

Economic Development Sustainability and Market Opportunities in Agritourism in Laguna Municipalities

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Abstract

This study examined the relationship between economic development sustainability and market opportunity utilization in agritourism across selected municipalities in Laguna, namely Calauan, Liliw, Nagcarlan, and Pila. Anchored in Romer's Endogenous Growth Theory and the Theory of Entrepreneurial Opportunity Identification and Development, the study explored how internal growth drivers, such as human capital development, innovation and technology adoption, and knowledge spillovers, influence entrepreneurial alertness, social networks, and opportunity belief formation among agritourism enterprises. A quantitative descriptive-correlational design was employed, with data collected from 96 agritourism owners and managers selected through random sampling from a population of 280. Data were gathered using a validated four-point Likert scale questionnaire and analyzed through descriptive statistics and Pearson's product-moment correlation coefficient. Findings indicate that economic development sustainability was fully sustained, particularly in innovation and technology adoption with a mean of 3.49 and a standard deviation of 0.753, and in human capital development with a mean of 3.39 and a standard deviation of 0.811, while knowledge spillovers also demonstrated a fully sustained level with a mean of 3.32 and a standard deviation of 0.688. Market opportunity utilization was fully utilized, with entrepreneurial alertness showed a mean of 3.40 and a standard deviation of 0.707, social networks with a mean of 3.41 and a standard deviation of 0.777, and opportunity belief formation with a mean of 3.51 and a standard deviation of 0.605. Correlation analysis revealed a statistically significant positive relationship between economic development sustainability and market opportunity utilization. The findings underscore the role of sustained investments in human capital, innovation, and collaborative practices in enhancing entrepreneurial capability and market responsiveness.

Key words: Agritourism; Economic Development Sustainability; Market Opportunity Utilization;

1. Nature and Scope of the Problem Instigated

In recent years, sustainable tourism has been increasingly recognized as a vital mechanism for advancing the Sustainable Development Goals (SDGs), particularly SDG 8 on decent work and economic growth and SDG 12 on responsible consumption and production. Agritourism, as a subset of sustainable tourism, has emerged globally as a powerful catalyst for rural economic development, cultural preservation, and environmental sustainability. It integrates agricultural production with tourism experiences, diversifies rural economies, and creates new business opportunities while responding to global trends in experiential and eco-friendly travel. Within this context, the municipalities of Calauan, Liliw, Nagcarlan, and Pila in Laguna face pressing challenges, as they have been identified as having the lowest GDP levels in the province. Despite their rich agricultural landscapes and vibrant cultural heritage, these areas have not fully harnessed agritourism as a developmental tool, leaving them vulnerable to economic stagnation, cultural erosion, and unsustainable farming practices. The nature of the problem lies in the limited viability of traditional farming under modern market pressures, which has left rural communities struggling to sustain livelihoods. This economic vulnerability is compounded by the underutilization of agritourism, which could otherwise serve as a means of income diversification, cultural preservation, and environmental stewardship. The scope of the problem extends across multiple dimensions: locally, the municipalities face weak competitiveness and limited market opportunities; nationally, the issue reflects broader challenges in rural development across the Philippines; and

globally, it connects to missed opportunities in aligning tourism strategies with international sustainability targets. Without deliberate intervention, these communities risk further economic decline, weakening of social cohesion, and loss of cultural identity. Thus, agritourism presents itself not merely as an alternative livelihood but as a strategic solution capable of addressing the intertwined challenges of economic stagnation, cultural decline, and environmental vulnerability, while positioning Laguna's rural municipalities to contribute meaningfully to sustainable development.

1.1 Statement of the Problem

This study aimed to determine the role of economic development, sustainability, and market opportunities in agritourism in Laguna Municipalities. Specifically, this study sought to answer the following research questions:

1. What is the economic development sustainability level in agritourism in Laguna municipalities in terms of:
 - 1.1. Human capital development,
 - 1.2. Innovation and technology adoption, and
 - 1.3. Knowledge spillovers?
2. What is the market opportunity utilization level in agritourism in Laguna municipalities in terms of:
 - 2.1. Entrepreneurial Alertness,
 - 2.2. Social Networks, and
 - 2.3. Opportunity Belief Formation?
3. Is there a significant relationship between economic development sustainability and market opportunity utilization levels in the agritourism of Laguna municipalities?
4. Based on the findings of the study, what strategic marketing plan may be proposed?

