

# The Moderating Influence of Government Policy on The Innovation Capability-Competitiveness Relationship in Food SMES

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## Abstract

Food Small and Medium Enterprises (SMEs) in Indonesia have low competitiveness but receive less attention in innovation research. This study aims to analyze the relationship between innovation capability and competitiveness of food SMEs and to analyze the role of government policies in strengthening that relationship during the Covid-19 pandemic. Data were collected using an online questionnaire from food SMEs in Malang Regency. There were 162 returned and valid questionnaires for analysis. The results of the study prove that innovation capability was strongly related to the competitiveness of food SMEs. Government policies through training, credit, and marketing strengthen the relationship between product innovation and competitiveness, while it weakening the relationship between process innovation and the competitiveness of food SMEs. The Covid-19 pandemic is an externality factor that hinders resource mobility so that the production process is reduced which in turn has a negative impact on the competitiveness of food SMEs.

**Keywords:** innovation capability; food SMEs; competitiveness; government policy; process innovation; product innovation

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## 1. Background

Small and Medium Enterprises (SMEs) play an important role in the Indonesian economy. SMEs absorb 97 percent of the workforce and contribute 60 percent of the gross domestic product. However, the competitiveness of SMEs is low as indicated by the contribution to exports of only 14 percent (BPS, 2020). The low competitiveness of SMEs is mainly due to low innovation (ERIA SME Research Working Group, 2014; Sulistyowati, 2018) and has not prioritized the role and function of innovation (Komisi Inovasi Nasional, 2012). Competitiveness at the enterprise level is the company's capacity to compete, grow, and be profitable (Wisenthige and Guoping, 2016).

The causes of the low competitiveness of SMEs that have received attention from previous studies are the types of innovation (Wisenthige and Guoping, 2016), the level of innovation (Setyawan Agus et al., 2015; Szlapka et al., 2017), organizational and business innovation ((Akmal et al., 2017; Ibarra et al., 2020). These studies have not revealed innovation capabilities, that is the ability of SMEs to manage resources including their innovations to increase competitiveness ((Saunila, 2020). The innovation capability of SMEs has been investigated by several previous researchers but in a different analytical framework from this research. For example, Mendez-Vega et al. (2021) analyze innovation capability as a mediation between resource-based and SME competitiveness, Pranowo et al. (2021) also analyze innovation capability as a mediation between knowledge sharing and SMEs performance, Siahaan & Tan (2020) analyze innovation capability as a mediation between intellectual capital, learning capability, technology orientation and innovative milieu with SMEs performance. This study analyzes innovation capability as an independent variable and competitiveness as the dependent variable.

The lack of innovation capabilities of SMEs is shown by the low resilience to the Coronavirus Disease 2019 (Covid-19) pandemic. A survey by the National Development Planning Agency, 2020 showed that 50 percent of SMEs closed their businesses and the remaining half had to operate with a drastic decline in turnover in March and April 2020, 88 percent did not have cash and savings during the pandemic, access to formal financing was limited, and more than 60 percent cut workers. This indicates the weak resilience of SMEs against shocks from external factors. In contrast, a study by Taneo et al. (2021) at the micro-level found several types of food SMEs whose turnover increased by up to 400 percent in the first six months of the Covid-19 pandemic. This indicates that there are SMEs that have good innovation capabilities

Previous studies on innovation capability and competitiveness were conducted on SMEs in general (e.g. Pranowo et al., 2021; Siahaan & Tan, 2020; Rajapathirana & Yan, 2018) regardless of the business sector. This study focused on food SMEs based on two considerations. First, SMEs in Indonesia in 2018 were 64.2 million and 60 percent of them were food and beverage ((Masduki, 2020; Somamiharja, 2020). Second, the Ministry of Industry Republic of Indonesia (2018) identify food and beverage as the first priority sector out of five main sectors for the early application of advanced technology in the industrial revolution 4.0. In addition to having high feasibility and high impact, the Indonesian food and beverage sector has great growth potential because it is supported by abundant agricultural resources and large domestic demand.

Innovation capability is defined as the capacity to produce different types of innovation, such as product innovation, process innovation, or organizational innovation (Saunila, 2020). A literature review by

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Purba et al. (2018) of 40 research journal articles indexed at Google Scholar, ScienceDirect, Researchgate, Springer, Proquest, and EBSCO, in the category of “food industry innovation”, agro-industry innovation, and “food sector innovation” found that innovations that are the priority of the food industry are process and product innovation.

