

# The Role of Product Innovation in Mediating Digital Marketing and Business Networks on MSME Performance

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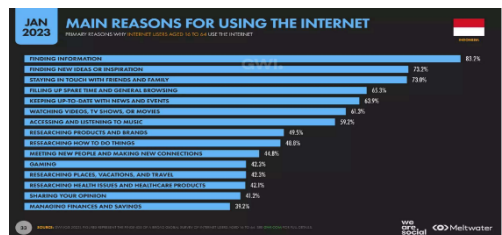
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## Abstract

Product innovation is a very important element in determining the performance of MSMEs. In a business world that continues to develop and is full of competition, the ability to innovate must be an important thing to consider in order to win the existing competition. In this research, testing was carried out to determine the effect of product innovation in mediating digital marketing and business networks on the performance of MSMEs in the food sector. The research method used is quantitative descriptive. The research sample used was 250 MSME respondents operating in the food sector in Pematang Siantar City. Data analysis used in this research uses a Structured Equation Model (SEM) based on Partial Least Square (PLS). The results of this research show that digital marketing and business networks directly have a positive and significant effect on product innovation. Furthermore, digital marketing variables, business networks and product innovation also have a positive and significant effect on MSME performance. Based on research, it is also known that product innovation fully mediates digital marketing and business network variables on the performance of MSMEs in Pematang Siantar City.

**Keywords:** Product Innovation, Digital Marketing, Business Networks and MSME Performance.

The development of the current digital era has brought many changes to every aspect or facet of human life activities. One form of change that is increasingly visible and can be felt is the increasing and varied use of internet technology. This also applies to human patterns or behavior that continue to use the internet to facilitate existing life activities. Based on data obtained from We Are Social in 2023, it is known that around 49.5% of Indonesians' reason for using the internet is to carry out shopping activities. The following data is displayed:



(Source: We Are Social, 2023)

From this data, it is clear that digital marketing activities are something that many

Indonesians do in utilizing internet technology. For this reason, business actors or MSMEs must be able to see opportunities and start aggressively using digital marketing in promotional activities for the products they produce. The use of digital marketing in promoting products produced by MSMEs is certainly expected to have a positive impact on building the performance of these MSMEs.

It is further known that based on data (BPS, 2023), it turns out that digital marketing is quite widely used by MSMEs, namely in the field of food and beverage products with percentage data reaching 41.50% (BPS, 2023). This is known because the food and beverage sector can be easily entered. The MSME sector in the food and beverage sector is certainly more varied with controllable investment capital, fairly easy product processing and a large market share in the food and beverage sector (Primatami & Primadhita, 2020). This is the reason that the MSME sector in food and beverage products can develop rapidly and rapidly.

In developing the performance of MSMEs, one of the factors that needs to be considered is product innovation. With product innovation carried out in Micro, Small and Medium Enterprises (MSMEs), they can create products that are different or better compared to competitors. This can attract more customers and increase market share so that MSME performance can improve further (Knudsen et al., 2021). Research on product innovation on the performance of MSMEs has been carried out previously, but further research needs to be carried out to find out the results for MSMEs in developing countries like Indonesia.

Business Networks have a significant influence on the performance of Micro, Small and Medium Enterprises (MSMEs). With business networks, MSMEs can access important information such as market trends, new technology and government policies. This of course really helps MSMEs adapt and make better decisions so as to improve future performance. In line with research conducted by

(Anggraini et al., 2020), business networks enable MSMEs to collaborate with other businesses, both in terms of production, distribution and marketing. This collaboration can reduce costs and increase operational efficiency so that MSME performance is maximized.

## Literature Review

### 2.1. Product Innovation

Product innovation is the process of developing and introducing new products or improving existing products to meet growing consumer needs or create new market opportunities. Product innovation involves changes to the features, functions, design, technology, or materials used in a product, with the goal of improving value, performance, or user experience. Product innovation allows MSMEs to remain competitive in the market by offering better or unique products compared to competitors. Product innovation that experiences continuous development can meet changing consumer needs and preferences, thereby improving the performance of MSMEs. Research on the influence of innovation on the performance of MSMEs has been carried out previously (Ogochukwu & Jiangru, 2021; Effendi et al., 2022) and the research results show that product innovation has a positive and significant effect on the performance of MSMEs.

