

The Influence of Government Support, Digital Literacy, and Market Orientation on Agrotourism Sustainability in the Menoreh Mountains

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ABSTRACT

This study aims to analyze the influence of government support, digital literacy, and market orientation on agrotourism sustainability in the Menoreh Mountains. A quantitative approach with explanatory design was employed, involving 100 respondents consisting of agrotourism managers and operators. Data were collected through Likert-scale questionnaires and analyzed using multiple linear regression. The results reveal that government support has a significant positive impact on agrotourism sustainability through policies, infrastructure provision, and destination promotion. Digital literacy significantly enhances competitiveness via social media utilization, tourism applications, and online information management. Market orientation also shows significant effects by driving product adaptation, service adjustments, and targeted promotional strategies. Simultaneously, the three independent variables contribute significantly to agrotourism sustainability in the Menoreh Mountains. These findings indicate that synergy among policy support, digital capabilities, and adaptive marketing strategies is the key to strengthening competitiveness and ensuring long-term community-based agrotourism sustainability.

Keywords - Government Support, Digital Literacy, Market Orientation, Agrotourism Sustainability, Menoreh Mountains

INTRODUCTION

Agritourism has developed as an integrated form of tourism that combines the agricultural and tourism sectors, aiming to promote inclusive and sustainable economic growth in rural areas. In Indonesia, this concept is highly relevant given the country's abundant natural resources and the strong cultural heritage embedded in rural communities. One of the regions that stands out in agritourism development is the Menoreh Mountains, particularly in Kulon Progo Regency, Yogyakarta Special Region. This area is well known for its beautiful landscapes and diverse community-based agricultural activities that hold strong potential to be developed into educational and sustainable tourism destinations (Dinas Pariwisata Kulon Progo, 2023).

In fact, the increasing flow of tourists to Yogyakarta demonstrates a growing demand for nature-based tourism and local experiences. According to the Central Bureau of Statistics (BPS DIY, 2024), by July 2024, there were 22.59 million domestic tourist trips recorded in the region, marking a 19% increase compared to the same period in the previous year. Kulon Progo itself contributed more than 1.38 million trips, making it one of the key mountain tourism

centers. Moreover, international tourist arrivals also rose significantly, with a 36.71% increase in July 2024 compared to the previous month.

However, the full potential of agritourism in the Menoreh Mountains has not yet been fully realized. One of the main challenges lies in the low level of digital literacy among agritourism actors. A study in Kemiri Tourism Village, East Java, revealed that limited digital skills had a negative impact on promotion strategies, branding efforts, and the overall digitalization of tourism services (Wicaksono et al., 2024). A similar situation occurs in Kulon Progo, where many rural tourism managers remain unfamiliar with digital marketing platforms and lack data-driven strategies. In addition, the market orientation of agritourism stakeholders has become an important yet often overlooked factor. A lack of understanding of tourist preferences, market segmentation, and value propositions has led to stagnation in tourism innovation. According to FAO, agritourism sustainability largely depends on the adaptive capacity of local actors to respond to market dynamics while simultaneously integrating environmentally friendly agricultural practices into tourism narratives (Nogalez et al., 2023).

From an institutional perspective, government support plays a pivotal role in creating an integrated agritourism ecosystem. The Kulon Progo Regional Government has formulated a regional development strategy through its 2023 Regional Government Work Plan (RKPD), prioritizing agritourism as a key program. This support includes infrastructure development, tourism workforce training, and cross-sectoral integration of agriculture, tourism, and cooperatives (Habibah & Winarni, 2023). However, evaluations show that stakeholder collaboration remains suboptimal, while monitoring and evaluation mechanisms still need strengthening.

A review of previous studies indicates a tendency to examine one or two variables separately for instance, government support for infrastructure or digital literacy for promotion while the simultaneous relationship between government support, digital literacy, and market orientation on agritourism sustainability has rarely been quantitatively tested. In fact, the synergy of these three elements has the potential to determine the quality of governance, the effectiveness of digital promotion, the precision of product innovation, and the suitability of destination value propositions with market needs. This knowledge gap highlights the urgency for more comprehensive research.

Partial success stories can be seen in Nglinggo Tourism Village, where a stakeholder dynamics model involving local communities, government, and tourism businesses has shown promising results in coffee-based agritourism development. Nevertheless, this success remains localized and has not yet been widely replicated across the Menoreh Mountains region (Astono et al., 2023).

