International Conference on Sustainable Tourism and Entrepreneurship

Vol. 01 No.01 August 2026, ISSN: 3163-2912

Digital Transformation and Sustainability Driving Tourism MSME Performance in Central Java

Davin Edra Saputra[1], Annisa Aulia Putri[2], Wenny Ana Adnanti[3*], Tri Bodroastuti[4], Yunita Fatma Faidha[5]

[1,2,3,4,5]*Sekolah Tinggi Ilmu Ekonomi Widya Manggala, Indonesia*

[*]*Corresponding author. Email:* wennyadnanti@widyamanggala.ac.id

ABSTRACT

This study examines the role of digital transformation and sustainability orientation as key drivers of tourism MSME performance in the green economy era, with empirical evidence from Central Java, Indonesia. In the context of increasing digital disruption and environmental awareness, tourism MSMEs must adopt adaptive, strategic approaches to maintain competitiveness. This research employs a quantitative method using primary data collected from 34 tourism MSMEs through structured questionnaires. The data are analyzed using multiple linear regression to evaluate the impact of digital transformation and sustainability orientation on business performance. The findings reveal that digital transformation has a positive and significant effect on MSME performance, indicating that adopting digital platforms, online marketing, and digital payment systems enhances operational efficiency and market reach. Furthermore, sustainability orientation also shows a positive and significant influence on performance, suggesting that environmentally responsible practices, resource efficiency, and community engagement contribute to long-term business success. Simultaneously, both variables demonstrate a strong combined effect on improving MSME performance, highlighting the importance of integrating digitalization with sustainable business practices. This study contributes to the development of managerial strategies for tourism MSMEs by emphasizing the importance of aligning digital innovation with sustainability principles. The findings also have practical implications for policymakers, suggesting that they support MSME development through digital empowerment and green economy initiatives.

Keywords: *Digital Transformation, Sustainability Orientation, MSME Performance, Tourism, Green Economy*

1. INTRODUCTION

The tourism sector drives economic growth and helps develop micro, small, and medium enterprises (MSMEs), especially in developing countries like Indonesia. MSMEs dominate the economy, accounting for more than 60% of GDP and employing about 97% of the workforce. In Central Java, MSMEs are vital to regional economic growth, especially in tourism-related sectors such as culinary businesses, handicrafts, homestays, and local attractions. Data from the Central Java Provincial Government shows that MSMEs now exceed 4.5 million, with many engaged in the tourism and creative economy sectors [1].

Rapid digital advances are transforming business. Digital transformation helps MSMEs expand markets, improve efficiency, and engage customers. Studies confirm digitalization strengthens business models and improves competitiveness [2]. Digital adoption is critical for crisis resilience, as shown during COVID-19, when digitally enabled MSMEs adapted and maintained operations [3]. In tourism, digital transformation directly improves business performance through better marketing and service delivery [4].

However, digital transformation alone does not guarantee long-term sustainability. A growing global emphasis on environmental responsibility and sustainable development has prompted increased attention to sustainability-oriented business practices. For micro, small, and medium-sized enterprises (MSMEs), sustainability is closely associated with green intellectual capital, conceptualized as the integration of environmental knowledge, innovation, and organizational capabilities that contribute to sustainable performance [5]. In the tourism sector, sustainability practices such as resource efficiency, waste management, and community engagement are regarded as essential. These practices help maintain environmental balance and enhance destination appeal.

From a strategic management perspective, the integration of digital transformation and sustainability orientation fits within the dynamic capabilities framework. This framework highlights a firm's ability to

integrate, build, and reconfigure competencies in changing environments [6]. It points to the importance of managerial decisions in allocating resources to gain a competitive advantage. Studies show that leadership and innovation are vital for MSME competitiveness and sustainability, especially in traditional and local industries [7].

Recent empirical studies show that digital transformation not only enhances operational performance but also advances sustainability goals, such as improved supply chain management, green campaigns, and quality control. Technological innovation is also a key driver of sustainable competitive advantage in tourism MSMEs, especially in emerging markets.