1.2 Research Framework

The research paradigm illustrated how sustainable economic development served as a foundational driver of market opportunity utilization in agritourism, integrating key structural and behavioural elements. Human capital development, innovation capacity, and knowledge spillovers functioned as the primary input variables, strengthening the competencies and adaptive capabilities of agritourism stakeholders. These inputs influenced the process variables, particularly entrepreneurial alertness, the strength of social and institutional networks, and the formation of opportunity beliefs, which enabled entrepreneurs to recognize, evaluate, and exploit emerging market opportunities. The interaction of these elements facilitated efficient resource use, innovation diffusion, and collaboration within rural tourism ecosystems. As an output, enhanced market opportunity utilization led to improved agritourism performance, increased competitiveness, and sustainable value creation. The paradigm emphasized feedback mechanisms, where successful market engagement further reinforced human capital and innovation. Overall, the framework demonstrated a coherent linkage between internal economic growth drivers and the broader advancement of sustainability.

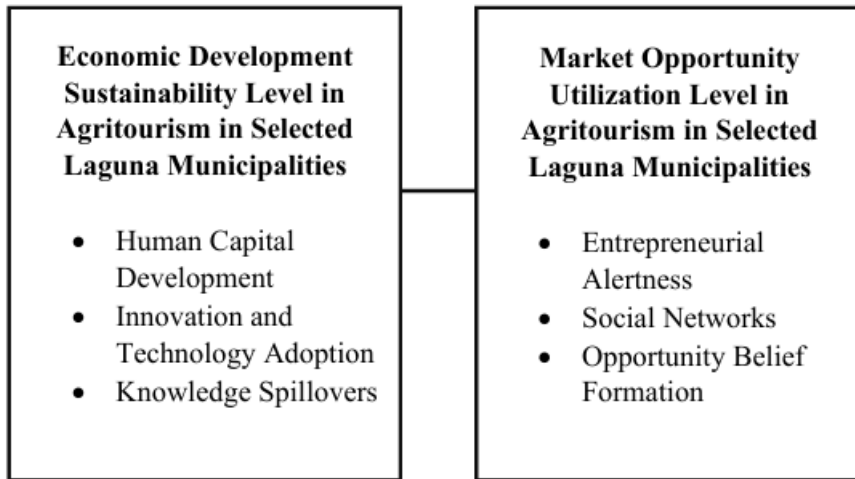


Figure 1. Research Paradigm

1.3. Research Significance

This study underscores the significance of agritourism as a strategic driver of rural economic development and market prospects, offering practical insights for a wide range of stakeholders. For agritourism destination owners, it provides valuable knowledge about customer behavior, pricing strategies, and industry trends that can enhance profitability and improve operations. Local municipalities benefit from evidence that agritourism stimulates rural economies by creating jobs, supporting local businesses, and encouraging infrastructure development and community-based tourism initiatives. Customers gain the ability to make informed choices about destinations aligned with their interests and expectations, while also influencing service quality through their preferences and price sensitivity. For researchers, the study deepens understanding of agritourism's role in economic growth, consumer behavior, and market dynamics, strengthening their analytical capacity. Finally, future researchers can use it as a foundation to expand knowledge on sustainability, consumer trends, and strategic business practices in the agritourism industry, making it a comprehensive resource for advancing both theory and practice.

1.4. Scope and Delimitations

This quantitative descriptive correlational study focused on agritourism as an economic development and market opportunities driver in four municipalities in Laguna, Calauan, Liliw, Nagcarlan, and Pila. Based on the Cities and Municipalities Competitive Index using DTI's 2023 data, these four municipalities had a low GDP, which highlighted economic challenges in these areas. It investigated how agritourism promoted human capital development, innovation and technology adoption, and knowledge spillovers, as well as entrepreneurial alertness, social networks, and opportunity belief formation. The study was limited to agritourism operations in Calauan, Liliw, Nagcarlan, and Pila, Laguna, and did not include additional municipalities or urban agritourism programs. It focused largely on the economic and business aspects of agritourism, ignoring thorough environmental impact studies. Data gathering methods included surveys and data analysis, rather than experimental trials on agritourism business models. The findings were specific to agritourism enterprises in these selected municipalities, and the conclusions might not fully reflect agritourism trends in other regions. Furthermore, the study was limited to existing agritourism policies and developments, with no future forecasts beyond the research period.

