

# COMPETITIVE ADVANTAGE AS A MEDIATING VARIABLE BETWEEN E-COMMERCE AND PRODUCT INNOVATION TOWARDS MARKETING PERFORMANCE OF SMALL AND MEDIUM-SIZED ENTERPRISES IN KENDAL

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## ABSTRACT

*Path analysis is used on this study in studying the effect of e-commerce and product innovation on competitive advantage and the impact on marketing performance of SMEs in Kendal Regency, Central Java. The method of collecting data is by using a questionnaire. The sample is amounted to 100 SMEs in Kendal, Central Java, Indonesia. The result indicates that e-commerce together with product innovation have positively significant influence partially and simultaneously toward competitive advantage of SMEs in Kendal. The competitive advantage has a significant positive influence on the marketing performance of SMEs in Kendal. E-commerce together with product innovation mediating by competitive advantage positively significant effecting on marketing performance of SMEs in Kendal, directly and indirectly. The outcomes of this research answered the effect of e-commerce and product innovation toward competitive advantage and marketing performance of SMEs in Kendal, Central Java. The SMEs owner can optimize and improve the marketing performance by escalating use of e-commerce and optimizing product innovation that will affect the increasing competitive advantage and marketing performance.*

*Keywords: Competitive Advantage; E-Commerce; Product Innovation; Marketing Performance.*

## ABSTRAK

*Analisis jalur digunakan dalam penelitian ini untuk mengetahui pengaruh e-commerce dan inovasi produk terhadap keunggulan bersaing serta dampaknya terhadap kinerja pemasaran UMKM di Kabupaten Kendal, Jawa Tengah. Metode pengumpulan data dengan menggunakan kuesioner. Sampel berjumlah 100 UMKM di Kendal, Jawa Tengah, Indonesia. Hasil akhir menunjukkan bahwa e-commerce bersama-sama dengan inovasi produk mempunyai pengaruh positif dan signifikan secara parsial dan simultan terhadap keunggulan bersaing UMKM di Kendal. Keunggulan bersaing mempunyai pengaruh positif signifikan terhadap kinerja pemasaran UMKM di Kendal. E-commerce bersama-sama dengan inovasi produk yang dimediasi oleh keunggulan bersaing berpengaruh positif dan signifikan terhadap kinerja pemasaran UMKM di Kendal, baik secara langsung maupun tidak langsung. Hasil penelitian ini menjawab tentang pengaruh e-commerce dan inovasi produk terhadap keunggulan kompetitif dan kinerja pemasaran UKM di Kendal, Jawa Tengah. Pemilik UKM dapat mengoptimalkan dan meningkatkan kinerja pemasaran dengan meningkatkan penggunaan e-commerce dan mengoptimalkan inovasi produk yang akan berdampak pada peningkatan keunggulan kompetitif dan kinerja pemasaran.*

*Keywords: Competitive Advantage; E-Commerce; Product Innovation; Marketing Performance.*

## INTRODUCTION

In Indonesia, Small and Medium-sized Enterprises (SMEs) play an important role for economy. Kendal has a fairly large number of SMEs at around 155.696 SMEs with 11.733 SMEs already digitalized (1), this can be potential in regional economy improvement.

Nevertheless, based on RKPD of Kendal Regency, SMEs are often facing obstacles in product marketing, they can produce their products but find it difficult to distribute their products due to the lack of marketing networking. In the 21st century nowadays, the rapid growth of internet users should be the

reason why the company should try to implement e-commerce. E-commerce has the strength of simplified distribution, reduced costs, no time limitations and other advantages over the traditional business model (2). In fact, according to the Kendal Government, around 79.7% of SMEs have not sold using online media. So, it is necessary to digitize SMEs with at least every SME in Kendal encouraged to have one WhatsApp contact, one mainstream social media, one Google business/maps, and one mainstream e-commerce. So therefore, SMEs especially in Kendal can apply e-commerce since the use of e-commerce will increase the competitive advantage (3) and marketing performance (4) of the company. E-commerce is incorporated activities concerning consumers, manufactures, carrier companies and middleman traders using computer networks, i.e., internet. E-commerce definition is any form of goods and services sales transaction (trade of goods and services) by using electronic media (5). Directorate General of Taxes (DJP) Indonesia has mapped four e-commerce transaction models namely online marketplace, classified ads, daily deals, and online retail.