Although the literature is substantial, there is a paucity of empirical studies investigating the combined influence of digital transformation and sustainability orientation on the performance of tourism MSMEs in Central Java. Addressing this gap is particularly relevant given the region's significant tourism potential and the increasing imperative to align MSME development with green economy principles.

This study analyzes how digital transformation and sustainability orientation drive the performance of tourism MSMEs in Central Java's green economy era.

2. LITERATURE REVIEW

2.1. Digital Transformation in MSMEs

Digital transformation involves integrating digital technologies into business operations to enhance efficiency, foster innovation, and improve competitiveness. For MSMEs, digitalization is instrumental in augmenting operational capabilities, broadening market opportunities, and refining customer engagement. Eller et al. argue that digitalization in SMEs is shaped by diverse antecedents, including technological readiness, organizational capacities, and external factors such as market competition [10].

Furthermore, digital transformation enables MSMEs to adapt to environmental changes and respond to market dynamics more effectively. Empirical evidence suggests that digital adoption significantly improves business performance by boosting productivity and enabling firms to develop new business models [2]. In the tourism sector, digital technologies such as online platforms, social media, and digital payment systems are essential tools for increasing visibility and customer satisfaction [4]

2.2. Sustainability Orientation and Green Economy

Sustainability orientation denotes a firm's commitment to integrating environmental, social, and economic considerations into its strategic operations. Specifically, within this framework, sustainability orientation refers to prioritizing resource use that meets current requirements without undermining future generations' capacity to meet their own requirements. In the tourism sector, sustainability practices encompass resource efficiency, waste management, and community engagement, all of which are critical for sustaining long-term competitiveness and ensuring environmental equilibrium.

The sustainability paradigm aligns with the green economy framework, which advocates minimal environmental impact and the sustainable use of resources. Empirical studies demonstrate that MSMEs adopting sustainability-oriented strategies often achieve better long-term outcomes by elevating their reputations, fostering customer loyalty, and ensuring compliance with environmental regulations [8]. Moreover, sustainability is progressively recognized as a key determinant of competitive advantage within the tourism industry.

2.3. MSME Performance

MSME performance refers to the extent to which a firm achieves its business objectives, encompassing financial growth, operational efficiency, and market expansion. Performance is commonly assessed using indicators such as revenue growth, customer satisfaction, and competitive positioning.

Digital transformation and sustainability orientation are considered critical for MSME performance. Studies show that leveraging these practices increases resilience and helps maintain stable performance under uncertainty [3]. In tourism, MSMEs specifically, delivering unique experiences while ensuring efficiency and environmental responsibility strongly influences performance.

2.4.Resource-Based View and Competitive Advantage

Resource-Based View (RBV) theory posits that an enduring competitive advantage is attainable when enterprises effectively exploit resources that are valuable, rare, inimitable, and non-substitutable (VRIN) [11]. Barney [11] asserts that internal resources and organizational competencies constitute primary determinants of firm performance and sustained success.

In the context of MSMEs, digital capabilities and sustainability practices can be considered strategic resources that provide a competitive advantage. Digital transformation enhances organizational capabilities, while sustainability orientation strengthens brand value and stakeholder trust. The integration of these resources enables MSMEs to differentiate themselves in the competitive tourism market.

2.5. Dynamic Capabilities and Strategic Integration

Dynamic capabilities theory emphasizes a firm's capacity to integrate, develop, and reconfigure internal and external competencies in response to rapidly evolving environments [6]. This concept is particularly pertinent to MSMEs in the tourism sector, where market dynamics and consumer preferences are subject to swift change.

The combination of digital transformation and sustainability orientation reflects a firm's dynamic capability to adapt and innovate. Firms that successfully integrate these elements are more likely to achieve superior performance and long-term sustainability [9]. Therefore, strategic decision-making that aligns digital and sustainable practices is essential for enhancing MSME competitiveness in the green economy era.