1.5. Review of Pertinent Literature

The reviewed literature consistently underscored the pivotal role of agritourism in rural economic transformation, particularly in the Philippines and other international contexts. Multiple journal articles, books, and research reports confirmed that agritourism enhanced rural livelihoods by integrating farming with tourism, thereby diversifying income and promoting environmental sustainability. Studies by Cruz et al. (2021), Del Rosario (2021), and Garcia and Santos (2022) highlighted how agritourism empowered micro-entrepreneurs, preserved cultural farming practices, and generated employment. However, challenges persisted in the form of insufficient policy support, poor infrastructure, and limited marketing capabilities. Globally, scholars such as Smith and Johnson (2021) and Williams et al. (2021) revealed that agritourism fostered economic resilience through sustainable land management, digital transformation, and farm diversification. In addition, research by Martinez et al. (2022) and Hernandez and Patel (2023) pointed to agritourism's contributions to food security, organic practices, and technological innovation. Locally, the findings of Clemente et al. (2024) demonstrated agritourism's positive impact on employment in areas like Bulacan, while Arru et al. (2021) and Space Voyage Ventures (2024) affirmed that agritourism enhanced profitability and mitigated farming risks through diversified income. Supporting elements such as sustainable development (Reiser, 2021; Mazza, 2021), human capital development (Gruzina et al., 2021; Arokiasamy et al., 2023), technology adoption (Granic, 2023; Emon, 2023), and knowledge spillovers (Madanaguli et al., 2021; Arcos-Guanga et al., 2024; Ahmad et al., 2023) further reinforced the institutional and theoretical frameworks that enabled agritourism to thrive. These interdisciplinary connections revealed that successful agritourism must have been supported by policy clarity, capacity building, and a strong innovation ecosystem. Finally, literature on agritourism marketing (Penn State Extension, 2023; Chiang et al., 2025) underscored the importance of strategic branding, digital outreach, and the 7Ps framework in attracting tourists and sustaining business growth. Marketing approaches grounded in authenticity and local identity, coupled with multi-channel promotion, were vital for maximizing the potential of agritourism enterprises.

2. Research Design

The researcher employed a descriptive correlational research design, which involved collecting, analyzing, and interpreting data to determine economic development sustainability and market opportunities in agritourism in Laguna municipalities. A descriptive correlational research design was ideal for this study because it aimed to both describe and examine the relationships between key variables, specifically, how aspects of economic development sustainability related to the utilization of market opportunities in agritourism. This design allowed for the systematic gathering of data on agritourism practices, local development initiatives, and entrepreneurial behavior, without manipulating any variables.

2.1. Population and Sampling

A simple random sampling method was employed, ensuring that all eligible owners/managers had an equal chance of being selected. These individuals were directly engaged in both agricultural production and tourism services, placing them at the core of the intersection between sustainability and market opportunity. Their first-hand experiences made them well-positioned to comment on the opportunities, challenges, and evolving trends within local agritourism. Stratified sampling allowed the researcher to divide the population into distinct subgroups, or strata, such as farmers, local government officials, business owners, and tourists, and then randomly select participants from each subgroup. This method ensured that all relevant segments of the population were proportionally represented in the study on agritourism and its impact on rural economic development and market opportunities. This study involved respondents from agritourism destinations located in Calauan, Liliw, Nagcarlan, and Pila, Laguna, with a total target population of 280 individuals. To determine the required sample size, G*Power analysis was employed, resulting in a recommended sample of 96 respondents based on an effect size of 0.35 and a 95% confidence level.

2.2. Treatment of Data

The study utilized the following statistical treatments:

1. Mean, standard deviation, and four-point Likert scale were used to describe the Economic Development, Sustainability, and Market Opportunities in Agritourism in Laguna Municipalities.

2. Pearson product-moment correlation coefficient was used to determine the relationship between Economic Development Sustainability and Market Opportunities in Agritourism in Laguna Municipalities.

Economic Development Sustainability Level in Agritourism of Selected Municipalities in Laguna

Scale Range	Scale	Categorical Response	Verbal Interpretation
3.25-4.00	4	Strongly Agree	Fully Sustained
2.50-3.24	3	Agree	Sustained
1.75-2.49	2	Disagree	Partially Sustained
1.00-1.74	1	Strongly Disagree	Not Sustained

Market Opportunity Utilization Level in Agritourism of Selected Municipalities in Laguna.

