Human Resource Competency, Government Support, Experience, and Product Innovation on Business Performance

Review of Integrative Business & Economics Research

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ABSTRACT

The COVID-19 pandemic has destroyed many SMEs throughout Indonesia, even in South Sumatra and the Special Region of Yogyakarta. This study examines product innovation models in start-up SMEs to overcome the challenges of digital transformation. The technology analyzed in this study is digital technology in start-up SMEs for product marketing and the manufacture of innovative new products. The population in this study were all start-up SMEs in South Sumatra and the Special Region of Yogyakarta. Sampling using purposive sampling. The number of samples in this study were 250 respondents. This study uses a respondent survey approach with data analysis techniques using quantitative analysis. Quantitative analysis examines organizational/business performance models in looking at start-ups in South Sumatra and the Special Region of Yogyakarta. The analytical tool used is SEM-Partial Least Square analysis. The results show that the organizational/business performance model that is influenced by product innovation, technological competence, government support, and initial experience is acceptable.

Keywords: HR competency; government support; experience; product innovation; performance; start-up.

1. INTRODUCTION

Industry 4.0 and the COVID-19 pandemic in this era have forced SMEs to make radical innovations in new technologies, products, and services (Sugandini et al., 2020). The emergence of new SMEs is expected to be the key to sustainable economic transformation. Binder & Belz (2015) show that the triple-bottom-line as the main characteristic of start-ups contributes to sustainable value creation that can generate value economically, socially, and environmentally (Bansal et al., 2019; Teran-Yepez et al. al., 2020). South Sumatra and the Special Region of Yogyakarta are ideal cities for internet-based start-ups. This city has a supporting ecosystem that can make digital start-ups thrive, such as creative SMEs, coworking spaces, and business incubators. Unfortunately, many innovative SMEs in South Sumatra and the Special Region of Yogyakarta are still dominated by rural SMEs that still operate traditionally. The many obstacles and obstacles in digital transformation make this research essential to be carried out to analyze and provide a solution to the

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problem of digital adoption in SMEs start-up in South Sumatra. This study explores the various challenges faced by Start-up SMEs in South Sumatra and the Special Region of Yogyakarta in adopting digital technology. More specifically, this study examines the technology adoption model for SME start-ups in South Sumatra and the Special Region of Yogyakarta, influenced by digital technology competence, previous experience in using digital technology, and government support. This research is urgently needed because the COVID-19 pandemic has forced start-up SMEs to change their operation forms. The challenges that exist in the adoption of new technologies need to be addressed immediately. With the completion of barriers to technology adoption, these start-up SMEs will be able to thrive again and help the government overcome poverty.

Measuring SME performance in product innovation includes developing very new products to slight modifications of existing products (Bouncken et al., 2016). According to Atuahene-Gima (2005), product innovation reflects how companies develop and introduce new products. Technological innovation in new product development refers to changes that creatively destroy the market balance and are made possible through new combinations. In this case, Martin-Rojas et al. (2017) say that technology investment is essential for accumulating knowledge that facilitates the generation and exploitation of innovation opportunities and shapes the potential of new technology-based companies to succeed in innovation. The results of Tresna & Raharja (2019) research show that the variables of innovation and competitive advantage have no significant effect business performance of SMEs in Bandung, Indonesia. With HR technological competence, SMEs can find rare innovation opportunities through technological prowess and scientific excellence (Martin-Rojas et al., 2017). However, Deligianni et al. (2019) found a negative relationship between HR technical competence and product innovation. Deligianni et al. (2019) argue that at higher levels of HR technological competence, marginal costs tend to increase rapidly and are likely to outweigh benefits, with the return of HR-technological competence on innovation becoming increasingly hostile. Symeonidou and Nicolaou (2017) also say that high investment in HR-technological competence can restrain investment in other resources and capabilities. Launching a new technology product requires managing resources both within and outside the firm's boundaries, which may be difficult for companies to fund one type of resource over another (Symeonidou and Nicolaou, 2017; Wales et al., 2013).

In addition, this study considers government support as a predictor of influencing SMEs in their product innovation. Government support facilitates establishing a broad network that may involve various resource providers such as technology partners and key customers. The web gives SMEs the potential to access essential assets such as financial resources, technological know-how, distribution channels, etc. (Semrau & Sigmund, 2012). To continue to access various necessary support that the government has provided, SMEs need to have prior start-up experience. Newbert et al. (2007) have concluded that the previous start-up experience possessed by SMEs as start-ups plays a role in providing skills, knowledge, and expertise that enable a person to handle difficult and complex tasks up has participated at the time of its establishment as a founder or founder (not an employee). The previous experience can be essential in reducing the marginal costs associated with increasing HR technological competence (Deligianni et al., 2019). Based on the description above, this study re-analyzes organizational / business performance in SMEs, which are influenced by product innovation, technology competence, government support, and prior start-up experience competing during the current pandemic Covid-19.

