



THE DUCK FARMING IN DEVELOPMENT OF THE RURAL CREATIVE ECONOMY (Evidence from Kebomlati Village, Indonesia)

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Abstract: *This study examines the development of a creative economy based on duck farming and salted egg production and its contribution to the Sustainable Development Goals (SDGs) in Kebomlati Village, Plumpang District, Tuban Regency, Indonesia. A qualitative case study integrated with a community engagement program was employed. Data were collected through field observations, in-depth interviews, focus group discussions, and document analysis, and analyzed using an interactive analysis model. The findings reveal that duck farming provides local resources for developing a creative economy through value-added salted egg production. These activities improve household income, strengthen rural entrepreneurship, encourage business diversification, and optimize the utilization of local resources. Furthermore, the creative economy contributes to the achievement of SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), and SDG 17 (Partnerships for the Goals). The study concludes that product innovation based on local resources represents an effective strategy for promoting sustainable rural development.*

Keywords: *Creative Economy; Duck Farming; Salted Eggs; Rural Development; Sustainable Development Goals.*

Abstract: *Penelitian ini bertujuan menganalisis pengembangan ekonomi kreatif berbasis peternakan itik dan produksi telur asin serta kontribusinya terhadap Sustainable Development Goals (SDGs) di Desa Kebomlati, Kecamatan Plumpang, Kabupaten Tuban, Indonesia. Penelitian menggunakan pendekatan kualitatif dengan desain studi kasus yang terintegrasi dengan kegiatan pengabdian kepada masyarakat. Data dikumpulkan melalui observasi, wawancara mendalam, focus group discussion, dan dokumentasi, kemudian dianalisis menggunakan model analisis interaktif. Hasil penelitian menunjukkan bahwa peternakan itik menjadi sumber daya lokal yang mendukung pengembangan ekonomi kreatif melalui penciptaan produk bernilai tambah berupa telur asin. Kegiatan tersebut meningkatkan pendapatan rumah tangga, memperkuat kewirausahaan pedesaan, mendorong diversifikasi usaha, dan mengoptimalkan pemanfaatan sumber daya lokal. Selain itu, pengembangan ekonomi kreatif berbasis peternakan itik berkontribusi terhadap pencapaian SDG 1, SDG 2, SDG 8, SDG 12, dan SDG 17. Penelitian ini menegaskan bahwa inovasi produk berbasis sumber daya lokal*



merupakan strategi efektif untuk mendukung pembangunan pedesaan yang berkelanjutan.

Kata kunci: Ekonomi Kreatif; Peternakan Itik; Telur Asin; Pembangunan Pedesaan; Sustainable Development Goals.

BACKGROUND

The creative economy has emerged as a fundamental driver of sustainable economic growth by leveraging innovation, creativity, and knowledge to transform local resources into high-value, competitive goods and services. Transitioning away from conventional resource-extractive paradigms, creative economic activities generate value through knowledge spillover, entrepreneurial capabilities, and advanced product diversification (Howkins, 2001; Naylor & Florida, 2003; United Nations Conference on Trade and Development, 2024). In rural territories, creative economy initiatives serve as vital mechanisms for livelihood diversification, micro-enterprise resilience, and localized employment creation. As highlighted by international development frameworks (UNESCO, 2021; United Nations Conference on Trade and Development, 2024), capitalizing on endogenous cultural and natural assets not only revitalizes peripheral economies but also aligns local growth with inclusive, sustainable development trajectories.

A particularly compelling frontier of the rural creative economy lies in value-added, community-based agro-industries. Moving beyond the low-margin supply of raw agricultural commodities, rural producers can capture higher economic margins through post-harvest processing, strategic packaging, branding, and product differentiation. Such downstream integration strengthens rural value chains, enhances household income security, and fosters localized entrepreneurial ecosystems (Drucker, 2007; Porter & Kramer, 2002; Rustinsyah et al., 2021). Consequently, value-added agro-processing serves as a critical strategic lever for rural structural transformation, mitigating community vulnerability to primary commodity price fluctuations. As an agrarian archipelagic nation, Indonesia possesses immense latent potential for creative agro-industrial expansion, anchored by abundant livestock and agricultural assets (Rustinsyah, 2015; Yusrifa & Agus Danugroho, 2022). Duck farming, a traditional livestock practice widespread across Indonesian villages, provides a steady source of household revenue through egg production. However, raw egg marketing yields thin profit margins and exposes smallholders to market volatility. Transforming raw duck eggs into processed derivatives most notably salted eggs (*telur asin*) substantially enhances product utility, extends shelf life, and unlocks new market segments. Despite these advantages, many

small-scale rural producers remain trapped in conventional, low-value supply networks due to constrained capital, market price instability, and limited managerial capacity.

