

**THE EFFECT OF DISRUPTIVE INNOVATION ON MARKETING
PERFORMANCE IN MSMEs WITH INTELLECTUAL CAPITAL BANYUMAS
DISTRICT, CENTRAL JAVA**

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ABSTRACT

This research aims to analyze Disruptive Innovation for marketing performance using Intellectual Capital in MSMEs in the Banyumas district, Central Java. Sampling used a non-probability sampling technique using a purposive sampling method, samples were selected using certain criteria. The sample for the study was taken as many as 60 respondents with a research instrument in the form of a questionnaire which had been tested for validity and reliability. The data analysis technique used to answer the hypothesis is multiple regression analysis with the SPSS 26 data processing program. The research results show that human capital has no effect on marketing performance, structural capital has a negative and insignificant effect on marketing performance and relational capital has a positive and significant effect on marketing performance. Researchers also found that the disruptive innovation variable was able to mediate the independent variable on marketing performance.

***Keywords:** Intellectual Capital; Disruptive; Marketing Performance*

1. Introduction

Widespread economic and technological progress in modern times contributes to continued poverty and a business world that continues to lose money. Micro, Small and Medium Enterprises (MSMEs) are key players in the country's economy. According to Syahsudarmi (2018), MSMEs desire to provide employment opportunities, strengthen the nation's ties to taxes, and promote Gross Domestic Product (GDP). Therefore, MSMEs emphasize that they have the ability to have a positive impact on Indonesia's economic growth. According to Zuliyati and Delima (2017), MSMEs are strongly encouraged to empower their users to carry out competitive or comparative research methods. According to Utaminingsih (2016), every aspect of every project has a result called performance. According to Sedarmayanti (2011), "performance" is any result of work carried out by an individual, an organization that works in accordance with policy, or a management process. "Performance" is defined as "any result of work performed by an individual, an organization working in accordance with policy, or management processes," and "Performance" is "any result of work performed by an individual, an organization working in accordance with policy, and management processes." The ability to compete with products from other countries, or in terms of management, most MSMEs in Indonesia are still relatively weak in terms of capital,

ability to compete with products from other countries. At the same time, the government is trying to improve the government structure specifically designed to support the growth of SMEs (Melanie, 2019). Based on 2023 data from <https://satudata.dinkop-umkm.jatengprov.go.id/data/umkm-kabkota/Kabupaten%20Banyumas>, it can be concluded that the number of MSMEs in Banyumas Regency is 8,555 units.

Previous research has been conducted on Intellectual Capital using its 3 elements, such as human capital, structural capital and relational capital, the impact on marketing performance. Explaining that human capital has a positive and significant influence on industrial performance, structural capital has a negative influence and does not significant to industrial performance, relational capital has a negative and insignificant influence on company performance. Based on the research gap, it really supports researchers to conduct further research, which examines the relationship between intellectual capital including human capital, structural capital and relational capital on marketing performance. So far, organizations operating in challenging environments have highly innovative capabilities. This ability is related to intellectual capital or the ability to utilize knowledge sources. This research is limited to culinary MSMEs in Banyumas Regency, Central Java with a minimum of 2 employees totaling less than 100 MSMEs from the 8,555 MSME units in this district. The general aim of this research is to analyze the influence of Intellectual Capital in terms of Human Capital, Relational Capital and Structural Capital on Disruptive Innovation. Meanwhile, the specific aim is to analyze the existence of Intellectual Capital both in terms of the influence of Human Capital, Relational Capital, Structural Capital and Disruptive Innovation on Marketing Performance.

2. Literature Review

2.1 Human Capital

Based on the definition above, we can conclude that human resources are various things related to people who have all the skills needed to provide added value for a company to achieve its goals. According to Nugraha et al., (2018), human resources play an important role in business operations because they are a system that drives business performance. Human resources need to be transformed into capable and valuable resources. A company's most important asset is not only its mission and vision, but also its people. When a company uses its employees as assets, instead of just treating them as such. If you have more resources (human resources), you can get higher profits. Furthermore, human capital is a combination of genetic inheritance, experience, education, and attitudes towards life and business (Zuliyati and Zamrud, 2017). Based on the various indicators mentioned above, the human capital indicators in this research are knowledge, experience and skills.