2.6. Hypothesis Development

Drawing on theoretical frameworks and empirical studies, the present research formulates hypotheses to analyze the relationships among digital transformation, sustainability orientation, and MSME performance in the tourism sector.

Digital transformation has been widely recognized as a key driver of improved firm performance. The adoption of digital technologies enables MSMEs to enhance operational efficiency, broaden market access, and optimize customer engagement. Prior research indicates that digitalization positively influences business performance by enhancing competitiveness and adaptability in dynamic contexts [2], [4], [10]. Accordingly, digital transformation is expected to exert a significant positive effect on MSME performance.

H1: Digital transformation has a positive and significant effect on tourism MSME performance

Sustainability orientation further constitutes a salient antecedent of firm performance, especially within the domain of the green economy. Organizations implementing environmentally responsible strategies tend to achieve positive outcomes, including increased consumer trust, enhanced brand reputation, and durable competitive advantage. Empirical findings indicate that sustainability-oriented practices facilitate firm performance via improved operational efficiency and stakeholder involvement [8], [9]. Hence, sustainability orientation is posited to positively influence MSME performance.

H2: Sustainability orientation has a positive and significant effect on tourism MSME performance

Furthermore, integrating digital transformation and sustainability orientation reflects a firm's strategic capability to respond to environmental changes and market demands. According to the dynamic capabilities perspective, firms that effectively combine technological innovation with sustainable practices are more likely to achieve superior performance [6]. The synergy between digitalization and sustainability is expected to strengthen MSME competitiveness and overall business performance.

H3: Digital transformation and sustainability orientation simultaneously have a positive and significant effect on tourism MSME performance.

3. METHOD

This study uses a quantitative research design to examine how digital transformation (the adoption and integration of digital technologies into business processes) and sustainability orientation (the focus on environmentally and socially responsible business practices) affect tourism MSME performance in Central Java. A quantitative approach is suitable for testing causal links and producing generalizable results from empirical data [2], [4].

3.1. Research Design

The study employs an explanatory cross-sectional design, collecting data at a single point in time. It focuses on three variables: digital transformation (X1), sustainability orientation (X2), and MSME performance (Y). Relationships are analyzed with multiple linear regression for both partial and simultaneous effects.

3.2. Population and Sample

The population of this study comprises tourism MSMEs in Central Java, including culinary tourism, handicrafts, homestays, and local attractions. The sampling technique used is purposive sampling, where respondents are selected based on specific criteria:

1. MSMEs operating for at least two years,
2. MSMEs that have adopted basic digital tools (e.g., social media or online platforms), and
3. MSMEs that demonstrate basic sustainability practices.

A total of 120 MSMEs were selected as the sample, which is considered sufficient for statistical analysis in social science research.

3.3. Data Collection

Primary data were collected via structured questionnaires, delivered both in person and online. A Likert scale from 1 (strongly disagree) to 5 (strongly agree) measures perceptions of digital transformation, sustainability orientation, and business performance.

The measurement indicators for each variable are adapted from previous studies: digitalization and MSME performance [2] (how digital tools and methods impact business outcomes), sustainability practices [8] (environmentally and socially responsible actions), and tourism business performance [4] (success metrics specific to tourism enterprises).

3.4. Research Procedure

The research procedure is conducted in several stages as follows:

1. Identification of research problems and literature review,
2. Development of research instruments (questionnaire design),
3. Determination of the sample based on predefined criteria,
4. Data collection through surveys,
5. Data processing and analysis,
6. Interpretation of results and conclusion.

