

IC-LEE Model: A Financial Inclusion Framework for Strengthening Coastal Tourism Economies Based on Local Wisdom

¹Okta Eka Putra*, ¹Elan Rusnendar, ¹Fillah Maulana Akbar

Corresponding Author: *oktaeka@unibi.ac.id

¹ Universitas Informatika dan Bisnis Indonesia, Bandung, Indonesia

ARTICLE INFO

ABSTRACT

Article history

Received 5 November 2025

Revised 24 January 2026

Accepted 22 February 2026

This study aims to examine the influence of local wisdom, financial innovation ecosystem, and financial inclusion on the development of the creative economy and local economic empowerment in coastal tourism at Benan Island, Lingga Regency. The research employed a quantitative approach using a model development study design. Data were analyzed through Structural Equation Modeling (SEM) using SmartPLS 4, and questionnaires were distributed to creative business actors and local communities. The results indicate that all proposed hypotheses were supported, showing that local wisdom, financial innovation ecosystem, and financial inclusion significantly affect the creative economy and local economic empowerment, both directly and indirectly through the mediation of financial inclusion and creative economy. The Adjusted R^2 values confirm that the model adequately explains the variance of the constructs, while the high Goodness of Fit demonstrates strong model suitability. These findings highlight the critical role of integrating local cultural values with financial innovation and creative economy development as an effective strategy to enhance sustainable community economic empowerment. The study provides practical implications for government, academics, and business actors to optimize collaboration in supporting the growth of a creative economy grounded in local wisdom.

Keywords

Economy Development
Economic Empowerment
Financial Inclusion
Innovation Ecosystem
Local Wisdom

This is an open-access article under the [CC-BY-SA](#) license.



Introduction

Global tourism in 2024 demonstrates a strong revival, marked by innovation, shifting traveler preferences, and a growing emphasis on sustainability. Indonesia is experiencing a similar trend, as reflected in the growth of 6,026 tourism villages by October 2024. One of Indonesia's greatest tourism potentials lies in its coastal regions, which not only offer natural beauty but also embody rich local wisdom. However, a key challenge remains the low level of financial inclusion in frontier, outermost, and disadvantaged regions as well as coastal areas. Data from the 2022 National Survey on Financial Literacy and Inclusion shows that national financial inclusion reached 85.10%, yet the distribution remains uneven.

Financial inclusion is a crucial element for improving community welfare, strengthening the creative economy, and promoting sustainable tourism. In this context, Benan Island in Lingga Regency serves as a relevant case study. The island was ranked among the top 300 in ADWI 2024 and is home to approximately 1,000 residents, supported by a local government fund of IDR 1.12 billion for tourism development. Nonetheless, challenges persist in terms of financial access, financial literacy, and public trust in financial institutions. Therefore, a financial inclusion model integrated with local wisdom is needed to strengthen the creative economy and foster sustainable coastal tourism.

Previous studies have shown that financial inclusion contributes to tourism development and poverty reduction through improved access to financial services and financial literacy [1], [2]. Locally based creative economies enhance tourism competitiveness through cultural uniqueness and innovation [3], [4]. Meanwhile, community-based sustainable tourism is more effective when integrating local wisdom, environmental sustainability, and community participation [5], [6]. However, empirical studies that simultaneously link Local Wisdom, the Financial Innovation Ecosystem, Financial Inclusion, the Creative Economy, and Local Economic Empowerment have yet to be found.

Based on prior research, several gaps highlight the novelty of this study. Most financial inclusion and creative economy research focuses on urban areas, with limited empirical studies conducted in coastal regions. Few studies directly engage local communities. Moreover, no existing research combines Local Wisdom, the Financial Innovation Ecosystem, Financial Inclusion, the Creative Economy, and Local Economic Empowerment into a single

comprehensive model. This research aims not only to contribute academically but also to develop a contextual, applicable, and replicable local wisdom-based financial inclusion model.

The urgency of this study lies in the need to create inclusive and culturally rooted financial solutions so that coastal communities are not merely objects of tourism but also active drivers of the creative economy. Furthermore, the findings are expected to serve as a foundation for enhancing local competitiveness and economic independence, as well as to inform more effective policy formulation in the tourism and creative economy sectors based on local wisdom.

Literature Review

Local wisdom encompasses the values, norms, knowledge, and practices of communities in managing their social, economic, and natural environments [7]. The integration of local wisdom with modern innovation can strengthen the competitiveness of creative products and support economic development [8], while the value of mutual cooperation contributes to social capital and community resilience [9]. Ecological practices rooted in local wisdom tend to be more adaptive to environmental changes than modern approaches [10]. In tourism, they can enhance community participation, reinforce regional identity, and promote economic diversification [11], although challenges remain from globalization and urbanization [12].

Financial inclusion represents a pillar of modern economic development, where individuals and enterprises have effective access to useful and affordable financial services [13]. Access to financial services enhances the ability to withstand economic shocks, manage risks, and invest in future growth [14]. Financing for small enterprises increases production capacity and improves quality of life [15], while women's financial access strengthens independence and community contribution [16]. The digital ecosystem supports financial inclusion through low transaction costs and broad accessibility [17], though it still requires community-based approaches and enabling regulations [18].

Financial innovation creates a complex ecosystem combining regulation, infrastructure, and technology to promote financial inclusion [19], [20]. The adoption of fintech reduces transaction costs, accelerates services, and expands financial reach [21]. In Indonesia, financial innovation is evident through initiatives such as QRIS, BI-Fast, and P2P lending fintech, which act as key drivers of economic growth [22]. The creative economy rooted in creativity, innovation, and intellectual resources encompasses the creation, production, and distribution of goods and services [23]. Indonesia's creative economy consists of 17 subsectors [24], and the integration of local wisdom enhances product authenticity and market appeal, particularly in cultural tourism [25].