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2. LITERATURE REVIEW

2.1. Organization / Business Performance

Organizational / business performance in start-up innovation is the income level from a product innovation developed by SMEs (Spithoven et al., 2013; Criscuolo et al., 2012). Organizational / business performance measurement is assessed from how big the market share obtained by SMEs in innovating. Innovation performance is measured as the significant turnover resulting from new products introduced by the company to new markets over the last three years (Gimenez-Fernandez et al., 2020). Corporate / business innovation performance includes developing new products to slightly modifying existing products (Bouncken et al., 2016). Organizational innovation gives the company a competitive advantage in the market because it increases its visibility, external legitimacy, and Sustainability (Acur et al., 2012; Sheng et al., 2013). An entrepreneurial-oriented company is expected to be highly able to recognize threats and opportunities in their environment to quickly develop new products in response to these opportunities (Moreno-Moya and Munuera-Aleman, 2016).

2.2. Product Innovation

Barile et al. (2020) state that sustainable innovation is a process that involves different fields (technology, human, social, relational, and cultural). Sustainability across contexts requires integration through strategic management of shared value creation, helping organizations achieve Sustainability over the long term (Kuckertz et al., 2019). Regardless of their obligations related to the small and the new, start-ups have a unique opportunity to contribute to a triple bottom line fit by creating innovative and market-oriented value that benefits the environment and society (McGrath et al., 2019). Strategically oriented Sustainability should be the primary driver of innovation, both in cost reduction and environmental efficiency, and new products and markets (Nidumolu et al., 2009). SME start-ups based on technology innovation are defined in various ways, but most involve understanding technology and creating products and services with technology (Candi & Saemundsson, 2011). Product innovation or product innovation reflects how the company develops and introduces new products (Atuahene-Gima, 2005). Technological innovation includes introducing new products and devices, new production methods, and new forms of organizational processes (Choi et al., 2020). Voudouris et al. (2017) and Deligianni et al. (2019) identified two indicators in measuring product innovation in start-ups as follows: a) introducing more new products during their lifetime and b) frequently introducing new products during their lifetime.

2.3. HR Technology Competence

Investment in HR technological competence is essential for accumulating knowledge that facilitates the generation and exploitation of innovation opportunities and shapes the potential of new technology-based firms to succeed in innovation (Martin-Rojas et al., 2017). With HR technological competence, organizations can find rare innovation opportunities through technical prowess and scientific excellence (Martin-Rojas et al., 2013). HR technological competence can also be critical for exploiting innovation opportunities and inventions that would not be fruitful without them (Shane & Venkataraman, 2000). In addition to enabling firms to create, use and exploit cutting-edge technology internally (Ritter & Gemünden, 2003), HR technological competence can facilitate the acquisition of critical resources and the integration of knowledge from external sources (Baert et al., 2016). New technology product launches require resource

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attributes within and beyond organizational/enterprise boundaries (Symeonidou & Nicolaou, 2017). However, organizations' low to moderate use of new technology can accumulate knowledge (Wang et al., 2004) and detect innovation opportunities to create new products. Doing so increases flexibility, which can be beneficial (Brush et al., 2001); Fatima & Izha (2020). Benefits include better dealing with internal resource inefficiencies by managing collaboration and acquiring unique resources and capabilities essential for exploiting innovation opportunities (Baert et al., 2016). On the other hand, higher HR technological competence can also provide firms with the ability to generate opportunities to attack new markets with innovations based on rare and unique technologies (Walsh et al., 2002).

H_1: *HR Technological Competence affects Product Innovation*

2.4. Government Support

The use of technology is crucial for a country's innovation and economic growth (Ribeiro-Soriano & Piñeiro-Chousa, 2021). Government can reduce marginal costs from increasing HR technological competence levels in several ways. Government support helps develop start-up capabilities in forming, selecting, managing, and exploiting diverse partnerships (Baron and Tang, 2009; Chandler and Jansen, 1992). Government support facilitates establishing a broad network that may involve various resource providers such as technology partners and key customers. Such networks can provide the potential to access different essential assets such as financial resources, technological know-how, distribution channels, etc. (Semrau & Sigmund, 2012). Government support is also essential for selecting the right partners and establishing strong, profitable, and contextually appropriate network relationships (Todd et al., 2009). In addition to using new technologies for new innovative products with an essential set of external resources, the relationship involves a higher frequency of interaction between partners. Thus, enabling the development of collaborative routines and making resource exchange more efficient (Semrau and Sigmund, 2012). In addition, government support is essential to achieving successful negotiations (Baron and Tang, 2009), helping entrepreneurs obtain resources at lower costs.

H_2: Government support affects Product Innovation

2.5. Prior Start-up Experience

Previous start-up experience or experience possessed by SME start-ups provides skills, knowledge, and experience to handle difficult and complex tasks (Newbert et al., 2007). SMEs start-ups are operated by several companies where start-ups have participated as founders or founders (not employees) at the establishment time. The previous experience possessed by start-up SMEs can play an essential role in reducing the marginal costs associated with increasing levels of HR technological competence (Deligianni et al., 2019). Start-up SMEs with significant initial experience are likely to have developed skills to adapt to a resource-limited environment and face the challenges inherent in such situations. The previous experience SME start-ups have had is a valuable source of explicit knowledge and tacit understanding of what needs to be done and how the complex and challenging task of managing a company can be accomplished effectively and efficiently (Dencker et al. Gruber, 2015). SME start-ups with higher absorptive capacity can better recognize the value of new knowledge, assimilate it, combine it with existing ones and apply it to new goals (Cohen & Levinthal, 1990). Thus, they can help them overcome resource constraints, increase the efficiency of resource orchestration, and thereby increase the return of their HR technological competence on innovation. In addition, SME start-ups with high initial experience know how to optimize investment, expand their company's resources (Farmer et al., 2011), and utilize external resources. SME start-ups know how to leverage their network by increasing credibility and increasing their company's ability to combine their limited resource repository (Stinchcombe, 2000). Thus, they can improve the process of structuring and bundling their corporate resources, enhancing their HR technological competence in the direction of innovation

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(Deligianni et al., 2019). Previous experience with SME start-ups also increases understanding and ability to respond to the market (Newbert et al., 2007).

