



The Role Of Digital Marketing, Innovation, And Product Quality On The Performance Of UMKM In Batam City

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Abstract: This study examines the role of digital marketing, innovation, and product quality on the performance of UMKM in Batam City as a strategic region adjacent to Singapore and Malaysia. The main problem is the low competitiveness of UMKM amid globalization, changing consumer behavior, and intense competition, despite the number of UMKM fostered by the Batam City Government reaching 1,748 units (April 2024). The research objectives are to test the partial and simultaneous effects of the three variables on UMKM performance. The method used is descriptive quantitative with a sample of 110 MSMEs in the Nagoya, Tembesi, and Sekupang areas, employing a 5-point Likert-based questionnaire and regression analysis via SPSS 21. The main results show that digital marketing ($t=3.510$; sig. 0.001), innovation, and product quality have a positive and significant partial effect; simultaneously (F-test), the three variables together enhance sales growth, customer base, and profits. The synthesis of findings reinforces that the synergy of these three factors creates sustainable competitive advantage. Conclusion: Batam UMKM must optimize digital platforms, continuously innovate, and maintain quality consistency to compete in the digital economy era. This research provides empirical contributions to UMKM development strategies in border regions.

Keywords: Digital Marketing, Innovation, Product Quality, UMKM Performance, Batam City, Competitiveness, Digital Economy.

INTRODUCTION

Micro, Small, and Medium Enterprises (UMKM) are one of the key pillars of the Indonesian economy. UMKM play a significant role in job creation, income distribution, and enhancing regional economic growth. Batam City, as one of Indonesia's strategic national regions with a geographic position adjacent to Singapore and Malaysia, holds great potential for the development of the UMKM sector. This geographic advantage opens opportunities for UMKM actors to expand their markets, both domestically and internationally.

Amid rapid technological advancements and shifting consumer behavior, UMKM in Batam face challenges in enhancing competitiveness and maintaining business performance. The role of the Batam City Government in providing sustainable coaching has had a positive impact, as



evidenced by the increasing number of UMKM under its guidance, reaching 1,748 units in April 2024, predominantly in the culinary sector.

According to Aggarwal et al. (2021); Alzaam et al. (2021); and Amri et al. (2021), MSMEs contribute 60.3% to Indonesia's total gross domestic product (GDP). Furthermore, MSMEs absorb 97% of the total workforce and 99% of total employment opportunities. Innovation plays a key role in enhancing the competitiveness of MSMEs. Innovation can take the form of new product development, improvements in production processes, or the adoption of technology in business operations. UMKM that are able to innovate will be more adaptive to changes in the business environment and have greater opportunities to survive and grow in a competitive market.

Innovation also serves as a critical foundation for creating added value in products and strengthening brand positioning in the eyes of consumers. On the other hand, product quality remains a primary element in determining the success of UMKM. High-quality products not only meet consumer expectations but also build trust and customer loyalty. Consistent quality will create a positive brand image and serve as a competitive advantage that is difficult for competitors to replicate.

The synergy between product quality, innovation, and digital marketing becomes the key to improving UMKM performance in terms of sales, profitability, and business sustainability. Based on the above explanation, it is important to further investigate how digital marketing, innovation, and product quality simultaneously influence the performance of UMKM in Batam City. This study is expected to provide empirical and practical contributions to the development of business strategies for UMKM, enabling them to compete sustainably in the digital economy era.

METHOD

The type of research used in this study is descriptive quantitative research. According to Sugiyono (2022:15), quantitative research is based on positivism and aims to investigate a specific population or sample. Data analysis in quantitative research is statistical in nature, with the objective of describing and testing predetermined hypotheses. According to Sugiyono (2018:13), quantitative is a research method grounded in positivism (using concrete data), where research



data are in the form of numbers measured using statistics as a calculation testing tool, related to the research problem, to produce a conclusion.

This research was conducted on UMKM in the Nagoya, Tembesi, and Sekupang areas, with a total of 110 MSMEs serving as respondents, distributed across these three regions.

