The Effects of Product Innovation, Process Innovation and Government Policy on SMEs Performance: Evidence from Indonesia*

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Abstract

The purpose of this study is to examine and analyze product innovation and process innovation as an indicator of innovation that affects the performance of small and medium enterprises (SMEs). Government policy as a moderator of the effect of innovation on performance. This research was conducted during the COVID-19 pandemic. The population in this study are SMEs that produce clothes and t-shirts in Indonesia. Data collection is done through questionnaires and direct interviews. Online questionnaires were given to the managers and business owners. The sampling technique used is purposive sampling based on certain conditions of the research object, and in this study 100 business units were selected. The result of loading factor correlation between indicator and latent construct is significant. Hypothesis which explored the linear relationship between the construct variables was tested. Structural Equation Modeling (SEM) was used. The results of this study indicate that there is a positive relationship between innovation and business performance, and government policies have an important role as a full moderator in this relationship. The study findings concluded that the government policies are an important instrument in supporting the development of SMEs by innovating product and process innovation.

Keywords: Product Innovation, Process Innovation, Government Policy, Business Performance, SMEs

JEL Classification Code: G28, L23, L25

1. Introduction

The COVID-19 outbreak began to hit the Indonesia when COVID-19 was declared as a national disaster on March 15, 2020 (Sudaryanto et al., 2021). The COVID-19 outbreak has also had an impact on SMEs. To reduce this risk, SMEs must innovate products to enter new markets and utilize resources (Omar & Morales, 2021). An innovation strategy for a business, must have advantages and be able to have strong competitiveness. Baek & Lee (2018) provides insight into the comparative value of alternative accommodation for SMEs. Innovations that generate high added value, and are carried out in a sustainable manner, can enter the market and become market leaders. Cho and Pucik (2005) say that the companies always innovate as one of the main factors for the success and survival of a company. Innovating for companies in the open market is a must. Gaynor (2002) says that innovation by companies can increase growth, control the implementation of activities for future success, and is a driving force for businesses to develop further, and maintain the viability of the companies in a globalized world economy.

Afuah (1988) says that it is more often applied to SMEs than large companies, and innovation is an important aspect to lead to the advantages of competitive companies. Griffin (2004), SMEs carry out product innovation and process innovation to produce products and services that suit the consumer needs. Process innovation is a change in the way goods are produced or services are delivered. Bessant and Tidd (2007) state that the product innovation

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transforms a product or service into the value offered by an organization. Francis and Bessant (2005) state that the process innovation as a change in the way a product or service is created and delivered. Cooper (1998) states that the process innovation describes changes in the way organizations produce final products and services. Stuart (2000) implementation of product innovation and technology application cooperation between large and small companies, in order to attract customers, and increase sales. Kireyeva and Nurlanova (2014) say that the innovative clusters become a platform for introducing advanced technology, developing innovative enterprises, thereby providing a certain regional economic stability.

In general, the establishment of a business has the aim of making a profit. Achrol and Etzel (2003) stated that the level of goal achievement describes the company’s performance. Lin et al. (2008) says that the business performance is the result achieved by the company in accordance with the desired goals. Han et al. (1998) stated that innovation and business performance has a positive relationship, Salavou (2002) stated that the product innovation had a significant effect on business performance, Neira et al. (2009) stated that product innovation, process innovation, and marketing innovation affect the ability to generate profits in various ways. Najib and Kiminami (2011) argue that there is a positive and significant relationship between product innovation and process innovation with business performance, meaning that using innovative practices will generate competitive advantage and encourage better business performance. Neira et al. (2009); Hall et al. (2009); Murat and Birdogan (2011) state that the product innovation and process innovation carried out in SMEs improve business performance. Atalay et al. (2013) stated that to strengthen the competitiveness of SMEs in the face of increasingly fierce business competition, companies must innovate technology (product innovation and process innovation). Neira et al. (2009) improve product innovation and process innovation, higher business performance will be achieved. Ar and Birdogan (2011) state that the companies always improve product innovation and process innovation, to achieve higher business performance, Najib and Akira (2011) state that a company’s business performance can be measured by revenue from sales, profitability and market share. Rosli & Syamuriana (2013) stated that product innovation and process innovation can affect business performance. Atala et al. (2013) state that the product innovation and process innovation affect business performance.

