



The role of actors in the innovation diffusion process of *Celugam* products

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ABSTRACT

Background: This study explores the roles of various actors in the innovation diffusion process of *Celugam*, a traditional textile product in Liwa City, West Lampung Regency. *Celugam* holds high cultural value and local economic potential, yet its innovation dissemination faces challenges such as limited artisan regeneration, restricted market access, and insufficient policy attention. **Method:** Using a descriptive qualitative approach and Rogers' diffusion of innovation theory, the study analyzes five key stages: knowledge, persuasion, decision, implementation, and confirmation. Data were collected through in-depth interviews, field observations, and content analysis. Findings reveal that the diffusion process is gradual and involves three main actors: artisans as innovators, government as facilitators, and the community as end users. **Finding:** Artisans contribute through production technique transformation and product diversification, while the government provides training, equipment, and promotional access. The community's adoption is shaped by cultural values and social validation. The main challenges include low youth interest and suboptimal marketing strategies. The study recommends stakeholder synergy, digital-based promotion, and artisan regeneration programs to ensure *Celugam*'s sustainability as a culturally rooted creative economic product. These findings serve as a foundation for inclusive and sustainable local economic development policies. **Conclusion:** This study concludes that the diffusion of *Celugam* innovation in Liwa City reflects a dynamic interaction between cultural preservation and creative economic adaptation. **Novelty/Originality of this article:** The novelty of this study lies in its application of Rogers' Diffusion of Innovation Theory to a traditional textile context, offering an interdisciplinary perspective that bridges cultural heritage studies and innovation diffusion frameworks.

KEYWORDS: actor roles; innovation diffusion; *Celugam*; creative economy; cultural product.

1. Introduction

One of the key components in local economic development is knowledge, which serves as the foundation for innovation. Innovation functions as a transformational force in the development of local products because it enhances competitiveness and creates added value through improvements in design, production methods, and marketing strategies (Anwar et al., 2023). In the context of sustainable urban development, innovation is not limited to technology but also includes changes in governance, community participation, and social values. Cultural innovation, aimed at strengthening local identity and community creative practices, plays an important role in shaping social norms that support sustainability (UNESCO & World Bank, 2021). To ensure that innovation has a broad impact on local economic development, the process of innovation diffusion is required, namely the

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mechanism by which innovation is disseminated and adopted within a social system through specific communication channels over a period to participants in that system (Rogers, 2003).

In the innovation diffusion process, there exists a social system consisting of activities or groups of individuals who maintain relatively stable reciprocal relationships. Members of the social system can be categorized into adopter groups based on their level of innovation or speed of adoption. The classification of adoption rates includes five categories: innovators, early adopters, early majority, late majority, and laggards (Azizah, 2019). This process cannot occur naturally without the role of various actors who function as drivers, information disseminators, and bridges between innovation and recipient communities (Dhewanto et al., 2013). The study of actors in the process of innovation diffusion is important, considering their strategic role in spreading ideas, technologies, and new practices to surrounding social groups (Dissanayake & Jayasinghe, 2020).

In the context of West Lampung, particularly in Liwa City, a concrete example of innovation in the local economy is the development of *Celugam*, a traditional fabric. *Celugam* is a distinctive textile characterized by triangular motifs and bright colors such as red, black, and orange. This fabric holds significant cultural value and has been passed down across generations (Yadin et al., 2023). Over time, *Celugam* products have undergone innovation, both in terms of function—transforming from traditional ceremonial attire into household items and casual wear—and in terms of production techniques, shifting from manual methods to machine-based processes (Evita, 2022). Through appropriate and collaborative innovation diffusion, *Celugam* has great potential to become a driver of the local economy in Liwa City. This aligns with the Regional Spatial Plan/*Rencana Tata Ruang Wilayah Nasional* (RTRW) of West Lampung Regency, which designates Liwa City as a center of socio-economic services for the surrounding areas.