Scale Range	Scale	Categorical Response	Verbal Interpretation
3.25-4.00	4	Strongly Agree	Fully Utilized
2.50-3.24	3	Agree	Utilized
1.75-2.49	2	Disagree	Partially Utilized
1.00-1.74	1	Strongly Disagree	Not Utilized

Table 1. Likert Scale

3. Results and Discussion

The study reveals that agritourism enterprises in Laguna municipalities—Calauan, Liliw, Nagcarlan, and Pila—demonstrate a strong level of economic sustainability, particularly in human capital development, innovation and technology adoption, and knowledge sharing, which collectively enhance growth, efficiency, and competitiveness. Market opportunity utilization is also highly implemented, with enterprises showing strong entrepreneurial alertness, effective use of social networks, and proactive opportunity belief formation, though improvements in risk assessment, data analytics, and external collaborations are recommended. The findings highlight that sustainability practices directly strengthen entrepreneurial performance, enabling businesses to adapt to market demands and expand their reach. To sustain these gains, a strategic marketing plan is proposed, focusing on training, eco-friendly technology adoption, partnerships, and risk-management competencies. Overall, the study concludes that prioritizing human capital, innovation, and collective learning ensures long-term growth, resilience, and inclusive rural development through agritourism.

1.1 Human Capital Development

Table 1.1

Economic Development Sustainability Level in Agritourism of selected Municipalities in Laguna in terms of Human Capital Development

Indicators in terms of Human Capital Development	$\bar{X}$	VI	Rank
1. The business sustains continuous employee training focused on tourism operations.	3.07	S	6
2. The business sustains continuous employee training focused on farm management.	3.51	FS	3
3. The business maintains mentoring systems that enhance staff capability and performance.	3.69	FS	1
4. The business keeps opportunities for employees to pursue external learning or certification programs.	3.30	FS	4
5. The business consistently carries out performance reviews to determine staff development needs.	3.56	FS	2
6. The business upholds incentive programs that reward employees' skill improvement.	3.23	S	5
GENERAL ASSESSMENT	3.39	FS	
Standard Deviation	0.811		
Legend: 3.25 – 4.00 Strongly Agree/ Fully Sustained 1.75 – 2.49 Disagree/ Partially Sustained 2.50 – 3.24 Agree/ Sustained 1.00 – 1.74 Strongly Disagree/ Not Sustained			

1.2 Innovation and Technology Adoption

Table 1.2

Economic Development Sustainability Level in Agritourism of selected Municipalities in Laguna in terms of Innovation and Technology Adoption

Indicators in terms of Innovation and Technology Adoption	$\bar{X}$	VI	Rank
1. Sustain the use of digital systems such as online reservations or electronic payments.	3.71	FS	1
2. Maintain modern farming or tourism technologies to improve efficiency and service.	3.30	FS	4
3. Continue to apply eco-friendly technologies that reduce environmental impact.	3.65	FS	3
4. Regularly update agritourism activities based on visitor feedback and trends.	3.67	FS	2
5. Consistently allocate funds to sustain research and innovation initiatives.	3.14	S	5
GENERAL ASSESSMENT	3.49	FS	
Standard Deviation	0.753		
Legend: 3.25 – 4.00 Strongly Agree/ Fully Sustained 1.75 – 2.49 Disagree/ Partially Sustained 2.50 – 3.24 Agree/ Sustained 1.00 – 1.74 Strongly Disagree/ Not Sustained			

1.3 Knowledge Spillovers

Table 1.3

Economic Development Sustainability Level in Agritourism of Selected Municipalities in Laguna in terms of Knowledge Spillovers

Indicators in terms of Knowledge Spillovers	$\bar{X}$	VI	Rank
1. Sustain knowledge-sharing practices with nearby agritourism farms or partners.	3.28	FS	5
2. Maintain regular participation in workshops or farm tours for information exchange.	3.43	FS	1
3. Continue to contribute experiences and insights during local fairs or events.	3.31	FS	2
4. Sustain collaboration with other related industries.	3.30	FS	3
5. Uphold programs that provide students with learning or internship opportunities.	3.29	FS	4
GENERAL ASSESSMENT	3.32	FS	
Standard Deviation	0.688		
Legend: 3.25 – 4.00 Strongly Agree/ Fully Sustained 1.75 – 2.49 Disagree/ Partially Sustained 2.50 – 3.24 Agree/ Sustained 1.00 – 1.74 Strongly Disagree/ Not Sustained			