Kebomlati Village, situated along the Bengawan Solo River basin in Plumpang District, Tuban Regency, presents a quintessential setting for examining this dynamic. The village's agro-ecological conditions provide rich seasonal feeding resources specifically freshwater snails (*Pila ampullacea*) in inundated rice paddies, which drastically offset feed costs during the rainy season. Harnessing this ecological dividend, several local households have established small-scale salted egg processing enterprises. While this demonstrates an effective convergence of natural asset utilization and localized value addition, the full transformative potential of these micro-enterprises remains constrained by rudimentary processing techniques, weak branding, informal business management, and market isolation.

Existing scholarship on rural duck farming has predominantly focused on zootechnical productivity, farm-level economics, and household income generation (Darmawan et al., 2021; Hellin & Fisher, 2019; Joshi et al., 2000). Conversely, research on the creative economy and rural entrepreneurship often treats non-farm enterprises in isolation from primary agricultural ecosystems. Critical empirical gaps persist regarding how primary duck farming and downstream processing can be systematically integrated into an endogenous creative economy framework that accelerates rural entrepreneurship while advancing the Sustainable Development Goals (SDGs). To address this gap, this study analyzes how integrated duck farming and salted egg production drive the rural creative economy in Kebomlati Village, Tuban Regency, Indonesia. Specifically, this paper investigates: (1) the structural socio-economic characteristics of rural duck farming, (2) the mechanisms of value creation and product innovation in salted egg processing, (3) the systemic operational and market barriers confronting local producers, and (4) the alignment of these integrated micro-enterprises with the SDGs. By bridging the literature on the creative economy, rural agro-industrialization, and sustainable development, this study contributes conceptual insights into community-led rural transformation and provides evidence-based policy pathways for scaling rural value chains in emerging economies.

LITERATURE REVIEW

Rural Creative Economy

The creative economy has emerged as a new development paradigm that emphasizes the creation of economic value through creativity, knowledge, innovation, and intellectual capital rather than relying solely on natural resources or conventional production factors.

Howkins (2001) defines the creative economy as an economic system in which ideas become the primary source of value creation, enabling individuals and communities to transform local resources into products and services with higher economic value. Unlike traditional economic models that focus on increasing production volumes, the creative economy prioritizes innovation, product differentiation, and entrepreneurship as the main drivers of competitiveness. The development of the creative economy is closely associated with the concept of innovation and human creativity. Florida (2002) argues that economic growth is increasingly determined by the ability of communities to generate creative ideas, develop innovative products, and respond to changing market demands. Creativity, therefore, should not be interpreted solely as artistic expression but also as the ability to improve products, production processes, business models, and marketing strategies. In rural communities, creativity often emerges through the transformation of locally available agricultural and livestock resources into higher-value products that generate additional income and stimulate local entrepreneurship. Such innovation enables rural producers to compete more effectively while strengthening the resilience of local economies.

International organizations have also recognized the strategic role of the creative economy in achieving sustainable development. According to the United Nations Conference on Trade and Development (2024), the creative economy integrates economic, cultural, technological, and social dimensions by encouraging communities to utilize local knowledge and resources in developing competitive products and services. Similarly, UNESCO (2021) emphasizes that creativity and innovation are fundamental components of sustainable local development because they create employment opportunities, stimulate entrepreneurship, preserve local identity, and strengthen community participation. These perspectives suggest that creative economy development extends beyond increasing income, encompassing broader objectives related to social inclusion, economic resilience, and sustainable resource utilization.

Within rural contexts, the creative economy is frequently implemented through value-added agro-industries that process primary agricultural commodities into products with greater commercial value. Porter (1985) argues that value creation is achieved when production activities enhance product quality, differentiation, and market competitiveness. Rather than marketing raw commodities, rural enterprises can increase profitability by introducing product innovation, improving packaging, strengthening branding, and expanding market access. This value-added approach enables local producers to capture a larger proportion of the value chain while reducing their dependence on fluctuating prices of primary commodities. Agro-

processing has become one of the principal mechanisms through which rural communities generate sustainable economic growth.