Efforts to popularize *Celugam* products require commitment and collaboration from various actors or stakeholders, including the government, business actors, and the public (Aini & Nugroho, 2023). This is reinforced by recent studies emphasizing that understanding the role of actors is crucial to accelerating innovation adoption, particularly in the context of sustainability (Howaldt et al., 2025; Wilke & Pyka, 2024; Osobajo et al., 2023; Sultana & Turkina, 2023). Each actor plays a critical role and function in disseminating innovation at the local level, such as acting as change agents, opinion leaders, or information disseminators (Siregar & Widyawati, 2018). The government plays a role in providing access to capital and creating a conducive business climate for economic actors, including the empowerment of MSMEs through entrepreneurship training and product marketing (Nuraliah et al., 2023). Artisans contribute through product innovation, improving production quality, and participating in joint business groups to expand marketing networks (Janizar et al., 2024). Meanwhile, the community supports economic development by optimizing local potential, participating in business groups, and establishing partnerships with other entrepreneurs to strengthen the competitiveness of regional products (Nafisah & Segara, 2025). With collaboration among all parties—government, business actors, and the community—*Celugam* products are expected to foster the creation of an innovation ecosystem that supports knowledge exchange and collective learning (Wilke & Pyka, 2024).

Nevertheless, the diffusion process of *Celugam* products is not without obstacles. Unequal access to information, limited artisan regeneration, and inadequate government policies targeting the non-agricultural sector pose significant challenges in innovation diffusion (Nur Qomariyah & Sri Wulandari, 2021). Until now, *Celugam* has not become a priority in local government policies, which remain more focused on agricultural products such as coffee. Policies related to *Celugam* remain suboptimal. Another challenge is the lack of artisan regeneration, as most *Celugam* artisans belong to the older generation, while younger generations show limited interest in learning and continuing this tradition. If these challenges are not addressed, the sustainability of *Celugam* will face long-term threats, both in terms of competitiveness and its preservation as a marker of local cultural identity.

Therefore, this study aims to explore the role of various actors in the innovative diffusion process of *Celugam* products in Liwa City. By identifying and understanding how actors contribute to the diffusion of *Celugam* innovation, this research is expected to provide the basis for formulating strategies to develop and preserve *Celugam*. Ultimately, the findings are expected to contribute to the development of a sustainable culture-based creative economy through *Celugam* products.

2. Methods

This study employs a qualitative method with a deductive approach. The deductive approach is utilized because the research is grounded in Rogers' (2003) diffusion of innovation theory, which emphasizes five key stages: knowledge, persuasion, decision, implementation, and confirmation, along with the theory of actor roles in innovation. The qualitative method is chosen for its ability to provide an in-depth portrayal of social conditions in the field (Mahpur, 2017), particularly regarding the roles of actors such as artisans, government officials, and the community in the diffusion process of *Celugam* products in Liwa City. Through this approach, the researcher can capture the perspectives, experiences, and direct interactions of the involved informants. This theoretical framework is then operationalized into indicators used for data collection and analysis (Creswell & Poth, 2018).

Observations and interviews with various stakeholders, including government officials, artisans, and particularly community members directly involved in local economic development initiatives in Liwa City through *Celugam* products—will be conducted to collect both primary and secondary data. Semi-structured interviews are employed because they provide flexibility to explore in-depth information while maintaining the research focus (Magaldi & Berler, 2020).

The selection of informants is carried out using purposive sampling, which, according to Ahmad & Wilkins (2025), is effective for identifying participants with relevant experience to the research focus. Purposive sampling is chosen because not all members of the population possess the knowledge, experience, or involvement pertinent to the study. Therefore, the sample is directed toward individuals who can provide detailed insights into patterns of interaction, dissemination strategies, and challenges related to *Celugam* products in Liwa City. In the context of research on the role of actors in the innovation diffusion process in Liwa, West Lampung, a total of 17 informants are identified from groups directly or indirectly engaged in the dissemination of innovation, such as artisans, community leaders, and local government representatives.

