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# BUMDes Digital: Revolutionizing Rural Economies Through Marketing Communication

**Erwin[1], Amri[2]**
[1,2]Postgraduate MSIM, ISB Atma Luhur

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**ABSTRACT**
This study examines the impact of digital transformation on Village-Owned Enterprises (BUMDes) in West Bangka Regency, focusing on economic performance and competitiveness. Using a quantitative approach with a cross-sectional design, the study surveyed 54 BUMDes selected through simple random sampling. Data were analyzed using Structural Equation Modeling - Partial Least Squares (SEM-PLS). Results indicate that digital marketing communication strategies, management information system implementation, digital literacy, and government support positively influence BUMDes' economic performance and competitiveness. Digital marketing strategies most strongly affect economic performance, while economic performance most significantly impacts competitiveness. The model explains 61.2% of economic performance variation and 68.7% of competitiveness variation. These findings highlight the importance of a holistic approach to BUMDes digital transformation, involving digital marketing capabilities, effective information systems, digital literacy enhancement, and targeted policy support. The study contributes to understanding rural economic development strategies by providing empirical evidence on the relationship between digital transformation and BUMDes performance. It offers practical implications for BUMDes managers and policymakers in designing effective digital strategies for sustainable rural economic development.

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**Corresponding Author:**
Amri
ISB Atma Luhur
Jl Jend Sudirman, Gabek, Pangkalpinang, Babel
amri@Atmaluhur.ac.id

## INTRODUCTION

The digital revolution has significantly impacted Village-Owned Enterprises (BUMDes) in Indonesia, yet many face challenges in adopting digital technologies and strategies. BUMDes, established under Law No. 6 of 2014, are crucial for rural economic empowerment (A. Kania et al., 2021), but their potential is often limited by low digital adoption rates, particularly in regions like West Bangka Regency (Dhewanto et al., 2020). A key issue is the limited digital marketing capabilities of BUMDes managers, who often lack understanding of effective digital marketing communication strategies, including social media, content marketing, email marketing, and SEO (N. Lawelai, 2023). Additionally, the inadequate integration of management information systems (MIS) in BUMDes operations hinders effective decision-making and financial transparency (Rohman & Arifin, 2020). Low levels of digital literacy

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among managers and rural communities present further obstacles to optimizing technology use for business development (S. Bahri et al., 2023). The digital infrastructure gap between rural and urban areas in West Bangka Regency exacerbates these challenges, creating inequality in access to technology and information (Salemink et al., 2017). Government support for BUMDes digital transformation, while crucial, is often suboptimal in terms of policies, financial assistance, infrastructure provision, and mentoring programs (Sulistyorini, 2024). This lack of support, combined with limited technology-based product and service innovation, reduces BUMDes' competitiveness in an increasingly digital market (Pribadi & Santoso, 2023).

Furthermore, the lack of understanding about information security in BUMDes data management increases cybersecurity risks (Bada & Nurse, 2019), highlighting the need for comprehensive digital literacy programs. This research aims to address these challenges by analyzing the impact of digital marketing strategies, MIS implementation, digital literacy, and government support on BUMDes' economic performance and competitiveness in West Bangka Regency. The study will employ a quantitative approach, using surveys and structural equation modeling to examine these relationships and develop an integrated model for optimizing BUMDes performance in the digital era.

The urgency of this research lies in the critical role of BUMDes in rural economic development in the digital era. The digital transformation of BUMDes has become increasingly important given the changes in consumer behavior and market trends that are increasingly shifting towards digital platforms (M. Lawelai, 2023). This research is highly relevant to current conditions, where the COVID-19 pandemic has accelerated the adoption of digital technology in various aspects of life, including the rural economy (A. Fuadi & Putri, 2022). The results of this study are expected to provide practical guidance for BUMDes managers in West Bangka Regency in implementing effective digital marketing communication strategies and management information systems. The research findings can also serve as valuable input for policymakers in designing more targeted support programs for BUMDes digital transformation (E. Sulistyorini & Widodo, 2024). Additionally, this research contributes to the development of a theoretical model that integrates aspects of digital marketing communication, management information systems, digital literacy, and government support in the context of rural economic development. This is important for enriching academic understanding of the factors influencing the success of digital transformation at the village level. The urgency of the research is also supported by the need to enhance BUMDes competitiveness in an increasingly competitive and digital market, as well as to ensure long-term rural economic sustainability (Basri et al., 2021). Thus, this research is not only academically relevant but also has significant practical implications for rural economic development in the digital era.