Competitiveness is not only influenced by innovation capability but also by other factors such as the role of the government. One of the main determinants of competitiveness in developing countries such as Indonesia is the government’s role in mobilizing resources to generate competitiveness (Nallari and Griffith, 2013) and improve market outcomes (Mankiw, 2012) in conditions of market failure due to external factors such as the Covid-19 pandemic. Porter (1992) in his Diamond Model for Competitiveness suggests that the appropriate role for the government is as a catalyst, with a view to strengthening or even encouraging companies to increase aspirations in moving towards higher levels of competitive performance. Thus, the role of the government is to moderate innovation capability to improve the competitiveness of food SMEs. The publication on the role of the government as a reinforcement of innovation capability in increasing the competitiveness of food SMEs is still very limited.

Previous research emphasizes the role of innovation on SMEs in general so there are some gaps based on the framework, object, and context of research as well as the role of the government. *First*, Adam & Alarifi (2021) studied innovation practices for the survival of SMEs during the Covid-19 times and the role of external support as the moderating variable in which the government is one of the dimensions of external support. Alkahtani et al. (2020) investigate the effect of innovation practices on the competitiveness of SMEs with the role of the government as a mediating variable. Research by Kang & Park (2012) in South Korea and Xie (2012) in China analyzed innovation as the dependent variable and the role of government as the independent variable. This study analyzes the relationship between innovation capability and competitiveness of food SMEs with the role of the government as a moderating variable.

*Second*, Ali et al. (2020) investigate the relationship between innovation capability and performance but it was carried out on SMEs on financial performance. Sulisty & Ayuni (2020) also investigated the competitiveness of SMEs and innovation capability as mediating the influence of social capital and entrepreneur orientation on performance and competitive advantage. Although research by Nurliza et al. (2021) was conducted on food SMEs in Indonesia, however, it aims at studying the model of the innovation marketing process. Ali et al. (2021) studied food SMEs but they only on product innovation in India. This study focuses on food SMEs and the moderating role of government policies in the relationship between innovation capability and competitiveness

*Third*, the government’s role in strengthening SMEs’ innovation is inconsistent and not optimal yet. Rasyid & Rauf (2018) found that the government plays a role in increasing SME innovation in Gorontalo, Southeast Sulawesi. Islami et al. (2021) found that the government’s program for handling Covid-19 has not been effective. A study by the ERIA SME Research Working Group (2014) on SME development policies and the implementation of action programs by governments in ASEAN countries found that the Indonesian government was not proven to play a significant role in increasing the competitiveness of SMEs.

This research fills this gap with two objectives. First, to analyze the relationship between innovation capability and competitiveness of food SMEs. Second, to analyze the role of government policies in strengthening the relationship between innovation capability and competitiveness of food SMEs during the pandemic covid-19. The results of this study are expected to enrich science and further research on the relationship between innovation capability and competitiveness of SMEs in particular the food sector. In addition, the results of this study are also a source of reflection on government policies in increasing the competitiveness of SMEs as the backbone of the national economy, not just overcoming temporary problems such as the Covid-19 pandemic.

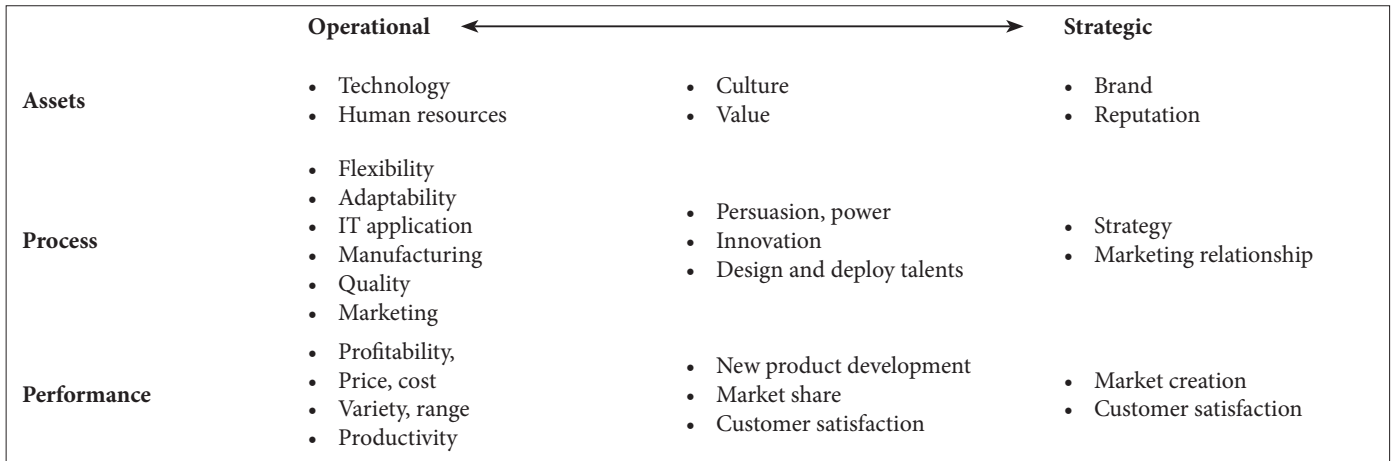
## 2. Literature Review and Hypotheses Development