H3: Prior Start-up Experience affects Product Innovation

H4: Product Innovation affects Business Performance

3. RESEARCH METHOD

3.1. Data

This study uses the organizational unit of analysis. The organizations selected for this research are several start-up SMEs in South Sumatra and the Special Region of Yogyakarta. The decision-makers targeted for the survey are usually the person in charge of operational activities within the SME, Usually the manager or owner. Start-up SMEs data is obtained from the database belonging to the Ministry of Creative Industries of the Republic of Indonesia in 2021. This research is a survey research using a questionnaire as a data collection tool. The number of respondents refers to the adequacy of the model set by Hair et al. (1989), ten times the observed parameters. The number of parameters observed was 17, so the minimum sample was 170 respondents. This study's respondents were 250 SMEs start-ups in South Sumatera and the Special Region of Yogyakarta, Indonesia. Data were collected from start-up businesses in South Sumatera and the Special Region of Yogyakarta. In-depth interviews were conducted with the Google Zoom facility. Most respondents are business owners who double as managers in their business ventures. The characteristics of the respondents can be seen in table 1.

Table 1. Characteristics of Respondents

Characteristics	Amount	%
Position:		
Owner	8	3.2 %
Owner and Manager	242	96.8 %
Operating time:		
≤ 5 years	41	16.4 %
≥ 5 years	209	83.6 %
Education:		
senior High School	102	40.8 %
Diploma & Bachelor	148	59.2 %
The number of employees:		
1 – 4 people	67	26.8 %
5 – 10 people	106	42.4 %
11 – 19 people	72	28.8 %
20 – 30 people	5	2 %
The average income per year:	178	71.2 %
1 million to 50 million (rupiah)	67	26.8 %
51 million to 300 million (rupiah)	5	2 %
301 million to 500 million (rupiah)		

3.2. Measures of variables

The measurement of several variables in this study used references from previous researchers. Shan et al. (2016) measure organizational performance with three items: 1) the overall performance of the new product development program. 2) successful implementation of the new product development program from the point of view of overall

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profitability. 3) successful implementation of new product development programs compared to other competitors. Voudouris et al. (2017) and Deligianni et al. (2019) identified four indicators in measuring product innovation in start-ups as follows: 1) introducing more new products during their lifetime. 2) frequently introducing new products during their lifetime. 3). Ability to modify products to suit market demands and tastes. 4). Ability to successfully manage new products for the market (Falahat et al., 2021).

Newbert et al. (2007) and Deligianni et al. (2019) identified three indicators in measuring HR technological competence in start-ups as follows: 1) knowledge and skills in conducting R&D, 2) overall skills in carrying out technological activities, and 3) ability to use technical knowledge and R&D results towards product production / new services. Newbert et al. (2007) and Deligianni et al. (2019) identified three indicators in measuring prior start-up experience at start-ups as follows: 1) recognizing unsatisfied customer needs, 2) recognizing the need for new products/services, and 3) recognizing business opportunities before anyone else. Chandler & Jansen (1992) and Deligianni et al. (2019) identified four indicators in measuring government support in start-ups as follows: 1) involving people with essential resources, 2) asking for support from important people, 3) networking and information exchange, and 4) making people others identify with and believe in his vision for the business.

4. RESULTS

4.1. Measurement model result

This study uses Structural Equation Modeling (SEM) to measure, validate, and test structural models. SEM is beneficial for testing complex models when researchers need to include latent variables. This study uses a Partial Least Squares (PLS) approach, using the Smart PLS 3.2.9 software. Reliability assesses how an item is free from random error that shows consistent results. This study calculates the reliability of the measurement using the composite reliability index (CR) of 0.7 and the average variance extract (AVE) index of >0.5. This technique consists of 3 components: the outer model or measurement model, the inner model or structural model, and the model schema (Hair et al., 1989). The outer model or test of reflective indicators is evaluated through convergent validity, discriminant validity, and AVE. Convergent validity assesses consistency in several constructions. Meanwhile, the reliability test is seen from the composite reliability and Cronbach alpha values. Valid and reliable data is > 0.7, and the expected AVE value is > 0.5. Each construct shown in Table 2 has criteria above the expected standard. Meanwhile, Table 3 presents the results of the discriminant validity test, which shows that each of the intended cross-loading factor values is greater than the loading values of the other constructs. The results of the Reliability and Validity Testing of the questionnaire items used in the study can be seen in table 2. Table 2 shows that the outer loading, AVE, Composite reliability, and Cronbach's Alpha values of all the instruments used are valid and reliable.