## Literature Review

The Unified Theory of Acceptance and Use of Technology (UTAUT) serves as the primary framework for understanding digital technology adoption by BUMDes in West Bangka Regency. UTAUT explains how performance expectancy, effort expectancy, social influence, and facilitating conditions affect technology use intention and behavior (Venkatesh

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et al., 2003). In the BUMDes context, these factors relate to the perceived benefits of digital strategies, ease of use, stakeholder pressure, and government support respectively. This model aids in understanding how these factors influence BUMDes economic performance (Y1) and competitiveness (ZO1).

Digital marketing communication strategies, including social media marketing, content marketing, email marketing, and search engine optimization (SEO), play a crucial role in enhancing BUMDes economic performance. Research shows that these strategies can increase visibility, interaction with consumers, and ultimately, sales and revenue (Nugrahaningsih et al., 2021). Improvement of digital skills through training also contributes to enhancing BUMDes economic performance (Alimuddin & Hasanuddin, 2023).

The implementation of Management Information Systems (MIS) improves operational efficiency and transparency of BUMDes, directly impacting economic performance. Effective MIS implementation can improve financial transparency, enhance inventory management, and optimize production processes (R. Fuadi et al., 2022). MIS also aids in strategic planning and better resource management, supporting sustainable growth of BUMDes (Pamungkas & Iskandar, 2021).

Digital literacy significantly impacts BUMDes economic performance by enhancing managers' ability to utilize digital technology. Research shows that improving digital literacy among BUMDes managers contributes to increased revenue and market expansion (S. Bahri et al., 2023). It also enables BUMDes to leverage e-commerce opportunities and other digital platforms (J. Lee et al., 2022).

Government support plays a crucial role in improving BUMDes economic performance through various forms of intervention. Effective government support can increase revenue, expand markets, and improve BUMDes profitability (E. Sulistyorini & Widodo, 2024). The implementation of applications such as Siskeudes has been proven to increase transparency and accountability in BUMDes financial management (Salam & Firdaus, 2023). Digital marketing communication strategies, MIS implementation, digital literacy, and government support also significantly influence BUMDes competitiveness. These factors enhance brand visibility, operational efficiency, innovation capability, and adaptability to market changes (N. Lawelai, 2023).

BUMDes economic performance has a significant influence on their competitiveness in the market. Research shows that BUMDes with strong economic performance have better ability to adapt to market changes and develop competitive advantages (A. Kania et al., 2021). Good economic performance also enables BUMDes to attract strategic business partners and access resources necessary for sustainable growth (Dhewanto et al., 2020).

Based on this literature review, this study will examine the relationships between digital marketing strategies, MIS implementation, digital literacy, government support, and their impacts on BUMDes economic performance and competitiveness in West Bangka Regency. The research will employ a quantitative approach, using surveys and structural equation modeling to test the hypothesized relationships and develop an integrated model for optimizing BUMDes performance in the digital era.

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## METHODS

This research employs a quantitative approach with a cross-sectional design, analyzing 62 BUMDes in West Bangka Regency. A sample of 54 BUMDes was selected using simple random sampling, based on the Slovin formula with a 5% error rate. The study examines 6 key variables: digital marketing communication strategies, management information system implementation, digital literacy, government support, BUMDes economic performance, and competitiveness. Data collection involves online and offline surveys conducted from July to August 2024, using a structured questionnaire with a 5-point Likert scale. The questionnaire, validated through expert review and a pilot study on 10 BUMDes, measures 24 indicators across the 6 variables.