### 2.1 Competitiveness and Innovation Capability

Competitiveness, at the micro level, is defined as “The ability of a company to win consistently in the long term in a competitive situation” (Black & Porter (2000: 213). Ambastha & Momaya (2012) state that competitiveness can be treated as a dependent variable or an independent variable, depending on the perspective or approach used. There are three perspectives or approaches used in identifying the position of the competitiveness variable. First, competitiveness is seen as a framework that has three sides: performance competitiveness, potential competitiveness, and management processes. Second, competitiveness is defined as a combination of assets and processes in which assets are natural or created resources (infrastructure) and processes that transform assets to achieve economic benefits from sales to customers. Third, competitiveness can be seen from the competency approach which includes a resource-based approach. Competency emphasizes the role of internal factors in the company such as strategy, structure, competence, capability to innovate, and tangible and intangible resources for success in competing.

Ambastha & Momaya (2012) identified sources of company competitiveness which can be categorized into assets, processes, and performance at the strategic and operating levels, as shown in Figure 1. This study treats competitiveness as performance at the operational level as measured by profitability and productivity.

Figure 1. Sources of Company Competitiveness



Source: Adopted and Modified from Ambastha & Momaya (2012)

The ability to manage resources is closely related to innovation capability. The two conceptualizations of innovation capability, innovation as a process and innovation as an outcome, are well established also in the small business context (Saunila, 2020). In innovation as a process, innovation capability is seen as the potential to create innovative outputs (Dadfar et al., 2013). Innovation capability is considered a one-dimensional phenomenon including actions that can be taken to improve the performance of SMEs (Castela, Ferreira, Ferreira, & Marques, 2018). Innovation as an outcome defines innovation capability as the capacity to produce different types of innovation, such as product innovation, process innovation, or organizational innovation (Saunila, 2020). Innovation that is a priority for the food industry is process and product innovation (Purba et al., 2018), even Baregheh et al. (2012) found that product innovation is the most common type of innovation in the food industry.

Process innovation includes the introduction of new production methods, new management approaches, and new technologies, which can be used to improve production and management processes (Hilmi et al., 2010). Process innovation is defined as changes in the way in which things (products/services) are created and delivered (Baregheh et al., 2012). Process innovation can be in the form of changes in technology, work processes, or organizational behavior routines (Widya-Hasuti et al., 2018), cost reductions, or increased flexibility in production (Hervas-Oliver et al., 2014). Gault (2018) also emphasized that process innovation includes production or delivery, organization, and marketing processes. Process innovation is characterized by significant technological changes, production equipment, and/or software (OECD, 2018) and the essence of process innovation is the introduction of new devices, methods, tools, or knowledge to produce goods or services (Tidd and Bessant, 2009).

Hilmi et al. (2010) found a positive relationship between process innovation and the performance of SMEs in Malaysia. Process innovation has an indirect effect through innovation on the competitive advantage of frozen food SMEs in Thailand (Distanont and Khongmalai, 2020). Competitive advantage is measured by superior efficiency,

superior quality, and customer responsiveness. Anzules-Falcones & Martin-Castilla (2020) reported that the process of food and beverage SMEs in Ecuador significantly influences firm innovation. Previous studies have proven that company innovation has a significant effect on company performance and competitiveness.