Table 3 shows the discriminant validity found from the research results. Each instrument used in this study shows good discriminant validity because it has a cross-loading value of each latent variable whose loading is greater than the other variables.

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Table 2. Construct Reliability and Validity

	Measurement Item	Outer Loading	Average Variance Extracted (AVE)	Composite Reliability	Cronbach's Alpha
HR Technological Competence	X11	0.836	0.661	0.853	0.751
	X12	0.898			
	X13	0.791			
Government Support	X21	0.788	0.715	0.909	0.865
	X22	0.906			
	X23	0.888			
	X24	0.882			
Prior Start-up Experience	X31	0.799	0.718	0.884	0.803
	X32	0.883			
	X33	0.858			
Product Innovation	Z1	0.855	0.793	0.939	0.913
	Z2	0.912			
	Z3	0.908			
	Z4	0.887			
Business Performance	Y1	0.856	0.756	0.903	0.854
	Y2	0.833			
	Y3	0.916			

Table 3. Cross Loading Factor

	Business Performance	Government Support	Prior Start-up Experience	Product Innovation	HR Competence
X11	-0.128	0.586	0.493	0.483	**0.836**
X12	-0.120	0.758	0.732	0.645	**0.898**
X13	0.033	0.470	0.468	0.310	**0.791**
X21	-0.092	**0.788**	0.528	0.428	0.660
X22	-0.084	**0.906**	0.776	0.633	0.718
X23	-0.152	**0.888**	0.748	0.671	0.585
X24	-0.205	**0.882**	0.709	0.719	0.665
X31	-0.082	0.626	**0.799**	0.597	0.546
X32	-0.173	0.795	**0.883**	0.625	0.669
X33	-0.192	0.672	**0.858**	0.668	0.598
Y1	**0.856**	-0.111	-0.123	-0.159	-0.109
Y2	**0.833**	-0.078	-0.055	-0.050	0.002
Y3	**0.916**	-0.185	-0.209	-0.205	-0.108
Z1	-0.241	0.558	0.625	**0.855**	0.482
Z2	-0.109	0.661	0.680	**0.912**	0.555
Z3	-0.166	0.611	0.627	**0.908**	0.530
Z4	-0.169	0.779	0.712	**0.887**	0.634

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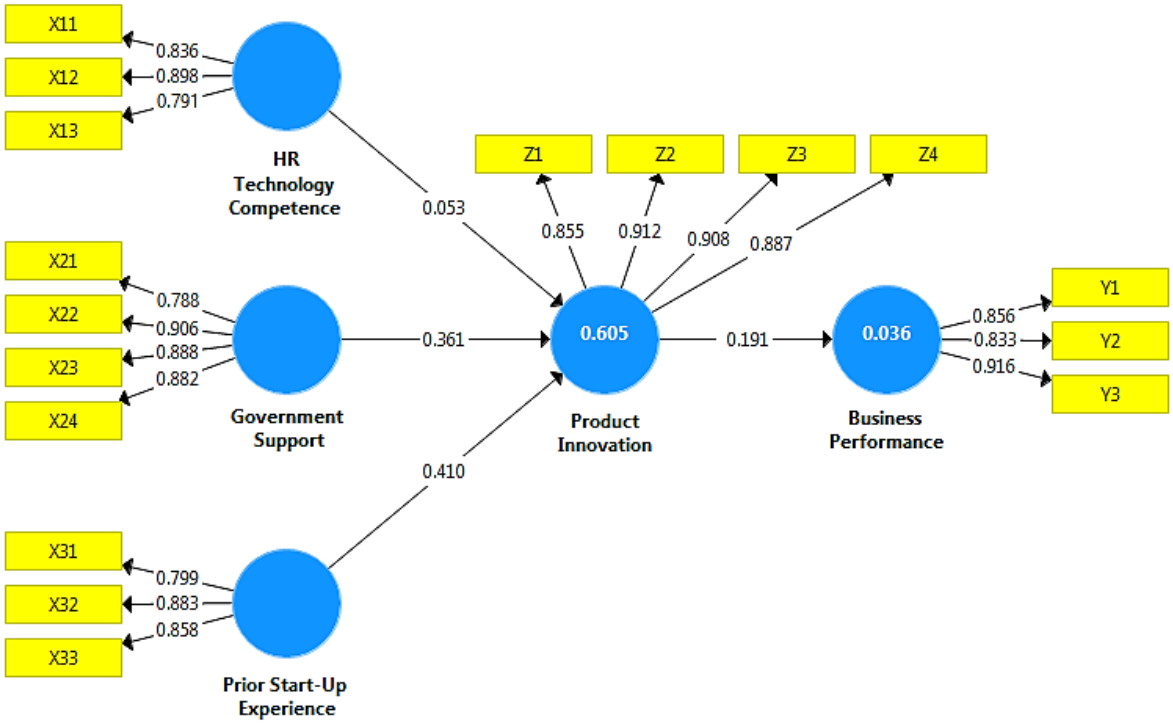
4.2. Empirical results

This study uses PLS-SEM to test the hypothesis. More specifically, implementing a complete bootstrap setup with 250 samples and a two-tailed test for hypothesis testing. Table 4 and Figure 1 show that all statistical values support hypotheses H1 to H4.