Public policy plays a crucial role in supporting regulation, financial access, and human resource development [26]. Local economic empowerment focuses on strengthening

community capacity, accessibility, and independence [27]. Community participation aligns with the concept of endogenous development, which emphasizes local potential and cultural assets [28]. Community based MSMEs contribute to employment creation and poverty reduction [29]. The synergy among financial inclusion, the creative economy, and quadruple helix collaboration enhances income generation, social cohesion, and cultural identity [30]-[32].

The Integrated Coastal Local Economic Empowerment (IC-LEE) Model is a conceptual framework developed to explain how culturally grounded financial inclusion can strengthen creative economic development and local economic empowerment in coastal tourism areas. The IC-LEE Model consists of five core components *Local Wisdom*, *Financial Innovation Ecosystem*, *Financial Inclusion*, *Creative Economy*, and *Local Economic Empowerment*. *Local Wisdom* represents the foundational social and cultural values that shape trust, cooperation, and economic behavior within coastal communities. These values influence how communities perceive and adopt financial services and how creativity is embedded in local economic activities. The *Financial Innovation Ecosystem* functions as an enabling infrastructure that includes technological access, regulatory support, institutional collaboration, and fintech adoption.

Within the IC-LEE framework, this ecosystem does not directly generate empowerment but facilitates broader access to financial services and market opportunities, particularly for creative and tourism-based microenterprises. *Financial Inclusion* occupies a central position in the IC-LEE Model as a transformational mechanism. It bridges cultural values and financial innovation with productive economic activities by enhancing access, trust, affordability, and effective usage of financial services. This positioning reflects the assumption that financial access alone is insufficient to produce empowerment unless it is translated into productive and creative economic engagement. The *Creative Economy* acts as the operational pathway through which financial inclusion and local cultural values are transformed into tangible economic value. In coastal tourism contexts, creative products and experiences rooted in local wisdom serve as key drivers of income generation, competitiveness, and community participation.

Finally, *Local Economic Empowerment* represents the ultimate outcome of the IC-LEE Model, characterized by improved income, self-reliance, participation, sustainability, and access to capital. The framework emphasizes that empowerment is achieved through cumulative and interactive processes rather than isolated interventions. Conceptually, the IC-LEE Model highlights a process-based logic, where local wisdom and financial innovation influence empowerment primarily through the mediating roles of financial inclusion and the creative economy. This integrative logic distinguishes the IC-LEE Model from conventional financial inclusion or tourism development frameworks, which often treat cultural values as

peripheral factors. By positioning local wisdom as a foundational construct and financial inclusion as a transformational mechanism, the IC-LEE Model offers a novel framework for understanding sustainable economic empowerment in coastal tourism communities.

A conceptual illustration of the IC-LEE Model is presented in Fig. 1, which is intentionally separated from the statistical SEM model (Fig. 2) to clarify the distinction between the theoretical framework and its empirical testing.

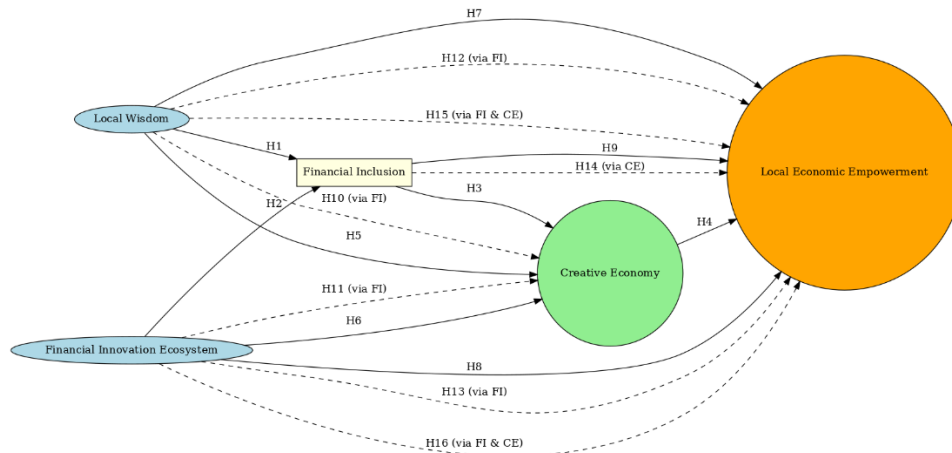


Fig. 1. Presents the Conceptual IC-LEE Framework

Material and Methods

This study adopts a model development approach with the objective of designing and empirically testing an integrated conceptual model that explains the relationships among Local Wisdom, Financial Innovation Ecosystem, Financial Inclusion, Creative Economy, and Local Economic Empowerment in a coastal tourism context. The model development approach is grounded in theory-driven hypothesis formulation, where the proposed structural paths are explicitly derived from established concepts discussed in the literature review, including community-based development, financial inclusion theory, creative economy theory, and endogenous economic empowerment. The inclusion of Local Wisdom as a foundational construct is theoretically derived from community-based development and social capital theory, which emphasize the role of cultural values, social norms, and collective practices in shaping economic behavior and institutional trust [7]-[9].

Based on this perspective, local wisdom is hypothesized to influence Financial Inclusion by strengthening trust, participation, and acceptance of financial services, and to stimulate the Creative Economy by fostering culturally embedded creativity and innovation. Furthermore, local wisdom is expected to contribute, directly and indirectly, to Local Economic Empowerment through its role in strengthening community cohesion and economic participation. The Financial Innovation Ecosystem construct is derived from fintech and financial system innovation theory, which highlights the importance of technological infrastructure, regulatory support, institutional collaboration, and digital financial services in

expanding access to finance [19]-[21]. In line with this theoretical framework, the model proposes that a well-developed financial innovation ecosystem enhances Financial Inclusion by reducing transaction costs and improving service accessibility.