Based on the above study, it can be formulated the following hypothesis:

**Hypothesis 1:** Process innovation significantly improves the competitiveness of food SMEs

Product innovation is the novelty and significance of new products introduced to the market in a timely manner, distinguishing product innovation from other innovation factors (Hilmi et al., 2010). Product innovation is defined as a change in the things (products/services) that an organization offers Baregheh et al. (2012). Another definition given by Gault (2018) is that product innovation is an available product made for potential users that are new or significantly modified with respect to its characteristics or intended use. Saptaningtyas & Rahayu (2020) emphasized that food product innovation does not only consider the customer needs, but also the volatility, uncertainty, complexity, and ambiguity environment so the innovative products could adapt to rapid and unpredictable change. A successful organization largely depends on the innovation strategy in the competitive market. The scope of implementation of product innovation is the innovation related to goods and services and it is characterized by significant improvements in technical specifications, components, and materials (OECD, 2018). The essence of product innovation is the introduction of new products and services or changes in new products and services that have added benefits to customers (Tidd and Bessant, 2009).

The study of Anzules-Falcones & Martin-Castilla, (2020) found that the products of food and beverage SMEs in Ecuador significantly influence enterprise innovation. Although the influence of enterprise innovation on the competitiveness of SMEs has not been investigated, there have been many previous studies that have proven a positive

relationship between the two variables. Najib et al. (2011) found a positive and significant effect of innovation on the competitiveness of processed food SMEs in Indonesia. Product, process, and marketing innovations are used as indicators of innovation so that product innovation is not partially analyzed for its effect on competitiveness. Competitiveness is measured by performance in terms of sales volume, profit, and market share.

A study by Ali et al. (2021) proves that product innovation in food SMEs is more likely to be influenced by a variety of internal, collaborative, and external factors. These are important factors of innovation capability. The findings of the study suggest that SMEs should diversify their product innovations to include new inputs, improved product features, and enhanced technologies to strengthen their place in the market.

Based on the description, the following hypothesis can be formulated:

**Hypothesis 2:** Product innovation significantly improves the competitiveness of food SMEs.

### 2.2 The Role of Government Policy in Strengthening the Competitiveness of Food SMEs

The right role for the government in increasing the competitiveness of SMEs is as a catalyst in strengthening companies to improve competitive performance (Porter, 1992). There are 10 principles that need to be carried out in the transformation of government administration practices with an entrepreneurial spirit (Osborne & Gaebler (1992). The first principle is “Catalytic Government: Steering rather than Rowing”. The government’s role is more as a facilitator than directly carrying out all operational activities. The role as a catalyst emphasizes the government’s role in moderating the influence of innovation capability on the competitiveness of food SMEs.

The government plays an important role through various policies in facilitating the innovation capabilities of SMEs. The government policies are reflected in the Law of the Republic of Indonesia number 20 of 2008 concerning Micro, Small, and Medium Enterprises, including increasing access to productive resources, developing products and markets for SMEs, and increasing the competitiveness of the workforce.

Facing the Covid-19 pandemic, the Indonesian government provided financial and non-financial stimulus policies to SMEs (Bappenas, 2020). Financial stimulus policies include postponement of principal and interest, credit interest subsidies, tax incentives, working capital credit loans, and regional incentive funds, while non-financial stimulus includes spending on SME products from the government and training for SMEs through webinars in various fields. These government policies need to be reviewed and evaluated for their effectiveness in improving the competitiveness of SMEs.

Research on the role of government policy in moderating the effect of innovation capability on the competitiveness of food SMEs is still very limited. Doh and Kim (2014) found a positive relationship between technology development support by the Korean government and the acquisition of patents and registration of new designs for SMEs. Xiao

et al. (2013) found that the level of centralized Chinese government control moderates the relationship between business processes and the performance of SMEs compared to lower levels of government (provincial and municipal).

Government facilitation in business processes is needed during times of economic turbulence, such as the Covid-19 pandemic. This external factor causes the market to be unable to allocate resources efficiently (Mankiw, 2012). Fu et al. (2021) found that environmental turbulence enhances the moderating role of absorptive power of the relationship between external knowledge-seeking and firm innovation performance. Another finding of Hung & Chou (2013) was that economic and technological turbulence positively moderates the effect of external technology acquisition (i.e. open innovation) on firm performance. The study found that external factors enhance innovation and firm performance in a dynamic industry. In developing countries such as Indonesia, the government is a key external factor. Thus, it can be said that if the government intensively implements policies and empowerment programs to increase SME innovation, it will increase the competitiveness of SMEs.