The development of rural creative economies is also closely linked to entrepreneurship. Drucker (2007) explains that entrepreneurship is driven by innovation, whereby existing resources are utilized in new and more productive ways to create economic opportunities. In rural areas, entrepreneurship frequently develops through small-scale household enterprises that process local agricultural products into marketable goods. Such enterprises encourage business diversification, create employment opportunities, and increase household income while strengthening local economic resilience. Moreover, family-based enterprises often facilitate the participation of women and younger generations, thereby broadening the socio-economic benefits generated by creative economic activities.

Recent studies by the Organisation for Economic Co-operation and Development (2006) further highlight that innovation, digital transformation, entrepreneurship, and local collaboration are essential factors supporting the competitiveness of rural economies. Rural communities that successfully integrate local resources with product innovation, institutional cooperation, and market-oriented business strategies are generally better positioned to achieve sustainable economic growth. Therefore, the creative economy should be understood as an integrated rural development approach that combines innovation, value addition, entrepreneurship, and community participation to strengthen local competitiveness and improve rural livelihoods. This conceptual perspective provides the theoretical foundation for analyzing how duck farming and salted egg production can contribute to the development of the creative economy in rural Indonesia.

Rural Economic Empowerment

Rural economic empowerment refers to the process of enhancing the capacity of rural communities to improve their welfare through productive economic activities, access to resources, entrepreneurship, and institutional participation. Chambers (1983) argues that rural development should prioritize the needs of marginalized communities by strengthening their capabilities rather than merely increasing production. Likewise, Sen (1999) emphasizes that development should be viewed as the expansion of people's freedoms and opportunities to participate in economic and social activities. This perspective is reinforced by Ellis (2000), who explains that diversified rural livelihoods enable households to reduce vulnerability while increasing income stability. Scoones (1998) further proposes that sustainable livelihoods depend on the interaction among livelihood assets, institutions, and adaptive strategies. Ostrom

(1990) also highlights the importance of community institutions in managing local resources collectively to achieve sustainable economic outcomes. Together, these perspectives indicate that rural economic empowerment is multidimensional, encompassing economic, institutional, and social capacities that collectively improve community resilience.

In practice, rural economic empowerment is closely associated with community participation, local entrepreneurship, and value creation. Porter (1985) explains that competitive advantage is generated not merely by resource availability but through value-added activities along the production chain. Drucker (2007) similarly argues that innovation and entrepreneurship are essential drivers of economic transformation in both rural and urban settings. Kotler and Keller (2009) further emphasize that market orientation and customer value are indispensable for ensuring the sustainability of rural enterprises. Consequently, community empowerment initiatives should integrate production, innovation, marketing, and institutional strengthening to enhance long-term competitiveness.

Duck Farming as a Rural Livelihood Strategy

Livestock farming represents one of the most important livelihood diversification strategies in rural economies. According to Ellis (2000), integrating livestock with crop production enhances household resilience by providing regular income, food security, and productive assets. Duck farming is particularly suitable for smallholder farmers because ducks require relatively low production costs, possess strong adaptability to diverse agroecosystems, and efficiently utilize locally available feed resources. The Food and Agriculture Organization (2021) recognizes poultry production as an effective mechanism for improving rural livelihoods due to its relatively quick production cycle and broad market demand. Duck farming contributes not only to food production but also to employment generation and poverty reduction. El Bilali et al. (2020) explains that sustainable agricultural systems should maximize local resource utilization while minimizing environmental impacts. In addition, Chambers (1983) argues that rural livestock enterprises become more sustainable when communities actively participate in production, knowledge sharing, and decision-making processes. Scoones (1998) also emphasizes that livestock ownership functions as an important livelihood asset capable of strengthening household adaptive capacity during economic uncertainty. Therefore, duck farming represents a strategic entry point for sustainable rural economic development.

Sustainable Development Goals and Community-Based Rural Development

The Sustainable Development Goals (SDGs) provide an integrated framework for balancing economic growth, social inclusion, and environmental sustainability. Sen (1999) argues that development should expand human capabilities rather than merely increase economic output. This perspective aligns with community-based rural development, which emphasizes local participation, equitable access to resources, and institutional strengthening. According to Chambers (1983), sustainable rural development requires active involvement of local communities in planning, implementation, and evaluation. Ostrom (1990) demonstrates that collective management of local resources enhances institutional effectiveness and long-term sustainability. Scoones (1998) similarly argues that sustainable livelihoods depend on the interaction between natural resources, social institutions, financial capital, human capacity, and policy environments. At the national level, decentralized rural development further enables local governments to design context-specific strategies that respond to local socioeconomic conditions (Kusumastuti et al., 2024; Rahayu et al., 2024; Rustinsyah et al., 2021). The integration of duck farming contributes directly to several SDGs, including poverty reduction (SDG 1), food security (SDG 2), decent work and economic growth (SDG 8), responsible consumption and production (SDG 12), and partnership for sustainable development (SDG 17). Through community participation, value-added production, and local entrepreneurship, village economies can generate more inclusive and sustainable development outcomes.