Besides, tight competitions in this era require businesspeople to be able to provide new things that can attract customers to make purchases, for example is innovation. Innovation consists of several aspects, one of them is product innovation. Product innovation is associate degree innovation utilized in the entire company operational that

a brand-new product created and marketed, as well as innovation within the whole purposeful method / the use (6). Product innovation is result of any processes that combined and influence each other (7). Product innovation is a thing that can be seen as product functional progress so that product can be better than competitor products (5). If the product has an advantage that is seen as value added for consumers. It is expected that product innovation can drive the increasing of consumers purchase decisions. Dimension of product innovation is new product for the world, improving the existing product, new product line, and adding for existing product line (7). Company that has a good product innovation can improve their competitive advantage (8) and can enhance their marketing performance (6).

Competitive advantage is a group of factors that differentiating small business of competitors and giving unique position and advantage for small business in the market (9). The definition of competitive advantage is highlighted on superior resources and competencies of the company (5). Several dimensions of competitive advantage i.e., innovation, differentiation, and led on low costs (10). With e-commerce companies can get benefits that are used as an alternative source of competitive advantage (11). The use of e-commerce will escalate the competitive advantage (3). There is a positive interplay between e-commerce and competitive advantage (12,13). With product innovation, companies carry out product development, so

that they can create products that have competitive advantages. There is a positive relationship and significant influence between product innovation and competitive advantage (8,14).

Marketing performance is achievement measurement obtained from marketing activity process in a whole in the organization (5). Marketing performance is factors that often used to measure the impact of applied strategy in the company, good marketing performance defined in three values, viz. sales value, sales growth, and market portion (6). Meanwhile, indicators used to measure marketing performance among others sales volume, customer growth, and profitability (5).

E-commerce has influence on marketing performance, meaning that a better e-commerce or online marketing will be able to improve the marketing performance of SMEs (15). Be found a positive effect between e-commerce toward marketing performance (4,5,16). The improvement of marketing performance is built on product innovation (14). Other researchers concluded that product innovation encompasses an important impact on marketing performance (5,6). Competitive advantage was a mediator in the relationship between e-commerce and marketing performance of SMEs (16). That result means that occur a relationship and impact among e-commerce, competitive advantage, and marketing performance. Competitive advantage was the mediator of product

innovation and marketing performance, and competitive advantage has positively influence on the marketing performance (6,14).

According to the previous studies and based on several existing literature showed that there is a relationship and influence of e-commerce using toward competitive advantage, product innovation toward competitive advantage, e-commerce against marketing performance, product innovation to marketing performance, and competitive advantage toward to performance. Therefore, this research can be a good combination to find out problems and find solutions to the competitive advantage of marketing performance in SMEs in Kendal, through the application of e-commerce and product innovation.

## **METHOD**

### **Data Collection Method**

Primary quantitative data was used in this study and is obtained using a questionnaire that was created and distributed through physically directing distribution to the respondents.

### **Population and Sample**

All the SMEs in Kendal, Central Java are the population in this research. The 100 SMEs as the sample was determined by using Slovin formula with 5% of confidence level. Nonprobability sampling with convenience sampling technique is used to take the samples. While the unit of analysis for this research are SME owners.

### Research Instrument Development

The questionnaire as a tool of this study consists of two parts, the first is the respondent profile and the second part is a five-point Likert scale to measure the 8 elements of e-commerce, 7 elements of innovation product, 9 competitive advantage points and 8 elements of marketing performance. The validity test and the reliability test were used to ensure the validity and reliability of the questionnaire. To test the model, this study used the way of the analysis approach..

### Data Analysis

There is several test equipment that have been performed in the classical hypothesis test in this research, like normality test, multicollinearity test and the heteroskedasticity test. Descriptive analysis, hypothesis test, and path analysis are used in this research.

## RESULTS AND DISCUSSION

### Descriptive Analysis

Descriptive analysis is functioned to analyze the general description of each variable condition in the company used as sample research. The average score for e-commerce is 3.94, product innovation is 3.74, competitive advantage is 3.73, and marketing performance is 3.84.