Table 2.1

Market Opportunity Utilization Level in Agritourism of selected Municipalities in Laguna in terms of Entrepreneurial Alertness

Indicators in terms of Entrepreneurial Alertness	$\bar{X}$	VI	Rank
1. The business fully utilizes tourism market information to identify new opportunities.	3.63	FU	1
2. The business uses trend monitoring to adjust products and services to visitor preferences.	3.54	FU	2
3. The business applies market-gap analysis to create innovative agritourism offers.	3.30	FU	3
4. The business makes use of competitor observations to improve its strategies.	3.27	FU	5
5. The business utilizes seasonal data to plan and adjust operations throughout the year.	3.28	FU	4
GENERAL ASSESSMENT	3.40	FU	
Standard Deviation	0.707		
Legend: 3.25 – 4.00 Strongly Agree/ Fully Utilized 1.75 – 2.49 Disagree/ Partially Utilized 2.50 – 3.24 Agree/ Utilized 1.00 – 1.74 Strongly Disagree/ Not Utilized			

2.2 Social Networks

Table 2.2

Market Opportunity Utilization Level in Agritourism of selected Municipalities in Laguna in terms of Social Networks

Indicators in terms of Social Networks	$\bar{X}$	VI	Rank
1. Fully utilize partnerships with local government tourism offices.	3.64	FU	1
2. Maximize collaboration with tour operators and travel agencies for promotion.	3.17	U	5
3. Use membership in agritourism associations to expand its market connections.	3.26	FU	4
4. Maintain communication networks with local suppliers and partner farms.	3.48	FU	3
5. Fully utilize social media to promote services and maintain stakeholder engagement.	3.50	FU	2
GENERAL ASSESSMENT	3.41	FU	
Standard Deviation	0.777		
Legend: 3.25 – 4.00 Strongly Agree/ Fully Utilized 1.75 – 2.49 Disagree/ Partially Utilized 2.50 – 3.24 Agree/ Utilized 1.00 – 1.74 Strongly Disagree/ Not Utilized			

Table 2.3

Market Opportunity Utilization Level in Agritourism of selected Municipalities in Laguna in terms of Opportunity Belief Formation

Indicators in terms of Opportunity Belief Formation	$\bar{X}$	VI	Rank
1. Fully utilize feasibility studies when developing new products or services.	3.50	FU	4
2. Use risk-assessment tools before investing in new ventures.	3.18	U	5
3. Apply strategic planning to act on identified market opportunities.	3.53	FU	3
4. Seek expert or institutional guidance to refine business expansions.	3.59	FU	2
5. Consistently use customer feedback to validate potential opportunities.	3.73	FU	1
GENERAL ASSESSMENT	3.51	FU	
Standard Deviation	0.605		
Legend: 3.25 – 4.00 Strongly Agree/ Fully Utilized 1.75 – 2.49 Disagree/ Partially Utilized 2.50 – 3.24 Agree/ Utilized 1.00 – 1.74 Strongly Disagree/ Not Utilized			

Table 3

Test of Significant Relationship between the Economic Development Sustainability Level and Market Opportunity Utilization Level in Agritourism of Selected Municipalities in Laguna

Economic Development Sustainability Level	Market Opportunity Utilization Level	r value	P value	Remarks	Decision
Human Capital Development	Entrepreneurial Alertness	.357**	.000	Significant	Reject H_0
	Social Networks	.447**	.000	Significant	Reject H_0
	Opportunity Belief Formation	.243*	.017	Significant	Reject H_0
Innovation and Technology Adoption	Entrepreneurial Alertness	.298**	.003	Significant	Reject H_0
	Social Networks	.429**	.000	Significant	Reject H_0
	Opportunity Belief Formation	.316**	.002	Significant	Reject H_0
Knowledge Spillovers	Entrepreneurial Alertness	.305**	.002	Significant	Reject H_0
	Social Networks	.401**	.000	Significant	Reject H_0
	Opportunity Belief Formation	.262**	.010	Significant	Reject H_0

**Correlational at the level 0.01

*Correlational at the level 0.05(Two-tailed)