Conceptual Framework

This study adopts the creative economy perspective to explain how local livestock resources can be transformed into sustainable rural economic development through value-added agroindustry. The conceptual framework assumes that duck farming serves as the primary local resource, while salted egg production represents a value-added innovation that transforms raw agricultural products into higher-value commodities. This transformation is expected to stimulate rural entrepreneurship, strengthen household income, and improve the competitiveness of village-based enterprises. The framework further assumes that the development of the rural creative economy is influenced by several supporting factors, including the availability of local resources, farmers' knowledge and skills, entrepreneurship, community organizations, market access, and product innovation. These factors collectively determine the ability of rural households to create economic value from duck farming activities. The resulting creative economy contributes to broader rural development outcomes, including employment creation, household income diversification, local business development, and

community welfare. Finally, the study proposes that the development of a creative economy based on duck farming and salted egg production contributes directly to the achievement of the Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), and SDG 17 (Partnerships for the Goals). Accordingly, the conceptual framework positions creative economy development as the central mechanism linking local resource utilization, value creation, and sustainable rural development.

RESEARCH METHODS

Research Design

This study employed a qualitative case study design integrated with a community engagement (community service) program implemented in Kebomlati Village, Plumpang District, Tuban Regency, East Java, Indonesia. The integration of research and community engagement enabled the researchers not only to document the existing conditions of duck farming and salted egg production but also to understand the process of developing creative economy initiatives through direct interaction with local communities. This approach emphasizes knowledge generation while simultaneously supporting community capacity building, making it appropriate for investigating complex socio-economic phenomena in rural settings. The case study design was selected because it facilitates an in-depth understanding of local contexts, community dynamics, and the utilization of local resources for creative economy development.

Research Site and Participants

The study was conducted in Kebomlati Village, which was purposively selected because it is one of the centers of duck farming in Plumpang District and has developed household-scale salted egg production as a value-added economic activity. Participants were selected using purposive sampling based on their involvement in duck farming, salted egg production, village governance, and community development activities. The participants consisted of duck farmers, leaders of farmer groups, village government officials, community leaders, and households engaged in salted egg production. These participants were considered capable of providing comprehensive information regarding production activities, business development, institutional support, and challenges in developing the rural creative economy.



Data Collection

Data were collected through field observations, semi-structured interviews, focus group discussions (FGDs), and document analysis during the implementation of research and community engagement activities. Field observations were conducted to understand farming practices, production processes, resource utilization, and business activities. Semi-structured interviews explored participants' experiences, economic conditions, entrepreneurial practices, and constraints encountered in developing duck farming and salted egg enterprises. FGDs were undertaken with farmer groups and village stakeholders to identify collective opportunities and challenges while validating preliminary findings. Documentary evidence, including village development reports, farmer group records, and community engagement documents, was also examined to strengthen data triangulation and improve the credibility of the findings.

Data Analysis

The collected data were analyzed using the interactive model developed by Miles, Huberman, and Saldaña (2014), consisting of data condensation, data display, and conclusion drawing and verification. Data condensation involved organizing and coding information related to creative economy development, duck farming, value-added production, institutional support, and rural livelihoods. Subsequently, the organized data were presented in thematic categories to identify patterns and relationships among research findings. Finally, conclusions were continuously verified through triangulation of multiple data sources, participant validation, and comparison between field observations, interview results, and documentary evidence. This analytical process ensured the credibility, dependability, and trustworthiness of the research findings while providing a comprehensive understanding of the contribution of duck farming and salted egg production to creative economy development and sustainable rural development.

RESULTS AND DISCUSSION

Characteristics of Duck Farmers in Kebomlati Village

Duck farming is one of the main livelihood diversification activities undertaken by rural households in Kebomlati Village, Plumpang District, Tuban Regency. Based on field observations and interviews, duck farming is predominantly managed by smallholder farmers, tenant farmers, and agricultural laborers who use this activity as an additional source of household income. Approximately 50 active duck farmers were identified during the study,

distributed across Ngeblek Hamlet and Mlaten Hamlet. To facilitate cooperation and knowledge exchange, the farmers are organized into two local farmer groups, namely Melati Mandiri in Ngeblek Hamlet and Maju Bersama in Mlaten Hamlet. The socio-economic characteristics of the duck farmers are summarized in Table 1.