H1: Product innovation has a significant positive effect on MSME performance

### 2.2. Digital Marketing

Digital marketing is an effort to market products or services carried out via digital platforms or the internet. This includes various strategies and techniques that utilize digital media to reach, attract and engage consumers with the aim of increasing sales, brand awareness and business growth. Digital marketing has become an integral part of modern marketing strategies, helping businesses to develop and compete in the digital era. Digital marketing allows targeting audiences based on demographics, behavior, interests and location,

thereby increasing campaign effectiveness (Nguyen et al., 2022). Digital marketing allows businesses to reach a global audience at a lower cost compared to traditional marketing methods. Research on digital marketing on the performance of MSMEs has been carried out previously, with the results that digital marketing has a positive and significant effect on MSMEs (Hendrawan et al., 2019).

H2: Digital marketing has a significant positive effect on product innovation

H3: Digital marketing has a significant positive effect on MSME performance

### 2.3. Business Network

A business network is a collection of relationships or connections between individuals, organizations, or companies that interact with each other to achieve common business goals. Business networks provide opportunities for MSMEs to learn from the experience and knowledge of fellow entrepreneurs, as well as from training or seminars organized by the network. Business networks often open access to funding sources such as loans, investors or grants that can be used for expansion or development of MSMEs. With a network, MSMEs can expand their market reach both locally and internationally. Business networks can help in opening new markets or entering previously unreached market segments. Research on business networks on the performance of MSMEs has been carried out previously (Giawa & Pasaribu, 2021) with the results that business networks have a significant positive effect on the performance of MSMEs.

H4: Business Network has a significant positive effect on product innovation

H5: Business Network has a significant positive effect on MSME performance

H6: Digital Marketing has a significant positive effect on MSME performance through innovation product

H7: Business Network has a significant positive effect on MSME performance through innovation product

### 2.4 MSME performance

The performance of MSMEs or Micro, Small and Medium Enterprises is a measure or indicator that shows how well MSMEs achieve their business goals. This performance reflects the effectiveness, efficiency and productivity of MSMEs in carrying out business operations, generating profits, as well as maintaining and improving market position. MSME performance is an important indicator for assessing business health and its potential to survive and develop in the future. Every MSME actor certainly really hopes for the development of the performance of the business or business he is starting. Overall, good MSME performance not only contributes to the growth of the business itself, but also plays an important role in economic development, improving social welfare, and overall economic stability.

## Methodology

In this further research, the methodology used is a quantitative approach. Quantitative research is a research method that uses numerical data and statistical techniques to test hypotheses or answer research questions. The main goal of quantitative research is to measure certain variables and analyze the relationship between these variables in the form of numbers and statistics. Quantitative research is often used to identify patterns, determine causal relationships, and make generalizations from samples to a wider population (Gunarto, 2018). The data collected in this research is in the form of numbers, using a 1-5 Likert Scale. The variables used in this research are MSME performance, digital marketing, product innovation and business networks. The sample used in this research was MSME actors in the food and beverage sector in Pematang Siantar City with a total of 250 respondents. Furthermore, this research was carried out for approximately 4 months from the beginning of 2024. Data processing for this research was carried out using Structured Equation Model (SEM) analysis based on Partial Least Square (PLS). This analytical method is used to process data used to

analyze the relationship between latent variables in complex models. PLS-SEM is suitable for use when the main research objective is prediction and theory development, and when the data does not meet certain assumptions such as a multivariate normal distribution or a large sample size. PLS-SEM is very flexible and is widely used in social science research (Hanafi et al., 2020).

## Results and Discussion

### 4.1. Validity Test Results

In the initial data processing, the stage carried out was conducting a convergent validity test. The results of the convergent validity analysis in this research are:

Table 1 Validity Test Results

Variable	Indicator	Results
<i>Digital Marketing</i>	DM1	0.757
	DM2	0.778
	DM3	0.881
	DM4	0.756
	DM5	0.856
	DM6	0.754
<i>Business Network</i>	BN1	0.689
	BN2	0.841
	BN3	0.756
	BN4	0.890
	BN5	0.878
	BN6	0.777
<i>Product Innovation</i>	PI1	0.789
	PI2	0.765
	PI3	0.819
	PI4	0.878
	PI5	0.768
	PI6	0.776
	PI7	0.895
<i>MSME Performance</i>	KU1	0.743
	KU2	0.823
	KU3	0.834
	KU4	0.798
	KU5	0.733

From the results of validity testing and can be seen in the table above, all indicators in this research model are greater than 0.70. This certainly indicates that all of the research variables are valid and can be tested further.