Variable	Variable Definition	Indicator
Digital Marketing (X1)	According to Farizki in Pangestika et al. (2020), digital marketing refers to promotional activities aimed at introducing a brand or product through various technology-based media, such as the internet and social media.	Menurut Aryani, (2021: 78) 1) Accessibility, 2) Interactivity, 3) Entertainment, 4) Credibility, 5) Irritation, dan 6) Informativeness
Innovation (X2)	According to Ahmed & Shepherd (2010) in (Sukmadi, 2016), innovation is defined as the stage of creating new ideas that differ from previous ones.	According to Kotler Amstrong (2020: 89) there are three indicators of product innovation: 1) product quality, 2) product variety, 3) product style and design.
Product Quality X3)	Moko (2021:121) states that “product quality is the inherent characteristic that distinguishes the degree or level of excellence of a product.”	According Amrullah, et.al (2020: 79) product quality consists of several indicators, namely:1) Performance (kinerja), 2) Durability (daya tahan), 3) . Features (fitur), 4) Reliability (reliabilitas), 5) Aesthetics (estetika), 6) Perceived quality (kesan kualitas)
Performance UMKM (Y)	Aribawa (2016: 90) states that MSME performance is the work result achieved by an individual and can be completed through the individual's tasks within the company over a certain period, and will be linked to the measure of value or standard of the company where the individual works.	According Rapih, S., Martono, T., & Riyanto, G. (2021: 108) The following are the indicators of UMKM Performance: 1) Sales growth 2) Customer growth 3) Profit growth

Tabel 1.Operasional variabel

This study employs a 5-point Likert scale for data collection, allowing respondents to indicate their level of agreement with statements related to digital marketing, innovation, product quality, and UMKM performance. This facilitates the quantification of attitudes and perceptions and enables statistical analysis using SPSS 21.



The data analysis used in this research includes validity testing, reliability testing, normality testing, as well as t-tests and F-tests. This is conducted to examine the extent of the influence of digital marketing, innovation, and product quality on the performance of UMKM in Batam City.

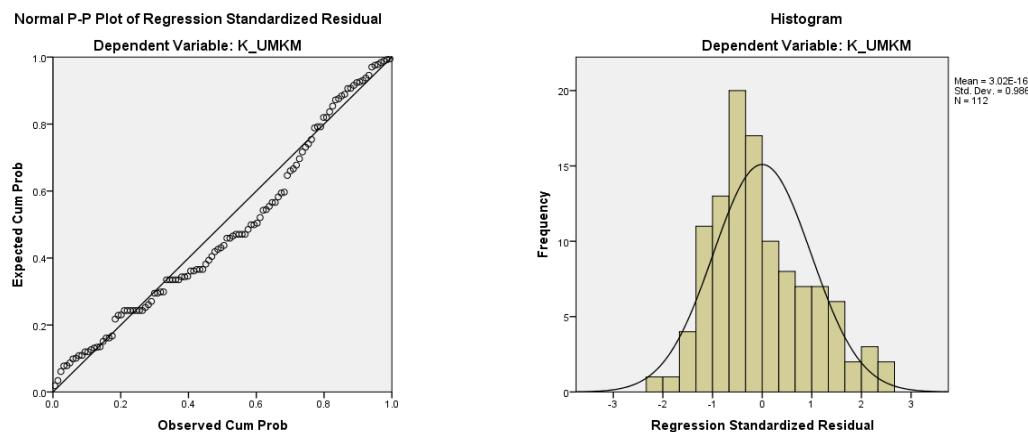
RESULT AND DISCUSSION

Reliability Test Result

Variabel	Cronbachs Alpha	N of Item	r tabel	Keterangan	Kriteria
Digital Marketing (X1)	0,627	5	0,186	Reliabel	Tinggi
Innovation (X2)	0,712	3		Reliabel	Tinggi
Product quality (X3)	0,591	6		Reliabel	Cukup
Performance UMKM (Y)	0,673	3		Reliabel	Tinggi

Tabel 2. Reliability Test Result

Based on Table 2, the results of the reliability test data processing show that the research instrument meets the reliability test. This is evidenced by the Cronbach's Alpha value (calculated r) being greater than the table r, or Cronbach's Alpha (calculated r) greater than 0.6. However, one variable falls below 0.6, namely the product quality variable.



