Analysis of the Impact of Innovation as a Mediator of the Relationship between Programs and Performance on the Competitive Advantage of MSMEs in Indonesia

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Abstract
In implementing the 4.0 marketing strategy, micro, small and medium business actors need to be open to market changes and be willing to allocate funds for marketing activities. This study aims to analyze the effect of innovation mediation on the relationship between programs and performances on the competitive advantage of SMEs. This study's research method includes library and field research design with a quantitative approach. This study's research subjects were SMEs in Indonesia's culinary sector. Data collection techniques using observation, interviews, questionnaires, and documentation. The data analysis method used is Partial Least Square (PLS). The data analysis test tool uses the Smartpls statistical software. The study's results stated that programs and performance positively and significantly affected innovation. The results of further research confirm that programs and performance positively and significantly affect competitive advantage. Further results conclude that innovation can mediate the relationship between programs and performance on competitive advantage. The conclusion of this study explains that to encourage a sustainable competitive advantage to be different from competing products, MSME actors need to start with a new marketing strategy in providing solutions when selling products to consumers and being able to design content relevant to product branding.

Keywords: Innovation, Programs, Performance, Competitive Advantage

1. Introduction
The principle pattern in the industrial revolution 4.0 is an innovation-based incremental step that consolidates supply and demand to drive today's modern designs, as we find in the sharing or on-demand economy (Ayesha et al., 2021). These stages are typically used with smartphones, effectively gathering individuals, resources, and information, thereby creating a better approach to burn-through labor and products (Inrawan et al., 2022). Increasing competitiveness, productivity, and technology will have an impact on investment which is also increasing (Afwa et al., 2021). By investing, business people can develop companies and develop industries. The market will be turbulent and lively, and this impact will occur following the industrial revolution.
4.0 (Widati, 2022). The industrial revolution 4.0 will bring many conveniences, but challenges will still be faced. Apart from these challenges, in general, industry 4.0 is revolutionary progress (Stachová et al., 2019). The advantages of doing business in the modern 4.0 Era unlike the previous times, the Modern 4.0 period is a change in business processes, not an industrial revolution (Ahidin et al., 2020). Suppose in the past, changes occurred more in the production sector. In that case, it is more visible in the network between assets that work together by utilizing computerization innovation, data innovation, and correspondence (Julyanthry et al., 2021).

The founding principle of the modern period 4.0 is the modern revolution 3.0, particularly the mechanization of creation that relies on microprocessor innovation (Halim, Grace, et al., 2021). This change impacts changes in very broad scope, namely changing the entire order of creation, implementation, and administration in MSME businesses (Inrawan, Silitonga, Sianipar, et al., 2021). Micro, small and medium enterprises are businesses formed by the community and the government, consisting of community groups and family groups, by utilizing the natural resources available around their homes as raw materials for producing micro, small and medium enterprises (Inrawan, Silitonga, Halim, et al., 2021). In its development, micro, small and medium enterprises can contribute to national economic growth, so the government has special attention on micro, small and medium enterprises, all efforts made by the government to revive micro, small and medium enterprises are intensively carried out, but the government's attention is still focused on the production aspect (Sherly et al., 2020). Through human resource training for production and assistance in production equipment. This condition will certainly impact the competitive advantage of MSME actors who are not ready to carry out marketing transformation and innovation (Purba et al., 2022).

The main problem of research lies in understanding digital marketing that is still not maximized, so the potential benefits obtained are still not optimal. This condition makes it difficult for MSME business actors to maintain their competitive advantage, especially during the Covid-19 pandemic, requiring a touch of qualified technology. The second problem that MSME entrepreneurs often experience is their lack of experience in business management. Many of them only focus on producing goods but do not think about how to expand their business. The next problem is the opportunity for MSME actors to be marginalized due to their unwillingness or inability to follow the transformation of current business processes. This condition causes the growth of marketing performance to be slow. This situation has occurred with the displacement of several businesses that went bankrupt due to the inability to keep up with the development of business digitization. By looking at these various problems, the role of the Modern Marketing Mix is needed, which is viewed from the aspects of programs and performance as well as sustainable innovation as a stimulus to maintain a competitive business advantage. This study aims to analyze the influence of innovation mediation on the influence of programs and performances on the competitive advantage of MSMEs in Indonesia. Therefore, the role of the Modern Marketing Mix is needed which is viewed from the aspects of programs and performance as well as sustainable innovation as a stimulus to maintain a competitive business advantage. This study aims to analyze the influence of innovation mediation on the influence of programs and performances on the competitive advantage of MSMEs in Indonesia.
2. Literature Review