Table 1. Socio-economic Characteristics of Duck Farmers in Kebomlati Village

Variable	Findings
Number of active duck farmers	Approximately 50 farmers
Farmer groups	Melati Mandiri (Ngeblek Hamlet) and Maju Bersama (Mlaten Hamlet)
Main occupations	Agricultural laborers, tenant farmers, and smallholder farmers
Flock size	50–300 laying ducks (mostly 50–200 ducks)
Farming system	Family-based small-scale enterprise
Preferred age of purchased ducks	5.5–6 months (ready-to-lay ducks)
Purchase price per duck	IDR 76,000–80,000
Source of duck stock	Traders from neighboring districts, mainly Lamongan
Initial investment for 100 ducks	Approximately IDR 8,000,000
Average egg production	Approximately 80 eggs/day per 100 ducks
Average selling price	Approximately IDR 3,000 per egg
Estimated daily gross income	Approximately IDR 240,000 per 100 ducks

(Processed Primary Data, 2026)

As shown in Table 1, duck farming in Kebomlati Village is generally operated on a household scale, with most farmers raising between 50 and 200 laying ducks, although several respondents reported maintaining up to 300 ducks. The relatively small flock size reflects the limited availability of production capital and labor within farming households. Daily husbandry activities, including feeding, herding, egg collection, and routine maintenance, are primarily performed by family members, allowing farmers to minimize labor costs while integrating duck farming with crop cultivation activities. Another important characteristic observed during the study is the farmers' preference for purchasing ready-to-lay ducks aged between 5.5 and 6 months. Respondents explained that this strategy enables them to obtain economic returns shortly after purchasing the ducks because egg production begins almost immediately. Purchasing younger ducklings was considered less attractive due to the longer rearing period, higher feeding costs, and increased labor requirements before the birds reached the laying stage. Most breeding stock is supplied by traders from neighboring districts, particularly Lamongan, where ready-to-lay ducks are more readily available.

The financial characteristics of duck farming also indicate that this activity requires a considerable initial investment. Farmers estimated that establishing a flock of 100 laying ducks requires approximately IDR 8,000,000, excluding expenditures for feed, housing, and routine

maintenance. Despite this relatively high initial capital requirement, respondents considered duck farming economically beneficial because laying ducks provide a continuous source of daily income through egg sales. Under normal production conditions, a flock of 100 ducks produces approximately 80 eggs per day. At an average market price of around IDR 3,000 per egg, farmers obtain an estimated gross income of IDR 240,000 per day, which is mainly used to finance household consumption, children's education, feed purchases, and other daily expenses. Field interviews also revealed that duck farming has become an important complementary livelihood strategy for rural households in Kebomlati Village. Several respondents stated that income generated from egg sales provides regular cash flow throughout the production cycle, helping households meet routine expenditures while reducing their dependence on seasonal agricultural income. Although some farmers had discontinued duck farming because of labor shortages or limited financial resources, most respondents regarded duck farming as a viable economic activity due to its relatively stable daily returns and its compatibility with existing farming practices.

Duck Farming Practices and Economic Performance

The field investigation showed that duck farming in Kebomlati Village follows a relatively simple and traditional production system that has been practiced for generations. Farmers generally rely on inherited knowledge and practical experience rather than formal technical training. Management practices include the procurement of ready-to-lay ducks, seasonal feeding strategies, daily egg collection, and direct marketing to local collectors. The production characteristics and economic performance of duck farming identified during the study are presented in Table 2.

Table 2. Production Characteristics and Economic Performance of Duck Farming in Kebomlati Village

Variable	Findings
Production type	Laying duck farming
Preferred duck age	5.5–6 months
Price of ready-to-lay duck	IDR 76,000–80,000 per bird
Price of day-old duckling	Approximately IDR 9,000 per bird
Daily feed cost (100 ducks)	Approximately IDR 80,000
Natural feed (rainy season)	Freshwater snails from rice fields
Supplementary feed (dry season)	Aking rice, rice bran, and concentrate
Price of aking rice	Approximately IDR 4,000/kg
Price of rice bran	Approximately IDR 4,000/kg
Average egg production	About 80 eggs/day per 100 ducks

Variable	Findings
Average selling price of eggs	Approximately IDR 3,000 per egg
Estimated daily gross revenue	Approximately IDR 240,000 per 100 ducks

(Processed Primary Data, 2026)