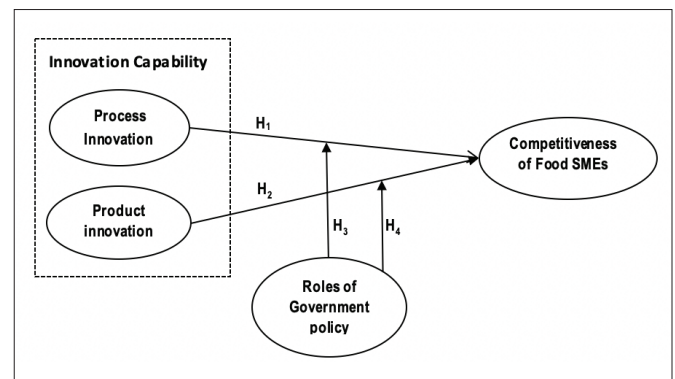
Based on the above study, the following hypotheses can be formulated:

**Hypothesis 3:** Government policies strengthen the relationship between process innovation and the competitiveness of food SMEs

**Hypothesis 4:** Government policies strengthen the relationship between product innovation and the competitiveness of food SMEs

The relationship between the variables studied is presented in Figure 2 below.

**Figure 2.** Model relationship between variables in this study



### 3. Method

#### 3.1 Data

Data were collected from food SMEs in Malang Regency, Indonesia. This area was selected for the following considerations. *First*, the results of previous qualitative studies by Kusumawardhani et al. (2015) found that SMEs benefit from government programs in the form of increased productivity. A quantitative approach is needed to complement the results of the study. A case study by Taneo et al. (2021) of four food SMEs found that two SMEs increased their sales turnover



by up to 400 percent while the other decreased during the Covid-19 pandemic. A quantitative approach is needed to be able to generalize the results of the study. *Second*, food SMEs play an important role in the economy of Malang Regency, based on the absorption of labor and contribution to Regional Income. *Third*, the vision and mission of this region are explicit to increase the innovation and competitiveness of food SMEs.

Food SMEs data were obtained from the Food and Beverage Association under the coordination of the Malang Regency Industry and Trade Office. The definition of SMEs refers to the criteria of the Central Statistics Agency, that is Small Enterprises are businesses with a workforce of 5-19 people, and Medium Enterprises with a workforce of 20-99 people. This definition is more practical than the definition according to Law Number 20 of 2008 concerning Micro, Small, and Medium Enterprises which is based on net worth and annual sales which are not easily obtained from SMEs. The number of registered SMEs is 214 business units and all become the target population.

Respondents in this study are business owners and usually also business managers, who are considered to know the most about the innovation capabilities and sustainable competitiveness of SMEs. Data were collected using an online questionnaire that was sent to all food SMEs who filled out and then returned the questionnaire to as many as 176 business units. After being examined 14 questionnaires were not filled in according to the instructions and were incomplete so they were not used in the data analysis process. Thus, the food SMEs used as the data source for this research were 162 business units.

Data were collected from the end of October to early November 2021. Prior to distribution, the questionnaire was tested on 60 SME managers to test the validity and reliability. The validity test uses product-moment correlation while reliability uses Cronbach alpha with a minimum value of 0.70 (Hair Jr, 2010). All items were valid and reliable so the instrument is feasible to use.

### 3.2 Variables and Measurement

The variables studied were innovation capability, which consisted of process and product innovation as independent variables, the competitiveness of food SMEs as the dependent variable, and the role of go-

vernment policy as the moderating variable. The product and process innovation items were adapted from Tidd & Bessant (2009), Atalay et al. (2013), Rosli & Sidek, (2013), and OECD (2018). Process innovation was measured by the development of new production process methods, more efficient production processes, and new methods of product delivery. Product innovation was measured by the development of various types of products, producing products with superior quality, and up-to-date products.

Competitiveness was measured by two indicators that are profitability and productivity, adapted from Black & Porter (2000) and Ambastha & Momaya (2012). Government policies were adapted from Law Number 20 of 2008 concerning Micro, Small, and Medium Enterprises, and the Bappenas (2020). The indicators used in this research are training, credit, and marketing.

Each indicator of all variables was breakdown into items. Each item was measured using a Likert Scale with a score range from 1 (strongly disagree) to 5 (strongly agree).

### 3.3 Technical Analysis

Data were analyzed using WarpPartial Least Square-Structural Equation Modeling (WarpPLS-SEM) software based on the following two considerations (Gentle et al., 2010; Sholihin & Ratmono, 2013; Hair et al. 2014). First, parameter estimation using WarpPLS-SEM is very efficient because it has greater statistical power than other methods based on covariance, which is more likely to give results that are in accordance with population conditions. Second, WarpPLS-SEM can provide coefficients and p-values directly on the model with moderating variables. The model evaluation uses the fit and quality indices model (Hair et al., 2014), and the hypothesis test uses the t-test (Hair et al., 2014; Sholihin & Ratmono, 2013).

