning is defined as learning activities that center on obtaining existing information to comprehend established ideals and accomplishments from the perspective of the innovation process. This boosts the potential for business innovation and gives a deeper awareness of current markets and technologies [28, 32, 56]. According to the research of Hamburg [32] and Wu et al. [4], entrepreneurial learning is one of the aspects that can affect how firms innovate. Thus, the second hypothesis is proposed as follows:

H2. Entrepreneurial learning has a positive influence of innovation process of small and medium business actors.

# 2.3 Innovation process and SMEs sustainable growth performance

The introduction of novel goods, services, or business practices is considered innovation [26, 62, 63]. Innovation is understood and described as the creation and commercialization of new ideas. Implementing new or significantly enhanced goods, methods, or services is covered by this term [64]. Consequently, a novel concept that is effectively commercialized falls under the definition of

innovation. For the sake of simplicity, this study's definition of innovation refers to both innovative ideas that have been successfully commercialized through gained knowledge and ideas that are intended to be commercialized in the market. Kehbila [65] asserts that the innovation process enables firms to look at the behaviors and relationships required for profitable operations. According to Chen et al. [66]. knowledge is necessary as the foundation for the innovation process to be developed in order for organizations to carry out processes of innovation. The knowledge-based view argues that knowledge creation, exchange, and recombination are essential for efforts in the innovation process [26, 67, 68], so as to enhance sustainable growth performance. From the knowledge-based view, the goal of the innovation process itself is to create a new design for a product or process in a business.

According to Chang et al. [67], firms can experience business growth through the innovation process. The decision to begin the development process and to support corporate growth is specifically the innovation process, which is the stage from the first concept until the ideas join the formal development process. The fact that consecutive authors have characterized innovation differently shows that it is a complicated phenomenon whose parameters shift with time [69]. Innovation in a business setting refers to new or enhanced goods or methods that enhance current goods and the manner in which they are distributed, hence enhancing performance. Innovation is viewed as a specific tool used by business owners to enable them to develop new lines of commerce, goods, or services. The concept of clearly defined stages and decision points for carrying out the innovation process was proposed by Teplická et al. [70]. This innovation process at a business incubator might take shape when the organization gets knowledge from multiple company partners. Thus, the third hypothesis is proposed as follows:

H3. Innovation process has a positive influence of sustainable growth performance of SMEs.

# 2.4 The mediation role of innovation process

According to Ni and Yu [71], the traditional innovation model focuses on development activities for new products. Developing a product involves engaging in a range of activities, including managing and transforming resources, gathering information and expertise on specifications, and creating a product that meets (or creates) market demand [72-74]. The innovation process refers to the clear stages for realizing an innovation project. In general, the innovation process is characterized by the process of developing a product or process in business activities. Zhu et al. [75] suggested that organizations that are effective and careful in seizing opportunities can support the innovation process by considering the knowledge and lessons learned. Other studies also emphasize the need to consider the innovation process as mediation to better understand how the mechanisms underlying external knowledge capabilities and entrepreneurial learning can enhance sustainable growth performance.

Literature has thus far come to the conclusion that innovation is more than just an idea; it is also a realization and successful application. The technical, design, production, managerial, and commercial actions involved in marketing a new (or improved) product, or the first commercial application of a new (or improved) method or piece of equipment to achieve growth, are all examples of innovation. With this strategy, the procedures that must be controlled to apply innovation in order to achieve growth are introduced in a pretty straightforward manner. According to Widya-Hasuti et al. [76], the production and development of ideas into a new good or service constitutes the innovation process in general. Also, a number of authors have underlined the necessity for innovation management so that they see the innovation process as an active organization and develop something new as a factor in enhancing enterprise sustainable growth performance [64, 77], such as Urba et al. [72].

H4a. External network can influence sustainable growth performance of SMEs through innovation process.

H4b. Entrepreneurial learning can influence sustainable growth performance of SMEs through innovation process.

#### **3. RESEARCH METHODOLOGY**

This study is conducted using a quantitative approach, with the aim of measuring and understanding the causal relationships between variables. To examine the hypothesis in this study, data was collected from small and medium business owners in DKI Jakarta Province. We chose DKI Jakarta Province for two reasons. First, Jakarta is the most populous province in Indonesia with highly developed economic development and incubator development. Second, the types of SMEs in DKI Jakarta are highly diverse. We carried out the data collection process for three months, starting from October to December. The sample consists of 320 SMEs chosen by purposive sampling method, which is determined according to several criteria, namely: (1) the business has been established for 3 years; (2) respondents are the main owner of the business and is actively joining in a business incubator; and (3) the business has more than 10 business partners.

The questionnaire is designed in such a way that the information collected was about external networks, entrepreneurial learning, innovation process and enterprise sustainable growth performance. Then data collection is carried out by distributing questionnaires using Google Forms. The final number of questionnaires returned and used for data processing was 290 and the remaining 30 respondents did not complete the data listed in the questionnaire (90% response rate). According to Sekaran and Bougie [78], when the questionnaire items were not answered or the questionnaire included values that were not part of the original question sheet, this questionnaire was rejected. This number of samples, namely 290 respondents for SEM analysis [79, 80], thus the data can be analyzed further.

This study uses a five-point Likert scale (1 represents strongly disagree to 5 represents strongly agree) to measure each variable in this study. External network is measured by four items adopted from Zhang et al. [81]. Then entrepreneurial learning is measured by eight items adopted from Gomes et al. [31]. The innovation process is measured by 8 items (idea generation, evaluation, selection, prototype development, testing, and refinement, transfer to large-scale production, and the commercial exploitation) adopted from Gerke et al. [82]. Finally, enterprise sustainable growth performance is measured by 5 items (the growth rate of new products or services, sales growth, market share growth, profit growth, and corporate reputation) adopted from Wu et al. [4]. We first ensured the validity and reliability of the instruments. Furthermore, we analyze the relationships between the hypothesis proposed, examine the model fit and model causality, and test the influence of mediating variable using Structural Equation Modeling (SEM) with AMOS.