The role of the right government policy can improve business performance. Antonio et al. (2003) state that training has a significant impact on improving business performance. Thurik and Wennkers (2004) state that the government policies help in controlling the macro economy by involving the use of technology and stable consumers to have an impact on improving business performance. Rasiah (2002) says that proactive policies from the autonomous government is done in the form of providing education and training, and market information, in order to support the development of SMEs. Samsir et al. (2013) says that to realize innovative behavior requires the role of the government with policies that favor SMEs. The implementation of these policies is mainly in the form of assistance such as training, technology, market information and working capital. Mukhtarova and Myltykbayeva (2014) say that the Regional innovation creates prerequisites for the policy adjustments in innovation. These adjustments make policies more dynamic and contribute to their long-term effectiveness.

The empirical research model was developed by involving government policy as a moderating variable. Government policy as a moderating variable theoretically aims to encourage creativity and innovative behavior of small business players. Government policies that are relevant to small businesses are human resource development through training, supporting facilities, and information expansion. The COVID-19 pandemic that is currently infecting the global community and especially in Indonesia has a direct impact on SMEs. This is a research gap is to examine the relationship between innovation, the role of the government, and the performance of SMEs during the COVID-19 pandemic in Indonesia.

2. Literature Review

2.1. Innovation

Gaynor (2002) state that innovation is a new combination of something that already exists. The combination can be applied for various purposes. According to the Organization for Economic Co-operation and Development (2005), innovation is the application of product innovation, process innovation, marketing innovation, or methods that are significantly updated in business practices, workplace organizations, or external relations. Robbins and Judge (2013) define innovation as a particular type of change, a new idea that is implemented to improve a product, process, or service. The statement can be interpreted that innovation is a special type of change with new ideas which is applied to improve a product, process or service. Product innovation and process innovation are relevant in this research. Product innovation is the creation of new products from new materials, or changes in part or all of the characteristics of existing products (Gopalakrishnan & Damanpour, 1997). Process innovation is the redesign of processes to improve the operation of internal business processes.

2.2. Government Policy

The government pays attention to the SMEs, because they are related to increasing the economy and employment.
The government’s support at SMEs in the COVID-19 pandemic era is manifested in policy of restructuring SMEs loans, working capital loans, and opening market access by bridging SMEs players with big entrepreneurs. Appropriate government policies will improve the performance of businesses of the SMEs. These conditions and facts are in line with the results of empirical research conducted by Rasiah (2002), which says that the government policies for SMEs can improve their performance by providing skills training, providing market information, and market access by using information technology facilities. Profit-oriented institutions in a competitive environment require an innovation strategy.

2.3. Performance of Business

Assessing business performance is one way that can be done by management, to fulfill obligations to the founders of the company. Company performance is measured from the financial aspect. Lee and Tsang (2001), the performance of a company can be measured using the development of sales growth, the development of asset growth, and the development of net profit growth. Jaugh & Glueck (1998) measurement of business performance can be calculated by the level of sales, profit rate, return on investment, turnover rate, and market share achieved. Camison, et al. (2005) measure business performance through references in three aspects of the company, namely profitability, productivity, and market. Lee & Tsang (2001) stated that a company’s performance can be measured through business growth consisting of sales growth, asset growth and operating profit growth.

2.4. Hypotheses

Neira et al. (2009) said that there is a positive influence of innovation on business performance. SMEs continue to innovate by creating new products and services to improve performance and efficiency. Pham & Quddus (2021) stated that innovation has an impact on efficiency that can improve performance. Mohd et al. (2010) and Egbide et al. (2013) revealed that the right government policy can strengthen the influence of innovation on the performance of SMEs. The research hypothesis is embodied in the formula:

\[ H1: \text{Innovation is significantly and positively related to product innovation.} \]

\[ H2: \text{Innovation is significantly and positively related to process innovation.} \]

\[ H3: \text{Innovation is significantly and positively related to business performance.} \]

\[ H4: \text{Government policies are significantly and positively related to the business performance.} \]

\[ H5: \text{Government policy as a moderator has a significant and positive effect on innovation on business performance.} \]

Figure 1 shows the relationship between innovation, business performance, and government policy.

3. Research Methods

3.1. Population, Sample and Data

The subject population is the owner or manager of SMEs making clothes and t-shirts in Indonesia. The sampling technique used is purposive sampling, taking into account the population that is scattered and cannot be determined with certainty (Hair, 2010). The number of samples selected is 100 SMEs. The sample selection in this study, using criteria based on considerations that are relevant to the research objectives. 1) The type of business is an SME that has activities in producing clothes and t-shirts, and 2) it has been operating for at least 2 years, and gets profits every year. Data was collected through direct survey questionnaires. The results of the validity and reliability test showed that the data used in the analysis was declared valid and reliable.