Based on the normality test results, it can be explained that the resulting curve resembles a bell-shaped curve. Therefore, it can be concluded that the data is normally distributed. The second



method for normality testing is by examining the normal P-P Plot of regression standardized residuals.

The Influence of Digital Marketing on UMKM Performance in Batam City The research results indicate that digital marketing has a significant influence on the performance of MSMEs in Batam City. This is based on the t-test results with a significance level of 0.001, which is less than 0.05, and a t-value of 3.510, which is greater than the t-table value of 1.967. Based on these results, it can be concluded that continuous digital marketing efforts can have a positive impact on overall MSME performance and increase brand recognition among the public as consumers of MSME products. This study is consistent with previous research conducted by Primadhita, et al (2023),

The Influence of Innovation on UMKM Performance in Batam City Globalization and intense competition require MSME actors to continuously innovate. Innovation represents an effort to create added value in products through new ideas that are beneficial to the market. Previous research has shown that innovation supports business sustainability. Other studies have also proven that innovation has a positive and significant influence on business performance. Research conducted by Hasna (2021) demonstrates that product innovation, process innovation, and service innovation positively affect MSME performance. Similarly, a study by Kristian & Gofur (2022) found that product innovation has a positive effect on business performance among MSMEs in the Pademangan area. These findings underscore the critical role of innovation in enhancing adaptability and growth in competitive environments, aligning with the context of Batam City's strategic position (Primadhita et al., 2023),

The Influence of Product Quality on UMKM Performance in Batam City Product quality is the ability of a good or service to meet or exceed customer expectations. Products that align with market demands enhance consumer trust and serve as a strategic factor for business success. Previous research has shown that product quality has a positive and significant influence on MSME performance. In fact, the influence of product quality is greater than that of creativity and product innovation in improving MSME performance. This study is consistent with previous research conducted by Kuspriyadi et al. (2023), who found that product quality has the strongest effect on MSME performance with a regression coefficient of 0.56 ($p < 0.01$), followed by digital marketing. Additionally, Amrullah et al. (2020) confirm that dimensions such as performance,



durability, features, reliability, aesthetics, and perceived quality collectively strengthen competitive positioning and long-term business sustainability.

Discussion

This study provides empirical evidence on the critical role of digital marketing, innovation, and product quality in enhancing the performance of UMKM in Batam City, a strategic border region adjacent to Singapore and Malaysia. The findings demonstrate that these three variables exert both partial and simultaneous positive effects on UMKM performance, measured through sales growth, customer growth, and profit growth. This result confirms that UMKM competitiveness in the digital economy era is not driven by a single factor but rather by the synergy of multiple strategic capabilities.

The significant influence of digital marketing on UMKM performance highlights the importance of digital platforms as a primary channel for market access and customer engagement. The t-test results ($t = 3.510$; $\text{sig.} = 0.001$) indicate that UMKM that effectively utilize digital marketing tools—such as social media, online marketplaces, and digital content—are better positioned to expand their customer base and improve sales performance. This finding aligns with previous studies (Primadhita et al., 2023; Jung & Shegai, 2023), which emphasize that digital marketing enhances brand visibility, reduces promotional costs, and enables real-time interaction with consumers. In the context of Batam City, digital marketing becomes particularly relevant due to the proximity to international markets and the increasing digital orientation of consumers in cross-border trade areas. Therefore, digital marketing serves not only as a promotional tool but also as a strategic mechanism for UMKM to integrate into broader digital value chains.