2.2 Structural Capital

Structural capital reflects the quality and structure of an organization that leads to the creation and development of knowledge as well as the dissemination of the knowledge created (Lestari, 2017). Shirojudin, Gatot Ahmad. Nazaruddin (2014) defines structural capital as the ability of an organization or company to support the efforts of its employees to achieve the best intellectual performance and overall business performance, including manufacturing processes, company operating systems, company organizational culture, management ideology, and all forms of property rights. Intellectual enforced periodically. Astuti and Angraini (2015) state that structural capital comes from intangible assets accumulated in a company, such as infrastructure, organizational structure, and technology.

2.3 Relational Capital

Relational capital is also known as customer capital and includes relationships with customers and partners at the local and global level (Zuliyati and Zamrud, 2017).

Customer capital comes from all parts of the company and provides added value to the company (Alviani and Purnamasari, 2011). Relationship capital is a beautiful bond of relationship between a company and various external stakeholders, including customers, business collaborations, distribution networks, franchise agreements, and other factors (Suhardjanto and Wardhani, 2010). Cleary and Quinn (2016) believe relational capital is the knowledge embedded in all relationships between internal stakeholders. External companies such as suppliers, customers, and business partners help a company gain and maintain a competitive position. From the definition above, we can conclude that relational capital is a good relationship between a company and its internal and external partners that helps the company maintain and achieve competitive advantage.

2.4 Intellectual Capital

Intellectual Capital, according to Bukh et al. (2005), are various knowledge resources in the form of employees, customers, processes or technology that are useful in the process of creating value for the company. Intellectual Capital is knowledge that can be converted into profit. Intellectual Capital does not only concern the skills and knowledge of industrial employees, but also the industry's infrastructure, relationships with customers, information systems, technology, ability to create and innovate. Intellectual capital, by IFAC (1998) in Ulum (2009), is classified into three categories, namely: (1) organizational capital which consists of infrastructure assets and intellectual property, (2) relational capital, and (3) human capital. According to Bontis et al. (2008), calls organizational capital structural capital which includes all nonhuman storehouses of knowledge in the organization. This includes databases, organizational charts, process manuals, strategies, routines and everything that makes the company's value greater than its material value. Meanwhile, relational capital is also called customer capital, namely the knowledge inherent in marketing channels and customer relationships which an organization develops through business.

2.5 Disruptive Innovation

Disruptive innovation in Indonesian means disruptive innovation. In this case, the word "disability" should not be taken lightly. As technology develops, disruption in this case means the emergence of new technological innovations that destroy the existence of old technology (Hamid, 2017). According to (Khasanah et al., 2016), innovation is a systematic action to transform an idea, product, technology, information, etc. to create resources of high value for the target market. Types of innovation include substitution, rotation, addition, rearrangement, deletion, and improvement. Disruptive innovation is innovation that creates new markets, disrupts existing markets, and even changes existing technology. Disruptive innovations usually improve products and services in ways that the market does not anticipate by creating different types of consumers in new markets.