The method of data analysis employed in this study is content analysis. Content analysis is a research approach that focuses on an in-depth examination of the content of information derived from mass media, both written and printed. This analysis is expected to comprehensively explain the role of various actors involved in the diffusion process of *Celugam* product innovation in Liwa City, Balik Bukit District. To enhance credibility, this study applies source triangulation, which involves comparing data from multiple informants and methods, a practice emphasized by Creswell & Poth (2018) and McLeod (2024) as essential for improving the validity of findings. Furthermore, ethical considerations are implemented by obtaining informed consent, maintaining participant confidentiality, and ensuring participants' rights, in accordance with the principles of qualitative research ethics (Pietilä et al., 2019).

3. Results and Discussion

3.1 *The role actors in the innovation process of Celugam products*

The diffusion of innovation consists of five stages: knowledge, persuasion, decision, implementation, and confirmation. Within this process, a social system is present—defined

as a collection of distinct functional units bound together in cooperation to solve problems and achieve shared goals. Members of this system are categorized into adopter groups based on the speed at which they embrace innovation. These adopter groups are classified into five categories: (1) innovators, (2) early adopters, (3) early majority, (4) late majority, and (5) laggards.

3.1.1 Knowledge

This stage occurs when individuals or groups are first exposed to an innovation and begin to understand what it is and how it works (Rogers, 2003). In the case of *Celugam* products, the formation of knowledge involves disseminating information to the local community about *Celugam*, a traditional textile from West Lampung. *Celugam* is a traditional textile product from West Lampung that has been passed down through generations, characterized by its distinctive triangular patterns and traditional colors—red, orange, black, and white—each carrying rich symbolic meaning (Ciptandi & Ramadhan, 2021). The community begins to recognize the uniqueness, motifs, and cultural value embedded in the fabric. To ensure broader acceptance of *Celugam*, effective communication and promotional strategies are required, including the use of social media and collaboration with the creative industry.

“Initially, because Celugam is a cultural identity of West Lampung that must be preserved, I saw its great potential and believe it must always be protected.” (C-01.01)

“As a traditional garment inherited from our ancestors, most people in West Lampung wear Celugam as ceremonial attire—such as sarongs, wedding garments, caps, shirts, and more.” (C-02.01)

“Training is held regularly every year.” (C-01.03; C-02.03; C-03.03)

Information about *Celugam*’s development potential is also obtained through regular training programs organized by the government. As a traditional garment, *Celugam* is already familiar to most of the West Lampung community, who believe it must be preserved. To enhance the product, artisans have introduced various innovations. Previously, the fabric was sewn manually using patchwork techniques; now, it is developed using embroidery methods. Artisans stated:

“The innovation applied is a blend of traditional techniques with modern touches to attract a broader market segment.” (C-01.03)

“We used hand stitching because sewing machines were not available. After independence, we began using machines.” (C-02.03)

“We started with hand stitching, then developed modern techniques like embroidery, and diversified the product into bags, clothing, and accessories.” (C-03.03)

Based on interactions with government stakeholders, the identified innovations include the transformation of *Celugam* from a household product into a fashion item such as clothing and caps. The production process has also shifted from manual stitching to creative embroidery. This shift aligns with findings from the sustainable innovation network, which indicate that the combination of cognitive proximity (technical knowledge), institutional proximity (policy support), and social proximity (community trust) accelerates knowledge exchange and adoption (Wilke & Pyka, 2024).

“It used to be just household items, but now it includes fashion like shirts and caps. Previously it was patchwork sewn manually, now it’s creatively embroidered.” (P-01.01)

In the innovation diffusion process, *Celugam* as a traditional textile from West Lampung has undergone the knowledge stage, where the community begins to understand and appreciate its cultural and economic value. Innovations such as embroidery techniques reflect efforts to merge traditional elements with modern approaches to expand the market while preserving cultural heritage.