### 4.2. Reliability Test Results

The next stage is to test the reliability of the data so that it is suitable for hypothesis testing. From the results of data testing for reliability testing, the results are as follows:

Table 2. Reliability Test Results

Variable	Alfa Cronbach
Digital Marketing	0,883
Business Network	0,904
Product Innovation	0,879
MSME Performance	0,897

Based on the results of data reliability testing in this study and the results can be seen in Table 2 above, it can be said that the data is entirely reliable. This is proven by the average composite reliability value being greater than 0.60. This can certainly prove that the question indicators in this research are all reliable.

### Measurement Model Analysis (Inner Model) Coefficient or Value (R2)

Table 3. R-Square Value

Variable	R Value	R Square Adjusted
Product Innovation	0,451	0,451
MSME Performance	0,440	0,560

Based on the data from Table 3 above, it is known that the Adjusted R Square value for MSME performance is 0.560 or 56.0%, the remaining 44.0% is influenced by other variables not examined in this research. Furthermore, for the Product Innovation variable the Adjusted R Square value is 0.451 or 45.1%, whereas the opposite is 55.9% influenced by other variables not included in this research.

### Predictive Value of Relevance (Q2)

The next test is to test the Q2 value. The value of Q2 has the same meaning as the coefficient of determination, where if the value of Q2 is greater than 0, it indicates that the model has predictive relevance, conversely, if the value of Q2 is smaller than 0, it indicates that the model has less predictive relevance. In other words, if all Q2 values are higher than 0, the model can be considered a better fit. The results of calculating

the predictive value of relevance in this research are as follows:

$$Q^2 = 1 - (1 - R^2_1) (1 - R^2_2) \dots (1 - R^2_n)$$

$$Q^2 = 1 - (1 - 0,560) (1 - 0,452)$$

$$Q^2 = 1 - (0,440) (0,548)$$

$$P^2 = 1 - 0,2411$$

$$Q^2 = 0,758$$

Based on the calculation results in this research, the Q2 value is 0.758. This certainly indicates that overall the variables in this research, namely, Product Innovation, Digital

Marketing, Business Network and MSME Performance can contribute to data authenticity in the structural model by 75.8%. Then the remaining 25.2% needs to be carried out further research apart from the variables in this study.

#### 4.3 Hypothesis Test Results

The next stage is to test the data hypothesis. The following are the results of hypothesis testing in this research. The results can be seen in Table 4 below:

Table 4. Research Hypothesis Test Results

	Original Sample (O)	Sample Mean (M)	Statistik T ( O/STDEV )	Standard Deviation (STDEV)	Value P	Conclusion
Product Innovation -> MSME Performance	0,234	0,210	3,429	0,289	0,000	Supported
Digital Marketing -> > Product Innovation	0,341	0,375	9,174	0,234	0,001	Supported
Product Innovation -> MSME Performance	0,249	0,344	3,234	0,389	0,000	Supported
Business Network -> Product Innovation	0,345	0,455	3,210	0,189	0,003	Supported
Business Network -> > MSME Performance	0,443	0,363	9,132	0,276	0,005	Supported
Digital Marketing ->> Product Innovation -> MSME Performance	0,432	0,331	3,430	0,089	0,002	Supported
Business Network -> > Product Innovation -> MSME Performance	0,434	0,323	9,110	0,098	0,001	Supported

Source: Smart PLS Processing Results (2024)

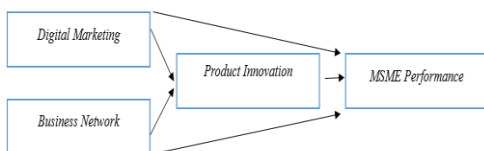


Fig.2: Research Results

H1: Product Innovation has a significant positive effect on MSME performance

From the results of data processing and analysis carried out in this research, it is proven that Product Innovation has a significant positive effect on the performance of MSMEs. This indicates that the first hypothesis in this study is accepted. The products produced by MSMEs in the food and beverage sector will be better if they

always innovate (Effendi et al., 2022). Innovations are made so that consumers do not get bored and feel satisfied so they continue to make repeat purchases. This can improve the performance of every MSME so that it can remain competitive in the business world.