Given these conditions, this study becomes urgent as it empirically examines the influence of each key factor on agritourism sustainability in the Menoreh Mountains, while also assessing their simultaneous effects. Specifically, this research seeks to determine: first, the extent to which current government support contributes to strengthening destination sustainability; second, the role of digital literacy among agritourism actors in enhancing competitiveness and

adaptability in the digital era; third, how market orientation influences tourism actors' capacity to understand and meet consumer needs; and fourth, the simultaneous influence of all three variables to gain a comprehensive understanding of the most significant drivers of agritourism sustainability.

LITERATURE REVIEW

A. Agrotourism

Agrotourism is a form of business that links agricultural production and/or processing with tourism activities, inviting the public to visit farms or agricultural enterprises for recreational and educational purposes while generating income for farmers (Patterson & Aslam, 2024). This concept emphasizes long-term balance across economic, socio-cultural, and environmental benefits, ranging from farmers' income diversification, preservation of landscapes and agrarian knowledge, to education for visitors about sustainable farming practices. Globally, agrotourism is viewed as an instrument for transforming food systems due to its ability to create added value along the supply chain, strengthen producer-consumer networks, and encourage sustainable consumption and production (Partalidou, 2024).

In Indonesia, policy frameworks for destination development and human resource capacity building are supported through regulations such as Ministerial Regulation No. 1 of 2024, which facilitates tourism village development, guides training, safety, hygiene, and homestay management (Kemenparekraf, 2024). Demand-side indicators show the revival of tourism mobility, positioning agrotourism as a growing niche market (Pemda DIY, 2024). On the supply side, national horticulture sector performance underpins agrotourism products, with a 12.57% increase in horticultural exports and post-harvest utility of 94.70% in 2024, strengthening competitiveness and product differentiation in agrotourism destinations (Kementrian Pertanian, 2024).

B. Community-Based Tourism (CBT)

Community-Based Tourism (CBT) is a sustainable tourism model that places local communities at the center of planning,

management, and benefit distribution. This approach ensures that residents participate in decision-making processes and retain the economic benefits, while protecting cultural heritage and the environment. Unlike conventional tourism, CBT emphasizes empowerment, cultural preservation, and environmental protection while promoting local entrepreneurship and fair distribution of benefits (Gantait et al., 2024).

Globally, CBT is recognized as an effective tool for achieving the Sustainable Development Goals, particularly SDG 1 (No Poverty) and SDG 8 (Decent Work and Economic Growth). Studies highlight its role in creating sustainable livelihoods, strengthening local economies, and empowering marginalized communities (Jackson, 2025). Recent bibliometric studies show growing interest in CBT research, with focuses on governance, empowerment, and socio-economic impacts in rural tourism. However, gaps remain, particularly in evaluating CBT's deep impact on local welfare and inclusivity, such as women's empowerment in Iran (Cordova-Buiza et al., 2025; Nikjoo et al., 2025).

C. Government Support

Government support in agrotourism development is realized through regulatory frameworks, infrastructure provision, human resource training, institutional strengthening, destination promotion, and cross-sector orchestration. In Kulon Progo, regional development priorities from the 2022–2023 RKPD were translated into programs that improved accessibility, standardization, local product curation, and digital promotion channels (Dinas Pariwisata Kulon Progo, 2023). These efforts created an enabling environment for tourism development by integrating agriculture, tourism, and MSMEs into a single ecosystem.

At the operational level, government programs provide legal certainty, improve accessibility, expand digital reach, and enhance human capital quality. Indicators include regulations that guarantee rights and responsibilities, infrastructure that improves connectivity and visitor comfort, and promotion strategies that strengthen destination branding

(Jayanti & Prawiro, 2024). Case studies such as Nglinggo Agrotourism Village show that government support combined with community participation and market orientation can produce successful and replicable models for sustainable tourism (Astono et al., 2023).

D. Customer Engagement Theory

Digital literacy in agrotourism encompasses access to devices and networks, content creation skills, mastery of social media platforms, reservation systems, and data analytics to improve visibility and visitor engagement (Wicaksono et al., 2024). Consistent, relevant content such as storytelling around harvest seasons or farm-to-TABLE experiences enhances organic reach, while quick responses to online interactions strengthen trust and visibility. Digital integration also reduces booking friction and transforms online engagement into actual visits.