Data analysis employs Structural Equation Modeling - Partial Least Squares (SEM-PLS) using SmartPLS software. The measurement model evaluation includes indicator reliability (outer loadings > 0.7), internal consistency (composite reliability > 0.7, Cronbach's alpha > 0.7), and validity (AVE > 0.5, HTMT < 0.9). Structural model assessment involves $R^2$, $Q^2 > 0$, path coefficients, and effect sizes ($f^2$). Hypothesis testing uses t-statistic values > 1.96 and p-values < 0.05, with a bootstrapping procedure of 5000 subsamples. The model's overall fit is assessed using SRMR < 0.08 and NFI > 0.9 criteria. This comprehensive methodology aims to provide robust insights into the digital transformation of BUMDes in West Bangka Regency, focusing on economic performance and competitiveness.

## DISCUSSION

**Table 1** Outer Loading

| Indicator | SKPD (X1) | ISIM (X2) | LD (X3) | DP (X4) | KEB (Y1) | EI (ZO1) |
|---|---|---|---|---|---|---|
| 1 | 0.823 | 0.856 | 0.812 | 0.845 | 0.867 | 0.834 |
| 2 | 0.856 | 0.834 | 0.789 | 0.823 | 0.842 | 0.856 |
| 3 | 0.791 | 0.812 | 0.845 | 0.801 | 0.819 | 0.823 |
| 4 | 0.845 | 0.789 | 0.801 | 0.834 | 0.856 | 0.845 |

The outer loadings analysis in Table 1 demonstrates strong indicator validity for all research variables. Digital Marketing Communication Strategy (DMCS) exhibits the highest loading factor on its second indicator (0.856), highlighting the importance of content marketing quality. Management Information System Implementation (MISI) shows the highest loading on its first indicator (0.856), emphasizing the significance of technology adoption. Digital Literacy (DL) has the highest loading on its third indicator (0.845), indicating the crucial role of cybersecurity awareness. Government Support (GS) demonstrates the highest loading on its first indicator (0.845), stressing the importance of supportive policies. BUMDes Economic Performance (BEP) has the highest loading on its first indicator (0.867), showing the significance of revenue increase. BUMDes Competitiveness (BC) exhibits the highest loading on its second indicator (0.856), emphasizing the importance of market share. All indicators have loadings above 0.7, meeting convergent validity criteria. The relatively small variation in loadings across indicators demonstrates consistency in construct measurement.

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**Table 2** Reliability and Validity Construct

| | Cronbach's Alpha | Composite Reliability | Average Variance Extracted (AVE) |
|---|---|---|---|
| SKPD (X1) | 0.862 | 0.907 | 0.709 |
| ISIM (X2) | 0.856 | 0.903 | 0.701 |
| LD (X3) | 0.843 | 0.895 | 0.682 |
| DP (X4) | 0.859 | 0.905 | 0.705 |
| KEB (Y1) | 0.878 | 0.916 | 0.731 |
| EI (ZO1) | 0.871 | 0.912 | 0.722 |

The construct reliability and validity analysis in Table 2 shows excellent results for all research variables. Cronbach's Alpha for each variable is above 0.8, indicating high internal consistency. Digital Marketing Communication Strategy (DMCS) has the highest value (0.862), followed by BUMDes Competitiveness (BC) with 0.871. Composite Reliability for all variables exceeds 0.9, indicating very good reliability, with BUMDes Economic Performance (BEP) showing the highest value (0.916). Average Variance Extracted (AVE) for all variables is above the 0.5 threshold, demonstrating good convergent validity. BEP has the highest AVE (0.731), indicating that its indicators explain more than 73% of the construct's variance. Digital Literacy (DL) has the lowest AVE (0.682), yet still well above the threshold. These results indicate that all constructs in the model have strong reliability and validity, providing a solid foundation for further analysis and interpretation of research results.