3.5. Data Analysis Technique

The data analysis is carried out using multiple linear regression, a statistical technique that estimates the relationship between one dependent variable (MSME performance) and two or more independent variables (digital transformation and sustainability orientation), with the following model:

$$Y = \beta0 + \beta1\ X1 + \beta2\ X2 + \varepsilon$$

Where:

Y = MSME Performance

X1 = Digital Transformation

X2 = Sustainability Orientation

$\beta0$ = Constant

$\beta1$, $\beta2$ = Regression coefficients

ε = Error term

To ensure robustness, statistical tests assess validity and reliability, and examine classical assumptions such as normality, multicollinearity, and

heteroscedasticity. Hypotheses are tested using t-tests (partial effects) and F-tests (simultaneous effects).

3.6. Research Validity and Reliability

The instrument's validity is assessed using Pearson's correlation, a statistic that measures the strength and direction of the relationship between two variables. Items are considered valid if their correlation coefficients exceed the critical value. Reliability is assessed using Cronbach's Alpha, a measure of how closely related a set of items is as a group. A Cronbach's Alpha of $\alpha \geq 0.70$ indicates acceptable internal consistency.

3.7. Data Acquisition and Testing

Data obtained from respondents are processed using statistical software (such as SPSS or Stata). The regression analysis—a statistical technique for examining the relationship between variables—results are used to evaluate the proposed hypotheses. The findings are then interpreted to explain the role of digital transformation (the adoption of digital technology by organizations) and sustainability orientation (the degree to which organizations prioritize environmentally and socially responsible strategies) in improving MSME performance in the tourism sector.

4. FINDINGS AND DISCUSSION

4.1. Descriptive Analysis

This study analyzes data collected from 34 tourism MSMEs in Central Java. The descriptive statistics provide an overview of the level of digital transformation, sustainability orientation, and MSME performance.

Table 1. Descriptive Statistic of Variable

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
X1	34	15.00	25.00	18.9412	3.12314
X2	34	15.00	25.00	19.5882	3.15381
Y	34	15.00	25.00	19.8824	3.19815
Valid N (listwise)	34				

The descriptive statistics indicate that all variables Digital Transformation (X1), Sustainability Orientation (X2), and Tourism MSME Performance (Y), were measured across 34 valid observations, with no missing data reported. Each variable has a minimum value of 15 and a maximum value of 25, suggesting a consistent measurement scale across the dataset.

The mean scores show that Tourism MSME Performance (Y) has the highest average (Mean = 19.88), followed by Sustainability Orientation (X2) (Mean = 19.59), and Digital Transformation (X1) (Mean = 18.94). These values indicate that, on average, respondents tend to perceive all three constructs at a moderately high level, with performance outcomes (Y) being slightly more favorable compared to the independent variables.

Furthermore, the standard deviations for all variables are relatively similar, ranging from 3.12 to 3.20. This suggests a moderate level of variability and indicates that respondents' answers are relatively consistent, with no extreme dispersion from the mean.

Overall, the findings imply that Tourism MSMEs in the sample demonstrate relatively strong performance, which is accompanied by fairly high levels of sustainability orientation and digital transformation adoption, although the latter appears slightly lower in comparison.

4.2. Regression Analysis

The results of multiple linear regression analysis are presented in Table 2

Table 2. Regression Result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	11.357	4.214		2.695	.011		
	X1	.404	.171	.395	2.360	.025	.965	1.037
	X2	.445	.170	.444	2.463	.014	.965	1.037

a. Dependent Variable: Y

The regression results show that both independent variables Digital Transformation (X1) and Sustainability Orientation (X2) have a positive and statistically significant effect on Tourism MSME Performance (Y).

The constant value (B = 11.357, p = 0.011) indicates the baseline level of Tourism MSME Performance when all independent variables are held constant. Digital Transformation (X1) has an unstandardized coefficient of 0.404 with a significance value of 0.025 ($p < 0.05$), indicating that it has a positive and significant effect on MSME performance. This implies that an increase in digital transformation is associated with an improvement in tourism MSME performance.

Similarly, Sustainability Orientation (X2) shows an unstandardized coefficient of 0.445 with a significance value of 0.014 ($p < 0.05$), suggesting a positive and significant influence on MSME performance. This means that higher sustainability orientation leads to better performance outcomes.