### Results

Examination of the overall measure of a fit model is carried out by referring to the Model Fit and Quality Indices according to the WarpPLS 5.0 User Manual (Kock, 2015). Some of the indices referred to are Average Path Coefficient (APC), Average R-squared (ARS), and Average Adjusted R-square (AARS). A summary of the goodness of fit model is presented in Table 2.

**Table 2.** Evaluation of Goodness of Fit Model

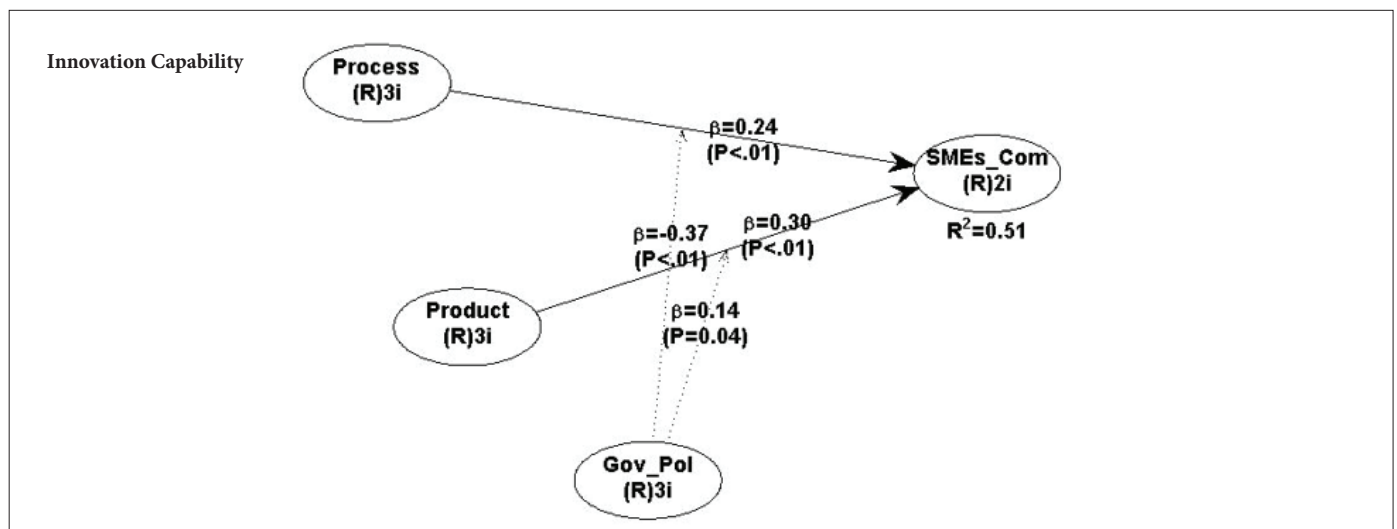
Goodness of Fit	Coeff. (p-value)	Cut-off	Information
Average Path Coefficient (APC)	0.557 (0.001)	0.05	Significant (good)
Average R-Squared(ARS)	0.616 (0.001)	0.05	Significant (good)
Average Adjusted R-squared (AARS)	0.612 (0.001)	0.05	Significant (good)
Average Block VIF (AVIF)	1.591	≤ 5: acceptable ≤ 3.3: ideal	Ideal
Average full collinearity VIF (AFVIF)	Inf.	≤ 5: acceptable ≤ 3.3: ideal	Because the relationship of all latent variables is significant
Tenenhaus GoF (GoF)	0.6	≥ 0.1: small ≥ 0.25: medium ≥ 0.36 big	Big
Sympson's paradox ratio (SPR)	1.000	≥ 0.7: acceptable 1: ideal	Ideal
R-squared contribution ratio (RSCR)	1.000	≥ 0.9: acceptable 1: ideal	Ideal
Statistical suppression ratio (SSR)	1.000	≥ 0.7: acceptable	Acceptable
Nonlinear bivariate causality direction ratio (NLBCDR)	0.889	≥ 0.7: acceptable	Acceptable

Based on the parameters presented in Table 2 and the rules of thumb evaluation of the WarpPLS structural model according to Hair et al. (2014) and the WarpPLS 5.0 User Manual (Kock, 2015) in general the structural model used is good so that it can be used to test the proposed hypothesis. The Average Path Coefficient (APC) is significant at  $\alpha = 1\%$  indicating that the coefficient of the latent variable in the model is significant. The average R-Squared (ARS) is also significant at  $\alpha = 1\%$ , which indicates that the exogenous latent variable used has a strong relationship with the endogenous latent variable. This is also reinforced by the large explanatory ability of the analyst model, which

is indicated by the large Tenenhaus GoF index ( $\geq 0.36$ ). Other indices are also eligible unless the Average Full Collinearity VIF (AFVIF) is greater than the cut-off. The high value of AFVIF indicates full collinearity in each significant latent variable. Thus, it can be concluded that the overall model is acceptable to test the research hypothesis.