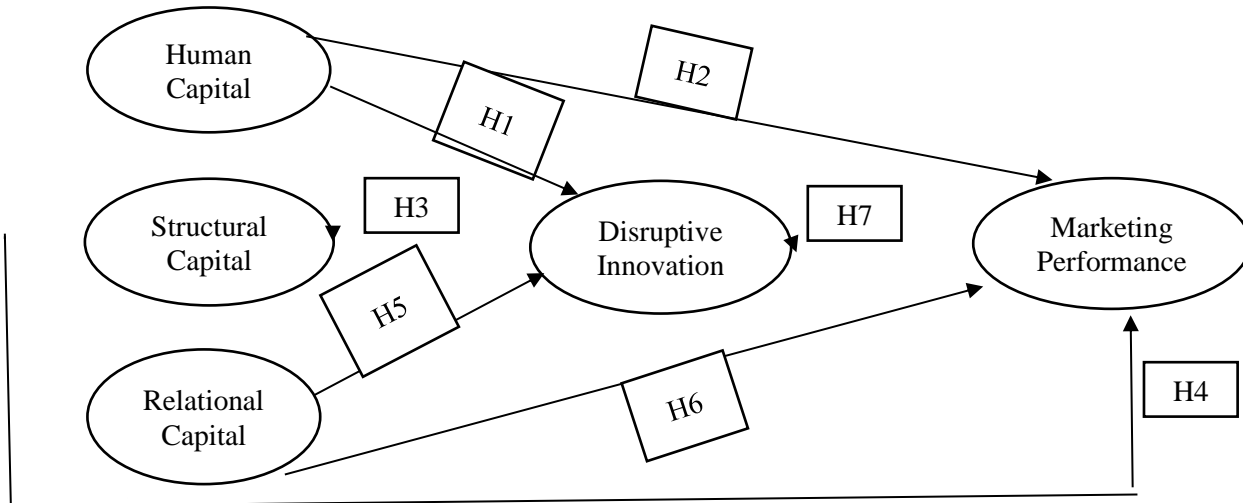
2.6 Marketing Performance

Performance, according to Dibrell (2008), is the ability of an industry to dominate the market and be oriented towards its goals, especially financial goals. Meanwhile, marketing performance, according to Ferdinand (2004), is an achievement resulting from the impact of various roles that function in an organization. Meanwhile, according to Yudith (2005), marketing performance is a measure of achievement obtained from the overall marketing activity process of an organization. Performance measurement is useful for users to provide feedback that helps managers identify problems and assist in solving them. However, the issue of performance measurement is still a classic debate, because as a construct, marketing performance is multidimensional, containing various goals and types of organizations. According to Yuhui's (2010) definition, marketing performance is a multidimensional process that includes three dimensions of effectiveness, efficiency and adaptability. The effectiveness and efficiency of an

organization's marketing activities are related to market objectives, such as revenue, growth, and market share.

2.7 Framework of Thinking

The framework for this research is used in the following scheme:



Hypothesis

The hypothesis can be formulated as follows:

- H1: Human Capital has a positive and significant effect on Disruptive Innovation
- H2: Human Capital has a positive and significant effect on Marketing Performance
- H3: Structural Capital has a positive and significant effect on Disruptive Innovation
- H4: Structural Capital has a positive and significant effect on Marketing Performance
- H5: Relational Capital has a positive and significant effect on Disruptive Innovation
- H6: Relational Capital has a positive and significant effect on Marketing Performance
- H7: *Disruptive Innovation has a positive and significant effect on Marketing Performance*

3. Research Methods

Types of research

This research was conducted to test a hypothesis with the aim of strengthening or refuting existing theories or research hypotheses. In this regard, the type of research used is explanatory or descriptive research. Cohen et al. (2013) defines explanatory research as research that aims to identify the alibis behind the emergence of a certain phenomenon and explain a situation or problem from a relational point of view. According to Arikunto (2012:104) if the amount the population is less than 100 people, so the total number of samples is taken, but if the population is greater than 100 people, 10-15% or 20-25% of the total population can be taken. Based on this research, because the population is not greater than 100 respondents, the author took 100% of the population of licensed culinary MSMEs in Banyumas Regency which have a minimum of 2 employees with a total of 60 MSMEs.

Population and Sample

The population of this study is based on data from the office of the Central Java Province Small and Medium Enterprises Cooperative Service, precisely in Banyumas Regency, the number of MSMEs is 8,555 MSMEs that have permits and are registered in the province. The population is the total number of culinary MSMEs in Banyumas Regency which have a minimum number of employees of 2 people, totaling 60 MSMEs. The sample technique for this research is a Non Probability Sampling technique using the census method. This method is used for research that uses the population as the entire sample.

Variables and Indicators

No	Operational definition	Indicator
1.	Human Capital is various things that are connected to humans who have all the abilities needed to create added value for the company to achieve its goals.	1. Knowledge 2. Experience 3. Skills
2.	Relational Capital is a good relationship between a company and internal and external partners to support the company in maintaining and gaining competitive advantage.	1. Customer Loyalty 2. Communication 3. Trust
3.	Structural Capital is the ability of an organization or company to carry out daily processes and structures, which lead to the creation of knowledge to obtain the best intellectual performance and business performance.	1. Information Systems 2. Organizational Process 3. Organizational Culture 4. Organizational Structure
4.	Disruptive Innovation refers to any innovation that is based on the combination of several small concepts that observe the world from a different perspective, which can help create new markets, disrupt or destroy existing markets, thereby ultimately replacing these previous technologies.	1. Readiness to Accept Change 2. Innovative and Creative Thinking 3. Be creative in looking for opportunities
5.	Marketing Performance is an important factor for every company to measure the results of implementing the strategy formulated by the company in order to determine marketing performance, sales growth rate and earnings, profits through sales volume, which reflects the success of its business in market competition.	1. Sales Growth 2. Customer Growth 3. Profitability 4. Marketing Area Coverage