H2: Digital marketing has a significant positive effect on product innovation

The next hypothesis is that digital marketing has a significant positive effect on product innovation from the test results accepted (Hendrawan et al., 2019). This can be seen in Table 4 with a significance value of  $0.001 < 0.050$ , meaning the significance value is below 0.050 and the second hypothesis is accepted. Products that are always innovating and developing according to consumer tastes will be

better if they are marketed using digital marketing so that they can increase sales and improve business performance.

H3: Digital marketing has a significant positive effect on MSME performance

The results of testing the third hypothesis in this research prove that digital marketing has a significant positive effect on the performance of MSMEs, so the third hypothesis is accepted. From the results of testing this third hypothesis, it can be seen that MSMEs must continue to strive to be able to take advantage of promotions using digital marketing. This is of course very helpful so that sales continue to increase so that the performance of MSMEs will be maximized (Hendrawan et al., 2019).

H4: Business Network has a significant positive effect on product innovation

The results of hypothesis testing show that financial literacy has a significant effect on digital marketing. This means that it indicates that the fourth hypothesis is accepted. Furthermore, if business actors have good financial literacy skills, this will certainly increase their ability to manage finances which will have a positive impact on their ability to manage their business. It is important to manage finances so that all activities run smoothly. With good financial literacy, you will be able to make the right strategic decisions, such as doing digital marketing, which is currently very necessary for business development (Anggraini et al., 2020).

H5: Business Network has a significant positive effect on MSME performance

The next hypothesis is that Business Network has a significant positive effect on the performance of MSMEs. From the results of hypothesis testing, the results are proven. This certainly proves that through business networks, MSMEs can access resources that may be difficult to reach, such as financial capital, human resources, technology and information. This access helps MSMEs overcome common obstacles such as limited funds which often occur in business activities. With business networks, collaboration and partnerships can

result, which allows MSMEs to work together on projects, share risks, and combine strengths which of course can improve MSME performance.

H6: Digital Marketing has a significant positive effect on MSME performance through innovation product

The next hypothesis is that Digital Marketing has a significant positive effect on MSME performance through product innovation. From the research results, it was found that the hypothesis was accepted, and can be seen in Table 4 for all the results. Business products that have been innovated need to be promoted through Digital Marketing so that they can be recognized by consumers so that they can improve the performance of businesses or MSMEs.

H7: Business Network has a significant positive effect on MSME performance through innovation product

From the results of further research on Hypothesis 7, namely that Business Networks have a significant positive effect on MSME performance through product innovation, the results are proven. In other words, the hypothesis is accepted. It can also be seen from the significance value of  $0.001 < 0.050$  which proves that the hypothesis is accepted. With food products that have been innovated creatively, there is a need for a network to be able to improve the performance of MSMEs in the future.

## Discussion and Implications

Product innovation enables MSMEs in the food sector to differentiate themselves from competitors. By offering unique, new, or better food products, MSMEs can attract customer attention and gain a larger market share. Product innovation can also help MSMEs to adapt products to changing consumer preferences and needs. For example, increasing demand for healthy, environmentally friendly food, or food with more authentic flavors and ingredients can be met through innovation. This can certainly

improve the performance of existing MSMEs. From this research, it is proven that product innovation has a significant effect on the performance of MSMEs. With increasing innovation, the performance of MSMEs will improve.

Business networks also influence the performance of MSMEs. With a business network, MSMEs can be introduced to new ideas, trends and technologies, which encourage innovation. Being in a dynamic network encourages companies to stay up-to-date and adapt, which is critical for long-term success (Wardati & Mahendrawathi, 2019). In this research, it is proven that the better or better the MSME business network, the more MSME performance will improve, and conversely, if MSMEs have less network, the MSME performance will also decrease.

Digital marketing allows MSMEs to reach more potential customers at lower costs compared to traditional marketing. Furthermore, through social media, search engines and e-commerce platforms, MSMEs can expand their reach in both local and global markets. In this research, it is proven that digital marketing has a significant positive effect on the performance of MSMEs. Digital marketing is often cheaper and more effective than traditional marketing (Lestari et al., 2022). MSMEs can use various digital tools, such as paid advertising, search engine optimization (SEO), and email marketing, to reach their target audience with a

smaller budget. By improving digital marketing, the performance of MSMEs will also increase.