3.2. Method of Data Analysis

The analysis technique used in the research is multiple regression, and hypothesis testing has been done using SEM. SEM as a system embodied in the form of an equation that shows the relationship between latent variables, and between latent variables and their indicators. In this study, the innovation variable has 2 indicators, namely product innovation and process innovation. Each of these indicators has 4 indicator items. Business performance variable with 3 indicator items. Government policy variable with 3 indicator items. The relationship between the construct variable and its indicators, and relationship between construct variable and construct variable is formulated:

\[ X_i = \alpha r X + \epsilon \]
\[ X_2 = y_1 X + \varepsilon \]  \hspace{1cm} (2)

\[ Y = \beta_1 X + \beta_2 M + \beta_3 MX + \varepsilon \]  \hspace{1cm} (3)

4. Results and Discussion

4.1. Loading Factor

The relationship between items and latent constructs in this study is a reflective relationship. For a reflective relationship, all items must be able to explain the latent construct. The loading factor is the magnitude of the correlation coefficient between the indicator or item and its latent construct. Latent constructs are construct variables. Measurement of a construct variable is done indirectly through its indicators. The loading factor of an item is measured by the outer loading. Indicators with a high outer loading will have a higher contribution to explain construct variables, and vice versa. Hair et al. (2010) stated that the items that have an outer loading equal to or is greater than 0.50, are considered to have strong enough validation to explain latent constructs.

Based on Table 1, the loading factor on the test results of the outer model shows that the items of product innovation construct variables, process innovation construct variables, government policy construct variables, and business performance variables have an average outer loading above 0.50. Based on these results, these items have very strong validity which can explain construct variables (Hair, 2010). Furthermore, the results of this loading factor serve as the basis for the hypothesis testing process.

4.2. Convergent Validity

Reliability shows the level of accuracy, consistency, and accuracy of a measuring instrument in measuring Cronbach’s alpha coefficient, average coefficient of variance extract (AVE) and communality.

Based on Table 2, it can be seen that the reliability test results show that all constructs have a Cronbach’s alpha coefficient of more than 0.60, a composite reliability coefficient of more than 0.70, AVE and communality coefficients of more than 0.50. Thus, all measurement models used in this study already have high reliability (Hair, 2010). Therefore, the measurement model of this study has met discriminant validity. In various angles of the assessment carried out on the validity and reliability of the constructs, it was found that all items could be used as a measure of the variables in this study. The results of this convergent validity test serve as a strong basis, that research data originating from respondents’ perceptions meet the requirements of the research model that has been declared. For the next step, the results of this convergent validity test can be used as a consideration for testing the hypothesis.

Based on Table 3, there is a positive and significant relationship \((p < 0.05)\) between the construct variables and their indicators. This shows that the indicators used can explain the construct variables. All relationships between construct variables and construct variables were positive and significant \((p < 0.05)\). The results of this hypothesis test are in accordance with the hypothesis previously declared in Sub Chapter 2.4, there is a relationship between innovation and product innovation, there is a relationship between innovation

### Table 1: Loading Factor

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<tbody>
<tr>
<td>Item</td>
<td>X11</td>
<td>X12</td>
<td>X13</td>
<td>X14</td>
</tr>
<tr>
<td>Outer Loading</td>
<td>0.56</td>
<td>0.85</td>
<td>0.76</td>
<td>0.67</td>
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</tbody>
</table>

### Table 2: Convergent Validity

<table>
<thead>
<tr>
<th>Latent Construct</th>
<th>Cronbach Alpha Coefficient</th>
<th>Composite Reliability</th>
<th>AVE</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Innovation</td>
<td>0.686</td>
<td>0.805</td>
<td>0.514</td>
<td>0.805</td>
</tr>
<tr>
<td>Process Innovation</td>
<td>0.82</td>
<td>0.882</td>
<td>0.651</td>
<td>0.882</td>
</tr>
<tr>
<td>Government Policy</td>
<td>0.882</td>
<td>0.928</td>
<td>0.811</td>
<td>0.928</td>
</tr>
<tr>
<td>Business Performance</td>
<td>0.896</td>
<td>0.935</td>
<td>0.828</td>
<td>0.935</td>
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</tbody>
</table>
and process innovation, there is a relationship between innovation and business performance, there is a relationship between government policy and business performance, and Government policies have been proven to moderate the influence of innovation on SME business performance in the era of the COVID-19 pandemic in Indonesia.