The following is a table containing several indicators to measure the impact of Disruptive Innovation and how to measure them:

No	Indicator	How to measure it
1.	Sales Growth	- Compare sales of innovative products year over year. - Calculate sales growth percentage.
2.	Market Share	- Compare the market share of innovative products with competitor products. - Calculate the market share percentage.
3.	Market penetration	- Calculate the number of new customers reached by the innovation. - Compare it to the total population of potential customers.
4.	Price and Efficiency	- Compare the production costs of innovative products with previous products. - Calculate customer acquisition costs.
5.	Customer satisfaction	- Conduct customer satisfaction surveys.
6.	Business Model Change	- Observe changes in pricing structures or product offerings. - See if there is a shift to a subscription model.
7.	Market Response Time	- Observe the extent to which competitors react to the innovation. - Compare their response times.
8.	Technological development	- Observe technological developments that support innovation. - Check related patents.
9.	ROI Analysis (Return On Investment)	- Calculate the revenues and costs associated with the innovation. - Determine whether the ROI is positive.
10.	Industry / Ecosystem Change	- Observe changes in industry structure or ecosystems affected by innovation. - Pay attention to regulatory changes or industry trends.
11.	Keberlanjutan Produk	- Observe whether innovative products continue to develop and receive updates. - Review the average lifespan of products on the market.

It is therefore important to combine several of these indicators and track them over time to get a complete picture of how disruptive innovation impacts specific markets and industries. In addition, the results of these measurements can be used to create better business strategies and measure the success of your innovation.

4. Results and Discussion

Hypothesis Testing 1

The standard regression coefficient for the Human Capital variable on Disruptive Innovation from regression model 1 obtained a value of 0.260, this shows a positive direction, which means that by increasing the quality of human capital, Disruptive Innovation can be increased. From the calculation results, the calculated t value is 2.239, which means that the calculated t value is greater than the t table value, namely $2.239 > 1.670$. The significance value is $0.029 < 0.05$, indicating that human capital has a positive and significant influence on disruptive innovation. Thus it can be concluded that H_0 is rejected and H_a is accepted, so that H_1 is declared accepted. **(H1 accepted)**

Hypothesis Testing 2

The standard regression coefficient for the Human Capital variable on Marketing Performance from regression model 2 obtained a value of 0.132, this shows a positive direction, which means that by increasing the quality of human capital, Marketing Performance can be improved. From the calculation results, the calculated t value is 1.503, which means that the t value is smaller than the t table value, namely $1.503 < 1.670$. The significance value is $0.139 > 0.05$, indicating that human capital does not have a significant influence on marketing performance. Thus it can be concluded that H_a is rejected and H_0 is accepted, so that H_2 is declared rejected. **(H2 rejected)**

Hypothesis Testing 3

The standard regression coefficient for the Structural Capital variable on Disruptive Innovation from regression model 1 obtained a value of 0.351, this shows a positive direction, which means that by increasing the quality of structural capital, Disruptive Innovation can be increased. From the calculation results, the calculated t value is 2.978, which means that the calculated t value is greater than the t table value, namely $2.978 > 1.670$. The significance value is $0.004 < 0.05$, indicating that structural capital has a positive and significant influence on disruptive innovation. Thus it can be concluded that H_0 is rejected and H_a is accepted, so that H_3 is declared accepted. **(H3 accepted)**

Hypothesis Testing 4

The standard regression coefficient for the Structural Capital variable on Marketing Performance from regression model 2 obtained a value of -0.078, this shows a negative direction, which means that increasing the quality of structural capital can reduce Marketing Performance. From the calculation results, the calculated t value is -0.846, which means that the calculated t value is smaller than the t table value, namely $-0.846 < -1.670$. The significance value is $0.401 > 0.05$, indicating that structural capital does not have a significant influence on marketing performance. Thus it can be concluded that H_a is rejected and H_0 is accepted, H_4 is declared rejected. **(H4 rejected)**