The key actors in this stage are the Innovators—individuals who first adopt an innovation. According to Rogers (2003), innovators play a crucial role in disseminating knowledge about innovations to others. They are typically highly trusted and respected within their social groups, making them effective in introducing innovations. In the knowledge stage of *Celugam*'s diffusion, the identified key actors are the artisans, who serve as innovators. They exhibit innovator characteristics through active participation in government-led training and their willingness to integrate traditional production techniques with modern approaches to better respond to market demands (Macharová et al., 2022).

This is reflected in their statements about regularly attending training and modifying designs to make *Celugam* more appealing across market segments. The role of artisans as innovators is vital in shaping the initial stage of *Celugam*'s innovation diffusion, both in terms of technical knowledge and cultural value introduction to the broader community. Operationally, the literature also shows that knowledge networks led by key actors accelerate the diffusion of ecologically and socially relevant innovations (such as process efficiency, use of local materials, and durable design) when the culture and absorptive capacity of the region or city are strengthened (Li et al., 2023; Wilke & Pyka, 2024).

Meanwhile, the general public begins to understand and appreciate *Celugam*'s motifs and cultural meanings through socialization efforts led by the artisans—reinforcing their role as early knowledge agents within the social system (Ciptandi & Ramadhan, 2021; A. R. Isra & M. Muktiali, 2022). Knowledge about *Celugam* is not only technical but also encompasses cultural values, history, and local identity. This makes the knowledge stage a critical foundation for building positive public attitudes toward innovation, which then progresses to the next stage in the diffusion process.

3.1.2 Persuasion

After acquiring knowledge, individuals or groups begin to form attitudes toward the innovation—whether positive or negative—based on perceived benefits, risks, and alignment with their needs (Rogers, 2003). At this stage, they evaluate the innovation in terms of utility, relevance, and compatibility with their values. Attitudes may be positive, neutral, or negative, depending on their initial perceptions and experiences with the product. In the case of *Celugam*, once the community becomes aware of it, they begin to explore its advantages—such as utility, price, and quality compared to similar products. Interviews with government representatives and artisans revealed:

"Celugam is appealing because of its diverse colors and patterns, which distinguish it from other fabrics." (P-01.05)

"In my opinion, what adds value to Celugam is its distinctive colors and unique motifs, which set it apart from other textiles." (C-02.05)

"Celugam stands out due to its unique characteristics—a combination of four main colors: black, white, red, and orange. It also features special motifs not found elsewhere." (C-02.05)

Celugam's unique appeal lies in its color combinations and traditional motifs, which differentiate it from other types of fabric. Interviews indicate that its visual characteristics are a major attraction, giving *Celugam* a strong identity as an authentic local product. Its distinctive form and craftsmanship further reinforce its value as a traditional textile with

high artistic merit. These features present significant potential for further development, especially within the innovative fashion industry, thereby enhancing its competitiveness in broader markets.

The government plays a vital role in supporting artisans by providing market access, enabling *Celugam* products to reach wider domestic and international audiences. As Rogers (2003) notes, innovations can be disseminated through communication channels and adopted by broader markets.

“As a government institution, we consistently collaborate with artisans to provide market access as a strategy to expand Celugam’s reach beyond the region—even internationally.”
(P-01.04)

With government support, artisans gain better access to information, technology, and distribution networks, facilitating the adoption and diffusion of their products into new markets.



Fig. 1. *Celugam* fabric

After gaining initial knowledge about *Celugam* products, the community began to form positive attitudes toward the innovation, driven by the distinctive qualities and advantages that set *Celugam* apart from other textiles—thus giving it added market value. This growing interest encouraged individuals to seek further information regarding its benefits, uses, and quality compared to similar products.

The key actors in this stage are the early adopters—individuals who demonstrate a higher level of receptiveness to innovation and possess the ability to influence others to become more interested in innovation. Early adopters play a crucial role in encouraging broader community adoption (Rogers, 2003). They are often regarded as role models within their social groups and help reinforce positive perceptions of innovation.