Programs
In facing competition, every business actor must always pay attention to its products' position. Existing products must be improved in quality, function, and model to suit the development of consumer preferences (Sumarno & Suarman, 2017). The pricing policy step begins with selecting a pricing objective, estimating demand/supply, estimating and analyzing costs, analyzing competitor offers, selecting a pricing method, and finally, selecting a final price. The program aspect is the ability to think of something new and different (Rose et al., 2006). The ability to create programs in the form of creativity is also the ability to create unique products that attract consumer interest (Salem, 2014). The higher the business competition, is hoped creativity is needed so that the business continues to run and develop. Study results (Lestari et al., 2020) and (Muhajirin et al., 2020) revealed that programs positively and significantly impact innovation and competitive advantage. Therefore, based on several previous research results, this study is carried out to develop hypotheses:

H1: Programs affect innovation
H3: Programs affect competitive advantage

Performance
In Kotler's vision, programs reflect all the old 4Ps and many other activities required to market a product or service (Kotler & Keller, 2016). Combining all these elements is necessary to achieve higher development for the company (Asikhia, 2010). Performance is a characteristic of entrepreneurs, namely an attitude of being responsible for their actions and not depending on others (Lestari et al., 2020). Finding opportunities is something that entrepreneurs must have (Thi & Mothe, 2010). The essence of performance is a positive response to opportunities for profit. In entrepreneurship, it is necessary to have the uniqueness or characteristics of the product or goods produced so that it becomes a differentiator from others. Study results (Ioanid et al., 2018) and (Pratono et al., 2019) reveal that performance positively and significantly influences innovation and competitive advantage. Therefore, based on several previous research results, this study is carried out to develop hypotheses:

H2: Performance affects innovation
H4: Performance affects competitive advantage

Innovation
Innovation is the ability to apply creativity (Halim, Sherly, et al., 2021). All innovation starts from creative ideas (Sundulusi et al., 2022). Innovation is also explained as the ability possessed to make breakthroughs in business (Sudrartono et al., 2022). Innovation shows the nature of approaching problems by trying to solve them in new and better ways. Innovation is needed to solve existing problems and look for opportunities in every business (Hasan et al., 2021). An entrepreneur must be skilled in finding and capturing opportunities for business development. To get a business opportunity, one must have skills. Study results (Distanont & Khongmalai, 2020) and (Yi et al., 2021) revealed that innovation positively and significantly impacts competitive
advantage. Therefore, based on several previous research results, this study is carried out to develop hypotheses:

**H5:** Innovation affects competitive advantage

**H6:** Programs have an effect on competitive advantage with innovation as a mediating variable

**H7:** Performance has an effect on competitive advantage with innovation as a mediating variable

**Competitive Advantage**

Businesses with a focused advantage target a predefined market rather than one large one. A market-focused approach can employ strategies that provide the business with information about its target demographic, and the business then uses this information to better tailor its products or services to meet the needs of its market (Kumar et al., 2011). Increasing competitiveness worldwide through participation and confederation of businesses is inevitable (Indriyaningrum & Fachrunnisa, 2021). Production is generally no longer completed by humans but by robots or projects. Competitive advantage is realized by continuing, so new strategies must be designed (Heredia-Calzado & Duréndez, 2019). The designed strategy will certainly be able to dominate both the old market and the new market. The strategy implemented which is the most important thing in achieving success is the actual company assets that must be identified (Arsawan et al., 2020). Competitiveness is how well the company does everything compared to its competitors (Potiwanna & Avakiat, 2017). The long-term success of an organization is considered very important which is illustrated by the competitive advantage of a company (O’Neill & Brabazon, 2019).

3. **Method**

This study uses a literature and field research design with a quantitative approach. The research plan will be carried out in early 2022 until the end of 2022. The population in this study is the total number of MSMEs in Indonesia City. The sampling method used in this study is the convenience sampling method, where this technique was chosen because it is the fastest method due to time constraints and anyone who accidentally meets the researcher can be used as a sample if the person is considered suitable as a data source. According to [19], if the population is unknown, the number of samples can be determined from 5-10 times the number of indicators used in a single construct. This study uses 17 indicators from 5 dimensions of existing variables, so the number of research samples obtained is 28 x 10 = 280. Testing estimates and hypotheses of the research model using the Partial Least Square Structural Equation Model (PLS-SEM) method.