Empirical evidence shows that training and mentoring programs significantly improve digital competencies, expand reach, and facilitate service updates. Branding kits, professional banners, promotional videos, and official websites provide consistent identity and credibility (Yulia et al., 2023). In agrotourism, social media interactions increase visitor loyalty and word-of-mouth promotion, while effective online communication management builds trust and strengthens revisit intentions, ultimately boosting destination sustainability (Jayanti & Prawiro, 2024).

E. Market Orientation

Market orientation in agrotourism involves customer orientation, competitor orientation, and interfunctional coordination. It translates into adaptive innovations such as farm-to-TABLE experiences, bean-to-bar activities, hands-on workshops, and story-based tourism packages (Kemenparekraf, 2023). By aligning products and services with evolving tourist needs, market orientation creates differentiated and memorable experiences.

When integrated with sustainability principles, market orientation supports environmentally responsible practices while ensuring financial viability. Indicators include understanding tourist needs, adjusting products and services, and implementing targeted

promotional strategies. With agricultural supply capacity—evidenced by horticultural export growth and strong production utility—agrotourism destinations can reliably deliver authentic experiences that enhance competitiveness and visitor satisfaction (Astono et al., 2023; Kementrian Pertanian, 2024; Yulia et al., 2023).

METHODOLOGY

This study applied a quantitative methodology with an explanatory research design to examine causal relationships between independent variables (government support, digital literacy, and market orientation) and the dependent variable, agrotourism sustainability in the Menoreh Mountains. A quantitative approach was chosen because it enables systematic hypothesis testing and statistical analysis of relationships between variables, allowing findings to be generalized across similar contexts. The explanatory design was appropriate since the study aimed to explain how institutional, technological, and market factors interact to influence destination sustainability.

A. Research Location

The Menoreh Mountains, located in Kulon Progo Regency, Yogyakarta Special Region, served as the primary research setting. This area was purposively selected due to its position as one of the priority agrotourism clusters in Yogyakarta, characterized by strong integration of agriculture and rural tourism initiatives. The site represents diverse community-based agrotourism activities supported by government policies, digital promotion efforts, and market-oriented strategies that align with the study's objectives on sustainable agrotourism development.

Geographically, the Menoreh highlands lie within volcanic–karst hill formations with mixed land cover including community gardens, terraced rice fields, and forested areas. Situated at moderate elevations with fertile soils and a humid tropical climate, the region is highly suitable for cultivating commodities such as coffee, cocoa, and horticulture. These agricultural activities are directly integrated into tourism offerings such as farm tours, post-harvest demonstrations, and

local culinary experiences, making the Menoreh Mountains a particularly appropriate locus for examining the interplay between government support, digital literacy, market orientation, and agrotourism sustainability.

B. Sample Determination

1) Sample size

1. The sample size was determined using Slovin's formula at a 95% confidence level ($\alpha = 0.05$), with a population (N) of 135 agrotourism actors operating in the Menoreh Mountains. Applying the formula: $n = N / (1 + N \times e^2)$

where $e = 0.05$, the calculation resulted in approximately 100 respondents. This figure was deemed sufficient to ensure statistical robustness for multiple regression analysis while maintaining practical feasibility for field data collection.

2) Sampling Criteria

Purposive sampling was employed with specific inclusion criteria: respondents had to be agrotourism managers or entrepreneurs operating in the Menoreh area, have at least one year of management experience, be directly involved in agricultural-based tourism services, and be willing to participate in the study. These criteria ensured that all participants possessed relevant managerial, digital, and market-oriented experiences necessary for accurately assessing the effects of government support, digital literacy, and market orientation on agrotourism sustainability.

C. Variables Operationalization

- X1: Government Support – represents institutional facilitation through policies, infrastructure provision, and destination promotion aimed at strengthening agrotourism sustainability. Measurement indicators include local government regulations and policies, availability of supporting facilities and infrastructure, and promotional strategies for tourism destinations.
- X2: Digital Literacy – captures the ability of agrotourism actors to utilize digital platforms for promotion, communication, and business management. Indicators

cover social media mastery for promotion, utilization of tourism-related applications or digital platforms, and the capacity to manage online communication and information effectively.