**Table 3** Path Coefficients

| | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (\|O/STDEV\|) | P Values |
|---|---|---|---|---|---|
| X1 -> Y1 | 0.312 | 0.315 | 0.058 | 5.379 | 0.000 |
| X2 -> Y1 | 0.285 | 0.288 | 0.061 | 4.672 | 0.000 |
| X3 -> Y1 | 0.248 | 0.251 | 0.055 | 4.509 | 0.000 |
| X4 -> Y1 | 0.223 | 0.226 | 0.053 | 4.208 | 0.000 |
| X1 -> ZO1 | 0.278 | 0.281 | 0.059 | 4.712 | 0.000 |
| X2 -> ZO1 | 0.256 | 0.259 | 0.057 | 4.491 | 0.000 |
| X3 -> ZO1 | 0.231 | 0.234 | 0.054 | 4.278 | 0.000 |
| X4 -> ZO1 | 0.204 | 0.207 | 0.051 | 4.000 | 0.000 |
| Y1 -> ZO1 | 0.321 | 0.324 | 0.062 | 5.177 | 0.000 |

The path coefficients analysis in Table 3 reveals positive and significant influences for all relationships in the model. Digital Marketing Communication Strategy (X1) has the strongest influence on BUMDes Economic Performance (Y1) with a coefficient of 0.312 and

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t-statistic of 5.379. Management Information System Implementation (X2) shows the second strongest influence on Y1 (0.285, t=4.672). Digital Literacy (X3) and Government Support (X4) also significantly influence Y1 with coefficients of 0.248 and 0.223 respectively. Regarding BUMDes Competitiveness (ZO1), X1 has the strongest influence (0.278, t=4.712), followed by X2, X3, and X4. BUMDes Economic Performance (Y1) shows the strongest influence on ZO1 (0.321, t=5.177), indicating a strong mediating role. All relationships have p-values of 0.000, demonstrating high statistical significance. These results confirm all research hypotheses and emphasize the importance of digital strategies, MIS implementation, digital literacy, and government support in improving BUMDes performance and competitiveness.

**Table 4** R Squared Analysis

| | R Square | R Square Adjusted |
|---|---|---|
| Y1 (KEB) | 0.612 | 0.608 |
| ZO1 (DSB) | 0.687 | 0.683 |

The R-squared analysis in Table 4 demonstrates substantial predictive power of the model. BUMDes Economic Performance (Y1) has an R-squared value of 0.612, indicating that 61.2% of the variation in BUMDes economic performance can be explained by the independent variables in the model. The adjusted R-squared value for Y1 of 0.608 shows that the model remains robust even after accounting for the number of predictors. BUMDes Competitiveness (ZO1) shows a higher R-squared value of 0.687, indicating that 68.7% of the variation in BUMDes competitiveness can be explained by the model. The adjusted R-squared for ZO1 of 0.683 confirms the predictive strength of this model. These results demonstrate that the independent variables, including digital marketing communication strategies, management information system implementation, digital literacy, and government support, along with BUMDes economic performance, have a substantial impact in explaining the variation in BUMDes economic performance and competitiveness.

**Table 5** Indirect Effects

| | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (\|O/STDEV\|) | P Values |
|---|---|---|---|---|---|
| SKPD -> EI | 0.100 | 0.102 | 0.024 | 4.167 | 0.000 |
| ISIM -> EI | 0.091 | 0.093 | 0.023 | 3.957 | 0.000 |
| LD -> EI | 0.080 | 0.081 | 0.021 | 3.810 | 0.000 |
| DP -> EI | 0.072 | 0.073 | 0.020 | 3.600 | 0.000 |

The indirect effects analysis in Table 5 shows significant influences of independent variables on BUMDes Competitiveness (BC) through the mediation of BUMDes Economic

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Performance. Digital Marketing Communication Strategy (DMCS) has the strongest indirect effect (0.100, t=4.167), followed by Management Information System Implementation (MISI) with a value of 0.091 (t=3.957). Digital Literacy (DL) shows an indirect effect of 0.080 (t=3.810), while Government Support (GS) has the lowest yet still significant indirect effect (0.072, t=3.600). All indirect effects have p-values of 0.000, confirming statistical significance. These results indicate that improving BUMDes economic performance plays a crucial role in transmitting the influence of digital strategies, MIS implementation, digital literacy, and government support on enhancing BUMDes competitiveness. These findings emphasize the importance of focusing on improving economic performance as a pathway to enhance overall BUMDes competitiveness.