In the persuasion stage of *Celugam*’s innovation diffusion, the primary actors are early adopters—namely, community members actively engaged in cultural activities, creative entrepreneurs, and consumers who are aware of the value of local products. These individuals began expressing interest in *Celugam* after receiving initial information about the product:

“Yes, I’m interested in products that carry cultural meaning and historical value.” (M-04.02)

“Yes, I’m very interested because Celugam is a traditional fabric of West Lampung that must be preserved.” (M-07.02)

Community members began exploring the advantages of *Celugam*, including its benefits, usage, pricing, and comparative quality. This interest stems from the cultural

significance, quality, and aesthetic appeal embedded in *Celugam*. As reflected in the statements above, individuals are drawn to *Celugam* due to its historical relevance and local wisdom, fostering deeper appreciation and positive perceptions of innovation.

The community's positive attitude is evident in their increased curiosity, comparisons with similar products, and consideration of purchasing or using *Celugam* in daily life. This process highlights the persuasion stage as a critical moment in shaping consumer perception and preference toward innovation. Thus, the persuasion stage in *Celugam*'s diffusion illustrates how the combination of cultural value, product aesthetics, and structural support can shape positive public attitudes. The role of early adopters as social influencers is key to expanding innovation acceptance and facilitating the transition to the decision stage.

3.1.3 Decision

In this stage, individuals or groups decide whether to adopt or reject an innovation. The decision is based on the evaluation of information acquired during the knowledge and persuasion stages, as well as other factors such as cost, availability, and social support (Rogers, 2003). This decision is influenced by prior knowledge, formed attitudes, and external factors such as access to resources, social validation, and environmental support.

In the context of Liwa City, individuals and communities assess whether the innovation related to *Celugam* products is worth adopting. This process involves evaluating the benefits, risks, and compatibility of the product with local needs and cultural values.

In making adoption decisions, artisans rely heavily on government support, as reflected in the following statements:

"Initially, I joined the training, and previously everything was done manually. Now we use sewing and embroidery machines, which greatly ease the artisans' work." (C-01.06)

"We usually conduct surveys to understand consumer preferences and adjust our products, and we also participate in government-facilitated training." (C-03.06)

Technological advancements and government support play a vital role in improving production efficiency and the competitiveness of *Celugam* products. The use of sewing and embroidery machines has replaced manual processes, making artisans' work easier, increasing productivity, and enabling the production of high-quality goods in less time.

"There is no specific government policy for Celugam yet, but regular training for artisans continues to be provided to encourage future innovation." (P-01.05)

This reflects ongoing efforts to adapt and innovate within the *Celugam* industry, both in production and marketing, supported by technical training from the government. Training in machine use, for example, helps artisans produce *Celugam* more efficiently. Additionally, conducting consumer preference surveys shows that artisans actively tailor their products to market demand. These efforts are complemented by promotional activities through cultural exhibitions, MSME events, and social media marketing.

"Since Celugam is a traditional textile of West Lampung, to raise awareness, we must promote it through cultural exhibitions or MSME events showcasing various Celugam products like bags, hijabs, tapis, and mattress covers. Online promotion is also important." (M-01.06)

"In my opinion, promotion should be intensified, especially for audiences outside the region. We need to highlight its uniqueness—through social media and participation in exhibitions outside the area." (M-02.06)

“Celugam should be introduced more widely to communities beyond West Lampung, possibly through social media.” (M-05.06)

However, broader promotion is still needed, particularly to increase popularity outside the region. Leveraging social media, participating in cultural and MSME exhibitions, and developing derivative products based on *Celugam* are essential steps to expand market reach. Based on interviews and field observations, the decision to use or produce *Celugam* is not uniform. Certain community groups, especially those involved in cultural and creative economic activities, show high enthusiasm for adopting the innovation. They view *Celugam* as both a symbol of local identity and a promising economic opportunity. This decision is reinforced by positive experiences with product quality, design aesthetics, and the accompanying cultural narrative.