## Conclusions, Suggestions and Limitations in Research

In this research, it was proven that all the hypotheses in the research were accepted or proven. Digital marketing in MSMEs has an effect on performance, as well as business networks which have a significant positive effect on MSME performance. MSME players must be able to pay attention to how to carry out promotions by utilizing digital marketing and business networks in order to improve the performance of MSMEs to the maximum. Digital platforms allow MSMEs to interact directly with customers via social media, email and chatbots. This creates stronger relationships with customers, increases engagement, and builds a loyal community.

This research is certainly not free from limitations and shortcomings. This is something that needs to be considered for further research. It is known that MSMEs are often influenced by external factors such as government policies, economic conditions, and market competition, which can be confounding variables in research. Isolating the influence of these factors can be challenging. In future research, this can be included so that the research results can be more accurate.

## WORKS CITED

- Anggraini, R., Kadir, A.R. and Nohong, M. (2020) "The Effect of Business Networks, Product Innovation, and Business Competition on the Development of Micro, Small and Medium Enterprises (MSMEs) In Boven Digoel District," *Hasanuddin Journal of Business Strategy*, 2(4), pp. 53-63. Available at: <https://doi.org/10.26487/hjbs.v2i4.366>
- Effendi, M. R., Abubakar, R., & Bachri, N. (2022). Pemasaran digital dan kinerja umkm: dapatkah inovasi produk menjadi variabel mediasi? *Jurnal Manajemen Indonesia*, 7(2), 108-115
- Giawa, & Pasaribu. (2021). Kinerja Usaha Sebagai Moderasi Jaringan Usaha Terhadap Pengembangan Usaha (Studi Mitra Binaan Pegadaian Medan). *Journal of Economics and Business*, 2(2), 1-17. <https://doi.org/10.36655/jeb.v2i2.544>
- Gunarto, M. (2018). Analisis Statistika dengan Model Persamaan Struktural (SEM): Teoritis dan Praktis. Bandung: Alfabeta

- Hanafi, Daljeet Singh Malkeet Singh dan Norshafizah Binti. (2020). Innovation Capacity and Performance of Malaysian SMES', *International Journal of Academic Research in Business and Social Sciences*, 10
- Hendrawan, A., Sucahyowati, H., Cahyandi, K., Indriyani, & Rayendra, A. (2019). Pengaruh Marketing Digital Terhadap Kinerja Penjualan Produk UMKM Asti Gauri di Kecamatan Bantasari Cilacap. *Jurnal Administrasi Dan Kesekretarisan*, 4(1), 53-60.  
<http://www.jurnal.stikstarakanita.ac.id/index.php/JAK/article/view/189/136>
- <https://andi.link/hootsuite-we-are-social-indonesian-digital-report-2023/>
- Johnpaul Ogochukwu, I., & Jiangru, W. (2021). Entrepreneurship Innovation and Finance. *Journal of Behavioural Economics, Finance, Entrepreneurship, Accounting and Transport*, 9(1), 16-35.  
<https://doi.org/10.12691/jbe-9-1-3>
- Knudsen, Eirik Sj holm et al. 2021. "Stability in Turbulent Times? The Effect of Digitalization on the Sustainability of Competitive Advantage." *Journal of Business Research* 128(October 2019): 360-69.
- Lestari, Rahayu, Tiara Pradani, Kumba Digdowiseiso. (2022). The Effects of Digital Marketing, Entrepreneurship Orientation, and Product Innovation on Competitive Advantage and Its Impact on the Marketing Performance of Talas Bolu Sangkuriang in Bogor City. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal) Volume 5, No 1*.
- Nguyen, A. T. H., Nguyen, P. V., & Do, H. T. S. (2022). The effects of entrepreneurial orientation, social media, managerial ties on firm performance: evidence from vietnamese smes. *International Journal of Data and Network Science*, 6(1), 243-252.
- Primatami, A., & Primadhita, Y. (2020). Efisiensi Umkm Makanan Dengan Pendekatan Data Envelopment Analysis. *Jurnal Pengembangan Wiraswasta*, 22(01), 1. <https://doi.org/10.33370/jpw.v22i01.388>.
- Qalati, S. A., Yuan, L. W., Khan, M. A. S., & Anwar, F. (2021). A mediated model on the adoption of social media and SMEs' performance in developing countries. *Technology in Society*, 64, 1-12.  
<https://doi.org/10.1016/j.techsoc.2020.101513>
- Wardati, N. K., & Mahendrawathi, E. R. (2019). The impact of social media usage on the sales process in small and medium enterprises (SMEs): A systematic literature review. *Procedia Computer Science*, 161, 976-983.