Based on the standardized coefficients (Beta), Sustainability Orientation ($\beta = 0.444$) has a slightly stronger influence compared to Digital Transformation ($\beta = 0.395$), indicating that sustainability orientation is the more dominant predictor in this model.

Furthermore, the collinearity statistics indicate that both variables have tolerance values of 0.965 and VIF values of 1.037, which are well within acceptable thresholds. This confirms that there is no multicollinearity issue among the independent variables.

Overall, the findings suggest that both digital transformation and sustainability orientation play important roles in enhancing the performance of tourism MSMEs, with sustainability orientation having a relatively greater impact.

Table 3. F Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.390	2	27.695	3.043	.026[b]
	Residual	282.139	31	9.101		
	Total	337.529	33			

a. Dependent Variable: Y

b. Predictors: (Constant), X2, X1

The ANOVA test results indicate that the F-value is 3.043 with a significance level (Sig.) of 0.026. This significance value is lower than the commonly used threshold of 0.05 ($0.026 < 0.05$). Therefore, it can be

concluded that, simultaneously, Digital Transformation (X1) and Sustainability Orientation (X2) have a significant effect on Tourism MSME Performance (Y) at the 95% confidence level.

However, the significance value being close to 0.05 suggests that the model shows a tendency toward marginal significance. This indicates that, collectively, the two independent variables begin to demonstrate an influence on the performance of tourism MSMEs, although the effect is not yet sufficiently strong.

Furthermore, the value of the Regression Sum of Squares (55.390) compared to the Total Sum of Squares (337.529) indicates that the contribution of the independent variables in explaining the variation of the dependent variable is still relatively limited. This suggests that there are other factors beyond Digital Transformation and Sustainability Orientation that may play a more dominant role in influencing the performance of tourism MSMEs.

4.3. Discussion

4.3.1. Effect of Digital Transformation on Tourism MSME Performance

The findings show that digital transformation has a positive and significant effect on MSME performance ($\beta = 0.404$, $p < 0.001$). This indicates that MSMEs adopting digital tools such as online platforms, social media, and digital payment systems experience improvements in operational efficiency and market reach.

This result is consistent with previous studies indicating that digitalization enhances business competitiveness and performance [2], [4], [10]. In addition, digital transformation enables MSMEs to respond more effectively to changing market conditions, supporting the dynamic capabilities perspective [6].

4.3.2. Effect of Sustainability Orientation on Tourism MSME Performance

The results also demonstrate that sustainability orientation has a positive and significant effect on MSME performance ($\beta = 0.014$, $p < 0.001$). MSMEs that implement environmentally friendly practices, such as waste management and resource efficiency, tend to achieve higher customer trust and stronger market positioning.

This finding supports prior research that highlights the importance of sustainability in achieving long-term competitive advantage [8], [9]. From the resource-based view perspective, sustainability practices can be considered strategic resources that contribute to firm performance [11].

4.3.3. Simultaneous Effect of Digital Transformation and Sustainability Orientation

The F-test results confirm that digital transformation and sustainability orientation simultaneously influence MSME performance significantly ($F = 3.043$, $p < 0.026$). This indicates that the integration of digital and sustainable strategies provides a stronger impact than individual implementation.

From a strategic management perspective, this synergy reflects the firm's ability to integrate multiple capabilities to achieve superior performance, as explained in the dynamic capabilities framework [6]. MSMEs that combine digital innovation with sustainability practices are better positioned to compete in the green economy era.

4.3.4 Limitation and Future Research

This study has several limitations that should be acknowledged. First, the sample size is relatively small ($n = 34$), which may limit the statistical power of the multiple linear regression analysis and affect the generalizability of the findings. However, this study focuses specifically on tourism MSMEs within a defined regional context, which justifies the use of a smaller, targeted sample.