4. **Results**

**Outer Model Measurement**

The results of the data obtained from the research questionnaire were processed using the SmartPLS version 3.2.9 application with processing guidelines by (Juliandi, 2018). In measuring
the outer model, validity and reliability tests were conducted. The loading factor and AVE determine a convergent validity testing with the condition that the loading factor is above 0.7 and the AVE value is 0.5 (Hair, 2014). The model reliability test, according to (Hair, 2014) is seen from the value of Cronbach's alpha and composite reliability (CR), which has a value higher than 0.7. The following will show an explanation of the measurement of the outer model, which is presented in Table 1 below:

Table 1. Outer Model Measurement Results

<table>
<thead>
<tr>
<th>Variables</th>
<th>Items</th>
<th>Outer Loading</th>
<th>Average Variance Extracted (AVE)</th>
<th>Composite Reliability</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programs</td>
<td>Product Display Offered (PG1) 0.843</td>
<td></td>
<td>0.688</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Availability of Discounted Rates 0.938  (PG2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ease of Access (PG3) 0.719</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Service Provider Willingness (PG4) 0.803</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance</td>
<td>System performance (PF1) 0.811</td>
<td></td>
<td>0.661</td>
<td>0.886</td>
<td>0.829</td>
</tr>
<tr>
<td></td>
<td>Security level (PF2) 0.852</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Partnership relationship (PF3) 0.786</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Confidence level (PF4) 0.801</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation</td>
<td>Marketing Channels (IN1) 0.746</td>
<td></td>
<td>0.687</td>
<td>0.897</td>
<td>0.844</td>
</tr>
<tr>
<td></td>
<td>Marketing Innovation (IN2) 0.901</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Product Segmentation (IN3) 0.900</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Customer Insights (IN4) 0.755</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitive Advantage</td>
<td>Competitive price (CA1) 0.849</td>
<td></td>
<td>0.747</td>
<td>0.898</td>
<td>0.832</td>
</tr>
<tr>
<td></td>
<td>Market Coverage (CA2) 0.883</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Timely Delivery and Service (CA3) 0.860</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Processed Data (2022)

In the validity test presented in Table 1 above, it was obtained that the value of each loading factor on the indicators of the variables of programs, performance, innovation, and competitive advantage was above 0.7 and above 0.5 for the average variance extracted (AVE) value. Furthermore, for the Cronbach's alpha value and composite reliability, the value for each variable was above 0.7, which showed that all research variables had good reliability values. With these good values, it can be used as an overview that the condition of the relationship between variables was also good so that further tests can be carried out.
Inner Model Measurement

Inner model measurement was carried out by bootstrapping research data using SmartPLS 3.2.9. There were two results obtained from bootstrapping, the first was the significance of the two related variables, and also the R-square of the study. The value of the R-square is the value that shows the ability of exogenous variables to build endogenous variables. According to Chin et al., (2008), there are three categories of R-square values, in which if the R-square value is 0.19, the relationship between exogenous variables forming endogenous variables is weak, if it is 0.33, it means that the relationship is moderate, and if the value is 0.67, it means that the relationship is strong. meanwhile, Sarwono (2016), stated that if the R-square value is more than 0.67, the relationship between endogenous and exogenous variables is very strong.

Table 2. Calculation results of the R-Square value

<table>
<thead>
<tr>
<th>Notes</th>
<th>R Square</th>
<th>R Square Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive Advantage</td>
<td>.419</td>
<td>.412</td>
</tr>
<tr>
<td>Innovation</td>
<td>.221</td>
<td>.215</td>
</tr>
</tbody>
</table>

Source: Processed Data (2022)

Judging from the R-square value for the endogenous competitive advantage variable, it is obtained a value of 0.419 whose value ranges from 0.33-0.67, this shows that the overall ability of the exogenous variable to explain the endogenous variable is moderate. For the R-square value, the value of the endogenous innovation variable is 0.221, which is below the value of 0.33, indicating that the exogenous variable's overall ability to explain the endogenous variable is weak. Furthermore, a significance test was carried out to prove the hypothesis to determine the relationship between exogenous and endogenous variables. The significant criterion is seen from the p-value. With a significance level of 5%, if the p-value between exogenous and endogenous variables is less than 0.05 means that the exogenous variable has a significant effect on the endogenous variable, on the contrary, if the value is greater than 0.05, it means that the exogenous variable has no significant effect on building the endogenous variable. The following presents the results of hypothesis testing, which are explained in table 3:

Table 3. Hypothesis Test Results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Coefficient</th>
<th>t-count</th>
<th>P-Value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programs&gt;&gt;Innovation (H1)</td>
<td>0.197</td>
<td>4.642</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>Performance&gt;&gt;Innovation (H2)</td>
<td>0.360</td>
<td>6.332</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>Programs&gt;&gt;Competitive Advantage (H3)</td>
<td>0.166</td>
<td>3900</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>Performance&gt;&gt;Competitive Advantage (H4)</td>
<td>0.374</td>
<td>6.520</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>Innovation&gt;&gt;Competitive Advantage (H5)</td>
<td>0.286</td>
<td>4.669</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Source: Processed Data (2022)

Based on the results of the processed data presented in table 3, it is known that the influence of programs on innovation obtained positive and significant results with the acquisition of a p-value
of 0.000 below 0.05. Furthermore, the influence of performance on innovation obtained positive and significant results with the acquisition of a p-value of 0.000 below 0.05. Positive and significant results were obtained for the influence of programs on competitive advantage with the acquisition of a p-value of 0.000, below 0.05. Likewise, for the effect of performance toward competitive advantage, positive and significant results were obtained with the acquisition of a p-value of 0.000, which was below 0.05. Then the influence of innovation is proven to have a positive and significant effect on competitive advantage with the acquisition of a p-value of 0.000, below 0.05. Furthermore, to determine the effect of innovation mediation on the relationship between programs and performance on competitive advantage, a mediation test was conducted using an indirect effect approach, with the explanation of the results as follows:

Table 4. Hypothesis Test Results

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Coefficients</th>
<th>t-Statistics</th>
<th>P-Value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programs→Innovation→Competitive Advantage (H6)</td>
<td>0.056</td>
<td>3.076</td>
<td>0.002</td>
<td>Accepted</td>
</tr>
<tr>
<td>Performance→Innovation→Competitive Advantage (H7)</td>
<td>0.103</td>
<td>3.908</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Source: Processed Data (2022)

Based on the results of the processed mediation test data based on the indirect effect, it can be concluded that the innovation variable can mediate the relationship between programs and competitive advantage, as evidenced by the acquisition of a p-value of 0.002, below 0.05. Furthermore, the innovation variable is also proven to mediate the relationship between performance and competitive advantage, as evidenced by the acquisition of a p-value of 0.000 below 0.05.

5. Discussion

The research results developed through the first hypothesis show that the programs have a positive and significant effect on innovation. These results prove that the program has a major impact on changes in business innovation, especially regarding implementing marketing strategies in the modern era. Marketing strategies must be carried out dynamically according to social behavior that is affected by the development of science and technology. Every business that wants to grow needs to be open to the changes that occur and study and evaluate these changes and then develop the right strategy for competitive advantage. Meanwhile, the financial and marketing aspects are still very low. So it is not surprising that many micro, small, and medium enterprises do not know where to sell after producing their products. The government's efforts to assist in the marketing aspect of micro, small and medium enterprises are only through seasonal development events or exhibitions, while sustainable businesses require systematic and planned marketing activities for business survival (Mondego & Gide, 2018).

The results of the research developed through the second hypothesis, show that performance has a positive and significant effect on innovation. These results explain the performance aspect from the aspect of product pricing that needs to be adjusted to the market segment, which refers to
below the price of similar products in the market. Generally, MSME products are products that already exist or are also produced by large-scale business producers, in other words, the position of MSME products is a market follower, so the safest price so that MSME products remain in demand by consumers is by setting prices below the price of the market leader's business product. By knowing the products consumers demand, a business can expand and develop its business in a better direction. With the concept of marketing modern (France et al., 2016).

The research results developed through the third hypothesis show that the program positively and significantly affects competitive advantage. This result explains that it is very important for a business, whether it is a large or small-scale business, to find the right target market, this should even have been done before the Marketing 4.0 concept. This method is very important and must be done by business actors, because of the intense market competition coupled with the convenience of consumers to find similar products with easy access to products digitally (Suleiman Awwad & Agti, 2011). In the current era of marketing 4.0, there are many platforms that micro, small and medium enterprises can use to reach consumers, such as targeted ads from Google Ads, Facebook Ads, or Instagram Ads, which have consumer choices, behavior, and preferences.

The research results developed through the fourth hypothesis show that performance positively and significantly affects competitive advantage. These results conclude that in carrying out marketing activities, the first step before creating a product is to research trends in market needs and desires, which then is to segment the market, namely to group the market into a part of the market group that will be the company's target in marketing its products. The market segmentation strategy is mostly carried out by large companies in marketing their products, in contrast to micro, small and medium enterprises which create products only by considering the supply of raw materials in the area around the business location (Labanauskaitė et al., 2020). Production as much as possible following the budget of funds assisted by the government and the government's lack of attention to marketing make the products produced less attractive to consumers. As a good business actor, you need to prioritize professionalism in your work. Indeed it is not easy, but the impact that will be felt in the long term will be felt by behaving professionally to maintain a good image for the company in the eyes of consumers.