It is also hypothesized to support the Creative Economy by enabling financing, digital transactions, and market access for creative actors, thereby indirectly contributing to Local Economic Empowerment. Financial Inclusion is positioned as a key mediating variable based on financial inclusion theory and development economics literature, which argue that access to affordable, reliable, and trusted financial services improves productive capacity, resilience, and economic participation [13], [14]. Accordingly, financial inclusion is hypothesized to directly influence the Creative Economy by enabling business expansion and innovation, and to promote Local Economic Empowerment by enhancing income opportunities, self-reliance, and sustainability. Its mediating role reflects the assumption that financial access alone does not generate empowerment unless it is translated into productive economic activities. The Creative Economy construct is grounded in creative economy theory, which emphasizes creativity, innovation, and cultural assets as drivers of economic value creation [23], [34].

In the proposed model, the creative economy serves as an operational mechanism through which local values and financial access are transformed into tangible economic outcomes. Therefore, it is hypothesized to directly contribute to Local Economic Empowerment, particularly in tourism-based coastal communities where cultural products and experiences represent key sources of income. Based on these theoretical foundations, the proposed structural model integrates direct, indirect, and serial mediation relationships among the constructs to reflect the cumulative and process-based nature of local economic empowerment. This structure aligns with endogenous development theory, which views empowerment as the outcome of interactions between local resources, institutional support, and economic innovation rather than isolated interventions. The population of this study comprises residents and business actors on Benan Island, including MSMEs, tourism groups, indigenous communities, village officials, and local financial institutions. A minimum sample size of 100 respondents was determined following the requirements of Structural Equation Modeling (SEM).

Data were collected using a structured questionnaire, with measurement indicators adapted from prior studies to ensure content validity. The constructs were operationalized as follows: Local Wisdom (cultural values, social norms, economic practices, environmental wisdom, social cooperation), Financial Innovation Ecosystem (technological access, institutional support, regulation, ecosystem collaboration, fintech adoption), Financial Inclusion (accessibility, usage, service quality, trust, affordability), Creative Economy (product creativity, culture-based innovation, economic contribution, technology utilization,

competitiveness) [33], [34], and Local Economic Empowerment (income improvement, self-reliance, participation, sustainability, capital access). Quantitative data are analyzed using Structural Equation Modeling (SEM) with SmartPLS 4 for several reasons. First, SEM enables the simultaneous testing of relationships among latent constructs, including both direct and indirect effects. Second, the Partial Least Squares-based SEM (PLS-SEM) approach in SmartPLS is suitable for studies with relatively small sample sizes.

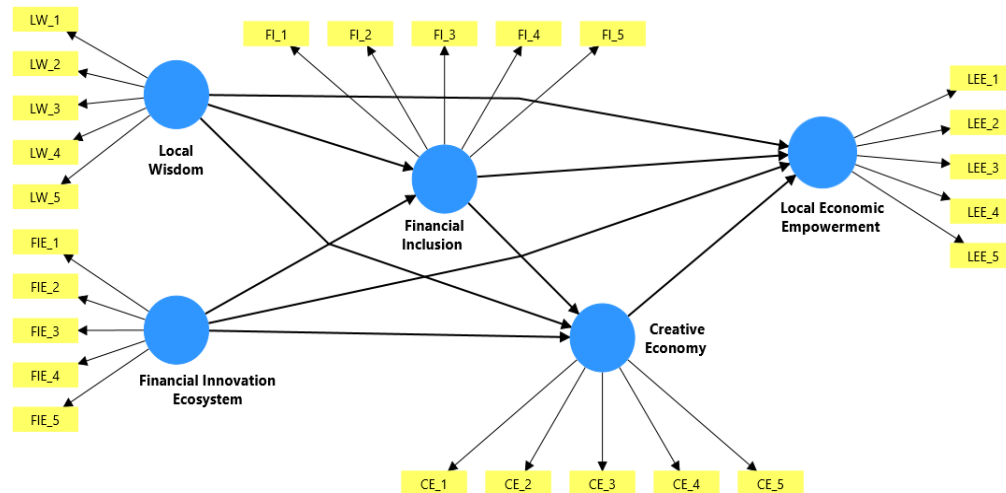


Fig. 2. Research Model

Results and Discussions

The data in this study were collected quantitatively through questionnaires distributed to the general public and business actors. The data collection process was conducted over a one-month period, from August to September 2025. The research location was focused on Benan Island, Lingga Regency. Based on the results of data compilation and tabulation, the total number of respondents in this study was 165.

A. Results of Measurement Model Evaluation (Outer Model)

In the initial stage of analysis using SEM-PLS, an evaluation of the measurement model (outer model) is conducted to ensure that the indicators employed in the study accurately represent the constructs in a valid and reliable manner. This evaluation includes tests of convergent validity, discriminant validity, and construct reliability.

1. Convergent Validity Test

The convergent validity test is conducted to evaluate the extent to which the indicators within a construct are correlated with each other and accurately represent the intended variable.

Table 1. Loading Factor Value

	Creative Economy	Financial Innovation Ecosystem	Financial Inclusion	Local Economic Empowerment	Local Wisdom
CE_1	0.847				
CE_2	0.862				

	Creative Economy	Financial Innovation Ecosystem	Financial Inclusion	Local Economic Empowerment	Local Wisdom
CE_3	0.861				
CE_4	0.875				
CE_5	0.847				
FIE_1		0.824			
FIE_2		0.869			
FIE_3		0.863			
FIE_4		0.879			
FIE_5		0.828			
FI_1			0.870		
FI_2			0.818		
FI_3			0.881		
FI_4			0.848		
FI_5			0.804		
LEE_1				0.799	
LEE_2				0.827	
LEE_3				0.805	
LEE_4				0.836	
LEE_5				0.824	
LW_1					0.855
LW_2					0.856
LW_3					0.838
LW_4					0.874
LW_5					0.873

Source: SmartPLS 4, Processed by Researcher

The results of the convergent validity test show that all indicators have loading factor values above 0.70. This indicates that each indicator strongly and consistently represents its corresponding latent variable. Therefore, the constructs used in this study meet the criteria for convergent validity, meaning that the instrument employed can be considered reliable in explaining the intended concept.