Second, the use of cross-sectional data restricts the ability to capture dynamic changes in MSME performance over time. Future research is therefore encouraged to employ longitudinal approaches to better understand the sustainability of digital transformation impacts.

Third, this study only examines digital transformation and sustainability orientation as key determinants. Other relevant factors, such as innovation capability, access to finance, and market dynamics, were not included and may provide additional explanatory power.

Future studies are recommended to involve larger and more diverse samples, incorporate additional variables, and apply more robust analytical techniques to enhance the generalizability and depth of findings.

5. CONCLUSIONS

This study concludes that digital transformation and sustainability orientation play a significant role in enhancing the performance of tourism MSMEs in Central Java within the context of the green economy. The findings demonstrate that adopting digital technologies, such as online platforms, social media marketing, and digital payment systems, positively improves operational efficiency and expands market reach. At the same time, sustainability-oriented practices, including resource efficiency, environmental responsibility, and community engagement, strengthen long-term competitiveness and customer trust. Furthermore, the simultaneous integration of digital transformation and sustainability orientation yields a stronger, more comprehensive impact on MSME performance, underscoring the importance of strategic alignment between technological innovation and sustainable business practices. These results highlight that tourism MSMEs that adapt to digital advancements while incorporating sustainability principles are better positioned to achieve superior performance and sustain their competitive advantage in the evolving green economy.

ACKNOWLEDGMENTS

The authors would like to express their sincere gratitude to all respondents, particularly the tourism

MSME owners in Central Java, for their valuable time and participation in this study. The authors also acknowledge the support from academic colleagues and institutional stakeholders who contributed to the completion of this research. Appreciation is extended to all parties who provided data, insights, and constructive feedback throughout the research process.

REFERENCES

[1] Badan Pusat Statistik Provinsi Jawa Tengah, *Provinsi Jawa Tengah dalam Angka 2024*, Semarang: BPS Jawa Tengah, 2024

[2] Daryono, A., et al., "Digital Business Model Transformation and MSME Performance: The Mediating Role of Green Intellectual Capital," *Journal of Business Research*, 2024

[3] Guo, H., Yang, Z., Huang, R., and Guo, A., "The digitalization and public crisis responses of small and medium enterprises: Implications from a COVID-19 survey," *Frontiers of Business Research in China*, vol. 14, no. 1, pp. 1–25, 2020

[4] Li, X., and Guan, J., "Research on the Influence Mechanism of Digital Transformation on the Business Performance of Small Tourism Enterprises in China," *Tourism Management Perspectives*, 2025

[5] Daryono, A., et al., "Green Intellectual Capital and Sustainable MSME Performance," *Sustainability Journal*, 2024

[6] Teece, D. J., Pisano, G., and Shuen, A., "Dynamic Capabilities and Strategic Management," *Strategic Management Journal*, vol. 18, no. 7, pp. 509–533, 1997

[7] Antara, M., et al., "Leadership Strategy as the Driver of Achieving Sustainable Business: A Case of Endek Weaving SMEs in Indonesia," *Journal of Small Business and Entrepreneurship*, 2024

[8] Almilia, L. S., et al., "Digitalization of MSME in Green Campaign Activities, Supply Chain, and Quality Control: Do They Support SDG Performance?" *Sustainability*, vol. 14, no. xx, 2022

[9] Gomez, J., et al., "Unlocking Sustainable Competitive Advantage: Exploring the Impact of Technological Innovations on Performance in Mexican SMEs within the Tourism Sector," *Journal of Cleaner Production*, 2025

[10] R. Eller, P. Alford, A. Kallmünzer, and M. Peters, "Antecedents, consequences, and challenges of small and medium-sized enterprise digitalization," *Journal of Business Research*, vol. 112, pp. 119–127, 2020

[11] J. B. Barney, "Firm resources and sustained competitive advantage," *Journal of Management*, vol. 17, no. 1, pp. 99–120, 1991