Table 1. Respondents' characteristics

Category	Amount	Percentage (%)
Number of employees		
Less than 10	183	63%
11-20	81	28%
21-30	26	9%
Years of business established		
3-4years	194	67%
5-6years	75	26%
>6years	21	7%
Types of industry		
Culinary	55	19%
Fashion	81	28%
Craft	64	22%
Digital creative	32	11%
Others	58	20%

Based on the characteristics of a sample of 290 respondents presented in Table 1, most SMEs have less than 20 employees. Based on the length of establishment, most SMEs have been established for 3-4 years, and based on the type of industry, most SMEs are in the fashion business line.

# 4. RESEARCH RESULT

This study is carried out to understand how the sustainable growth performance can be achieved by SMEs which participates in business incubators. In a more specific sense, we identify how SMEs can utilize their external network and entrepreneurial learning gained from being in the business incubators in order to create innovation process and thus achieving the sustainable growth performance. In order to find out, we first test the validity and reliability of the research instruments through convergent and determinant validity tests as well as reliability test. The results indicate that all instruments are valid and can be used for further analysis. Furthermore, we examined the model causality test and conducted Sobel test to figure out the relationships between variables. In short, the findings prove that when SMEs maximize their opportunities by participating in business incubators through external networks and entrepreneurial learning, this leads them to the ability of carrying out innovation process, hence achieving sustainable growth performance.

#### 4.1 Validity and reliability

Based on the findings of the measurement model's standard loading estimation significance test, it is determined objectively that every indicator contained in the latent variable exhibits a very significant value with a p value of 0.001 or less and that each loading on the indicator is greater than 0.50. These findings demonstrate the validity of all indicators for measuring latent variables. The SPSS version 25 program was used to calculate the Cronbach's Alpha for reliability test, with acceptance parameters>0.70.

The indicator is regarded as reliable for assessing latent variables if the Construct Reliability (CR) parameter is greater than 0.7, while the Average Variance Extracted (AVE) parameter must be greater than 0.5. The utilized indicators are

regarded as valid and reliable since Standard Loading, Cronbach's Alpha, Construct Reliability (CR), and Average Variance Extracted (AVE) match the requisite acceptance criteria (see Table 2).

Table 2. Validity and reliability test results

Latent Variable	Indicator	Standard Loading	Са	CR	AVE
External	EK1	0.843			0.715
	EK2	0.955	0.805	0.909	
Network	EK3	0.786		0.909	
	EK4	0.788			
	EL1	0.726	-		0.542
	EL2	0.788			
	EL3	0.749			
Entrepreneurial	EL4	0.716	0.761	0.904	
Learning	EL5	0.761	- 0.761 - -	0.904	
	EL6	0.701			
	EL7	0.707			
	EL8	0.736			
-	IP1	0.726	0.765 0.918		0.595
	IP2	0.786			
	IP3	0.767			
Innovation	IP4	0.774		0.010	
Process	IP5	0.752		0.585	
	IP6	0.733			
-	IP7	0.786			
	IP8	0.791	-		
Enterprise - Sustainable - Growth -	EGP1	0.710			
	EGP2	0.725			
	EGP3	0.858	0.755	0.755 0.872	
Performance	EGP4	0.747			
1 ci ioi mance	EGP5	0.751	_		

#### 4.2 Convergent validity test results

This test was conducted to evaluate the dimensions of the study's hypothesized outcome in order to establish the validity of each estimated indicator. A set of indicators may suggest a single hidden variable that underlies the latent variable if each indicator has a critical ratio (C.R.) value greater than twice the standard error (S.E.). According to test results and regression weight values, all indicators used in the study are valid for each latent variable because the critical ratio (C.R.) is more than twice the standard error (S.E.). Table 3 displays the regression weight values for each component.

Table 3. Convergent validity test results

	Estimate	C.R.	Р
EK1	1.000		
EK2	1.337	19.465	***
EK3	.544	8.416	***
EK4	.828	8.530	***
EL1	1.000		
EL2	1.306	7.724	***
EL3	1.064	7.971	***
EL4	1.304	7.623	***
EL5	.620	5.083	***
EL6	1.419	8.081	***
EL7	.824	.125	6.618
EL8	1.292	.154	8.382
IP1	1.000		
IP2	1.107	.120	9.195

	Estimate	C.R.	Р
IP3	1.142	.129	8.883
IP4	1.002	.114	8.777
IP5	1.290	.132	9.783
IP6	.801	.108	7.430
IP7	.646	.094	6.884
IP8	.520	.088	5.914
EGP1	1.000		
EGP2	1.349	.243	5.542
EGP3	1.649	.334	4.932
EGP4	1.273	.243	5.231
EGP5	.818	.208	3.935

#### 4.3 Discriminant validity test results

The degree to which the constructs have empirically varied relationships with one another is referred to as discriminant validity. By comparing the square root of each AVE on the diagonal with the correlation coefficient for each construct in the pertinent rows and columns, discriminant validity is evaluated. The construct or variable is deemed to be legitimate if the correlation coefficient value is less than the AVE square root. The construct or latent variable in this test can be deemed to be valid because the value of the correlation coefficient satisfies the criteria for the discriminant validity parameter (see Table 4).

Table 4. Discriminant validity test results

Variable	1	2	3	4
External Network	0.846			
Entrepreneurial Learning	0.624	0.736		
Innovation Process	0.543	0.486	0.765	
Enterprise Sustainable Growth Performance	0.096	0.150	0.132	0.760

#### 4.4 Model fit test

The parameter used in the model fit test is Chi-Square, CMIN/DF, AGFI, RMSEA, TLI, and CFI. A good model indicates that the measurement model of the study is fit with the empirical condition within the population activity. The results of model fit test in this study can be seen in Table 5 below.