As presented in Table 2, duck farmers in Kebomlati Village predominantly purchase ready-to-lay ducks instead of raising ducklings from the early growth stage. Although the purchase price of ready-to-lay ducks is considerably higher than that of day-old ducklings, respondents perceived this practice as more profitable because egg production begins shortly after purchase. In contrast, raising ducklings requires a longer production period before income can be generated, while feeding and maintenance costs continue to accumulate during the growing phase. Feeding management varies according to seasonal conditions. During the rainy season, the availability of freshwater snails in rice fields significantly reduces feeding costs because snails constitute the primary natural feed source. Farmers explained that seasonal flooding associated with the Bengawan Solo River increases the abundance of snails, enabling ducks to forage naturally in agricultural areas. Consequently, production costs are relatively lower during this period. In contrast, the dry season substantially reduces the availability of natural feed, requiring farmers to purchase supplementary feed consisting of aking rice, rice bran, and commercial concentrate. Respondents reported that aking rice is preferred because it provides a longer feeling of satiety for ducks compared with rice bran, despite both feed ingredients having similar market prices.

The production performance of laying ducks remains relatively stable under normal husbandry conditions. Farmers estimated that a flock of 100 ducks produces approximately 80 eggs per day, representing a laying rate of around 80%. Eggs are generally marketed immediately after collection through local traders or collectors, allowing farmers to obtain daily cash income without prolonged storage. The direct marketing system also minimizes post-harvest handling and reduces the risk of product deterioration. The economic performance of duck farming demonstrates its importance as a regular income-generating activity for rural households. Based on interview data, the average selling price of duck eggs during the study period was approximately IDR 3,000 per egg. With an average production of 80 eggs per day, farmers obtained an estimated gross revenue of approximately IDR 240,000 per day from every 100 laying ducks. Respondents indicated that this income was primarily allocated to purchasing feed, covering routine household expenditures, financing children's education, and supporting other farming activities. Several farmers also processed a portion of their duck eggs into salted



eggs to increase product value before marketing, although fresh eggs remained the dominant product sold by most households.

Challenges in Duck Farming Development

Although duck farming has become an important source of household income in Kebomlati Village, farmers continue to face various constraints that affect production continuity and business development. The challenges identified during interviews can be grouped into four major categories: production constraints, financial constraints, market constraints, and technical constraints. A summary of these challenges is presented in Table 3.

Table 3. Major Challenges in Duck Farming Development in Kebomlati Village

Challenge Category	Major Issues Identified
Production constraints	Seasonal shortage of natural feed, duck diseases, molting period, declining egg production during certain periods
Financial constraints	Limited production capital, high feed costs during the dry season, difficulty expanding flock size
Market constraints	Fluctuating duck egg prices and unstable farmer income
Technical constraints	Traditional farming practices, limited adoption of modern production technology, inadequate knowledge of feed formulation and livestock management

(Processed Primary Data, 2026)

As shown in Table 3, feed availability is one of the most significant production challenges experienced by duck farmers. During the rainy season, freshwater snails are abundant in rice fields due to flooding from the Bengawan Solo River, providing an inexpensive natural feed source. However, this situation changes considerably during the dry season when snail populations decline, forcing farmers to rely on commercial feed such as *aking* rice, rice bran, and concentrate. Respondents reported that the increasing dependence on purchased feed substantially raises production costs and reduces profit margins, particularly for small-scale farmers with limited financial resources. Another production-related challenge concerns animal health and the natural production cycle of laying ducks. Farmers reported that ducks occasionally suffer from diseases locally known as *sempor*, which can lead to mortality or require affected birds to be sold at significantly lower prices than healthy ducks. In addition, laying ducks periodically undergo molting, during which egg production temporarily ceases while old feathers are replaced with new ones. Respondents explained that these biological and health-related conditions directly reduce production output and household income during the affected periods.

Financial limitations also represent a major obstacle to the expansion of duck farming enterprises. Many respondents identified themselves as agricultural laborers, tenant farmers, or smallholder farmers with limited savings. As a result, they often encounter difficulties in financing the purchase of additional ducks, constructing or improving housing facilities, and securing sufficient feed during periods of high production costs. Several respondents indicated that the relatively large initial investment required to establish a laying duck enterprise discourages many rural households from increasing the scale of production. Market-related constraints were also identified during field interviews. Although demand for duck eggs remains relatively stable, farmers frequently experience fluctuations in market prices that affect daily income. Respondents stated that declining egg prices reduce their purchasing power for feed and veterinary supplies, particularly during the dry season when production costs are already higher. The dependence on local collectors further limits farmers' bargaining position in determining selling prices.