Table 4. Bootstrapping Test Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values
: HR Technological Competence → Product Innovation	0.053	0.069	0.151	2.349	**0.000**
: Government Support → Product Innovation	0.361	0.356	0.119	3.025	**0.003**
: Prior Start-up Experience → Product Innovation	0.410	0.406	0.145	2.826	**0.005**
: Product Innovation → Business Performance	0.191	0.205	0.138	2.379	**0.000**



The results of quantitative analysis in this study indicate that all hypotheses have a positive and significant effect. The value of the original sample on H_1 (0.053), H_2 (0.361), H_3 (0.410), and H_4 (0.191) has a positive value, so it shows a positive relationship. On the other hand, the value of t statistics has a number > 1.960 and p-values > 5%. This means the hypotheses H_1 (t-value = 2.349 / p-value = 0.000), H_2 (t-value = 3.025 / p-value = 0.003), H_3 (t-value = 2.826 / p-value = 0.005), and H_4 (t-value = 2.379 / p-value = 0.000) is supported.

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5. DISCUSSION

Overall, the hypothesis in this study has a positive and significant relationship. This study adds to the understanding of the role of entrepreneurs' abilities in influencing new business outcomes (Dencker and Gruber, 2015). Although the relationship between HR technological competence and product innovation is in line with the results of research conducted by Martin-Rojas et al. (2017), the original sample value in this hypothesis (H1: 0.053) is relatively low compared to other hypotheses (H2: 0.361, H3: 0.410, H4: 0.191). This result means that SMEs are still very minimal in terms of technology. Thus, SMEs should be aware of the limitations associated with their level of technological competence, which may trap them in the domain of ongoing technology activities. This result is essential for SMEs to succeed in developing product innovation. In addition, SMEs also need to understand their potential to strengthen the benefits of exploiting their technological competencies.

Furthermore, they need to recognize their weaknesses and strengths and improve the competence of their human resources by enhancing their technological capabilities. Thus, it is expected that their performance will increase. So, they can fill existing business opportunities and be able to compete during the current Covid-19 pandemic. This study showed a positive and significant relationship between government support and product innovation. This significant relationship implies that Indonesia's government support for start-up SMEs is essential in developing their technological innovations to produce new products. This study's results align with the research conducted by Chandler & Jansen (1992) and Deligianni et al. (2019), which also found a significant relationship to this hypothesis. This hypothesis test proves that SME start-ups in South Sumatra and the Special Region of Yogyakarta have involved essential people in their network and exchange of business information. In addition, they also get others to identify with and believe in his vision for the business.

The relationship between prior start-up experience and product innovation is positive and significant. The original sample in this hypothesis (H_4: 0.191) has the highest value of the other hypotheses (H_1: 0.053, H_2: 0.361, H_3: 0.410). This relationship means start-up SMEs in South Sumatra and the Special Region of Yogyakarta can recognize unsatisfied customer needs. They are also able to identify the demand for new products/services. So, they tend to acknowledge existing business opportunities before other competitors. This study succeeded in confirming the research conducted by Newbert et al. (2007), Baum et al. (2014), and Deligianni et al. (2019). This study positively affected the relationship between product innovation and organizational / business performance. The results of this study support the research from Tu and Wu (2021); Zameer et al. (2020); Voudouris et al. (2017); and Deligianni et al. (2019), which say that the success of product innovation in the context of start-up SMEs is determined by their performance in introducing more new products. Based on the results of hypothesis testing in this study, it proves that start-up SMEs in South Sumatra and the Special Region of Yogyakarta have successfully implemented product innovation. Thus, the performance of SMEs has also increased optimally.

6. CONCLUSIONS, LIMITATIONS, AND FUTURE RESEARCH

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The study results reveal that HR's ability in technology and the experience of SMEs in managing start-up businesses are the two internal capabilities of SMEs in improving product innovation capabilities in SMEs start-ups. The ability to innovate products impacts SME business performance, leading to the competitive advantage of start-up SMEs in Indonesia. SME start-ups cannot develop product innovations and improve their business performance without good government support. Furthermore, it can be explained that SME start-ups' performance is supported by SMEs' ability to improve their technological competence for HR and innovate their products to take advantage of market opportunities. This study explains the determinants of start-up SMEs' business performance that are influenced by product innovation from start-up SMEs. Theoretically, this study provides empirical evidence on the determinants of SME business performance and the mediating role of product innovation in the context of SME start-ups in Indonesia.

The business performance model predicted by product innovation, government support, HR technology competency, and prior start-up experience is a good fit model. HR technological competence has a relatively small effect on product innovation. This small effect happens because it is constrained by limited resources, SMEs start-up in South Sumatera, and the Special Region of Yogyakarta. Therefore, it is vital for them to carefully consider the benefits of investing with the help of both technological and non-technological capabilities because such investments may be expensive, risky, and time-consuming. An essential role for policymakers is to formulate appropriate entrepreneurial skills and technical competency development policies. The approach supports business formation and development of R&D activities and encourages education and training to develop entrepreneurial competencies. When this is achieved, the performance of start-up SMEs in South Sumatra and the Special Region of Yogyakarta will improve.