 Table 5. Model fit test results

Statistical Test	<b>Critical Value</b>	Results	Conclusion
Chi Square	-	539.561	-
Degree of Freedom	-	271	-
p-Value	>0.05	0.051	Fit
CMIN/DF	<2.00	1.991	Fit
RMR	>0.05	0.056	Fit
RMSEA	< 0.08	0.077	Fit
GFI		0.911	Fit
AGFI	>0.90	0.913	Fit
CFI	≥0.90	0.917	Fit
TLI		0.905	Fit

#### 4.5 Model causality test

By assessing the strength of the association between two or more latent variables, this test is used to ascertain the causal relationship between variables. Tables 5 and 6 show the outcomes of computations performed using AMOS 23 in Figure 1.

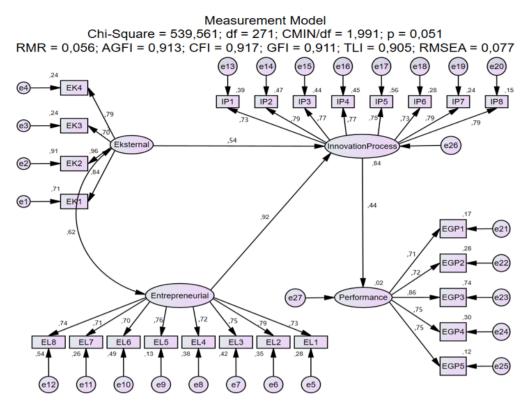


Figure 1. Output of AMOS

Table 6. Model causality test results

			Estimate	C.R.	Р
Innovation Process	<	External Network	.541	4.344	***
Innovation Process	<	Entrepreneurial Learning	.919	6.529	***
Enterprise Sustainable Growth Performance	<	Innovation Process	.438	3.982	***

Based on the t-count significance in Table 5 with a probability value (p)=0.05, the latent variables are considered to have a significant influence because they have a probability value less than 0.05. The external network has a CR of 4.344, a probability value of less than 0.05, and a considerable impact on the creative process (H1 accepted). Entrepreneurial learning strongly affects the innovation process with a probability value of less than 0.05 and a coefficient of determination (CR) of 6.529 (H2 accepted). The innovation process significantly influences the causal relationship between enterprise sustainable growth performance, with a probability value of less than 0.05 and a CR of 3.982 (H3 accepted).

# 4.6 Mediator variable test

This test is used to determine the role of mediator factors in mediating the causal link between exogenous and endogenous variables. The mediation test is conducted using the Sobel test. The Sobel test is employed to investigate a hypothesis where there is an indirect relationship between the independent (X) and dependent (Y) variables, and this relationship is influenced by a third variable (M). In simpler terms, it examines if the inclusion of a mediator (M) in the regression analysis significantly diminishes the impact of the independent variable (X) on the dependent variable (Y) [83, 84]. In this study, we carried out Sobel test to understand the mediating role of innovation process in the relationship between external network, entrepreneurial learning, and sustainable growth performance of SMEs (see Table 7).

Table 7. Mediation test result with sobel test

Variable	Sobel Test Statistics	р
External Network>Innovation Process- ->Enterprise Sustainable Growth Performance	2.963	0.003
Entrepreneurial Learning>Innovation Process>Enterprise Sustainable Growth Performance	3.319	0.001

The results indicate that the innovation process is found to be a significant mediator in the relationship between the external network and SMEs sustainable growth performance. This is demonstrated by the Sobel test result of 2.963, which exceeds the z table of 1.96 and has a probability value of 0.003 less than 0.05 (H4a is accepted). The innovation process is another mediator that has the potential to have a considerable impact on the relationship between entrepreneurial learning and enterprise sustainable growth performance. This can be seen from the Sobel test score of 3.319 which is greater than the z table of 1.96 with a probability value of 0.001 which is less than 0.05 (H4b accepted).

#### 5. DISCUSSION

This study is conducted to look at the factors that influence

sustainable growth performance in SME business organizations by examining the role of external networks, entrepreneurial learning, and innovation processes as mediator. Based on the hypothesis testing that has been carried out, it can be seen that all the hypotheses proposed in this study are accepted significantly. In the first hypothesis, external networks are seen as a factor that can improve the innovation process in organizations in achieving business sustainable growth performance. The findings indicate that external network has a significant positive influence on innovation process with a probability value of less than 0.05 with CR 4.344, thus the first hypothesis can be accepted. Based on the results obtained, it appears that external networks can be used as an aspect in obtaining the knowledge and information needed to innovate. This is in line with the study from Johan et al. [13] who stated that external networks can be a solution for organizations in solving problems and exploring opportunities and increasing organizational strengths to achieve growth. With networks, organizations can create new knowledge in stimulating the creation of innovations.

Furthermore, in the second hypothesis, we examined the direct influence of entrepreneurial learning on the innovation process. Based on the calculation of the results, entrepreneurial learning is proven to have a significant positive influence on innovation process with a probability value of less than 0.05 with a CR of 6.529, thus the second hypothesis can be accepted. These findings also indicate that apart from networking, learning is an important factor in the innovation process. According to Gomes et al. [31], entrepreneurial learning is a series of processes that are oriented towards generating knowledge in the innovation process. Learning can occur through various methods such as discussion and training. In addition, Atatsi et al. [85] stated that learning is the key to understanding why organizations are successful and how they can do it. The results of this study are also supported by previous research conducted by previous researchers [30, 31, 60], who found that that learning has brought many insights into creating innovation.