- X3: Market Orientation – reflects the strategic perspective of agrotourism managers in identifying and responding to market needs. Measurement indicators include understanding tourist preferences, adapting products and services to visitor demands, and implementing targeted promotional strategies.
- Y: Agrotourism Sustainability – assesses the long-term viability of agrotourism destinations across economic, socio-cultural, and environmental dimensions. Indicators comprise improved community economic welfare, environmental conservation practices, and active local participation in tourism management.

The sample size was determined using Slovin's formula with a 95% confidence level ($\alpha = 0.05$), yielding 100 respondents from a population of 135 agrotourism actors. The sampling technique applied purposive sampling with inclusion criteria: respondents must be agrotourism managers or entrepreneurs operating in the Menoreh Mountains, have a minimum of one year of business management experience, be directly involved in community-based agrotourism activities, and be willing to participate in the research.

D. Conceptual Framework

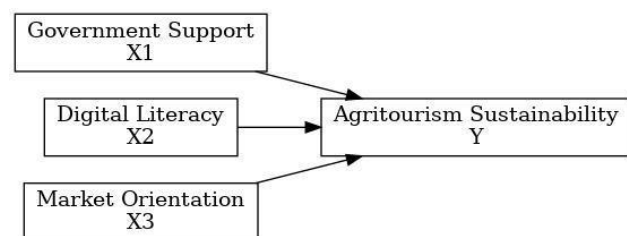


Fig. 1. Conceptual framework.

E. Data Collection Procedures

Primary data were collected using structured questionnaires with a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The instrument was adapted to the agrotourism context and validated through expert review and a pilot test.

Data collection took place from May to August 2025 in several community-based agrotourism sites in the Menoreh Mountains, involving both direct field distribution and online surveys. Research assistants followed standardized protocols to ensure consistent and reliable responses.

F. Statistical Analysis

Multiple linear regression analysis was employed to test the hypothesized causal relationships, using the model equation:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \quad (3)$$

The analysis included validity testing through Pearson product-moment correlations, reliability testing using Cronbach's Alpha coefficients, and classical assumption testing. Classical assumption tests comprised normality checks (Kolmogorov–Smirnov and Shapiro–Wilk), multicollinearity diagnostics (Variance Inflation Factor and tolerance values), and heteroscedasticity assessments (Glejser and Breusch–Pagan tests).

Hypothesis testing was conducted using t-tests to evaluate the significance of each independent variable (X_1 = Government Support, X_2 = Digital Literacy, X_3 = Market Orientation) on the dependent variable (Y = Agrotourism Sustainability). An F-test was applied to examine overall model significance. Statistical decisions were made at a significance level of $\alpha = 0.05$, ensuring robust inference on both partial and simultaneous effects.

RESULTS

A. Respondent Characteristics

Research participants ($n = 100$) represented diverse profiles of agrotourism actors and managers operating in the Menoreh Mountains. Gender distribution comprised 58% male and 42% female respondents. Age categories

indicated that 12% were under 25 years, 38% between 25–35 years, 30% between 36–45 years, and 20% above 45 years, reflecting a predominance of respondents in the productive age group.

Educational backgrounds included 44% high school graduates, 20% diploma holders, 30% bachelor's degree holders, and 6% postgraduate degree recipients. In terms of business tenure, 25% had managed their ventures for less than three years, 40% for 3–5 years, and 35% for more than five years. This distribution suggests that most respondents possessed sufficient managerial experience and educational qualifications to adapt to digital innovations and market-oriented strategies in agrotourism.

B. Instrument Validation Results

Validity testing confirmed that all questionnaire items exceeded the minimum correlation threshold. Pearson correlation coefficients ranged from 0.654 to 0.801, well above the critical value of 0.196 for $n = 100$ ($\alpha = 0.05$). These results indicate that all items demonstrate strong item–total correlations, confirming their validity across the four measurement constructs: government support (X1), digital literacy (X2), market orientation (X3), and agrotourism sustainability (Y).