2. Discriminant Validity Test

Discriminant validity testing is conducted to ensure that each construct in the research model is truly distinct from one another and is measured solely by the indicators that represent it. This test employs the Fornell-Larcker criterion.

Table 2. Fornell-Larcker Criteria

	Creative Economy	Financial Innovation Ecosystem	Financial Inclusion	Local Economic Empowerment	Local Wisdom
Creative Economy	0.858				
Financial Innovation Ecosystem	0.466	0.853			
Financial Inclusion	0.702	0.556	0.845		
Local Economic Empowerment	0.608	0.423	0.604	0.818	
Local Wisdom	0.592	0.091	0.541	0.463	0.859

Source: SmartPLS 4, Processed by Researcher

The results of the discriminant validity test using the Fornell-Larcker Criterion indicate that each construct has an Average Variance Extracted (AVE) value higher than its correlations with other constructs. Therefore, it can be concluded that the research instrument adequately meets the criteria for discriminant validity.

Reliability testing is conducted to ensure the consistency and dependability of the research instrument in measuring the intended construct. An instrument is considered reliable when the indicators used can produce stable measurements under varying conditions. In this study, reliability was assessed using Cronbach's Alpha and Composite Reliability as the primary evaluation benchmarks.

Table 3. Reliability Test

	Cronbach's alpha	Composite reliability (rho_c)
Creative Economy	0.911	0.933
Financial Innovation Ecosystem	0.906	0.930
Financial Inclusion	0.899	0.926
Local Economic Empowerment	0.877	0.910
Local Wisdom	0.912	0.934

Source: SmartPLS 4, Processed by Researcher

The reliability test results indicate that all constructs have Cronbach's Alpha and Composite Reliability values above 0.70. This confirms that each indicator consistently measures its respective variable and meets the criteria for good reliability, thereby ensuring that the research instrument is trustworthy.

3. Results of Structural Model Evaluation (Inner Model)

The evaluation of the structural model (inner model) is conducted to assess the strength of the relationships among latent variables in this study. The results of this analysis are used to determine how well the model explains the dependent variable and to test the proposed hypotheses.

Coefficient of Determination (R^2). The R-Square value is used to assess how much the independent variables can explain the variability of the dependent variable. However, to obtain a more accurate result, this study employs the Adjusted R-Square, as it accounts for the number of predictors in the model. Therefore, it provides a more precise representation of the model's explanatory power when multiple independent variables are involved.

Table 4. Coefficient of Determination (R^2)

	R-square	R-square adjusted
Creative Economy	0.588	0.580
Financial Inclusion	0.551	0.546
Local Economic Empowerment	0.449	0.435

Source: SmartPLS 4, Processed by Researcher

The Adjusted R Square value for the Creative Economy is 0.580, indicating that the variables Local Wisdom, Financial Innovation Ecosystem, and Financial Inclusion collectively explain 58% of the variance in the Creative Economy. The Adjusted R Square value for Financial Inclusion is 0.546, meaning that Local Wisdom and the Financial Innovation Ecosystem account for 54.6% of the variance in Financial Inclusion. Meanwhile, the Adjusted R Square value for Local Economic Empowerment is 0.435, showing that Local

Wisdom, the Financial Innovation Ecosystem, Financial Inclusion, and the Creative Economy together explain 43.5% of the variance in Local Economic Empowerment. These findings confirm that the research model is capable of explaining the variation among constructs at a moderate level, indicating that the relationships among the variables are both significant and relevant.

Effect Size (f^2) Test. The Effect Size (f^2) test is used to determine the extent to which an independent variable contributes to the dependent variable within a research model. The f^2 value helps assess the strength of each construct's influence, providing a more detailed understanding of the relative role of each variable in the structural model.

Table 5. Effect Size (f^2) Test

	Creative Economy	Financial Inclusion	Local Economic Empowerment
Creative Economy			0.058
Financial Innovation Ecosystem	0.075	0.577	0.021
Financial Inclusion	0.158		0.043
Local Wisdom	0.209	0.540	0.022

Source: SmartPLS 4, Processed by Researcher

The test results provide an overview of the relationships among constructs in the developed model, which can be interpreted as follows:

1. The influence of the Creative Economy on Local Economic Empowerment is 0.058, indicating that the effect of the Creative Economy on Local Economic Empowerment is weak.
2. The influence of the Financial Innovation Ecosystem on the Creative Economy is 0.075, indicating that the effect of the Financial Innovation Ecosystem on the Creative Economy is weak.
3. The influence of the Financial Innovation Ecosystem on Financial Inclusion is 0.577, indicating that the effect of the Financial Innovation Ecosystem on Financial Inclusion is moderate.
4. The influence of the Financial Innovation Ecosystem on Local Economic Empowerment is 0.021, indicating that the effect of the Financial Innovation Ecosystem on Local Economic Empowerment is weak.
5. The influence of Financial Inclusion on the Creative Economy is 0.158, indicating that the effect of Financial Inclusion on the Creative Economy is weak.
6. The influence of Financial Inclusion on Local Economic Empowerment is 0.043, indicating that the effect of Financial Inclusion on Local Economic Empowerment is weak.
7. The influence of Local Wisdom on the Creative Economy is 0.209, indicating that the effect of Local Wisdom on the Creative Economy is weak.

8. The influence of Local Wisdom on Financial Inclusion is 0.540, indicating that the effect of Local Wisdom on Financial Inclusion is moderate.
9. The influence of Local Wisdom on Local Economic Empowerment is 0.022, indicating that the effect of Local Wisdom on Local Economic Empowerment is weak.

Path Coefficients. After the structural model has been tested, a hypothesis test is conducted to determine whether the relationships between variables in this study are significant. The hypothesis testing is based on the path coefficient values, t-statistics, and p-values, which confirm whether each proposed hypothesis is accepted or rejected.