In the third and fourth hypotheses, the results found that the innovation process influences enterprise sustainable growth performance, and it can be a mediation linking external networks and entrepreneurial learning on enterprise sustainable growth performance. According to Sawaean and Ali [29], innovation includes the application of new and improved products, processes, or services. In this study, small and medium business actors have succeeded in implementing and commercializing new products. Thus, the innovation process can direct the organization in achieving business growth. In general, this research also supports the study from Zhao et al. [60], which states that in general the innovation process is the phase from the first idea until the idea is implemented [6, 86]. Then, this study also found that the innovation process bridged the indirect influence relationship between external network variables, and entrepreneurial learning on enterprise sustainable growth performance. The results of this study are in line with the findings of previous studies which confirm that the innovation process involves a set of activities, namely relationships built through networks and internal learning within organizations. If the external network and entrepreneurial learning built by the organization increases, the innovation process will also increase so that it will have an impact on the sustainable growth performance of the organization. Thus, the fourth hypothesis can be accepted. Theoretically, this study empirically supports the notion of Resource-Based View (RBV), which highlights that a firm's resources is what determines its sustainable competitive advantage. Departing from this understanding, SMEs who participate in business incubators can utilize their resources in the form of external networks and entrepreneurial learning to achieve sustainable growth performance. As they interact with various parties within the incubators, this enables them to establish or maintain relationships with external parties, even gaining and learning new insights for their entrepreneurial activities. These two aspects can act as resources and capabilities owned by SMEs itself, enabling the SMEs to carry out their innovation process and achieving sustainable growth performance.

# 6. CONCLUSION

This study is carried out to explore the factors that can affect the sustainable growth performance of SMEs. Specifically, this study analyzes how business, especially SMEs can take advantage of being in a business incubator, specifically by emphasizing on the external network and entrepreneurial learning they gain in driving their innovation process and sustainable growth performance. From the results of analysis and hypothesis testing that has been done, this study proves that all hypotheses proposed are accepted. Specifically, this study proves that external networks and entrepreneurial learning can increase the innovation process of SMEs, and innovation process can enhance the sustainable growth performance of SMEs itself. Furthermore, this study also proves that the innovation process can mediate the relationship between external networks and entrepreneurial learning in increasing enterprise sustainable growth performance.

When SMEs join business incubators, they will be able to gain resources that can strengthen their business to compete in the market. It occurs when SMEs can take advantage of their external network while also obtain information and knowledge through entrepreneurial learning. This allows the SMEs to increase their innovation process, thus leading them to improve sustainable growth performance.

# 7. IMPLICATION

# 7.1 Theoretical implication

This study contributes to practice and theory regarding the sustainable growth performance of business organizations, especially in seeking it in SMEs. First, regarding the literature, this study extends the study of organizational performance literature and the factors that can influence it, namely external networks, entrepreneurial learning, and innovation processes. In addition, this study also looks at the role of the innovation process as a mediation to find out more about the mechanism of the factors that drive the sustainable growth performance of SMEs. This study is conducted specifically through the lens of SMEs which join business incubators. Until now, there has not been any study in Indonesia that directly links the innovation process with external networks and entrepreneurial learning simultaneously in increasing sustainable growth performance, by specifically looking at the interaction between SMEs and business incubators.

This study confirms that external networks have a role as a basis in the innovation process carried out by organizations. It acts as a factor that can support providing information and developing knowledge, thus enabling the organization to seize opportunities and innovate. Furthermore, this study also proves that entrepreneurial learning leads to innovation process. Through entrepreneurial learning, SMEs can acquire and develop the information, abilities, and attitudes that will be useful for them to conduct innovation process, which then will lead to enterprise sustainable growth performance.

#### 7.2 Practical implication

This study also contributes to practice, especially for small and medium business actors to pay attention to the importance of networking and learning capabilities to improve their performance. This is expected to become knowledge for business people to make it easier for them to run their business. In addition, the existence of learning is also very important to achieve sustainable business performance. This study highlights the importance of business incubators for SMEs, since it allows them to build stronger network and enable them to carry out entrepreneurial learning. The existence of business incubators is also able to be a way for SMEs to improve their innovation process and raise their sustainable growth performance.

By joining business incubators, SMEs can find a place which facilitate and provide the necessary resources to develop their business. Business incubators exists and facilitate numerous SMEs with different characteristics. The connection from joining this incubator will allow SMEs to build and develop their own business network as well as gaining new perspectives in carrying out their business. Furthermore, the business incubators also provide information and encourage learning for SMEs, thus facilitating them to increase their innovation process. Finally, by joining business incubator and maximize its potentials, SMEs will be able to increase their enterprise sustainable growth performance.

This study also can be a recommendation for other stakeholders in the SMEs ecosystem. The government and industry associations, as well as universities, must understand the crucial role of a well-established business incubators. Business incubators that can provide the needs and maximize the potentials of SMEs itself can be an alternative to pursue the growth of the economy, as SMEs greatly contributes towards the country's GDP. This can still be enhanced, and the possibility can still be challenged further. The government, large corporations, and universities should build business incubators that can answers the needs and challenges for SMEs, thus enabling them to maximize their full potentials.

# 8. LIMITATION

This study is also not free from the existing limitations. First, we use cross-sectional data from the SMEs in DKI Jakarta, Indonesia. We use the variables of external network, entrepreneurial learning, and innovation process in explaining enterprise sustainable growth performance. Second, the sample used in this study is from one province in Indonesia, hence there is a potentials that the findings cannot be generalized to different geographical locations or cultural contexts. Future research can use a larger sample which is obtained in several big cities and use other variables such as open innovation, green strategy, or business collaboration as factors that can explain enterprise sustainable growth performance to ensure the generalizability of the results. It is also suggested for future studies to use longitudinal data for more robust results. Furthermore, this study also still sees the SMEs as a whole, and we have not yet differentiated the SMEs based on their business type or characteristics. Future studies can consider the distinct characteristics of the SMEs such as size, age, and other firm characteristics, in order to get better understanding of the context. It is also suggested for future scholars to considers the underlying conditions for the relationships between variables, such as by employing entrepreneurial atmosphere or entrepreneurial climate as the moderating variable.