Conversely, some community groups remain hesitant or reject *Celugam* innovation. This reluctance is not solely due to disinterest but is often driven by limited access to information, lack of capital support, and perceptions that traditional products lack economic value. In this context, the roles of government and artisans as facilitators and motivators are crucial to expanding the acceptance base.

Generational factors also influence adoption decisions. Younger generations show fluctuating interest depending on how relevant the product is to their lifestyle. Therefore, innovation strategies that combine traditional elements with modern design are key to attracting this demographic. Derivative products such as bags, wallets, and accessories based on *Celugam* serve as bridges between cultural values and contemporary needs.

The key actors in this stage are the early majority and late majority, who tend to be more cautious and require tangible evidence or social validation before making decisions. In the decision stage of *Celugam*'s innovation diffusion, these groups begin to consider adoption based on social validation and concrete outcomes demonstrated by previous adopters. This decision-making process is reflected in community considerations of cultural value, product uniqueness, and relevance to local needs.

Those who express interest in purchasing and using *Celugam* represent the early and late majority—individuals who do not adopt innovation immediately but wait for proof of benefits, user experiences, and support from credible sources. Their decisions are influenced not only by personal preferences but also by social influence and trust in the product's alignment with local cultural values (Rochmaniah & Jariyah, 2018).

Meanwhile, the government continues to provide support through regular technical training, while artisans have decided to adopt modern technologies such as sewing and embroidery machines in response to efficiency needs and market adaptation. Thus, the decision to adopt innovation is significantly shaped by training, technical guidance, and government support.

3.1.4 Implementation

The implementation stage marks the phase in which innovation is concretely applied in the lives of individuals or groups. Implementation may involve changes in behavior, processes, or the use of technology (Rogers, 2003). In the case of *Celugam* products, this stage is characterized by several strategic steps, including a shift in production methods—from traditional hand-stitching to the use of sewing machines—and guidance in branding, particularly in building product identity and enhancing appeal through digital marketing.

“Product diversification training for Celugam artisans focuses on branding and market access support, including sewing machine assistance, but the main goal is to open market access.” (P-01.07)

Artisans also receive guidance on branding strategies, including how to build product identity and increase attractiveness through digital marketing. While the provision of sewing machines supports business development, the core focus of implementation lies in

expanding market access so that *Celugam* products become more widely recognized and accepted by consumers.

“There are no difficulties in implementing new innovations because the local agency provides guidance and training on the innovations we plan to develop.” (C-01.08)

“The challenge lies in the limited number of artisans here. Currently, there are 20 housewives who must all participate in training. Young women are generally less interested in learning about Celugam, so only older women are involved.” (C-01.08)

Although the implementation of *Celugam* production innovation is supported by training and guidance from relevant agencies, challenges remain—particularly regarding the number of artisans and generational continuity in preserving these skills. The essence of the implementation stage is to broaden market access and increase recognition of *Celugam*. From a technical perspective, artisans face few obstacles due to the availability of training that facilitates adaptation to new innovations. This underscores the critical role of government support in ensuring effective implementation.

Key actors in this stage are early adopters and early majority. These groups play an essential role in disseminating innovation through direct practice and experience-sharing. According to Rogers (2003), adopter categories are instrumental in introducing and implementing innovation at both individual and group levels. Early adopters are evident among artisans who actively participate in product diversification training, engage in branding activities, and adopt new technologies such as sewing machines provided by the government. Additionally, artisans representing the early majority actively implement innovations and diversify *Celugam* products to maintain cultural relevance and respond to market challenges (Muliana & Anwar, 2024). The early majority also begin to engage in production and distribution, responding to market opportunities and applying proven innovations.