This study has several significant limitations. First, this study only analyzes four variables as predictors of SME business performance. Other variables need to be considered by further researchers, namely the influence of the entrepreneurial team on the technology-innovation competency relationship (Bocken, 2015) and crowdfunding (Brown, Mawson, & Rowe, 2019) as a unique instrument to support the development of sustainable start-up performance. Future research must also analyze how start-up SMEs can benefit from continuous innovation (Weissbrod & Bocken, 2017). The second limitation concerns the possibility of bias because the data comes from one region/region, which may present specific characteristics of the entrepreneurial behavior of each SME start-up manager. Different conditions related to the setting of start-up SMEs in each region are needed to meet the generalization requirements of the findings. Future research can also analyze the performance of start-up SMEs in other areas involving HR technology competence, Government support, the experience of start-up SMEs, and product innovation to generalize the findings.

REFERENCES

[1] Acur, N., Kandemir, D., Boer, H. (2012). "Strategic alignment and new product development: drivers and performance effects", *Journal of Production and Innovative Management.* Vol. 29, pp. 304–318. https://doi.org/10.1111/j.1540-5885.2011.00897.x.

[2] Atuahene-Gima, K. (2005), "Resolving the Capability–Rigidity Paradox in New Product Innovation," *Journal of Marketing*. Vol. 69, No.(4), pp. 61–83. https://doi.org/10.1509/jmkg.2005.69.4.61.

ISSN: 2304-1013 (Online); 2304-1269 (CDROM); 2414-6722 (Print)

[3] Baert, C., Meuleman, M., Debruyne, M. (2016), "Portfolio entrepreneurship and resource orchestration". *Strategic Entrepreneurship Journal*. Volume10, Issue 4. Special Issue: Enduring Entrepreneurship. Pp. 346-370. https://doi.org/10.1002/sej.1227

[4] Bansal, S., Garg, I., & Sharma, G. D. (2019), "Social entrepreneurship as a path for social change and driver of sustainable development: A systematic review and research agenda," *Sustainability*. Vol. 11(4), 1091. https://doi.org/10.3390/su11041091.

[5] Barile, S., Grimaldi, M., Loia, F., & Sirianni, C. A. (2020), "Technology, value co-creation, and innovation in service ecosystems: Toward sustainable co-innovation", *Sustainability*. Vol. 12(7), 2759. https://doi.org/10.3390/su12072759.

[6] Baron, R.M., Tang, J. (2009), "Entrepreneurs' social skills and new venture performance: mediating mechanisms and cultural generality," *Journal of Management*. Vol. 35 No. (2), pp. 282–306. https://doi.org/10.1177/0149206307312513

[7] Baum, J. R., Frese, M., & Baron, R. A. (Eds). (2014), "The psychology of entrepreneurship. *Psychology Press*.

[8] Binder, J. K., & Belz, F. (2015), Sustainable entrepreneurship: What it is. In P. Kyr¨o (Ed.), Handbook of entrepreneurship and sustainable development research (pp. 30–72). *Cheltenham: Edward Elgar Publishing Limited*. https://doi.org/10.4337/9781849808248.

[9] Bocken, N. M. (2015), "Sustainable venture capital–catalyst for sustainable start-up success?", *Journal of cleaner production*. Vol 108, pp. 647-658. https://doi.org/10.1016/j.jclepro.2015.05.079.

[10] Bouncken, R.B., Plüschke, B.D., Pesch, R., Kraus, S. (2016), "Entrepreneurial orientation in vertical alliances: joint product innovation and learning from allies," *Review of Managerial Science*. Vol 10, 381–409. https://doi.org/10.1007/s11846-014-0150-8.

[11] Brown, R., Mawson, S., & Rowe, A. (2019), "Start-ups, entrepreneurial networks and equity crowdfunding: A processual perspective." *Industrial Marketing Management*. Vol 80, 115-125. https://doi.org/10.1016/j.indmarman.2018.02.003.

[12] Brush, C. G., Greene, P. G., & Hart, M. M. (2001), "From initial idea to unique advantage: The entrepreneurial challenge of constructing a resource base," *The Academy of Management Executive*; Briarcliff Manor. Vol. 15, Iss. 1, pp. 64-78. DOI:10.5465/ame.2001.4251394

[13] Candi, M., & Saemundsson, R. (2011), "Exploring the relationship between aesthetic design as an element of new service development and performance," *Journal of Product Innovation Management*. Vol. 28, pp. 536–557. https://doi.org/10.1111/j.1540-5885.2011.00827.x

[14] Chandler, G. N., & Hanks, S. H. (1998), "An examination of the substitutability of founders' human and financial capital in emerging business ventures," *Journal of Business Venturing*. 13(5), 353-369. https://doi.org/10.1016/S0883-9026(97)00034-7.

[15] Choi, D. S., Sung, C.S., Park, J. Y. (2020), "How Does Technology Start-ups Increase Innovative Performance? The Study of Technology Start-ups on Innovation Focusing on Employment Change in Korea", *Sustainability*. Vol. 12(2), pp. 551. https://doi.org/10.3390/su12020551.