## REFERENCES

- [1] Dey, B.L., Sarma, M., Pandit, A., Sarpong, D., Kumari, S., Punjaisri, K. (2019). Social media led co-creation of knowledge in developing societies: SME's roles in the adoption, use and appropriation of smartphones in South Asia. Production Planning & Control, 30(10-12): 1019-1031. https://doi.org/10.1080/09537287.2019.1582106
- Benhayoun, L., Le Dain, M.A., Dominguez-Péry, C., Lyons, A.C. (2020). SMEs embedded in collaborative innovation networks: How to measure their absorptive capacity? Technological Forecasting and Social Change, 159: 120196.

https://doi.org/10.1016/j.techfore.2020.120196

- [3] Benhayoun, L., Saikouk, T. (2022). Untangling the critical success factors for blockchain adoption in supply chain: A social network analysis. Revue Française de Gestion Industrielle, 36(1): 27-59. https://doi.org/10.53102/2022.36.01.915
- [4] Wu, W., Wang, H., Wu, Y.J. (2021). Internal and external networks, and incubatees' performance in dynamic environments: Entrepreneurial learning's mediating effect. The Journal of Technology Transfer, 46: 1707-1733. https://doi.org/10.1007/s10961-020-09790-w
- [5] Caputo, F., Fiano, F., Riso, T., Romano, M., Maalaoui, A. (2022). Digital platforms and international performance of Italian SMEs: An exploitation-based overview. International Marketing Review, 39(3): 568-585. https://doi.org/10.1108/IMR-02-2021-0102
- [6] Soetanto, D., Jack, S.L. (2018). Slack resources, exploratory and exploitative innovation and the performance of small technology-based firms at incubators. The Journal of Technology Transfer, 43: 1213-1231. https://doi.org/10.1007/s10961-016-9533-0
- [7] Diamantopoulou, V., Androutsopoulou, A., Charalabidis, Y. (2018). Towards a taxonomy of services offered by start-up business incubators: Insights from the Mediterranean region. International Journal of Entrepreneurship and Small Business, 33(4): 494-513. https://doi.org/10.1504/IJESB.2018.090333
- [8] Hewitt, L.M., Van Rensburg, L.J.J. (2020). The role of business incubators in creating sustainable small and medium enterprises. The Southern African Journal of Entrepreneurship and Small Business Management, 12(1): 9. https://doi.org/10.4102/sajesbm.v12i1.295
- [9] Deyanova, K., Brehmer, N., Lapidus, A., Tiberius, V., Walsh, S. (2022). Hatching start-ups for sustainable

growth: A bibliometric review on business incubators. Review of Managerial Science, 16(7): 2083-2109. https://doi.org/10.1007/s11846-022-00525-9

- [10] De Esteban Escobar, D., De-Pablos-Heredero, C., Montes-Botella, J.L., Blanco Jiménez, F.J., García, A. (2022). Business incubators and survival of startups in times of COVID-19. Sustainability, 14(4): 2139. https://doi.org/10.3390/su14042139
- [11] Abbas, J., Raza, S., Nurunnabi, M., Minai, M.S., Bano, S. (2019). The impact of entrepreneurial business networks on firms' performance through a mediating role of dynamic capabilities. Sustainability, 11(11): 3006. https://doi.org/10.3390/su11113006
- [12] He, X., Wu, X., Croasdell, D., Zhao, Y. (2022). Dynamic capability, ambidexterity and social network-empirical evidence from SMEs in China. Journal of Small Business and Enterprise Development, 29(6): 958-974. https://doi.org/10.1108/JSBED-05-2020-0181
- [13] Johan, A.J., Hurriyati, R., Dirgantara, P.D. (2022). Context of knowledge and network capabilities: A framework for achieving innovation strategies for SMEs in Bandung City. Manajemen dan Bisnis, 21(2): 161-172. https://doi.org/10.24123/jmb.v21i2.584
- [14] Kraus, S., Burtscher, J., Niemand, T., Roig-Tierno, N., Syrjä, P. (2017). Configurational paths to social performance in SMEs: The interplay of innovation, sustainability, resources and achievement motivation. Sustainability, 9(10): 1828. https://doi.org/10.3390/su9101828
- [15] Liu, H.M., Yang, H.F. (2019). Managing network resource and organizational capabilities to create competitive advantage for SMEs in a volatile environment. Journal of Small Business Management, 57: 155-171. https://doi.org/10.1111/jsbm.12449
- [16] Li, D., Wei, Y.D., Miao, C., Wu, Y., Xiao, W. (2019). Innovation, network capabilities, and sustainable development of regional economies in China. Sustainability, 11(17): 4770. https://doi.org/10.3390/su11174770
- [17] Bubicz, M.E., Barbosa-Póvoa, A.P.F.D., Carvalho, A. (2021). Social sustainability management in the apparel supply chains. Journal of Cleaner Production, 280: 124214. https://doi.org/10.1016/j.jclepro.2020.124214
- [18] Bojnec, S., Tomšič, N. (2020). Corporate sustainability and enterprise performance: The mediating effects of internationalization and networks. International Journal of Productivity and Performance Management, 70(1): 21-39. https://doi.org/10.1108/IJPPM-05-2019-0226
- [19] Olvera, C., Piqué, J.M., Cortés, U., Nemirovsky, M. (2021). Evaluating university-business collaboration at science parks: A business perspective. Triple Helix, 8(3): 445-485.https://doi.org/10.1163/21971927-bja10007
- [20] D'Amato, D., Veijonaho, S., Toppinen, A. (2020). Towards sustainability? Forest-based circular bioeconomy business models in Finnish SMEs. Forest Policy and Economics, 110: 101848. https://doi.org/10.1016/j.forpol.2018.12.004
- [21] Abdelwahed, N.A.A., Soomro, B.A., Shah, N. (2022). The role of environment, business and human behavior towards entrepreneurial sustainability. Sustainability, 14(5): 2517. https://doi.org/10.3390/su14052517
- [22] Klewitz, J., Hansen, E.G. (2014). Sustainability-oriented innovation of SMEs: A systematic review. Journal of Cleaner Production, 65: 57-75.