A direct effect indicates the extent to which an independent variable influences a dependent variable without passing through an intervening or mediating variable. This is essential for understanding the strength of the relationship between constructs within the model.

Table 6. Path Coefficients Direct Effect

	Path Coefficient	T statistics	P values
Creative_Economy -> Local Economic_Empowerment	0.277	3.326	0.001
Financial_Innovation_Ecosystem -> Creative_Economy	0.221	3.645	0.000
Financial_Innovation_Ecosystem -> Financial_Inclusion	0.511	9.302	0.000
Financial_Innovation_Ecosystem -> Local Economic_Empowerment	0.142	2.005	0.045
Financial_Inclusion -> Creative_Economy	0.382	5.737	0.000
Financial_Inclusion -> Local Economic_Empowerment	0.248	2.681	0.007
Local_Wisdom -> Creative_Economy	0.366	6.129	0.000
Local_Wisdom -> Financial_Inclusion	0.495	10.130	0.000
Local_Wisdom -> Local Economic_Empowerment	0.152	1.993	0.046

Source: SmartPLS 4, Processed by Researcher

The interpretation of the structural model test assesses the direct effects among variables in this study, as follows:

1. The Creative Economy has a positive and significant effect on Local Economic Empowerment, with a Path Coefficient value of 0.277, T-statistics of 3.326 (>1.96), and a P-value of 0.001 (<0.05). This finding confirms that H1 is accepted. It implies that strengthening the creative economy sector can effectively enhance local economic empowerment.
2. The Financial Innovation Ecosystem positively and significantly influences the Creative Economy, with a Path Coefficient of 0.221, T-statistics of 3.645 (>1.96), and a P-value of 0.000 (<0.05). Thus, H2 is accepted. This indicates that the development of a financial innovation ecosystem significantly supports the growth of the creative economy.
3. The Financial Innovation Ecosystem shows a positive and significant relationship with Financial Inclusion, with a Path Coefficient of 0.511, T-statistics of 9.302 (>1.96), and a P-value of 0.000 (<0.05). Therefore, H3 is accepted. This

demonstrates that a stronger financial innovation ecosystem leads to higher levels of financial inclusion within society.

4. The Financial Innovation Ecosystem has a positive and significant effect on Local Economic Empowerment, with a Path Coefficient of 0.142, T-statistics of 2.005 (>1.96), and a P-value of 0.045 (<0.05). Consequently, H4 is accepted. Although the effect size is relatively small, it shows that a well-developed financial innovation ecosystem still contributes meaningfully to local economic empowerment.
5. Financial Inclusion exerts a positive and significant influence on the Creative Economy, with a Path Coefficient of 0.382, T-statistics of 5.737 (>1.96), and a P-value of 0.000 (<0.05). Hence, H5 is accepted. This suggests that higher levels of financial inclusion foster greater development of creative economic activities within communities.
6. Financial Inclusion has a positive and significant effect on Local Economic Empowerment, with a Path Coefficient of 0.248, T-statistics of 2.681 (>1.96), and a P-value of 0.007 (<0.05). Thus, H6 is accepted. This means that increased access to and utilization of financial services significantly contribute to strengthening local economic empowerment.
7. Local Wisdom positively and significantly affects the Creative Economy, with a Path Coefficient of 0.366, T-statistics of 6.129 (>1.96), and a P-value of 0.000 (<0.05). Therefore, H7 is accepted. This result highlights that local wisdom plays a vital role in fostering creativity and innovation within the creative economy sector.
8. Local Wisdom has a positive and significant impact on Financial Inclusion, with a Path Coefficient of 0.495, T-statistics of 10.130 (>1.96), and a P-value of 0.000 (<0.05). Accordingly, H8 is accepted. This indicates that local values and traditions significantly encourage access to and utilization of financial services among communities.
9. Local Wisdom exerts a positive and significant influence on Local Economic Empowerment, with a Path Coefficient of 0.152, T-statistics of 1.993 (>1.96), and a P-value of 0.046 (<0.05). Therefore, H9 is accepted. Although the effect is relatively modest, it still demonstrates that local wisdom contributes meaningfully to improving local community economic empowerment.

An indirect effect describes the extent to which an independent variable influences a dependent variable through one or more intervening or mediating variables. This analysis is essential for understanding the mechanism of relationships among variables and the contribution of mediation within the model.

Table 7. Path Coefficients Indirect Effect

	Path Coefficient	T statistics	P values
Financial Innovation_Ecosystem -> Financial_Inclusion -> Local Economic_Empowerment	0.127	2.638	0.008
Local_Wisdom -> Financial_Inclusion -> Creative_Economy	0.189	4.950	0.000
Financial Innovation_Ecosystem -> Creative_Economy -> Local Economic_Empowerment	0.061	2.386	0.017
Financial_Inclusion -> Creative_Economy -> Local Economic_Empowerment	0.106	2.832	0.005
Local_Wisdom -> Financial_Inclusion -> Local Economic_Empowerment	0.123	2.495	0.013
Local_Wisdom -> Creative_Economy -> Local Economic_Empowerment	0.101	2.803	0.005
Financial Innovation_Ecosystem -> Financial_Inclusion -> Creative_Economy -> Local Economic_Empowerment	0.054	2.642	0.008
Local_Wisdom -> Financial_Inclusion -> Creative_Economy -> Local Economic_Empowerment	0.052	2.762	0.006
Financial Innovation_Ecosystem -> Financial_Inclusion -> Creative_Economy	0.195	4.843	0.000

Source: SmartPLS 4, Processed by Researcher

The following presents the interpretation of the structural model testing results, which assess the indirect effects among the variables in this study:

1. The Financial Innovation Ecosystem has a positive and significant effect on Local Economic Empowerment through the mediation of Financial Inclusion, with a Path Coefficient of 0.127, T-statistics of 2.638 (>1.96), and a P-value of 0.008 (<0.05). This finding confirms that H10 is accepted, indicating that financial inclusion serves as a key mechanism that strengthens the role of the financial innovation ecosystem in promoting local economic empowerment.
2. Local Wisdom has a positive and significant effect on the Creative Economy through the mediation of Financial Inclusion, with a Path Coefficient of 0.189, T-statistics of 4.950 (>1.96), and a P-value of 0.000 (<0.05). This confirms that H11 is accepted, implying that local wisdom can enhance the creative economy, particularly when optimized through increased financial inclusion.
3. The Financial Innovation Ecosystem positively and significantly affects Local Economic Empowerment through the mediation of the Creative Economy, with a Path Coefficient of 0.061, T-statistics of 2.386 (>1.96), and a P-value of 0.017 (<0.05). Thus, H12 is accepted, meaning that strengthening the financial innovation ecosystem can more effectively drive local economic empowerment when mediated by the development of the creative economy.
4. Financial Inclusion has a positive and significant effect on Local Economic Empowerment through the mediation of the Creative Economy, with a Path Coefficient of 0.106, T-statistics of 2.832 (>1.96), and a P-value of 0.005 (<0.05).

Therefore, H13 is accepted, indicating that financial inclusion strengthens local economic empowerment, particularly when supported by the growth of the creative economy.

5. Local Wisdom positively and significantly influences Local Economic Empowerment through the mediation of Financial Inclusion, with a Path Coefficient of 0.123, T-statistics of 2.495 (>1.96), and a P-value of 0.013 (<0.05). This finding confirms that H14 is accepted, suggesting that local wisdom can enhance local economic empowerment when mediated by improved financial inclusion.
6. Local Wisdom has a positive and significant effect on Local Economic Empowerment through the mediation of the Creative Economy, with a Path Coefficient of 0.101, T-statistics of 2.803 (>1.96), and a P-value of 0.005 (<0.05). Thus, H15 is accepted, which indicates that local wisdom can more effectively drive local economic empowerment when mediated by a strengthened creative economy.
7. The Financial Innovation Ecosystem positively and significantly affects Local Economic Empowerment through the serial mediation of Financial Inclusion and the Creative Economy, with a Path Coefficient of 0.054, T-statistics of 2.642 (>1.96), and a P-value of 0.008 (<0.05). Hence, H16 is accepted, confirming that the financial innovation ecosystem yields optimal impact on local economic empowerment when accompanied by enhanced financial inclusion and a stronger creative economy.
8. Local Wisdom has a positive and significant effect on Local Economic Empowerment through the serial mediation of Financial Inclusion and the Creative Economy, with a Path Coefficient of 0.052, T-statistics of 2.762 (>1.96), and a P-value of 0.006 (<0.05). Therefore, H17 is accepted, indicating that local wisdom exerts a stronger influence on local economic empowerment when mediated by financial inclusion and the creative economy.
9. The Financial Innovation Ecosystem has a positive and significant effect on the Creative Economy through the mediation of Financial Inclusion, with a Path Coefficient of 0.195, T-statistics of 4.843 (>1.96), and a P-value of 0.000 (<0.05). Thus, H18 is accepted, demonstrating that the financial innovation ecosystem contributes to the growth of the creative economy, particularly when enhanced through greater financial inclusion.

Goodness of Fit (GoF) is used to assess how well the proposed model corresponds to the observed data. The GoF value provides an overall indication of the model's adequacy or how accurately it represents the data.

Table 8. Goodness of Fit (GoF) Test

	Average variance extracted (AVE)	R-square
Creative Economy	0.737	0.588
Financial Innovation Ecosystem	0.727	
Financial Inclusion	0.714	0.551
Local Economic Empowerment	0.670	0.449
Local Wisdom	0.739	

Source: SmartPLS 4, Processed by Researcher

$$Value\ GoF = \sqrt{Rata - Rata\ AVE \times Rata - Rata\ R\ Square} \quad (1)$$

$$Value\ GoF = \sqrt{(0.717 \times 0.529)} \quad (2)$$

$$Value\ GoF = 0.616 \quad (3)$$

The Goodness of Fit (GoF) value of 0.616 falls into the large fit category, as it exceeds the 0.36 threshold. This indicates that both the outer and inner models in this study demonstrate an excellent level of fit, effectively explaining the relationships among variables comprehensively and reliably supporting the proposed hypotheses.

The findings of this study provide deeper insights into how Local Wisdom, the Financial Innovation Ecosystem, and Financial Inclusion interact in shaping the Creative Economy and Local Economic Empowerment within a coastal tourism context. While the structural model confirms that all proposed relationships are statistically significant, the variation in explanatory power and effect sizes suggests that economic empowerment in coastal communities is driven by a layered and contextual process rather than by direct linear effects alone. The Adjusted R^2 values indicate a moderate explanatory capacity of the model, with 58% of variance explained in the Creative Economy, 54.6% in Financial Inclusion, and 43.5% in Local Economic Empowerment. These values imply that the proposed constructs capture the main drivers of economic dynamics in Benan Island, while also leaving room for contextual factors such as human capital, market access, and institutional capacity that may further influence empowerment outcomes.

This supports prior arguments that community-based economic development in peripheral regions is inherently multidimensional and cannot be explained solely by financial or technological variables. The effect size (f^2) analysis reveals that Local Wisdom and the Financial Innovation Ecosystem exert a moderate influence on Financial Inclusion, whereas most direct effects on Local Economic Empowerment remain relatively weak. This finding suggests that cultural values and financial innovation primarily function as enabling mechanisms rather than as immediate sources of economic empowerment. In coastal communities, strong social norms, trust, and cooperation rooted in local wisdom facilitate

acceptance and usage of financial services, confirming earlier studies that highlight the role of social capital in expanding financial inclusion in rural and marginalized areas [7][9]. Similarly, financial innovation particularly digital payment systems and fintech platforms enhances accessibility and efficiency, but its economic impact depends heavily on how well it is embedded within local socio-cultural structures.