TABLE I
VALIDITY TEST RESULTS

Variable	Item	r-value	r-TABLE	Status
Government Support (X ₁)	X _{1.1}	0.654	0.196	Valid
	X _{1.2}	0.712	0.196	Valid
	X _{1.3}	0.683	0.196	Valid
Digital Literacy (X ₂)	X _{2.1}	0.721	0.196	Valid
	X _{2.2}	0.749	0.196	Valid
	X _{2.3}	0.735	0.196	Valid
Market Orientation (X ₃)	X _{3.1}	0.801	0.196	Valid
	X _{3.2}	0.774	0.196	Valid

	X _{3.3}	0.788	0.196	Valid
Agrotourism Sustainability (Y)	Y.1	0.755	0.196	Valid
	Y.2	0.782	0.196	Valid
	Y.3	0.769	0.196	Valid

Source: Researcher Processed Data, 2025

Reliability assessment showed satisfactory internal consistency across all research variables. Cronbach's Alpha coefficients for each construct were above the minimum threshold of 0.70, indicating strong reliability. Specifically, Government Support achieved $\alpha = 0.772$, Digital Literacy $\alpha = 0.781$, Market Orientation $\alpha = 0.795$, and Agrotourism Sustainability $\alpha = 0.802$. These results confirm that the measurement instruments were consistent and dependable for capturing the intended constructs in this study.

C. Classical Assumption Testing

Normality testing using both Kolmogorov–Smirnov and Shapiro–Wilk methods produced significance values of 0.200 and 0.124 ($p > 0.05$), confirming that the regression residuals were normally distributed. Multicollinearity analysis revealed Variance Inflation Factor (VIF) values ranging from 1.342 to 1.433 (< 10) and Tolerance values between 0.698 and 0.745 (> 0.10), indicating no multicollinearity issues among the predictors.

Heteroscedasticity testing with the Glejser method yielded significance levels of 0.481, 0.512, and 0.623 ($p > 0.05$), while the Breusch–Pagan test returned $p = 0.431$ (> 0.05), confirming homoscedasticity of residuals. Autocorrelation diagnostics showed a Durbin–Watson statistic of 1.967 (between 1.5 and 2.5) and a Runs Test significance of 0.612 (> 0.05), indicating the absence of autocorrelation. Collectively, these results validate the appropriateness of multiple linear regression for hypothesis testing in this study.

D. Multiple Regression Analysis

Statistical analysis produced the following regression equation:

$$Y = 5.214 + 0.312X_1 + 0.278X_2 + 0.295X_3$$

TABLE II

MULTIPLE LINEAR REGRESSION
COEFFICIENTS

Variable	B	Std. Error	t-value	Sig.	Status
Constant	5.214	1.087	4.797	0.000	Significant
Government Support (X₁)	0.312	0.075	4.160	0.000	Significant
Digital Literacy (X₂)	0.278	0.082	3.390	0.001	Significant
Market Orientation (X₃)	0.295	0.079	3.734	0.000	Significant

Source: Researcher Processed Data, 2025

Model performance indicators demonstrated strong explanatory power: $R = 0.827$, $R^2 = 0.684$, Adjusted $R^2 = 0.675$, F-statistic = 76.214 ($p < 0.001$). These results indicate that the three independent variables collectively explained 68.4% of the variance in agrotourism sustainability, while the remaining 31.6% was influenced by factors outside the model.

E. Hypothesis Testing Results

TABLE III
HYPOTHESIS TESTING SUMMARY

Hypothesis	Variable Relationship	t-value	t-TABLE	Sig.	Decision
H₁	Government Support → Sustainability	4.160	1.984	0.000	Accepted
H₂	Digital Literacy → Sustainability	3.390	1.984	0.001	Accepted
H₃	Market Orientation	3.734	1.984	0.000	Accepted

on →
Sustainability

H₄	Simultaneous Effect	F = 76.214	F = 2.70	0.000	Accepted
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Source: Researcher Processed Data, 2025

All individual hypotheses were statistically supported, with calculated *t*-values exceeding the critical value of 1.984 ($df = 96$, $\alpha = 0.05$) and significance levels below 0.05. Government Support (X₁), Digital Literacy (X₂), and Market Orientation (X₃) each showed positive and significant effects on Agrotourism Sustainability (Y). Simultaneously, the overall regression model was significant, confirming the combined influence of the three independent variables on destination sustainability.