https://doi.org/10.1016/j.jclepro.2013.07.017

- [23] Baporikar, N. (2018). Innovation and sustainability in SMEs. In Handbook of Research on Intrapreneurship and Organizational Sustainability in SMEs. IGI Global, pp. 163-181. https://doi.org/10.4018/978-1-5225-3543-0.ch008
- [24] Ganawati, N., Soraya, D., Yogiarta, I.M. (2021). The role of intellectual capital, organizational learning and digital transformation on the performance of SMEs in Denpasar, Bali-Indonesia. International Journal of Science and Management Studies (IJSMS), 4(3): 235-246. https://doi.org/10.51386/25815946/ijsms-v4i3p122
- [25] Isensee, C., Teuteberg, F., Griese, K.M., Topi, C. (2020). The relationship between organizational culture, sustainability, and digitalization in SMEs: A systematic review. Journal of Cleaner Production, 275: 122944. https://doi.org/10.1016/j.jclepro.2020.122944
- [26] Sanusi, Z.M., Roostika, R. (2023). Digital skills, digital entrepreneurship, job satisfaction, and sustainable performance of MSMEs: A survey on MSMEs in Indonesia. International Journal of Sustainable Development & Planning, 18(2): 465-473. https://doi.org/10.18280/ijsdp.180215
- [27] Lin-Lian, C., De-Pablos-Heredero, C., Montes-Botella, J.L. (2021). Value creation of business incubator functions: Economic and social sustainability in the COVID-19 scenario. Sustainability, 13(12): 6888. https://doi.org/10.3390/su13126888
- [28] Shaher, A.T.H.Q., Ali, K. (2020). The effect of entrepreneurial orientation on innovation performance: The mediation role of learning orientation on Kuwait SME. Management Science Letters, 10(16): 3811-3820. http://doi.org/10.5267/j.msl.2020.7.030
- [29] Sawaean, F., Ali, K. (2020). The impact of entrepreneurial leadership and learning orientation on organizational performance of SMEs: The mediating role of innovation capacity. Management Science Letters, 10(2): 369-380. http://doi.org/10.5267/j.msl.2019.8.033
- [30] Deakins, D., Bensemann, J. (2018). Entrepreneurial learning and innovation: Qualitative evidence from agribusiness technology-based small firms in New Zealand. International Journal of Innovation and Learning, 23(3): 318-338. https://doi.org/10.1504/IJIL.2018.091091
- [31] Gomes, G., Seman, L.O., Berndt, A.C., Bogoni, N. (2022). The role of entrepreneurial orientation, organizational learning capability and service innovation in organizational performance. Revista de Gestão, 29(1): 39-54. https://doi.org/10.1108/REGE-11-2020-0103
- [32] Hamburg, I. (2020). Supporting digital innovations by interdisciplinary entrepreneurial learning. Advances in Social Sciences Research Journal, 7(4): 8-17. https://doi.org/10.14738/assrj.74.8046.
- [33] Del Campo Villares, M.O., Miguéns-Refojo, V., Ferreiro-Seoane, F.J. (2020). Business survival and the influence of innovation on entrepreneurs in business incubators. Sustainability, 12(15): 6197. https://doi.org/10.3390/su12156197
- [34] Nijssen, E.J., Van der Borgh, M. (2017). Beyond the water cooler: Using socialization to understand use and impact of networking services on collaboration in a business incubator. R&D Management, 47(3): 443-457. https://doi.org/10.1111/radm.12261
- [35] Moyano-Fuentes, J., Maqueira-Marín, J.M., Bruque-Cámara, S. (2018). Process innovation and

environmental sustainability engagement: An application on technological firms. Journal of Cleaner Production, 171: 844-856. https://doi.org/10.1016/j.jclepro.2017.10.067

- [36] Rantala, T., Ukko, J., Saunila, M., Havukainen, J. (2018). The effect of sustainability in the adoption of technological, service, and business model innovations. Journal of Cleaner Production, 172: 46-55. https://doi.org/10.1016/j.jclepro.2017.10.009
- [37] Ismail, M. (2023). Pemerintah targetkan cetak satu juta pengusaha muda pada 2024. Koran Jakarta, https://koran-jakarta.com/pemerintah-targetkan-cetaksatu-juta-pengusaha-muda-pada-2024?page=all.
- [38] Sriyono. (2023). Kemenkop UKM sebut Indonesia Ingin Cetak Satu Juta Pengusaha Muda di 2024. Koran Jakarta, https://www.antaranews.com/berita/3442170/kemenkop -ukm-indonesia-cetak-satu-juta-pengusaha-muda-di-2024.
- [39] BRIN. (2022). BRIN tawarkan fasilitas teknologi dan pendanaan untuk umkm di Kota Bandung. Humas BRIN, https://www.brin.go.id/news/110825/brin-tawarkanfasilitas-teknologi-dan-pendanaan-untuk-umkm-di-kotabandung.
- [40] Prodjo, W.A. (2022). Inkubator bisnis jadi mesin pencetak wirausaha baru dari kampus. Kompas.com, https://umkm.kompas.com/read/2022/08/24/172204683/ inkubator-bisnis-jadi-mesin-pencetak-wirausaha-barudari-kampus?page=all.
- [41] Wajdi, F., Mangifera, L., Isa, M. (2021). Strategi penguatan inkubator bisnis dalam pengembangan usaha kecil dan menengah. Jurnal Manajemen Dayasaing, 22(2): 101-107.
  - https://doi.org/10.23917/dayasaing.v22i2.12720
- [42] Incubie. (2017). Faktor kesuksesan dan kegagalan inkubator bidang ICT. Penelitian Joint Research.
- [43] Gozali, L., Masrom, M., Zagloel, T.Y., Haron, H.N., Garza-Reyes, J.A., Tjahjono, B. (2020). Final framework for a successful business incubator for Indonesian public universities: The influence of information technology on business incubator success. In Interdisciplinary Approaches to Digital Transformation and Innovation. IGI Global, pp. 70-98. https://doi.org/10.4018/978-1-7998-1879-3.ch004
- [44] Games, D., Kartika, R., Sari, D.K., Assariy, A. (2021). Business incubator effectiveness and commercialization strategy: A thematic analysis. Journal of Science and Technology Policy Management, 12(2): 176-192. https://doi.org/10.1108/JSTPM-03-2020-0067
- [45] Anwar, M.R., Yusup, M., Millah, S., Purnama, S. (2022). The role of business incubators in developing local digital startups in Indonesia. Startupreneur Business Digital (SABDA Journal), 1(1): 1-9. https://doi.org/10.33050/sabda.v1i1.69
- [46] Annas, M., Meilinda, V. (2023). A review of indonesian business start-up incubator models. Startupreneur Business Digital (SABDA Journal), 2(1): 86-97. https://doi.org/10.33050/sabda.v2i1.260
- [47] Wahyuni, A.I., Noviaristanti, S. (2022). Startup characteristics and the role of business incubators in Indonesia. Indonesian Journal of Business and Entrepreneurship (IJBE), 8(2): 251-251.
- [48] Cahyadi, A., Natalisa, D., Poór, J., Perizade, B., Szabó, K. (2022). Predicting the relationship between green transformational leadership, green human resource