### Hypothesis Test

T test or partial test is used for testing hypothesis of this study. With the significance level of 5% (0.05), the criteria said that if the significant value is  $< 0.05$ , then hypothesis is accepted, which means there is a significant partial influence between independent variables to the dependent variable. The hypothesis of this research can be seen on the Table 1.

**Table 1: Hypothesis Testing Result**

Hypothesis	T count	Conclusion
E-commerce to competitive advantage (H1)	0.004	Accepted
Product innovation to competitive advantage (H2)	0.000	Accepted
E-commerce to marketing performance (H3)	0.003	Accepted
Product innovation to marketing performance (H4)	0.023	Accepted
Competitive advantage to marketing performance (H5)	0.008	Accepted

Source: Primary data processed, 2021

Since all the hypotheses has significant value  $< 0.05$  then all the hypotheses are accepted. Then can be concluded that there is a positively significant influence of e-commerce and product innovation partially toward competitive advantage. And there is a positively significant effect of e-commerce, product innovation, and competitive

advantage partially toward marketing performance.

### Path Analysis

Two structural equations of path analysis exist in this research. Structural equation 1 aims to see the effect of e-commerce and product innovation on competitive advantage to

examine the outcome of the path analysis may be seen within the Table 2.

**Table 2: Result of Path Analysis (Equation 1)**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	,990	,385		2,570	,012
E-COMMERCE	,290	,099	,282	2,940	,004
PRODUCT INNOVATION	,429	,105	,392	4,079	,000

Source: Primary data processed, 2021

**Table 3: Outcome of Determinant Coefficient 1**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,590 <sup>a</sup>	,349	,335	,43174

Source: Primary data processed, 2021

Build upon the outcome, then to count the path coefficient can use this formula:

$$e1 = \sqrt{1 - R^2} = \sqrt{1 - 0.349} = 0.8068 \dots [1]$$

At the same time, structural equation 1 is:

$$Y = 0.282 X_1 + 0.392 X_2 + 0.8068 \dots [2]$$

Structural equation 2 aims to determine the influence of e-commerce, product innovation, and competitive advantages on marketing performance.

**Table 4: Result of Path Analysis (Equation 2)**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	,980	,352		2,784	,006
E-COMMERCE	,274	,091	,287	3,005	,003
PRODUCT INNOVATION	,233	,101	,229	2,310	,023
COMPETITIVE ADVANTAGE	,245	,090	,264	2,725	,008

Source: Primary data processed, 2021

**Table 5: Result of Determinant Coefficient 2**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,642 <sup>a</sup>	,413	,394	,38186

Source: Primary data processed, 2021

According to the table 5 and 6, the path coefficient can be count:

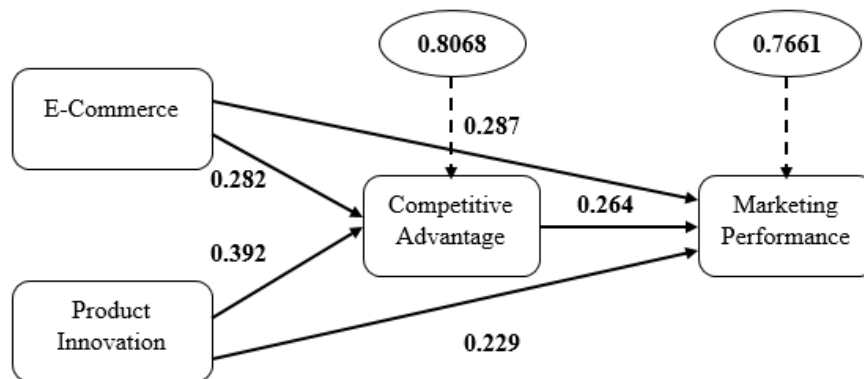
$$e2 = \sqrt{1 - R^2} = \sqrt{1 - 0.413} = 0.7661 \dots [3]$$

Meantime, structural equation 2 is:

$$Z = 0.287X_1 + 0.229X_2 + 0.264Y + 0.7661 \dots [4]$$

Based on the equation 1 and 2 on path analysis, the impact structure of e-commerce and product innovation on competitive advantage, also the effect of e-commerce, product innovation, and competitive

advantage on marketing performance can be figured as follows.