The government continues to support this process through technical training, marketing assistance, and the provision of modern production equipment, thereby accelerating the implementation of innovation. Furthermore, innovation implementation opens opportunities for collaboration among artisans, entrepreneurs, and educational institutions. Internship programs, entrepreneurship training, and the integration of *Celugam* into arts and culture curricula can strengthen this process. Thus, the implementation stage is not merely a phase of application but a momentum for expanding the social and economic impact of *Celugam* innovation.

3.1.5 Confirmation

Following implementation, individuals or groups seek reinforcement for their decision to adopt the innovation. This reinforcement may come in the form of positive feedback from others, evidence of innovation success, or personal satisfaction with the outcomes. If the reinforcement is positive, continued adoption is likely. Conversely, if the reinforcement is negative, individuals or groups may discontinue use of the innovation (Rogers, 2003). Validation may stem from personal experience, social influence, or tangible results observed after implementation.

In the context of *Celugam* products, the confirmation stage has yielded positive outcomes, encouraging the sustainability of the adopted innovation. This is reflected in the statement of a government official:

“Yes, consumers are quite supportive of innovation, because with the emergence of new innovations, Celugam products can continue to evolve—from textiles and household items to fashion products. The innovations introduced, especially the shift from manual stitching to embroidery, greatly facilitate artisans in producing Celugam, particularly in large quantities.” (P-01.09)

Positive consumer support plays a vital role in driving further development of *Celugam* products. Through innovation adoption, *Celugam* has diversified into various forms, including raw textiles, household items, and fashion products. These changes not only simplify the production process but also enhance production capacity and work efficiency among artisans.

“Using higher-quality materials and developing product variations for different market segments.” (C-01.09)

Artisans have begun using higher-quality raw materials to improve durability and aesthetic value, enabling them to meet more competitive market standards. Innovation is also reflected in product diversification, encompassing textiles, accessories, and household goods tailored to the evolving needs and preferences of consumers.



Fig. 2. Product variations of *Celugam* fabric: (a) *Celugam* necklace, (b) *Celugam* tablecloth

Positive reinforcement ensures the continued adoption of innovation, strengthening *Celugam*'s competitiveness and preserving its identity as a local product with appeal to broader markets. Artisans who have successfully marketed *Celugam* beyond the region—even to international markets—serve as concrete evidence of its competitive potential. This success not only boosts the artisans' confidence but also reinforces public perception that *Celugam* is a product worth preserving and developing. Such validation is essential for sustaining innovation and encouraging wider adoption.

The confirmation stage thus demonstrates that *Celugam* innovation has undergone a complete diffusion process and has been broadly accepted by the community. Social and structural validation form a critical foundation for ensuring the sustainability of innovation, while also opening opportunities for expansion and strengthening local cultural identity through creative economic products.

Actors involved in this stage include *laggards*, those who adopt innovation more slowly—and innovators, who help convince others that their decision to adopt innovation is justified. According to Rogers (2003), laggards are individuals or communities that adopt innovation at the final stage, often due to strong attachment to traditional practices, skepticism toward new ideas, or limited access to information.

In the context of *Celugam*, laggards can be identified among segments of the community that only begin to show interest and trust in the product after witnessing the success and sustainability of innovations implemented by artisans and supported by the government. On the other hand, innovators, namely artisans who consistently develop product variations and improve material quality, play a vital role in reinforcing the decisions of other groups to continue using and supporting the product. Reaching the final adopter group (such as passive consumers) depends heavily on effective innovation communication, the creation of tangible benefits, and the active involvement of innovators (Rochmaniah & Jariyah,

2017). The roles of actors in the diffusion process of *Celugam* product innovation in Liwa City, as explained in the five stages above, can be seen in the following table.