management practices, and employees' green behavior. Administrative Sciences, 13(1): 5. https://doi.org/10.3390/admsci13010005

- [49] Jędrych, E., Klimek, D., Rzepka, A. (2022). Social capital in energy enterprises: Poland's case. Energies, 15(2): 546. https://doi.org/10.3390/en15020546
- [50] Akintimehin, O.O., Eniola, A.A., Alabi, O.J., Eluyela, D.F., Okere, W., Ozordi, E. (2019). Social capital and its effect on business performance in the Nigeria informal sector. Heliyon, 5(7): e02024. https://doi.org/10.1016/j.heliyon.2019.e02024
- [51] Gu, Q., Jiang, W., Wang, G.G. (2016). Effects of external and internal sources on innovation performance in Chinese high-tech SMEs: A resource-based perspective. Journal of Engineering and Technology Management, 40: 76-86.

https://doi.org/10.1016/j.jengtecman.2016.04.003

- [52] Vongkulluksn, V.W., Xie, K., Bowman, M.A. (2018). The role of value on teachers' internalization of external barriers and externalization of personal beliefs for classroom technology integration. Computers & Education, 118: 70-81. https://doi.org/10.1016/j.compedu.2017.11.009
- [53] Zulfiqar, S., Ahmad, S.F. (2020). Investigating the impact of external environment on strategic marketing planning: A case study for NetSol Technologies Inc. International Journal of Business Process Integration and Management, 10(2): 185-193. https://doi.org/10.1504/IJBPIM.2020.117149
- [54] Shi, X., Zheng, Z., Zhang, Q., Liang, H. (2020). External knowledge search and firms' incremental innovation capability: The joint moderating effect of technological proximity and network embeddedness. Management Decision, 58(9): 2049-2072. https://doi.org/10.1108/MD-08-2019-1078
- [55] Liakh, O., Spigarelli, F. (2020). Managing corporate sustainability and responsibility efficiently: A review of existing literature on business groups and networks. Sustainability, 12(18): 7722. https://doi.org/10.3390/su12187722
- [56] Eveleens, C.P., van Rijnsoever, F.J., Niesten, E.M. (2017). How network-based incubation helps start-up performance: A systematic review against the background of management theories. The Journal of Technology Transfer, 42: 676-713. https://doi.org/10.1007/s10961-016-9510-7
- [57] Hattam, L., Greetham, D.V. (2018). An innovation diffusion model of a local electricity network that is influenced by internal and external factors. Physica A: Statistical Mechanics and its Applications, 490: 353-365. https://doi.org/10.1016/j.physa.2017.08.014
- [58] Xia, T., Liu, X. (2021). Cultural values and innovation: The mediating role of entrepreneurial learning capacity. Journal of International Management, 27(1): 100812. https://doi.org/10.1016/j.intman.2020.100812
- [59] Bae, B., Choi, S. (2021). The effect of learning orientation and business model innovation on entrepreneurial performance: Focused on South Korean start-up companies. Journal of Open Innovation: Technology, Market, and Complexity, 7(4): 245. https://doi.org/10.3390/joitmc7040245
- [60] Zhao, W., Yang, T., Hughes, K.D., Li, Y. (2021). Entrepreneurial alertness and business model innovation: The role of entrepreneurial learning and risk perception.

International Entrepreneurship and Management Journal, 17: 839-864. https://doi.org/10.1007/s11365-020-00637-2