Contribution of the Rural Creative Economy to Sustainable Development

The findings indicate that the development of the rural creative economy through duck farming and salted egg production has generated multiple socio-economic benefits for the community of Kebomlati Village. The contribution extends beyond increasing household income by creating opportunities for product diversification, strengthening family-based enterprises, encouraging entrepreneurship, and improving the utilization of local resources. Furthermore, the integration of duck farming with value-added processing supports sustainable rural development by combining economic, social, and environmental benefits. The major contributions identified during the study are summarized in Table 4.

Table 4. Contribution of the Rural Creative Economy to Sustainable Development

Rural Creative Economy Activity	Empirical Findings	Contribution to Sustainable Development
Duck farming	Daily production of duck eggs provides regular household income	Strengthens household economic resilience and reduces dependence on seasonal agriculture
Salted egg production	Fresh eggs are processed into higher-value products	Increases product value, extends shelf life, and improves market competitiveness
Family-based enterprise	Household members participate in processing, packaging, and marketing	Creates employment opportunities and strengthens family entrepreneurship
Farmer organizations	Farmer groups facilitate cooperation and knowledge sharing	Enhances social capital, institutional capacity, and collective business development

Rural Creative Economy Activity	Empirical Findings	Contribution to Sustainable Development
Resource utilization	Duck manure is utilized as organic fertilizer and natural feed resources are optimized	Supports environmentally sustainable farming practices
Market development	Processed products are marketed through local traders and surrounding communities	Expands local business opportunities and stimulates rural economic growth
SDGs contribution	Economic, social, and environmental benefits generated by the creative economy	Supports SDG 1, SDG 2, SDG 8, SDG 12, and SDG 17

(Processed Primary Data, 2026)

As presented in Table 4, the most immediate contribution of the rural creative economy is the improvement of household income through continuous duck egg production. Unlike seasonal crop farming, duck farming generates a relatively stable cash flow that enables rural households to meet daily living expenses, finance children's education, purchase livestock feed, and reinvest in productive activities. The processing of fresh duck eggs into salted eggs further enhances income by creating products with higher commercial value and a longer shelf life, allowing producers to access broader market opportunities while reducing post-harvest losses. The results also demonstrate that the creative economy strengthens rural entrepreneurship through family-based business activities. Processing, packaging, and marketing are generally carried out by household members, allowing families to diversify their economic activities without substantially increasing labor costs. In addition, farmer organizations such as Melati Mandiri and Maju Bersama function as important local institutions that facilitate knowledge exchange, collective learning, and cooperation among producers. These organizations improve farmers' capacity to solve production problems, exchange market information, and strengthen local business networks. From an environmental perspective, the integration of duck farming with agricultural activities contributes to more efficient resource utilization. Duck manure is commonly used as organic fertilizer for rice fields, while natural feed resources, particularly freshwater snails available during the rainy season, reduce dependence on commercial feed. These practices illustrate how local resources are recycled within an integrated farming system, thereby supporting environmentally responsible production while lowering production costs.

DISCUSSION

The findings demonstrate that duck farming has evolved beyond a traditional livestock activity to become an important driver of the rural creative economy in Kebomlati Village. Unlike conventional agricultural production that emphasizes the sale of raw commodities, the rural creative economy creates additional value by transforming local resources into products

with higher economic and commercial value. In this study, duck farming provides the primary resource, while salted egg production represents an innovation that increases product value, extends shelf life, and creates broader market opportunities. This finding supports the concept of the creative economy proposed by Howkins (2001), which emphasizes that creativity and innovation are fundamental sources of economic value. Rather than relying solely on increased production, rural communities improve competitiveness through product transformation and value creation. Similarly, UNCTAD (2024) and UNESCO (2021) argue that creative economy development enables rural communities to utilize local resources more efficiently while promoting inclusive and sustainable economic growth. Therefore, the development of duck-based processed products in Kebomlati Village reflects how rural innovation can transform agricultural resources into competitive creative economic activities.

The transformation of fresh duck eggs into salted eggs also illustrates the importance of value-added agroindustry in strengthening rural competitiveness. Porter (1985) explains that competitive advantage is achieved through value creation rather than merely increasing production output. The findings reveal that processing duck eggs enables producers to obtain greater economic returns than selling fresh eggs alone because processed products possess higher market value, longer storage periods, and wider marketing opportunities. This value-added strategy is further strengthened by family participation in processing, packaging, and marketing activities, indicating that rural creative industries are closely associated with household entrepreneurship. Drucker (2007) emphasizes that innovation is not necessarily based on advanced technology but on the ability to utilize existing resources in more productive and profitable ways. In this context, the creativity demonstrated by farming households in Kebomlati Village represents a practical form of rural entrepreneurship that encourages business diversification while strengthening the resilience of household economies.