ISSN: 2304-1013 (Online); 2304-1269 (CDROM); 2414-6722 (Print)

[16] Cohen, W., & Levinthal, D. (1990), "Absorptive Capacity: A New Perspective on Learning and Innovation," *Administrative Science Quarterly.* Vol. 35(1), pp. 128-152. https://doi.org/10.2307/2393553.
[17] Criscuolo, P., Nicolaou, N., & Salter, A. (2012), "The elixir (or burden) of youth? Exploring differences in innovation between start-ups and established firms", *Research Policy*. Volume 41. No. (2), pp. 319-333. https://doi.org/10.1016/j.respol.2011.12.001.
[18] Deligianni, I., Voudouris, I., Spanos, Y., Lioukas. S. (2019), "Non-linear effects of technological competence on product innovation in new technology-based firms: Resource orchestration and the role of the entrepreneur's political competence and prior start-up experience", *Technovation.* Vol. 88. 102076 https://doi.org/10.1016/j.technovation.2019.05.002.
[19] Dencker, J.C. & Gruber, M. (2015), "The effects of opportunities and founder experience on new firm performance", *Strategic. Management Journal*. Vol. 36. Pp. 1035-1052. https://doi.org/10.1002/smj.2269.
[20] Falahat, M., Ramayah, T., Soto-Acosta, P., & Lee, Yan-Yin. (2020), "SMEs internationalization: The role of product innovation, market intelligence, pricing and marketing communication capabilities as drivers of SMEs' international performance," *Technological Forecasting and Social Change*. Volume 152. https://doi.org/10.1016/j.techfore.2020.119908.
[21] Farmer, S. M., Yao, X., & Kung–Mcintyre, K. (2011), "The Behavioral Impact of Entrepreneur Identity Aspiration and Prior Entrepreneurial Experience," *Entrepreneurship Theory and Practice*. Vol 35. No. (2), pp. 245–273. https://doi.org/10.1111/j.1540-6520.2009.00358.x
[22] Fatima, M., & Izha, Z. (2020), "HRM Practices and Organizational Innovation: A Comparative Study of Manufacturing and Service Sector of Pakistan." *Review of Integrative Business and Economics Research*. Vol. 9, Supplementary Issue 4 309
[23] Gimenez-Fernandez, E. M., Sandulli, F. D., & Bogers, M. (2020), "Unpacking liabilities of newness and smallness in innovative start-ups: Investigating the differences in innovation performance between new and older small firms." *Research Policy*. Vol 49. No. (10). 104049. https://doi.org/10.1016/j.respol.2020.104049.
[24] Hair, Jr., Anderson, R.E., Tatham, R. L & Black, W.C (1998), *Multivariate Data Analysis*, New Jersey: Prentice-Hall International, Inc.
[25] Kuckertz, A., Berger, E. S. C., & Gaudig, A. (2019), "Responding to the greatest challenges? Value creation in ecological start-ups", *Journal of Cleaner Production*. 230, 1138–1147. https://doi.org/10.1016/j.jclepro.2019.05.149.
[26] Martín-Rojas, R., Fernández-Pérez, V., & García-Sánchez, E. (2017), "Encouraging organizational performance through the influence of technological distinctive competencies on components of corporate entrepreneurship," *International Entrepreneurship and Management Journal*. Vol. 13, pp. 397–426. https://doi.org/10.1007/s11365-016-0406-7.
[27] Martín-Rojas, R., García-Morales, V. J., & Bolívar-Ramos, M. T. (2013), "Influence of technological support, skills and competencies, and learning on corporate entrepreneurship in European technology firms," *Technovation*. 33(12), 417-430. https://doi.org/10.1016/j.technovation.2013.08.002.
[28] McGrath, H., Medlin, C. J., & O'Toole, T. (2019), "A process-based model of network capability development by a start-up firm," *Industrial Marketing Management*. Vol. 80, pp. 214-227. https://doi.org/10.1016/j.indmarman.2017.11.011.

ISSN: 2304-1013 (Online); 2304-1269 (CDROM); 2414-6722 (Print)