- [61] Nursal, M.F., Rianto, M.R., Bukhari, E. (2022). The influence of market orientation, entrepreneurial orientation, knowledge management and learning organization on performance mediated by innovation in culinary SME's in Bekasi. East Asian Journal of Multidisciplinary Research, 1(8): 1691-1702. https://doi.org/10.55927/eajmr.v1i8.1266
- [62] Kustiningsih, N., Tjahjadi, B. (2020). Mediating effect of business process performance on innovation strategy-cost performance relationship: Case study of manufacturing industry in East Java Province, Indonesia. International Journal of Business Performance Management, 21(3): 346-362. https://doi.org/10.1504/IJBPM.2020.108324
- [63] de Oliveira Paula, F., da Silva, J.F. (2020). Combining knowledge to improve product and process innovation and performance of SMES in developing economies. International Journal of Innovation and Technology Management, 17(02): 2050013. https://doi.org/10.1142/S0219877020500133
- [64] Migdadi, M.M. (2022). Knowledge management processes, innovation capability and organizational performance. International Journal of Productivity and Performance Management, 71(1): 182-210. https://doi.org/10.1108/IJPPM-04-2020-0154
- [65] Kehbila, A.G. (2021). The entrepreneur's go-to-market innovation strategy: Towards a decision-analytic framework and a road mapping process to create radically successful businesses driving spectacular growth and profitability. Journal of Small Business & Entrepreneurship, 33(6): 689-716. https://doi.org/10.1080/08276331.2020.1786646
- [66] Chen, J., Liu, L., Wang, Y. (2020). Business model innovation and growth of manufacturing SMEs: A social exchange perspective. Journal of Manufacturing Technology Management, 32(2): 290-312. https://doi.org/10.1108/JMTM-03-2020-0089
- [67] Chang, Y.C., Chiu, W.H., Wang, J.H., Teng, M.J. (2022). Customer involvement in the new process innovation: Antecedents, mediation and performance. European Journal of Innovation Management, 25(4): 1115-1141. https://doi.org/10.1108/EJIM-09-2019-0268
- [68] Suwignjo, P., Gunarta, I.K., Wessiani, N.A., Prasetyo, A.E., Yuwana, L. (2022). Framework for measuring process innovation performance at Indonesian stateowned companies. Journal of Open Innovation: Technology, Market, and Complexity, 8(2): 95. https://doi.org/10.3390/joitmc8020095
- [69] Kun, M. (2022). Linkages between knowledge management process and corporate sustainable performance of Chinese small and medium enterprises: Mediating role of frugal innovation. Frontiers in Psychology, 13: 850820. https://doi.org/10.3389/fpsyg.2022.850820
- [70] Teplická, K., Khouri, S., Beer, M., Rybárová, J. (2021). Evaluation of the performance of mining processes after the strategic innovation for sustainable development. Processes, 9(8): 1374. https://doi.org/10.3390/pr9081374
- [71] Ni, Y., Yu, J. (2021). Relationship between external search breadth and process innovation performance

under the background of big data. In International Conference on Data and Information in Online Cham: Springer International Publishing, pp. 406-417. https://doi.org/10.1007/978-3-030-77417-2\_33

- [72] Urba, S., Chervona, O., Panchenko, V., Artemenko, L., Guk, O. (2022). Features of the application of digital technologies for human resources management of an engineering enterprise. Ingenierie des Systemes d'Information, 27(2): 205-211. https://doi.org/10.18280/isi.270204
- [73] Lubi, R., Alexandri, M.B., Herawaty, T., Tresna, P.W. (2021). The effect of entrepreneurial leadership, innovation capacity, workplace performance on business process management and its implication on financial governance in small medium enterprises in Bandung city. Academy of Strategic Management Journal, 20: 1-10.
- [74] Shahzad, M., Qu, Y., Zafar, A.U., Rehman, S.U., Islam, T. (2020). Exploring the influence of knowledge management process on corporate sustainable performance through green innovation. Journal of Knowledge Management, 24(9): 2079-2106. https://doi.org/10.1108/JKM-11-2019-0624
- [75] Zhu, X., Shang, H., Dai, Z., Liu, B. (2021). The impact of e-commerce sales on capacity utilization. Engineering Economics, 32(5): 499-516. https://doi.org/10.5755/j01.ee.32.5.28508
- [76] Widya-Hasuti, A., Mardani, A., Streimikiene, D., Sharifara, A., Cavallaro, F. (2018). The role of process innovation between firm-specific capabilities and sustainable innovation in SMEs: Empirical evidence from Indonesia. Sustainability, 10(7): 2244. https://doi.org/10.3390/su10072244
- [77] Durmuş-Özdemir, E., Abdukhoshimov, K. (2018). Exploring the mediating role of innovation in the effect of the knowledge management process on performance. Technology Analysis & Strategic Management, 30(5): 596-608.

https://doi.org/10.1080/09537325.2017.1348495

- [78] Sekaran, U., Bougie, R. (2016). Research Methods for Business: A Skill Building Approach. John Wiley & Sons.
- [79] Kline, R.B. (2012). Assumptions in structural equation modeling. In Handbook of Structural Equation Modeling.
- [80] Kline, R.B. (2023). Principles and Practice of Structural Equation Modeling. Guilford Publications.
- [81] Zhang, J., Jiang, H., Wu, R., Li, J. (2019). Reconciling the dilemma of knowledge sharing: A network pluralism framework of firms' R&D alliance network and innovation performance. Journal of Management, 45(7): 2635-2665. https://doi.org/10.1177/0149206318761575
- [82] Gerke, A., Dickson, G., Desbordes, M., Gates, S. (2017). The role of interorganizational citizenship behaviors in the innovation process. Journal of Business Research, 73: 55-64. https://doi.org/10.1016/j.jbusres.2016.12.005
- [83] Preacher, K.J., Leonardelli, G.J. (2001). Calculation for the sobel test: An interactive calculation tool for mediation tests.
- [84] Abu-Bader, S., Jones, T.V. (2021). Statistical mediation analysis using the sobel test and hayes SPSS process macro. International Journal of Quantitative and Qualitative Research Methods.
- [85] Atatsi, E.A., Curșeu, P.L., Stoffers, J., Kil, A. (2022). Learn in order to innovate: An exploration of individual

and team learning as antecedents of innovative work behaviours in Ghanaian Technical Universities. Sustainability, 14(7): 4012. https://doi.org/10.3390/su14074012

[86] Kittikunchotiwut, P. (2020). The roles of organizational

learning capability and firm innovation in the relationship between entrepreneurial orientation and firm performance. The Journal of Asian Finance, Economics and Business (JAFEB), 7(10): 651-661. https://doi.org/10.13106/jafeb.2020.vol7.no10.651