The relatively weak direct effects of Financial Inclusion and the Creative Economy on Local Economic Empowerment indicate that access to financial services alone does not automatically translate into improved economic independence or income growth. This may reflect the early stage of productive financial utilization among coastal communities, where financial services are more frequently used for consumption smoothing rather than for business expansion or innovation. This finding partially contrasts with studies conducted in urban or industrial settings, where financial inclusion often shows a stronger direct impact on economic performance, suggesting that geographical and socio-economic contexts play a moderating role. More importantly, the indirect effect analysis highlights the crucial mediating roles of Financial Inclusion and the Creative Economy.

The results demonstrate that Local Wisdom and the Financial Innovation Ecosystem contribute more effectively to Local Economic Empowerment when their influence is channeled through improved financial inclusion and strengthened creative economic activities. This indicates that empowerment is a cumulative process: local cultural values build trust and participation, financial innovation expands access, financial inclusion enhances capability, and the creative economy transforms these capabilities into tangible economic outcomes. These findings are consistent with community-based tourism and endogenous development theories, which emphasize that sustainable empowerment emerges from the interaction between local resources, institutional support, and economic innovation. From a theoretical perspective, this study extends the literature on financial inclusion and creative economy by positioning Local Wisdom as a foundational construct rather than a peripheral contextual factor.

The proposed Integrated Coastal Local Economic Empowerment Model (IC-LEEM) demonstrates that culturally grounded financial inclusion frameworks provide a more accurate explanation of economic empowerment in coastal tourism areas than purely technology-driven or market-based models. Practically, the findings imply that policy interventions should move beyond expanding digital financial access and instead focus on strengthening financial literacy, trust-building mechanisms, and community-based creative enterprises aligned with local culture. Governments, financial institutions, and development agencies should adopt a quadruple helix approach involving government, academia, business actors, and local communities to ensure that financial innovation and creative economy initiatives are socially embedded and locally relevant. Such an approach is essential to

transform financial access into sustainable economic empowerment rather than short-term economic participation.

Conclusion

The results of the Inner Model evaluation using the Adjusted R^2 indicate that the variables Local Wisdom, Financial Innovation Ecosystem, and Financial Inclusion are able to explain Creative Economy by 58%, Financial Inclusion by 54.6%, and Local Economic Empowerment by 43.5%, demonstrating that the proposed model is adequate. The effect size (f^2) test shows that the influence of the Financial Innovation Ecosystem and Local Wisdom on Financial Inclusion is moderate, while other effects are relatively weak. The direct effect analysis confirms that all hypotheses (H1–H9) are accepted. Creative Economy, Financial Innovation Ecosystem, Financial Inclusion, and Local Wisdom have positive and significant effects on the growth of the creative economy and local economic empowerment.

The indirect effect analysis reveals the mediating roles of Financial Inclusion and Creative Economy, which strengthen the contribution of the main variables to Local Economic Empowerment. The Goodness of Fit (GoF) value of 0.616 indicates a very good model fit, confirming that the hypothesis testing results are reliable. It is recommended that the government, business actors, and communities continue to enhance local wisdom and support financial innovation to further improve financial inclusion. The development of the creative economy should be optimized as a vehicle for local economic empowerment. Future studies are encouraged to include environmental and social variables to better understand other factors influencing the effectiveness of community economic empowerment.

Acknowledgment

The author would like to express sincere appreciation and gratitude to the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia (Kemdiktisaintek) for the financial support provided through the BIMA Research Program 2025. This research was conducted under Decree Number 0419/C3/DT.05.00/2025 dated May 22, 2025, and Research Grant Agreement/Contract Number 125/C3/DT.05.00/PL/2025 dated May 28, 2025. The support received through this program played a significant role in enabling the successful implementation, completion, and dissemination of the research results.

Conflict of Interest

The authors hereby declare that there are no conflicts of interest, whether financial, personal, or professional, that could have influenced the research, analysis, or conclusions presented in this study.