The statistical analysis of the relationship between innovation capabilities and competitiveness with moderating the roles of government policies is presented in Figure 2, while the path coefficients are presented in Table 3.

**Figure 2.** Relationship between Innovation Capability (process and product innovation) and Sustainable Competitiveness of Food SMEs with Government Policy as the Moderating Variable



**Table 3.** The Path Coefficient of the Relationship between Innovation Capability (Process and Product) and Competitiveness of Food SMEs with Government's Role as the Moderation Variable

Independent and Moderating Variable	Coefficient	p-value	Decision on the Null Hypothesis
Process	0.242	< 0.001	Rejected
Product	0.301	< 0.001	Rejected
Process*Government policy	-0.373	< 0.001	Rejected
Product*Government policy	0.140	< 0.040	Rejected

The results of the statistical analysis show that all of the proposed hypotheses are accepted, except for the third hypothesis which is proven but in the opposite direction. This means that government policies weaken the relationship between process innovation and the competitiveness of food SMEs.

## Discussion

Innovation capability is the company's capacity to produce different types of innovation, such as process innovation. The results of the study prove that innovation capability through process innovation is positively and significantly related to the competitiveness of food SMEs. Hilmi et al. (2010) also found the same result for SMEs in Malaysia, although the food sector was only 17.4 percent of all SMEs studied. Improvement in the quality of process innovation will increase the competitiveness of food SMEs (Distranont & Khingmalai, 2020).

Process innovation such as production process efficiency took a relatively long time because it is related to investment. Taneo et al. (2021) found that equipment investment is the greatest influence on the chip processing industry. Equipment in the chips processing industry includes peeling machines, chopping machines, deep frying, vacuum frying, and sealers. As many as 30.3 percent of the food SMEs studied replaced their equipment with the same function, for example, a 300-Watt electric chopper machine was replaced with 200 Watt for the sake of cost efficiency. The cost structure affects profitability which ultimately determines the competitiveness of SMEs (Grau & Reig, 2020).

Process innovation covers such as purchasing equipment and applying a new production process tool, takes a relatively long time because it involves external parties such as banks as loan providers, machine manufacturers or sellers, and other parties related to the transfer of knowledge about the process innovation (Hervas-Oliver et al. (2014). Process of innovation relies heavily on the acquisition of external knowledge sources to complement their weak internal innovative capabilities, and their innovation patterns clearly differ from traditional product-based innovation strategies (Gentile-Ludecke et al., 2021). On the other hand, Török et al. (2019) found that tacit knowledge is more prominent than explicit one in the food industry in Hungary. The use of internal tacit knowledge is significant and relevant in the innovative production process. Ngah & Jusoff, (2009) emphasize that tacit knowledge exists in every corner of SMEs, in its structure and relationship, especially with its people. SMEs are rich in tacit knowledge but lacking in expertise, financial capital, and

infrastructure, therefore tacit knowledge sharing is the best tool for SMEs and become an important part of innovation capability from various dimensions which together contribute to increasing the company's competitiveness (Saunila, 2020).

The production process through open innovation increases the productivity of SMEs (Surya et al., 2021). This is closely related to product innovation. The results of the study show that product innovation is positively and significantly related to the competitiveness of food SMEs. Aziz & Samad (2016) found that innovation has a strong positive impact on the competitive advantage of food SMEs in Malaysia, where innovation contributes a 73.5 percent variance in competitive advantage. On the other hand, Hilmi et al. (2010) found that product innovation has no significant effect on the performance of SMEs in Malaysia. The explanation is that perhaps the respondents to the study happened to be passive entrepreneurs as opposed to passive entrepreneurs. The proactive and risk-seeking nature of an active entrepreneur usually results in higher performance (Mat et al., 2020), in contrast to that of a passive entrepreneur.