Table 1. The roles of actors in the diffusion process of *Celugam* product innovation in the five stages

Diffusion Stage	Description	Key Actors	Actor Roles
Knowledge	Individuals or groups are first exposed to the innovation and understand how it works.	Innovators (Craftsmen)	Attend training, introduce technical innovations (embroidery, product diversification), and spread initial information.
Persuasion	Society forms attitudes toward the innovation (positive or negative) after gaining knowledge.	Early Adopters (Culturally active community, creative actors)	Serve as social role models, provide positive influence, and enhance the perception of <i>Celugam</i> 's added value.
Decision	Individuals or groups decide to adopt or reject the innovation.	Early Majority & Late Majority	Adopt after social validation, attend training, and adjust products to market preferences.
Implementation	Innovation is applied in real practice.	Early Adopters & Early Majority	Adopt new technology, diversify products, and utilize branding and digital marketing.
Confirmation	Reinforcement of adoption decisions through social validation and actual results.	Laggards & Innovators	Laggards adopt after seeing success; innovators continue developing product variations.

4. Conclusions

This study successfully identifies and elaborates on the strategic roles of various actors in the innovation diffusion process of *Celugam* products in Liwa City, West Lampung. The diffusion process unfolds through five main stages as described by Rogers (2003): knowledge, persuasion, decision, implementation, and confirmation. Each stage involves different actors with specific roles: artisans as innovators in the early stage, cultural communities and creative actors as early adopters, and the majority groups and laggards in the subsequent stages.

Artisans act as innovators initiating the transformation of production techniques and product diversification, while the government serves as a facilitator by providing training, market access, and technical support. The community, as end users, exhibits adoption dynamics influenced by cultural values, aesthetics, and social validation.

In the initial stages (knowledge and persuasion), artisans play a crucial role in introducing *Celugam* as a cultural product with economic potential. They combine traditional techniques with modern approaches such as embroidery and contemporary design. The government supports this process through regular training and social media-based promotion, which enhances public understanding of *Celugam*'s value and uniqueness.

During the decision and implementation stages, the community begins to actively adopt *Celugam* products, driven by trust in their quality and embedded cultural value. Government and artisans collaborate to provide market access and strengthen product branding. Challenges such as limited artisan regeneration and the absence of specific policies targeting non-agricultural sectors must be addressed to ensure innovation sustainability.

The confirmation stage reveals that consumer support and innovation success encourage continued adoption of *Celugam*. Product diversification and material quality improvements serve as tangible evidence that innovation has been accepted and appreciated by the market. Artisans continue to innovate, while previously passive community members begin to show interest and trust in the product.

Theoretically, this study contributes to the development of the innovation diffusion concept in the context of cultural products. The findings broaden the understanding that

cultural innovation is not merely technical but also deeply embedded with social and symbolic values that influence the speed of adoption. The success of cultural innovation requires a combination of cultural embeddedness and adaptive strategies to market dynamics. Thus, this research emphasizes the importance of integrating socio-cultural perspectives into innovation diffusion theory, particularly for products that serve as local identity markers and instruments of creative economic development.

From a practical standpoint, the results recommend policies that support artisan regeneration through continuous training programs, incentives for younger generations, and the integration of *Celugam* skills into local education curricula. Additionally, city branding strategies based on *Celugam* can serve as instruments to enhance tourism appeal and attract creative investment in Liwa City. Local governments are advised to strengthen the innovation ecosystem through multi-actor collaboration, market access support, and digital promotion so that *Celugam* not only survives as cultural heritage but also becomes a driver of sustainable local economic growth. With these measures, *Celugam* has the potential to become both a symbol of city identity and a catalyst for inclusive and competitive regional development.

Overall, the roles of actors in the *Celugam* innovation diffusion process are collaborative and complementary. The success of diffusion depends not only on technical innovation but also on social dynamics, policy support, and active community participation. These findings provide a critical foundation for developing strategies to preserve cultural heritage and strengthen the local creative economy in Liwa City. Based on the findings regarding the role of actors in the innovation diffusion process of *Celugam* products in Liwa City, future research is encouraged to further expand understanding and academic contributions in the field of innovation rooted in local culture.

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Author Contribution

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