Innovation also plays a vital role in improving UMKM performance. The positive and significant effect of innovation confirms that UMKM must continuously adapt their products, processes, and designs to respond to changing consumer preferences and competitive pressures. Consistent with Hasna (2021) and Kristian and Gofur (2022), this study reinforces the view that innovation enhances business flexibility and long-term sustainability. In Batam's competitive environment, innovation allows UMKM to differentiate their offerings and avoid price-based competition. Even simple innovations—such as variations in product packaging, service delivery, or production methods—can generate added value and strengthen market positioning. This finding



supports the resource-based view (RBV), which posits that innovation functions as an intangible resource that contributes to sustainable competitive advantage.

Product quality emerges as another key determinant of UMKM performance. Although the reliability coefficient for this variable is slightly lower than the recommended threshold, the results still indicate a positive and significant effect on performance outcomes. High product quality enhances customer satisfaction, builds trust, and fosters repeat purchases, which are essential for long-term business viability. This finding is consistent with Kuspriyadi et al. (2023) and Amrullah et al. (2020), who argue that product quality often exerts a stronger influence on business performance than creativity alone. In highly competitive markets such as Batam, consistent quality in terms of performance, durability, aesthetics, and perceived value becomes a crucial factor that differentiates UMKM products from competitors, including imported goods.

More importantly, the simultaneous test (F-test) confirms that digital marketing, innovation, and product quality collectively improve UMKM performance. This result suggests that these variables do not operate independently but rather reinforce one another. Digital marketing increases market reach, innovation enhances product attractiveness, and product quality ensures customer retention. The interaction among these factors creates a virtuous cycle that strengthens UMKM competitiveness and resilience. This synergy supports the concept of integrated marketing and innovation strategies, where operational excellence and market orientation are aligned to achieve superior performance.

From a practical perspective, the findings imply that UMKM in Batam City should adopt an integrated strategy that combines digital marketing optimization, continuous innovation, and strict quality control. Government agencies and business development institutions can use these insights to design targeted training programs focusing on digital literacy, innovation management, and quality assurance. From a theoretical standpoint, this study enriches the literature on UMKM performance by providing empirical evidence from a strategic border region, an area that has received limited attention in previous research.

Despite its contributions, this study has limitations, particularly related to sample size and measurement reliability for the product quality variable. Future research should expand the sample coverage, refine measurement instruments, and incorporate moderating variables such as access to



capital, digital literacy, or government support to obtain a more comprehensive understanding of UMKM performance dynamics.

CONCLUSION

This study concludes that digital marketing, innovation, and product quality play a crucial and interrelated role in enhancing the performance of UMKM in Batam City, a strategic economic region bordering Singapore and Malaysia. The empirical findings confirm that each variable exerts a positive and significant partial effect on UMKM performance, as reflected in sales growth, customer expansion, and profit increases. Digital marketing emerges as a key driver of performance by expanding market reach, strengthening brand visibility, and facilitating interactive engagement with customers through digital platforms. Innovation enables UMKM to adapt to changing market dynamics by introducing product variations, improving processes, and enhancing design and packaging, thereby creating added value and differentiation. Meanwhile, product quality remains a fundamental determinant of business success, as consistent performance, durability, aesthetics, and perceived quality foster customer trust and long-term loyalty. Collectively, these findings validate the research hypotheses and underscore the importance of an integrated strategic approach in strengthening UMKM competitiveness in the digital economy era.

From a practical perspective, this research highlights the need for UMKM actors in Batam City to strategically align digital marketing adoption, continuous innovation, and quality management as a unified business strategy rather than isolated initiatives. Policymakers and local governments are encouraged to support UMKM development through targeted programs focusing on digital literacy, innovation capability building, and quality assurance standards, particularly for UMKM operating in border regions with high competitive pressure. Theoretically, this study contributes to the UMKM performance literature by providing empirical evidence from a strategic border context, reinforcing the relevance of synergy among marketing, innovation, and quality dimensions. However, this study is limited by its sample size and the relatively lower reliability of the product quality instrument. Future research is recommended to expand the sample scope, refine measurement instruments, and incorporate moderating variables such as access to finance, digital



readiness, and government policy support to better capture the complexity of UMKM performance and sustainability in the long term.

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