4.3. Discussion

Business competition in the era of globalization is getting tougher. SMEs as business entities must have the ability to compete to be the best, in order to produce products or services that can meet consumer needs. To be able to survive in the era of competition, the owner or the manager must have the ability to respond to the consumer needs, and innovate so that his business has a competitive advantage. Consumer tastes change because of the many choices of products that will be used. To enter the market and become a market leader, SMEs innovate to generate high value and become sustainable (Baek & Lee, 2018). Consumers will be willing to pay a higher price for an innovation made by the company, and innovation will increase the profits of the SMEs. Innovation can also create new value that can improve SME business performance. Li (2006) believes that the uniqueness of a product is an important attribute for product excellence. Uniqueness is influenced by innovative power and high technology, so that products can be produced according to the consumer desires. The company’s success will be achieved, if the company reacts quickly to the new market conditions and changing customer needs (Robbins & Judge, 2013). In addition, companies can continue to seek creative solutions as well as continuous improvement in producing products. Innovations in small and medium enterprises in the era of the COVID-19 pandemic can still influence business performance, meaning that the right innovation in unfavorable conditions is quite influential in improving the performance of the SMEs. The product innovations carried out have produced products that meet the fashion demands of today’s wearers of clothes and t-shirts. The product innovations that have been carried out have resulted in a level of efficiency and effectiveness in the product manufacturing process, so that the selling price can compete with other similar businesses.

Market demand becomes a reference for the entrepreneurs to prepare products and services to be made (Gaynor, 2002). Of course, the criteria for products that are in demand by the market are not simple, product innovation is needed so that market opportunities are not lost. Product innovations that are prepared seriously, based on science and technology, will produce products that are able to compete in the market. Likewise process innovations that will be carried out by the SMEs, will help them create a production process that is fast, efficient, and on time (Robbins & Judge, 2013). The demand for the clothes and t-shirts by millennial youth is quite large in this country. Entrepreneurs can innovate their products and carry out process innovations to increase the sales volume.

The findings in this study reveals that the government policies have a significant role to improve the business performance of the SMEs. Government policies towards SMEs are urgently needed in this era of the COVID-19 pandemic, so that it does not impact the employment levels and lead to an increase in the bad loans. The government has implemented a number of policies, namely interest subsidies, tax incentives, working capital credit guarantees and placement of government funds. With its policy and various programs, the government hopes to encourage the SMEs in Indonesia to continue to adapt and innovate in the midst of the COVID-19 pandemic. This is to develop business in the midst of a difficult economic situation due to the outbreak of the deadly virus from China. For SMEs innovation is important by observing the market conditions and changes in the consumer behavior in the midst of the COVID-19 pandemic. That way, the resulting product can sell well in the market. It must be able to build local-based superior products, in accordance with the peculiarities and

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<th>Table 3: Hypothesis Testing</th>
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<tr>
<td><strong>Variable Relations</strong></td>
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<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>Innovation → Product Innovation</td>
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<tr>
<td>Innovation → Process Innovation</td>
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<td>Innovation → Business Performance</td>
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<tr>
<td>Government Policy → Business Performance</td>
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<tr>
<td>Innovation and Government Policy → Business Performance</td>
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uniqueness of each. Product trends and lifestyles of the people around the globe are changing, growing rapidly and dynamically. SMEs must be able to keep up with the changing trends and lifestyles of the world community. SMEs must be able to move dynamically and quickly adapt to the changing times, start conducting research and development in order to follow world product trends, and not only follow the nation market tends. Also, digital marketing must also be carried out effectively.

5. Conclusion

In the era of the COVID-19 pandemic, the sustainability of SMEs can be maintained through innovation. Innovation is implementation of new ideas, especially, product innovation and process innovation is the most important way for SMEs to produce clothing and t-shirts. Sales will increase in business organizations that are always innovating. Innovation is an important function in management, because innovation is related to the company’s plan to achieve the desired profit, so that innovation is related to business performance. The results of the analysis of innovation strategies carried out by SMEs making clothes and t-shirts can increase the efficiency of the process of production and can increase profits. This shows that innovation has a very important role in business management to improve performance of business. Politically, the government as a regulator of the state, tries to make people more prosperous. Community welfare can be achieved, if policies related to the economic sector become a priority. The real of government policy for developing SMEs of clothes and t-shirts can have a real impact toward business performance. Based on the results and discussion in this study, for future researchers who still focus on SMEs, it is recommended that the factors that have been studied should be expanded to include factors that have sensitivity related to the business performance. More attention to human resource management, namely by giving awards to people who have high creativity and who produce highly competitive products. The vaccination program has been evenly distributed to the entire population in several countries, including in Indonesia, as part of the government’s efforts to minimize the spread of COVID-19, so that it will have an impact on the revival of SMEs affected by the corona outbreak.

References