This study proves that government policies strengthen the relationship between product innovation and the competitiveness of food SMEs. Training conducted by the government in collaboration with universities on product innovation, packaging, and online training has significantly increased the performance of SMEs (Hanifawati & Listyaningrum, 2021; Bappenas, 2020; Noya et al., 2023). Several government policies such as providing social assistance, tax incentives, relaxation and credit restructuring, expansion of working capital financing, and provision of product support. succeeded in increasing the resilience and performance of SMEs during the Covid-19 pandemic (Anggraeni et al., 2020; Taneo et al., 2021; Taneo et al., 2022). The survey by the National Development Planning Agency of Indonesia in December 2020 showed that as many as 74.29 percent of 732 small businesses, 67.44 percent of 133 medium-sized businesses had registered to take part in the working capital credit guarantee program and 74.95 percent of 732 medium-sized businesses and 62.50 percent of medium-sized enterprises have applied for credit interest subsidies (Bappenas, 2020).

The study by Kim et al. (2016) in South Korea confirmed that the moderating role of the government is to strengthen product innovation, especially in programs that provide indirect opportunities for innovation to SMEs. The research of Fu et al. (2021) indicated a significant association between innovation and SME performance, and the external environment has a moderating impact on innovation and SME

performance. Government policies through triple helix cooperation in transferring knowledge in food processing and assisting food production processes that are hygienic have been proven to increase the competitiveness of food SMEs (Taneo et al., 2017). Malang Regency government policy requires state civil servants to buy SME products for at least Rp. 50,000 or the equivalent of 3.5 USD per month has significantly increased the performance and competitiveness of SMEs (Taneo et al., 2022)

The interesting finding of this study is that government policies weaken the relationship between innovation capability through process innovation and the competitiveness of food SMEs. This is due to the government's policy of limiting physical contact and a less-contact economy after March 2020 due to the Covid-19 pandemic resulting in 50 percent of SMEs being forced to close their businesses, sales turnover dropped dramatically, more than 88 percent did not have cash, and more than 60 percent reduced workers (Bappenas, 2020). SMEs that survive have products but do not have the capacity to sell online due to only 13% of the 64 million SMEs in Indonesia are connected to the digital ecosystem (Brodjonegoro, 2020). Prior to the Covid-19 pandemic, Suriyanti & Binangkit (2019) found the same finding that government policies weakened the influence of business strategy on the performance of SMEs in the food and beverage sector in Pekanbaru City, Indonesia.

### Conclusion, Limitations, and Recommendations for Future Research

The competitiveness of food SMEs can be increased by improving innovation capabilities. Process and product innovation are the two main types of innovation in food SMEs. Food SMEs have the potential and are able to increase competitiveness through process and product innovation, despite the limited knowledge, skills, and access to productive resources of SMEs.

The Covid-19 pandemic is an externality factor that disrupts mobility and resource allocation so it has a negative impact on the competitiveness of food SMEs. In developing countries such as Indonesia, the role of government policies is very important to improve market outcomes. Government policies through training, credit, and marketing strengthen the relationship between food and SMEs' product innovations. On the other hand, government policies weaken the relationship between process innovation and the competitiveness of food SMEs because the production process is reduced or even completely stopped operating, with limited raw materials, and limited cash due to a sharp decline in sales.

This study has several limitations. *First*, this research approach is quantitative with cross-sectional data collected using a closed-ended questionnaire. This data is not able to dig up information about capabilities, especially the innovation process. Therefore, it is recommended for future research to use a qualitative or mix-method approach with longitudinal data to be able to reveal process innovations that take place in food SMEs.

Second, the object of this research is food SMEs in general which includes processed foods made from tubers, fruits, vegetables, nuts, milk, meat, and fish. The characteristics of the raw materials and the processing products vary greatly and therefore the capabilities in process and product innovation are also different. Future research can focus on certain types of food, such as potato chips or apple chips, so as to be able to reveal specific process and product capability innovations in increasing their competitiveness.

*Third*, this research was conducted at the end of the first year after the Covid-19 pandemic. Therefore, this research has not been able to provide complete information on innovation capabilities to improve the performance of SMEs, at least surviving, during the Covid-19 pandemic economic turbulence. Entering the second year of the Covid-19 pandemic, there are various government policies aimed at SMEs to restore national economic conditions and SMEs have begun to adapt to the dynamics of change. Similar research with the same variables can be carried out after the Covid-19 pandemic or the new normal era will provide scientific information on innovation capabilities, government policies, and the competitiveness of food SMEs in a turbulent economy.

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