Hypothesis Testing 5

The standard regression coefficient for the Relational Capital variable on Disruptive Innovation from regression model 1 obtained a value of 0.331, this shows a positive direction, which means that by increasing the quality of relational capital, Disruptive Innovation can be increased. From the calculation results, the calculated t value is 3.445, which means that the calculated t value is greater than the t table value, namely $3.445 > 1.670$. The significance value is $0.001 < 0.05$, indicating that structural capital has a positive and significant influence on disruptive innovation. Thus it can be concluded that H_0 is rejected and H_a is accepted, so that H_5 is declared accepted. **(H5 accepted)**

Hypothesis Testing 6

The standard regression coefficient for the Relational Capital variable on Marketing Performance from regression model 2 obtained a value of 0.192, this shows a positive direction, which means that by increasing the quality of relational capital, Marketing Performance can be improved. From the calculation results, the calculated t value is 2.501,

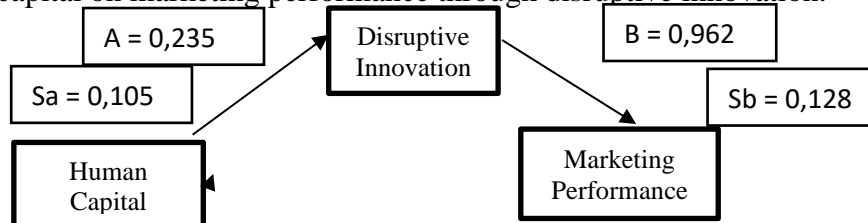
which means that the calculated t value is greater than the t table value, namely $2.501 > 1.670$. The significance value is $0.015 < 0.05$, indicating that relational capital has a positive and significant influence on marketing performance. Thus it can be concluded that H_0 is rejected and H_a is accepted, so that H_6 is declared accepted. **(H6 accepted)**

Hypothesis Testing 7

The standard regression coefficient for the Disruptive Innovation variable on Marketing Performance from regression model 2 obtained a value of 0.727, this shows a positive direction, which means that by increasing the quality of disruptive innovation, Marketing Performance can be improved. From the calculation results, the calculated t value is 7.571 (Table 4.15), which means that the calculated t value is greater than the t table value, namely $7.571 > 1.670$. The significance value is $0.000 < 0.05$, indicating that disruptive innovation has a positive and significant influence on marketing performance. Thus it can be concluded that H_0 is rejected and H_a is accepted, so that H_7 is declared accepted. **(H7 accepted)**

Testing Sobel Test 1

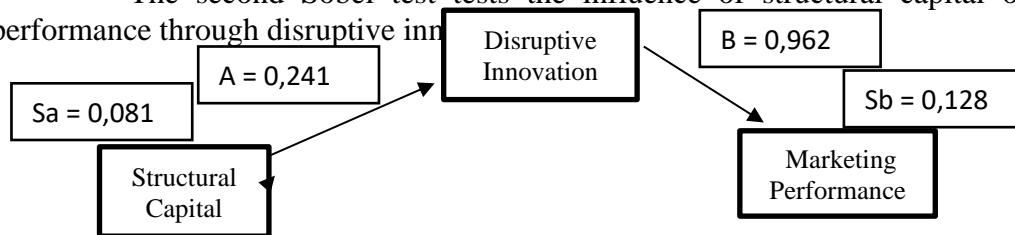
This sobel test was carried out to test the ability of the intervening variables to relate to the independent variables and the dependent variable. The first Sobel test tests the influence of human capital on marketing performance through disruptive innovation.



Based on the image, the results of the Sobel test calculation are obtained with a p-value of $0.031 < 0.05$, so it can be concluded that there is an indirect influence between human capital on marketing performance. This test can be interpreted that disruptive innovation is able to become an intervening variable between human capital and marketing performance.