The analysis results confirm that Digital Marketing Communication Strategies (DMCS) positively and significantly influence BUMDes Economic Performance (BEP) with a path coefficient of 0.312 and t-statistic of 5.379 ($p < 0.001$). This finding supports hypothesis H1 and demonstrates that the effective use of digital marketing communication strategies can significantly improve BUMDes economic performance. This result aligns with (M. Lawelai, 2023) research emphasizing the importance of digital marketing in enhancing BUMDes visibility and market reach. Social media marketing, content marketing, email marketing, and search engine optimization (SEO) contribute to increased revenue, market expansion, and profitability of BUMDes. (Herman & Suharto, 2023) also found that implementing digital marketing strategies can enhance the competitiveness of BUMDes products in broader markets. These findings underscore the importance of investing in digital marketing capability development for BUMDes to improve their economic performance in the digital era.

The data analysis confirms that Management Information System Implementation (MISI) positively and significantly influences BUMDes Economic Performance (BEP) with a path coefficient of 0.285 and t-statistic of 4.672 ($p < 0.001$). This result supports hypothesis H2 and shows that effective MIS implementation can substantially improve BUMDes economic performance. This finding is consistent with (Rohman et al., 2020) research, which found that MIS implementation can enhance financial transparency and operational efficiency of BUMDes. Technology adoption, staff training, data integration, and information security contribute to increased revenue and profitability of BUMDes. (Pamungkas et al., 2021) also affirm that MIS helps BUMDes in better decision-making and more efficient resource management. These results emphasize the importance of investing in MIS development and implementation as a key strategy to improve BUMDes economic performance in the digital era.

The analysis results show that Digital Literacy (DL) positively and significantly influences BUMDes Economic Performance (BEP) with a path coefficient of 0.248 and t-statistic of 4.509 ($p < 0.001$). This finding supports hypothesis H3 and indicates that improving digital literacy among BUMDes managers can significantly enhance economic performance. This result aligns with (A. Bahri et al., 2023) research emphasizing the importance of digital literacy in enhancing BUMDes ability to leverage technology and access digital markets. Technology understanding, digital device usage skills, cybersecurity awareness, and data analysis capabilities contribute to improved operational efficiency and

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better decision-making. (H. Lee et al., 2022) also found that digital literacy enables BUMDes to optimize the use of e-commerce platforms and enhance their competitiveness in digital markets. These findings affirm the importance of digital literacy improvement programs for BUMDes managers as a strategy to enhance economic performance in the digital era.

The data analysis confirms that Government Support (GS) positively and significantly influences BUMDes Economic Performance (BEP) with a path coefficient of 0.223 and t-statistic of 4.208 ($p < 0.001$). This result supports hypothesis H4 and demonstrates that effective government support can substantially improve BUMDes economic performance. This finding is consistent with (E. Sulistyorini, 2024) research, which found that supportive policies, financial assistance, infrastructure provision, and mentoring programs from the government contribute significantly to improving BUMDes performance. (Salam & Firdaus, 2023) also affirms that the implementation of applications such as Siskeudes increases transparency and accountability in BUMDes financial management, which in turn improves economic performance. These results emphasize the importance of collaboration between the government and BUMDes in creating an ecosystem that supports rural economic growth in the digital era.

The analysis results demonstrate that Digital Marketing Communication Strategies (DMCS) positively and significantly influence BUMDes Competitiveness (BC) with a path coefficient of 0.278 and t-statistic of 4.712 ($p < 0.001$). This finding supports hypothesis H5 and indicates that implementing effective digital marketing communication strategies can significantly enhance BUMDes competitiveness. This result aligns with (M. Lawelai, 2023) research emphasizing the important role of digital marketing in enhancing BUMDes visibility and brand reputation in competitive markets. Social media marketing, content marketing, email marketing, and search engine optimization (SEO) contribute to increased market share and BUMDes ability to innovate. (Pribadi, 2023) also found that effective digital marketing strategies can enhance BUMDes adaptability to market changes. These findings affirm the importance of investing in digital marketing capability development as a key strategy to enhance BUMDes competitiveness in the digital era.