F. Mean Analysis Results

TABLE IV
MEAN ANALYSIS

Variable	Mean	Category	Strongest Indicator
Government Support (X₁)	4.01	High	Facilities & Infrastructure (4.25)
Digital Literacy (X₂)	4.15	High	Online Information Management (4.20)
Market Orientation (X₃)	4.12	High	Target-Based Promotion Strategy (4.18)
Agrotourism Sustainability (Y)	4.18	High	Community Economic Welfare (4.22)

Source: Researcher Processed Data, 2025

The mean analysis indicated that all variables were rated in the high category. Government Support (4.18) scored highest in facilities and infrastructure (4.25). Digital Literacy (4.15) was strongest in online information management (4.20), while Market Orientation (4.12) peaked in target-based promotion (4.18). Agrotourism Sustainability (4.18) was strongest in community

economic welfare (4.22). These findings confirm effective implementation across variables, though digital and market strategies still present room for improvement.

DISCUSSION

A. Government Support Influence

Statistical analysis confirmed that government support significantly influenced agrotourism sustainability ($\beta = 0.312$, $t = 4.160$, $p < 0.001$). High mean evaluation scores (4.18) with the strongest indicator being infrastructure provision (4.25) suggest that respondents highly valued tangible government contributions in facilities and accessibility. These findings align with prior studies highlighting the critical role of local government policies, infrastructure development, and destination promotion in enabling sustainable tourism ecosystems (Dinas Pariwisata Kulon Progo, 2023).

However, despite strong infrastructure ratings, policy integration and monitoring mechanisms remain areas requiring improvement. While government initiatives are evident, cross-sector collaboration and evaluation consistency are still fragmented. Addressing these gaps will strengthen long-term destination resilience and community empowerment.

B. Digital Literacy Dynamics

Digital literacy demonstrated a significant positive effect on sustainability outcomes ($\beta = 0.278$, $t = 3.390$, $p = 0.001$). High mean scores (4.15) with the strongest indicator being online information management (4.20) indicate that digital responsiveness strongly supports visitor trust and destination credibility. These results support Wicaksono et al. (2024), who emphasized that digital competence in content production and online engagement enhances visibility and competitiveness in rural tourism contexts.

Nonetheless, while overall digital literacy levels were high, gaps remain in maximizing social media-based engagement and e-commerce integration. Current practices emphasize content distribution, but strategies for analytics-driven marketing and cross-platform branding require enhancement. Optimizing these aspects will

further increase tourist loyalty, revisit intentions, and e-WOM advocacy, strengthening sustainability.

C. Market Orientation Impact Analysis

Market orientation exhibited a significant positive influence on agrotourism sustainability ($\beta = 0.295$, $t = 3.734$, $p < 0.001$). High mean evaluations (4.12) with the strongest indicator being target-based promotional strategies (4.18) confirm that responsiveness to market needs directly strengthens destination competitiveness. These findings are consistent with Kemenparekraf (2023), which emphasizes that customer-focused, competitor-aware, and inter-functional strategies enhance tourism sustainability.

However, despite positive outcomes, some product and service adaptation mechanisms remain underutilized. While destinations have made progress in designing hands-on workshops, culinary packages, and storynomic tourism, further innovation tailored to evolving tourist demands is needed. Greater diversification of experiences would ensure continued alignment with modern market preferences.

D. Integrated Model Performance

Simultaneous analysis showed that government support, digital literacy, and market orientation collectively explained 68.4% of variance in agrotourism sustainability (Adjusted $R^2 = 0.675$, $F = 76.214$, $p < 0.001$). Sustainability evaluation achieved high mean scores (4.18), with community economic welfare (4.22) rated as the strongest indicator, followed by environmental preservation (4.15) and local participation (4.17). This suggests that respondents perceived sustainability outcomes as effectively integrated across social, environmental, and economic dimensions.

The integrated model highlights that synergy between supportive government policies, digitally literate tourism actors, and market-oriented strategies yields powerful cumulative effects. This combination not only ensures competitive advantage but also enhances resilience, positioning Menoreh's community-based agrotourism as a replicable model for sustainable rural development.

CONCLUSION

This investigation confirms that government support, digital literacy, and market orientation significantly influence agrotourism sustainability in the Menoreh Mountains, Kulon Progo. Government support had the strongest effect ($\beta = 0.312$), followed by market orientation ($\beta = 0.295$) and digital literacy ($\beta = 0.278$). The integrated regression model explained 68.4% of sustainability variance, demonstrating the effectiveness of combining institutional support, technological capacity, and market-driven strategies for community-based agrotourism development.