**Figure 1: The Structural Model Influence of Path Analysis**

Source: Developed in this research, 2021

Accordingly, to assign the direct and indirect effect, and the path coefficient of each variable can be seen on the Table 6.

**Table 6: The Direct and Indirect Influence**

Variable	Path Coefficient	Direct Influence	Indirect Influence	Total
X1 → Y		0.282		0.282
X2 → Y		0.392		0.392
Y → Z		0.264		0.264
X1 → Z		0.287	0.282 x 0.264 = 0.074448	0.352
X2 → Z		0.229	0.392 x 0.264 = 0.103488	0.463
e1	0.8068			0.8068
e2	0.7661			0.7661

Source: Primary Data, 2021

The impact of e-commerce and product innovation to competitive advantage is 33.5%. The impact of e-commerce, product innovation, and competitive advantage to marketing performance is 39.4%. Directly, the use of E-commerce positively and significantly affects the competitive advantage of SMEs in Kendal, Central Java. This result is in accordance with the research's results conducted by previous researchers

(3,11–13). The outcome of the study shows that in the use of e-commerce, indicators of the use of electronic payments for buying and selling products/services of SMEs in Kendal are quite good. Most SMEs who are respondents also already have an online marketplace as a place to sell goods/services. But on the indicator of human resources owned, the level of SMEs that have employees who can operate e-commerce or online stores

has the lowest value. This may be because not all employees have received training on how to sell using e-commerce. In fact, the Kendal government has encouraged the digitization of SMEs, one of which is by conducting e-commerce training (1), therefore SMEs need to improve the ability of their human resources to operate e-commerce by actively participating in training on the use of e-commerce.

Product innovation positively and significantly affects the competitive advantage of SMEs in Kendal, Central Java. The proceeds are appropriate with result from previous researches (8,14). Results show that most SMEs are lacking in creating new products that have never been marketed and providing something unique to products that are different from other competing products. Therefore, SME owners need to increase product innovation. This can be done by adding unique product variations, making the product look attractive and different from competitors' products, as well as by attending training on product innovation development.

As a mediating variable, competitive advantage directly has significant and positive effect on marketing performance. This output support results of previous studies (5,6,14,16). The average competitive advantage of SMEs in Kendal tends to be not so good, there are several things that need to be improved. The most prominent thing to improve is the position of the product in the eyes of the customer. Where the product is considered not

too unique compared to other products, and not yet easily remembered by customers. Meanwhile, in terms of excellence in price, SME actors tend to be able to reduce prices for promotions by utilizing advertisements in online media, so that they can produce products with good quality at affordable prices by customers. This also means that by leveraging e-commerce and increasing product innovation, SMEs in Kendal can increase their competitive advantage.

In terms of its influence on marketing performance, e-commerce positively and significantly affects, directly and indirectly through competitive advantage. The result is in line with the previous studies (4,5,15,16). Product innovation also has a positive and significant influence on marketing performance, directly and indirectly through competitive advantage. Which means this is in accordance with what was conveyed by previous researches (5,6,14). In marketing performance, the owners of SMEs in Kendal may pay more attention to the optimization using e-commerce and create some product innovation to increase the marketing performance. Furthermore, by maintaining the quality of product and by providing convenience for buyers with e-commerce, SMEs will be able to get loyal customers to improve SME's marketing performance.

## CONCLUSION

The outcomes of this research answered what is asked in research objectives and hypotheses

about the effect of e-commerce and product innovation toward competitive advantage and marketing performance of SMEs in Kendal, Central Java. The SMEs owner can optimize and improve the marketing performance by escalating use of e-commerce and optimizing product innovation that will affect the increasing competitive advantage and marketing performance. The analysis carried out in this research is not perfect, more research still needs to be done to improve marketing performance for SMEs in Kendal. So therefore, expected that there will be more researchers interested to analyze the same topic. Adding more possible factors affecting competitive advantage and marketing performance may need to be done to complete the results existing in this research. Results of this research are further expected to provide benefits for related parties and can encourage increased use of e-commerce and increased product innovation in SMEs in Kendal to increase competitive advantage and marketing performance.

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