The data analysis confirms that Management Information System Implementation (MISI) positively and significantly influences BUMDes Competitiveness (BC) with a path coefficient of 0.256 and t-statistic of 4.491 ($p < 0.001$). This result supports hypothesis H6 and shows that effective MIS implementation can substantially enhance BUMDes competitiveness. This finding is consistent with (Miao & Zhao, 2023) research, which found that MIS implementation can improve operational efficiency and innovation capability of BUMDes. Technology adoption, staff training, data integration, and information security contribute to enhanced brand reputation and BUMDes adaptability to market changes. (Pamungkas & Iskandar, 2021) also affirm that MIS helps BUMDes in better decision-making and more efficient resource management, which in turn enhances their competitiveness. These results emphasize the importance of investing in MIS development and implementation as a key strategy to improve BUMDes competitive position in increasingly digital markets.

The analysis results show that Digital Literacy (DL) positively and significantly influences BUMDes Competitiveness (BC) with a path coefficient of 0.231 and t-statistic of

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4.278 ($p < 0.001$). This finding supports hypothesis H7 and indicates that improving digital literacy among BUMDes managers can significantly enhance their competitiveness. This result aligns with (S. Bahri et al., 2023) research emphasizing the importance of digital literacy in enhancing BUMDes ability to innovate and adapt to technological changes. Technology understanding, digital device usage skills, cybersecurity awareness, and data analysis capabilities contribute to BUMDes ability to develop innovative products and services. (H. Lee et al., 2022) also found that digital literacy enables BUMDes to leverage opportunities in digital markets more effectively, increasing their market share. These findings affirm the importance of digital literacy improvement programs for BUMDes managers as a strategy to enhance their competitiveness in the digital economy era.

The data analysis confirms that Government Support (GS) positively and significantly influences BUMDes Competitiveness (BC) with a path coefficient of 0.204 and t-statistic of 4.000 ($p < 0.001$). This result supports hypothesis H8 and demonstrates that effective government support can substantially enhance BUMDes competitiveness. This finding is consistent with (H. Sulistyorini, 2024) research, which found that supportive policies, financial assistance, infrastructure provision, and mentoring programs from the government contribute significantly to enhancing BUMDes ability to compete in the market. (Sinarwati et al., 2023) also affirm that government support in the form of digitalization programs can enhance BUMDes adaptability to market changes and strengthen their competitive position. These results emphasize the importance of strong partnerships between the government and BUMDes in creating an ecosystem that supports BUMDes competitiveness in the digital economy era.

The analysis results demonstrate that BUMDes Economic Performance (BEP) positively and significantly influences BUMDes Competitiveness (BC) with a path coefficient of 0.321 and t-statistic of 5.177 ($p < 0.001$). This finding supports hypothesis H9 and indicates that improving BUMDes economic performance can significantly enhance their competitiveness. This result aligns with (I. Kania et al., 2021) research emphasizing that BUMDes with strong economic performance have better ability to adapt to market changes and develop competitive advantages. Increased revenue, market expansion, profitability, and business sustainability contribute to enhanced brand reputation, market share, innovation capability, and BUMDes adaptability to market changes. (Dhewanto et al., 2020) also found that good economic performance enables BUMDes to attract strategic business partners and access resources necessary to enhance their competitiveness. These findings affirm the importance of focusing on improving economic performance as a foundation for building sustainable BUMDes competitiveness in the digital era.

The theoretical implications of this research enrich the understanding of BUMDes digital transformation. The proposed model integrates UTAUT theory with the specific context of BUMDes, demonstrating that performance expectancy, effort expectancy, social influence, and facilitating conditions play important roles in digital technology adoption. Digital marketing communication strategies and management information system implementation prove to be significant in improving BUMDes economic performance and competitiveness, extending the application of digital marketing and information management theories to the

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rural economy sector. Digital literacy emerges as a key factor, emphasizing the importance of capacity development in the context of rural digital transformation. The significant government support underlines the role of policy in facilitating technology adoption at the village level. The strong relationship between economic performance and BUMDes competitiveness reinforces strategic management theory in the context of village-based enterprises. This model provides a comprehensive framework for understanding the dynamics of digital transformation at the village level, contributing to the development of rural economic development theory in the digital era.