Key findings highlight infrastructure provision as the highest-rated government support indicator (mean = 4.25), reflecting the importance of tangible facilities for destination accessibility and appeal. In digital literacy, the ability to manage online information (mean = 4.20) was the strongest element, underscoring the role of digital responsiveness in sustaining visitor trust. Market orientation's strongest indicator was target-based promotion strategies (mean = 4.18), confirming that audience-focused marketing ensures relevance and competitiveness. Sustainability outcomes were rated high overall (mean = 4.18), with community economic welfare (mean = 4.22) recognized as the most impactful dimension.

These results extend destination marketing theory by validating the integrated role of policy support, digital competence, and adaptive market orientation in sustaining rural tourism. They reinforce previous findings that institutional facilitation, technological literacy, and market sensitivity together create an enabling environment for long-term competitiveness and resilience. Practical implications include the need for cross-sector collaboration, systematic monitoring of government programs, enhanced training in digital engagement, and broader adoption of market-responsive innovation. Strengthening post-visit digital interaction platforms, diversifying product-service packages, and establishing consistent brand guidelines are recommended to maintain long-term visitor loyalty and destination positioning.

Future research should consider longitudinal

designs to evaluate sustainability impacts over time, comparative studies across different agrotourism regions, and mixed-method approaches to capture stakeholder perspectives more deeply. Additional variables—such as service quality, accessibility, and pricing strategies—could expand the explanatory power of the model and improve its practical applicability in policy and management contexts.

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REFERENCES

- Astono, A. D., Indriani, S., Roganda Parlindungan, D., Supriady Hutapea, M., Louis Gunawan, V., & Billy Ardianto, M. (2023). *Model Efektivitas Tata Kelola Melalui Skema Stakeholder Dynamics Desa Agrowisata Nglinggo* (Vol. 330, Issue 2).
- Cordova-Buiza, F., Medina-Viruel, M. J., & Pérez-Gálvez, J. C. (2025). Community-based rural tourism: a mapping technique analysis study from 2005 to 2023. In *Humanities and Social Sciences Communications* (Vol. 12, Issue 1). Springer. <https://doi.org/10.1057/s41599-025-04746-7>
- Dinas Pariwisata Kulon Progo. (2023). *Evaluasi Terhadap Hasil Rencana Kerja Pemerintah Daerah (RKPD)*.
- Gantait, A., Mathew, R., Chatterjee, P., & Singh, K. (2024). Community-based tourism as a sustainable direction for the tourism industry: Evidence from the Indian sundarbans. In *Interlinking SDGs and the Bottom-of-the-Pyramid Through Tourism* (pp. 197–217). IGI Global. <https://doi.org/10.4018/979-8-3693-3166->

8.ch009

- Jayanti, E., & Prawiro, J. (2024). Analisis Peran Media Sosial Terhadap Wisata Di Agrowisata Gunung Mas Bogor. *Jurnal Pariwisata Dan Perhotelan*, 2(1), 15. <https://doi.org/10.47134/pjpp.v2i1.3319>
- Kemenparekraf. (2023). *Peraturan Menteri Pariwisata dan Ekonomi Kreatif Nomor 1 Tahun 2023: Petunjuk Teknis Penggunaan Dana Alokasi Khusus Nonfisik Dana Pelayanan Kepariwisataaan*.
- Kementrian Pertanian. (2024). *Laporan Kinerja Direktorat Jendral Holtikultura Kementrian Pertanian 2024*.
- Nikjoo, A., Seyfi, S., & Saarinen, J. (2025). Promoting gender inclusivity through community-based tourism. *Annals of Tourism Research Empirical Insights*, 6(1). <https://doi.org/10.1016/j.annale.2025.10018>

1

- Wicaksono, J. A., Danur Suharsono, D., Kamal, M., Tornado Taufan, G., Febrian Pramudita, R., & Nabila, A. C. (2024). *Peningkatan Literasi Digital pada Pengelola Desa Wisata Kemiri Digital Literacy Improvement on Desa Wisata Kemiri Managements*.
- Yulia, A., Agus Sasongko, D., Fitriani, A., Solihin, L., Pranamulia, A., Zaid Mahfudi, A., Rachmanu Widjaja, I., Mutmainah, I., & Anisa Yulia, I. (2023). *Pendampingan Pemasaran Digital Dalam Upaya Mengembangkan Desa Wisata Benteng Digital Marketing Assistance in Efforts to Develop a Benteng Tourism Village*. 8(3), 2023. <https://doi.org/10.25047/j-dinamika.v8i3.3922>