The research results developed through the fifth hypothesis show that innovation positively and significantly affects competitive advantage. These results prove that the innovation aspect is crucial to encourage competitive advantage. An entrepreneur must have strong analytical power to see every profitable opportunity. Analytical power is useful for analyzing market opportunities, market analysis, competition, product selling value, and profit and loss that will be obtained. An entrepreneur must always be results-oriented, so there needs to be careful planning and good management skills in managing the business (Sanaei & Sobhani, 2018). An entrepreneur has creative ideas, is tough, innovates great, is competitive, and is good at finding opportunities. And entrepreneurs usually have a fighting spirit that can be an inspiration. This of course, can help create an entrepreneurial spirit in the community.

The research results developed through the sixth hypothesis show that innovation can mediate the relationship between programs and competitive advantage. Implementing innovation in the program aspect of making merchandise quickly can affect the increase in revenue and profits and reduce operating costs. In this era, manufacturers are progressively expanding their use to
address customer problems, especially with the help of mechanical advances that increase interaction efficiency. Business model innovation is designed to accelerate growth and at the same time, increase the added value in service in the eyes of customers, thereby increasing competitive advantage (Avlasko et al., 2019).

The research results developed through the seventh hypothesis show that innovation can mediate the relationship between performance and competitive advantage. In carrying out marketing activities, the first step before creating a product is to research trends in market needs and wants, followed by market segmentation, namely grouping the market into a part of the market group that will become the company's target in marketing its products. The market segmentation strategy is mostly carried out by large companies in marketing their products, in contrast to micro, small and medium enterprises which create products only by considering the supply of raw materials in the area around the business location (Distanont & Khongmalai, 2020).

6. Conclusion
The results of this study concluded that all the built hypotheses were well received. The first and third hypotheses show that programs positively and significantly affect innovation and competitive advantage. Opportunity to play an active role and get recognition from the community because the business or business can gain trust and recognition from the community and play an active role in community life because the existence of these businesses can affect the surrounding environment. The mechanism in carrying out the innovation process requires time and costs that are not cheap because high innovation will produce new high-quality products. Similarly, when you want to maintain a company's competitive advantage, it requires the creation of product with high quality. The second and fourth hypotheses show that performance positively and significantly affects innovation and competitive advantage. The most important thing when opening a business must be considered in selecting a business location. The cause of the presence of competitors or competitors is that an entrepreneur is wrong in choosing his business location. Competitors can steal all ideas and plans the entrepreneur has carefully thought out. Competitors can also open their businesses in other places considered more strategically. Competitors can steal all ideas and plans the entrepreneur has carefully thought out.

The fifth hypothesis shows that innovation positively and significantly affects competitive advantage. Ideas and creativity are processes that can be developed and improved. Everyone is creative at some level. People with abilities and talents in certain fields can be more creative than others. The same thing is experienced by people trained and developed in an environment that supports the development of ideas and creativity, they are taught to think and act creatively. The long-term success of an organization is considered very important, which is illustrated by the competitive advantage of a company. The competitive advantage is described if other companies can not do something well, but our company can do it well. The sixth and seventh hypotheses show that innovation can mediate the relationship between programs and performance on competitive advantage. Building accuracy and speed of business in providing services through the ease and access to the latest communications, building internal business expertise in providing detailed descriptions of products marketed to consumers, and building convenience for
consumers to find, pay for and track every transaction they have made. Innovation can lead to faster growth, increase market segments, and create a better corporate position.

The theoretical implication of this research explains that a marketing strategy with the modern marketing concept in terms of programs and performance needs to use the integration of style and substance, which means that a business in marketing its products must not only prioritize branding but also must be able to design relevant content. To fulfill this goal, micro, small and medium enterprises must take advantage of various existing media, both online and offline, to make reaching potential consumers easier. The managerial implications of this research confirm the need for government efforts to assist in the marketing aspects of micro, small and medium enterprises only through seasonal development events or exhibitions.

Acknowledgments
On this occasion, the writing team would like to express their deepest gratitude to DRTPM for the funding budget for the National Competitive Research Scheme for Beginner Lecturer Research in 2022. The writing team would also like to express their deepest gratitude to all parties involved in the research completion process, and writing articles and the entire academic community of the Sultan Agung College of Economics, who always provide constructive input to improve this article.

References