References

- [1] H. Luo, H. Wang, and Y. Wu, "Digital financial inclusion and tourism development," *Int. Rev. Econ. Finance*, vol. 90, pp. 207–219, 2024.
- [2] C.-C. Lee, R. Lou, and F. Wang, "Digital financial inclusion and poverty alleviation: Evidence from the sustainable development of China," *Econ. Anal. Policy*, vol. 77, pp. 418–434, 2023.
- [3] L. He and D. J. Timothy, "Tourists' perceptions of cultural and creative souvenir products and their relationship with place," *J. Tour. Cult. Change*, vol. 22, no. 2, pp. 143–163, 2024.
- [4] M. M. Tapfuma, R. Musavengane, and R. Magwaza, "The role of creative tourism through arts and crafts in promoting inclusive tourism in Zimbabwe," *J. Tour. Cult. Change*, vol. 22, no. 1, pp. 1–20, 2024.
- [5] F. Tjiptono, L. Yang, A. Setyawan, I. B. G. A. Permana, and I. P. E. Widaharthana, "Tourism sustainability in Indonesia: Reflection and reformulation," in *Asian Tourism Sustainability*, Singapore: Springer, 2022, pp. 1–20.
- [6] D. Pranita, S. Sarjana, and B. M. Mushofa, "Mediating role of sustainable tourism and creative economy to improve community wellbeing," *Afr. J. Hosp. Tour. Leis.*, vol. 11, no. 2, pp. 781–794, 2022.
- [7] A. Haryanto, "Local wisdom and community-based economic development," *J. Reg. Dev.*, vol. 12, no. 2, pp. 45–58, 2020.
- [8] I. Fitriyah and K. Khotimah, "Local wisdom and creative economy development in Indonesia," *J. Creat. Ind.*, vol. 3, no. 2, pp. 77–88, 2021.
- [9] R. Astuti and D. Nugraha, "Cultural values and financial inclusion in rural communities," *J. Financ. Incl.*, vol. 8, no. 1, pp. 33–50, 2022.
- [10] R. Wulandari, A. Setiawan, and T. Prabowo, "Ecological practices and local wisdom in natural resource management," *Environ. Sustain. J.*, vol. 9, no. 4, pp. 221–233, 2021.
- [11] B. Prasetyo and R. Kurniawan, "Community participation in creative economy-based tourism," *Tour. Manag. Perspect.*, vol. 40, pp. 101–113, 2023.
- [12] A. Susanto and Z. Arifin, "Local wisdom and community-based economic empowerment in the era of globalization," *J. Soc. Dev.*, vol. 8, no. 2, pp. 101–115, 2022.
- [13] World Bank, *Financial Inclusion Overview*. Washington, DC, USA: World Bank, 2022.
- [14] A. Demirgüç-Kunt, L. Klapper, D. Singer, and S. Ansar, *The Global Findex Database 2021*. Washington, DC, USA: World Bank, 2022.
- [15] F. Allen, A. Demirgüç-Kunt, L. Klapper, and M. S. Martinez Peria, "The impact of digital finance on small business development," *World Dev.*, vol. 142, pp. 105–122, 2021.
- [16] C. Doss and H. Malapit, "Women's financial inclusion and empowerment in developing countries," *World Dev.*, vol. 162, p. 106071, 2023.
- [17] J. Frost, "Digital finance and financial inclusion in emerging economies," *J. Bank. Finance*, vol. 112, pp. 105–129, 2020.
- [18] R. Sahay et al., "Financial inclusion: Can it meet multiple macroeconomic goals?," *IMF Staff Discuss. Note*, vol. 20, no. 5, pp. 1–45, 2020.
- [19] D. W. Arner, J. Barberis, and R. P. Buckley, "The evolution of fintech: A new post-crisis paradigm?," *Georgetown J. Int. Law*, vol. 51, no. 4, pp. 1271–1319, 2020.
- [20] D. A. Zetzsche, R. P. Buckley, D. W. Arner, and J. N. Barberis, "The rise of fintech in developing countries," *J. Financ. Regul.*, vol. 6, no. 2, pp. 123–145, 2020.
- [21] J. Frost, L. Gambacorta, and C. McDonald, "Fintech adoption and financial inclusion in emerging markets," *J. Bank. Finance*, vol. 123, pp. 106–119, 2021.
- [22] T. Philippon, "On the future of the financial industry," *Annu. Rev. Financ. Econ.*, vol. 14, no. 1, pp. 1–21, 2022.
- [23] UNCTAD, *Creative Economy Outlook*. Geneva, Switzerland: United Nations, 2022.
- [24] Ekraf Kabupaten Semarang, "Membedah 17 subsektor ekonomi kreatif," 2025. [Online]. Available: <https://ekrafkabsemarang.com/>. [Accessed: Apr. 2025].
- [25] D. Prameswari and H. Prabowo, "Integrating local wisdom in creative industries," *J. Cult. Econ.*, vol. 44, no. 3, pp. 287–303, 2020.
- [26] H. Bakhshi and E. McVittie, "Cultural and creative industries and economic development," *Int. J. Cult. Policy*, vol. 27, no. 3, pp. 302–318, 2021.
- [27] R. Chambers, *Rural Development: Putting the Last First*. London, U.K.: Routledge, 2021.
- [28] M. Todaro and S. Smith, *Economic Development*, 13th ed. Harlow, U.K.: Pearson, 2020.
- [29] E. Susilowati and L. Dewi, "Empowering MSMEs for local economic growth," *Small Bus. Int. Rev.*, vol. 6, no. 2, p. e477, 2022.

- [30] L. Arsyad and D. Kusuma, "Financial inclusion and local economic empowerment," J. Rural Dev., vol. 40, no. 2, pp. 215–230, 2021.
- [31] A. Putra and R. Anindita, "Community-based empowerment in tourism villages," Int. J. Community Dev., vol. 5, no. 1, pp. 45–59, 2023.
- [32] S. Widodo, "Quadruple helix collaboration in strengthening local economic development," Reg. Stud. Dev. J., vol. 12, no. 3, pp. 101–116, 2020.
- [33] R. Comunian and L. England, "Creative and cultural work without filters," Cultural Trends, vol. 29, no. 2, pp. 112–128, 2020.
- [34] J. Howkins, Creative Economy: How People Make Money from Ideas, Updated ed. London, U.K.: Penguin, 2021.

Authors



Okta Eka Putra   is a lecturer at the Faculty of Economics and Business, Universitas Informatika dan Bisnis Indonesia (UNIBI), Bandung. He holds a Master's degree in Business Management from Universitas Pasundan, Bandung and a Bachelor's degree in Management from Universitas Widyatama, Bandung. His academic interests include business management, entrepreneurship, and applied statistics, and he is actively engaged in teaching, research, and community service activities. He has authored a variety of teaching materials and book chapters. (email: oktaeka@unibi.ac.id).



Elan Rusnendar  is a lecturer at the Faculty of Economics and Business, Universitas Informatika dan Bisnis Indonesia (UNIBI), Bandung. He has been teaching since 2007 and currently holds the position of Lektor. He earned his Master's degree in Management from STIE Pasundan Bandung in 2009. His teaching expertise covers Management, Marketing, Accounting, and Consumer Behavior. In 2021, he co-founded the Asosiasi Fakultas Ekonomi dan Bisnis Swasta Indonesia (AFEBSI). (email: elanrusnendar@unibi.ac.id).



Fillah Maulana Akbar is an active Management student at Universitas Informatika dan Bisnis Indonesia and a mechanic at Honda Abadi Cibiru. Balancing academics and work, he is known for his discipline, dedication, and adaptability. His experience in both technical and organizational settings strengthens his problem-solving and teamwork skills. Outside of work and study, Fillah enjoys music, sports, and languages, reflecting his dynamic personality and passion for continuous self-improvement. (email: fillah666@gmail.com).