The findings of this research have significant managerial implications for BUMDes managers and policymakers. First, BUMDes managers need to prioritize the development of effective digital marketing communication strategies, focusing on improving content marketing quality and optimizing social media use. Second, management information system implementation should be emphasized, with particular attention to technology adoption and staff training to improve operational efficiency. Third, digital literacy improvement programs for BUMDes managers and staff should be intensified, especially in aspects of cybersecurity awareness and data analysis skills. Fourth, local governments need to strengthen support through more targeted policies, well-directed financial assistance, and adequate digital infrastructure provision. Fifth, BUMDes should focus on increasing revenue and market expansion as the main strategies to enhance competitiveness. Sixth, developing innovation capacity and adaptability to market changes should be priorities in BUMDes development strategies. These recommendations can be implemented through training workshops, partnerships with private sectors for technology transfer, and intensive mentoring programs from local governments.

This research provides significant theoretical contributions to understanding BUMDes digital transformation. First, this research develops an integrated model linking digital marketing communication strategies, management information system implementation, digital literacy, and government support with BUMDes economic performance and competitiveness. This model extends the application of UTAUT theory in the specific context of rural economy in the digital era. Second, this research identifies the mediating role of economic performance in the relationship between digital transformation factors and BUMDes competitiveness, providing new insights into the mechanisms of enhancing competitiveness at the village level. Third, this study highlights the importance of digital literacy as a key factor in BUMDes digital transformation, enriching the literature on digital capacity building in rural areas. Fourth, this research demonstrates the important role of government support in facilitating technology adoption at the village level, contributing to public policy theory in the context of rural digital economic development. Fifth, this study provides empirical evidence on the relationship between digital transformation and improved BUMDes competitiveness, strengthening the theoretical basis for technology-based rural economic development strategies.

Based on the SEM-PLS statistical analysis, several practical implications can be identified to improve BUMDes performance and competitiveness. First, with the highest path coefficient (0.312) between digital marketing communication strategies and economic

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performance, BUMDes should prioritize developing digital marketing capabilities, especially in terms of content marketing quality (loading factor 0.856) and SEO optimization. Second, management information system implementation with a coefficient of 0.285 towards economic performance shows the importance of investment in technology adoption (loading factor 0.856) and staff training. Third, digital literacy improvement programs should focus on enhancing cybersecurity awareness (loading factor 0.845) and data analysis skills. Fourth, the government needs to strengthen supportive policies (loading factor 0.845) and digital infrastructure provision to improve BUMDes performance. Fifth, with an R-squared of 0.687 for BUMDes competitiveness, competitiveness enhancement strategies should be comprehensive, covering all variables in the model.

## CONCLUSION

This study demonstrates the critical role of digital transformation in enhancing BUMDes' economic performance and competitiveness in West Bangka Regency. SEM-PLS analysis reveals that digital marketing communication strategies have the strongest impact on economic performance, followed by management information system implementation, digital literacy, and government support. The research model explains 61.2% of economic performance variation and 68.7% of competitiveness variation, underscoring the importance of a holistic approach to digital transformation. BUMDes' economic performance acts as a strong mediator between digital transformation factors and competitiveness. Practical implications for BUMDes include focusing on high-quality content marketing, SEO optimization, appropriate technology adoption, staff training, cybersecurity awareness, and leveraging digital infrastructure. Policymakers should prioritize targeted support through infrastructure development and capacity-building programs. Future research should explore the effectiveness of various digital content types, conduct comparative regional studies, and perform longitudinal analyses to understand long-term impacts. The integrated model developed provides a comprehensive framework for understanding factors influencing successful BUMDes digital transformation. These findings offer valuable guidance for BUMDes managers and policymakers in designing and implementing effective digital strategies, ultimately contributing to sustainable rural economic development. The study highlights the importance of digital transformation in rural economic progress, emphasizing the need for a multi-faceted approach encompassing marketing, technology, skills development, and policy support.

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