[29] Moreno-Moya, M., & Munuera-Aleman, J.L. (2016), "The differential effect of development speed and launching speed on new product performance: an analysis in SMEs," *Journal of Small Business Management.* Vol. 54, pp. 750–770. https://doi.org/10.1111/jsbm.12170.
[30] Newbert, S.L., Kirchhoff, B.A., & Walsh, S.T. (2007), "Defining the relationship among founding resources, strategies, and performance in technology-intensive new ventures: evidence from the semiconductor silicon industry," *Journal of Small Business Management.* Vol. 45(4), pp. 438–466. https://doi.org/10.1111/j.1540-627X.2007.00222.x.
[31] Nidumolu, R., Prahalad, C.K., & Rangaswami, M.R. (2009), "Why Sustainability Is Now the Key Driver of Innovation," *Harvard Business Review.* September Issue, 57-64.
[32] Ribeiro-Soriano, D., & Piñeiro-Chousa, J. (2021), "Innovative strategic relationships among sustainable start-ups," *Industrial Marketing Management*. Volume 94, pp. 106-114 https://doi.org/10.1016/j.indmarman.2021.01.008.
[33] Ritter, T., &Gemünden, H.G. (2003), "Network competence: Its impact on innovation success and its antecedents," *Journal of Business Research.* Vol. 56. No. (9), pp. 745–755. https://doi.org/10.1016/S0148-2963(01)00259-4.
[34] Semrau, T., & Sigmund, S. (2012), "Networking ability and the financial performance of new ventures: a mediation analysis among younger and more mature firms," *Strategic Entrepreneurship Journal*. Volume 6. Nomor (4), pp. 335–354. https://doi.org/10.1002/sej.1146
[35] Shane, S., & Venkataraman, S. (2000), "The promise of entrepreneurship as a field of research," *The Academy of Management Review*. Vol. 25, No. (1), pp. 217–226. http://www.jstor.org/stable/259271
[36] Sheng, S., Zhou, K.Z., & Lessassy, L. (2013), "NPD speed vs. innovativeness: the contingent impact of institutional and market environments," *Journal of Business Research.* Volume 66, Issue 11, pp. 2355-2362 https://doi.org/10.1016/j.jbusres.2012.04.018.
[37] Shan, Peng; Song, Michael, J. U., & Xiaofeng. (2016), "Entrepreneurial orientation and performance: Is innovation speed a missing link?", *Journal of Business Research*, Vol. 69. No. 2, pp. 683-690. https://doi.org/10.1016/j.jbusres.2015.08.032.
[38] Spithoven, A., Vanhaverbeke, W., & Roijakkers, N. (2013), "Open innovation practices in SMEs and large enterprises", *Small business economics*, Vol. 41(3), 537-562. https://doi.org/10.1007/s11187-012-9453-9.
[39] Stinchcombe, A. L. (2000), "Social Structure and Organizations," *Advances in Strategic Managemen*t. Vol. 17, 229-259. https://doi.org/10.1016/S0742-3322(00)17019-6.
[40] Sugandini, D., Effendi, M. I., & Istanto, Y. (2020). The resistance of social media adoption to SMEs in Yogyakarta: Exploratory Study. LPPM UPN "Veteran" Yogyakarta International Conference Series, Economic and Business Series (EBS). Vol.1(1).
[41] Symeonidou, N., Nicolaou, N. (2017). "Resource orchestration in start-ups: synchronizing human capital investment, leveraging strategy, and founder start-up experience." *Strategic Entrepreneurship Journal.* https://doi.org/10.1002/sej.1269.
[42] Tu, Y., & Wu, W. (2021), "How does green innovation improve enterprises' competitive advantage? The role of organizational learning", *Sustainable Production and Consumption*. Vol. 26, 504-516. https://doi.org/10.1016/j.spc.2020.12.031.

ISSN: 2304-1013 (Online); 2304-1269 (CDROM); 2414-6722 (Print)

[43] Teran-Yepez, E., Marín-Carrillo, G. M., Casado-Belmonte, M. D. P., Capobianco-Uriarte, & de Las Mercedes, M. (2020), "Sustainable entrepreneurship: Review of its evolution and new trends", *Journal of Cleaner Production*. PP. 252, 119742. https://doi.org/10.1016/j.jclepro.2019.119742.

[44] Todd, S.Y., Harris, K.J., Harris, R.B., & Wheeler, A.R. (2009), "Career success implications of political skill," *The Journal of Social Psychology*.Vol. 149 (3), 279–304. https://doi.org/10.3200/socp.149.3.279-304.

[45] Tresna, P. W., & Raharja, S. J. (2019), "Effect of Entrepreneurial Orientation, Product Innovation and Competitive Advantage on Business Performance in Creative Industries in Bandung City, Indonesia," *Review of Integrative Business and Economics Research*. Vol. 8, Supplementary Issue 3 51.

[46] Voudouris, I., Deligianni, I., & Lioukas, S. (2017), "Labor flexibility and innovation in new ventures," *Industrial and Corporate Change*. Vol. 26(5), pp. 931–951. https://doi.org/10.1093/icc/dtv019.

[47] Wales, W.J., Patel, P.C., Parida, V. and Kreiser, P.M. (2013), "Nonlinear Effects of EO on Small Firm Performance," *Strategic Entrepreneurship Journal*, 7, 93-121. https://doi.org/10.1002/sej.1153.

[48] Walsh, S.T., Kirchhoff, B.C., Newbert, S. (2002), "Differentiating market strategies for disruptive technologies," *IEEE Trans. Eng. Manag*. 49 (4), 341–351. https://doi.org/10.1109/TEM.2002.806718.

[49] Wang, Y., Lo, H.-P., Yang, Y. (2004), "The constituents of core competencies and firm performance: evidence from high-technology firms in China," *J. Eng. Technol. Manag*. 21 (4), 249–280. https://doi.org/10.1016/j.jengtecman.2004.09.001.

[50] Weissbrod, I., & Bocken, N. M. P. (2017), "Developing sustainable business experimentation capability – A case study," *Journal of Cleaner Production*, 142, 2663–2676. https://doi.org/10.1016/j.jclepro.2016.11.009

[51] Zameer, H., Wang, Y., & Yasmeen, H. (2020), "Reinforcing green competitive advantage through green production, creativity, and green brand image: implications for cleaner production in China," *Journal of cleaner production*, *247*, 119119. https://doi.org/10.1016/j.jclepro.2019.119119.

ISSN: 2304-1013 (Online); 2304-1269 (CDROM); 2414-6722 (Print)