Another important finding concerns the role of local institutions in supporting the development of the rural creative economy. Farmer groups not only function as organizations for livestock management but also facilitate knowledge exchange, collective learning, and collaboration among producers. These institutions improve farmers' access to production information, market opportunities, and problem-solving mechanisms related to feed availability, livestock management, and product marketing. Such findings are consistent with Ostrom's (1990) theory of collective action, which argues that local institutions strengthen community capacity through cooperation and shared resource management. Furthermore, the interaction among farmer groups, village government, universities, and extension services creates an enabling environment for community innovation and enterprise development. The

findings therefore indicate that the success of rural creative economy initiatives depends not only on the availability of natural resources but also on strong institutional collaboration and community participation.

The study further demonstrates that the rural creative economy contributes significantly to sustainable rural livelihoods. The integration of duck farming with value-added processing provides continuous income, diversifies household economic activities, and reduces dependence on seasonal agricultural production. These findings support the Sustainable Livelihood Framework developed by Scoones (1998), which emphasizes that sustainable livelihoods are achieved through the effective utilization of natural, human, financial, physical, and social capital. In Kebomlati Village, natural resources such as duck eggs and locally available feed are combined with household labor, farmer organizations, entrepreneurial skills, and local market networks to generate sustainable economic opportunities. Moreover, the utilization of duck manure as organic fertilizer illustrates a more efficient use of local resources, supporting environmentally responsible production while reducing agricultural input costs. The rural creative economy not only improves household welfare but also strengthens the resilience and sustainability of village-based production systems.

Taken together, these findings indicate that the development of a rural creative economy based on duck farming and salted egg production contributes directly to the achievement of several Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), and SDG 17 (Partnerships for the Goals). Beyond increasing household income, the creative economy encourages entrepreneurship, creates employment opportunities, strengthens local institutions, and promotes more efficient utilization of rural resources. The study therefore contributes to the literature by demonstrating that creative economy development in rural areas should be viewed as an integrated process linking local resource utilization, value-added agroindustry, entrepreneurship, and community collaboration. From a policy perspective, strengthening technical capacity, facilitating access to finance, improving product innovation and packaging, expanding market networks, and reinforcing institutional partnerships are essential strategies for enhancing the competitiveness and sustainability of rural creative economy initiatives. These findings suggest that the experience of Kebomlati Village can serve as a practical model for developing creative economy-based rural enterprises in other agricultural regions with similar socio-economic characteristics.

CONCLUSION

This study demonstrates that rural duck farming, when integrated with downstream salted egg processing functions as a potent catalyst for the rural creative economy in Kebomlati Village, Tuban Regency, Indonesia. By bridging primary livestock production with value-added processing, local producers transcend traditional subsistence farming, converting endogenous agro-ecological assets into market-competitive consumer goods. The empirical findings reveal that this integrated model enhances household economic resilience, drives micro-enterprise diversification, and fosters localized entrepreneurial agency. Beyond mere income augmentation, duck farming in Kebomlati Village has reconfigured traditional agriculture into an innovative mechanism for sustainable rural transformation, sustained by the dynamic interplay among natural resource availability, community social capital, institutional support, and incremental product innovation. Crucially, farmer collectives (*kelompok tani*) serve as essential institutional conduits that accelerate knowledge spillovers, collective bargaining, and entrepreneurial capacity building.

By formalizing these grassroots value chains, creative agro-industries yield direct socio-economic dividends aligned with key Sustainable Development Goals (SDGs), notably SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), and SDG 17 (Partnerships for the Goals). These findings affirm that community-led agro-processing is not merely a survivalist coping strategy, but a structural driver of inclusive, sustainable development in peripheral economies. Despite these contributions, the contextual boundaries of this research present key opportunities for future scholarship. As a qualitative single-case study, the observed dynamics reflect specific socio-ecological and institutional arrangements that may not fully capture regional variations. To build upon these foundational insights, future research should employ comparative cross-regional designs and mixed-method quantitative approaches to empirically assess value-chain efficiency, market competitiveness, financial return on investment, and long-term socio-ecological resilience. Such multi-site empirical validation will be vital for informing evidence-based policies designed to scale creative economy-driven rural development across Indonesia and other emerging agrarian economies in the Global South.

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