Testing Sobel Test 2

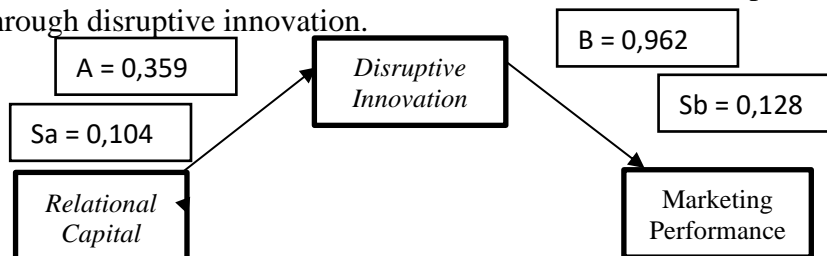
The second Sobel test tests the influence of structural capital on marketing performance through disruptive innovation.



Based on the picture, the results of the Sobel test calculation are obtained with a p-value of $0.005 < 0.05$, so it can be concluded that there is an indirect influence between structural capital on marketing performance. This test can be interpreted that disruptive innovation is able to become an intervening variable between structural capital and marketing performance.

Testing Sobel Test 3

The second Sobel test tests the influence of relational capital on marketing performance through disruptive innovation.



Based on the picture, the results of the sobel test calculation are obtained with a p-value of $0.001 < 0.05$, so it can be concluded that there is an indirect influence between relational capital on marketing performance. This test can be interpreted that disruptive innovation is able to become an intervening variable between relational capital and marketing performance.

5. Conclusions and Suggestions

Conclusion

Based on the results of research data analysis as follows:

- Human Capital has a positive and significant effect on disruptive innovation. This shows that the better the human capital, the more disruptive innovation will increase, which means that disruptive innovation can be built through human capital which includes knowledge, experience and skills and Human Capital does not have a significant effect on marketing performance. This shows that the quality of human capital which includes knowledge, experience and skills does not have a significant effect on marketing performance.
- Structural Capital has a positive and significant effect on disruptive innovation. This shows that the better the structural capital, the more disruptive innovation will increase, which means that disruptive innovation can be built through structural capital which includes information systems, organizational processes, organizational culture and organizational structure and Structural Capital has a negative and insignificant effect on marketing performance. This shows that the higher the quality of structural capital which includes information systems, organizational processes, organizational culture and organizational structure, the lower marketing performance will be.
- Relational Capital has a positive and significant effect on disruptive innovation. This shows that the better the relational capital, the more disruptive innovation will increase, which means that disruptive innovation can be built through customer loyalty, communication and trust and Relational Capital has a positive and significant effect on marketing performance. This shows that the better the relational capital, the more marketing performance will improve, which means that marketing performance can be built through relational capital, namely customer loyalty, communication and trust.
- Disruptive Innovation has a positive and significant effect on marketing performance. This shows that the better the disruptive innovation, the more marketing performance will improve, which means that marketing performance can be built through disruptive innovation, namely readiness to accept change, innovative and creative thinking and active search for opportunities. Disruptive innovation in this research was proven to be able to partially mediate the influence of intellectual capital on marketing performance.
- There are only three independent variables in this research, namely human capital, structural capital and relational capital, so they only explain disruptive innovation by 58.80% so that the remaining 41.20% is explained by other variables.

Suggestion

- To improve marketing performance, an increase in human capital is needed. To increase the human capital of MSMEs, this can be done through knowledge and education that is appropriate to the field of work, by increasing the quality of education such as attending training or courses, it will be easier for an MSME actor to bring the good name of MSMEs and gain knowledge about promotion because currently MSMEs are faced with Tight

competition even with foreign parties. Increasing marketing performance will be more effective if human capital is followed by disruptive innovation as a mediating variable and To improve marketing performance, an increase in structural capital is needed. To increase the structural capital of MSMEs, this can be done by having systems and technology that support adequate governance, in this case having systems and technology will make it easier for MSMEs to do anything, for example, recording sales data and employee attendance can be controlled via computer, carry out promotions through social media which of course is also supported by technology. Increasing marketing performance will be more effective if structural capital is followed by disruptive innovation as a mediating variable.

- To improve marketing performance, an increase in relational capital is needed. To increase the relational capital of MSMEs, this can be done by building good reciprocal relationships with customers or partners, in this case MSMEs can improve this by providing customer service, loyalty programs, community building, marketing data base, and customer service tires and Increasing performance will be effective if human capital, structural capital and relational capital are also able to increase disruptive innovation, because the main variable in this research is disruptive innovation which is a solution to the gap.

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