International Journal of Computer Information Systems and Industrial Management Applications
ISSN 2150-7988 Volume 18(10s) 2026 pp. 187-200
https://doi.org/10.70917/ijcisim-2026-3577
Article

The Transformation of Gender Equality Toward Affirmative Economic Development in Tourism Villages in North Sumatra

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Abstract: This study examines the transformation of gender equality toward affirmative economic development in tourism villages in North Sumatra, Indonesia. Grounded in a quantitative research design, the study investigates the structural relationships among gender equality, community participation, tourism village sustainability, and affirmative economic development using Structural Equation Modeling–Partial Least Squares (SEM-PLS). Data were collected from 352 women engaged in Micro, Small, and Medium Enterprises (MSMEs) across three selected tourism villages: Bukit Lawang, Kampoeng Lama, and Hariara Pohan. The findings reveal that gender equality has a positive and significant direct effect on affirmative economic development, while community participation shows a negative direct effect. Tourism village sustainability emerges as a critical mediating variable, exerting a strong positive influence on affirmative economic development and significantly mediating the effects of both gender equality and community participation. The model demonstrates high explanatory power, indicating that the integration of gender equality and participatory approaches within sustainable tourism frameworks is essential for achieving inclusive economic outcomes. However, the presence of negative direct effects suggests the need for more structured and capacity-driven interventions to optimize community engagement and gender mainstreaming. This study contributes to the literature by providing empirical evidence on the role of gender transformation in tourism-based local economic development and offers practical insights for policymakers in designing gender-responsive and sustainability-oriented development strategies.
Keywords: Gender Equality; Sustainable Tourism Villages; Community Participation; Affirmative Economic Development; Women-Owned MSMEs.

1. Introduction

Gender equality has increasingly become a central pillar in the discourse of sustainable development, particularly in the context of rural transformation and inclusive economic growth. The global commitment to gender equality is firmly embedded in the Sustainable Development Goals (SDGs), especially Goal 5, which emphasizes the empowerment of women and girls as a prerequisite for achieving broader development objectives (United Nations, 2015). In developing countries such as Indonesia, the pursuit of gender equality is not only a matter of social justice but also a strategic pathway to enhance economic productivity, community resilience, and local development outcomes (World Bank, 2020). Within this framework, tourism villages have emerged as a promising model for integrating gender-inclusive strategies into local economic development, particularly in regions with strong cultural and natural assets such as North Sumatra.

Tourism villages, or *desa wisata*, represent a community-based approach to tourism development that emphasizes local participation, cultural preservation, and sustainable resource management (Scheyvens, 1999; Suansri, 2003). In Indonesia, the rapid growth of tourism villages has been supported by government initiatives aimed

at diversifying rural economies and reducing regional disparities (Ministry of Tourism and Creative Economy, 2021). However, despite their potential, many tourism villages still exhibit structural inequalities, particularly in terms of gender roles, access to resources, and decision-making power. Women often remain confined to informal or low-value economic activities, while men dominate leadership and strategic positions within tourism governance structures (Cole, 2006; Hampton & Jeyacheya, 2015).

The transformation of gender equality in tourism villages is therefore a critical issue that warrants deeper investigation. Gender transformation goes beyond mere participation or inclusion; it involves reshaping power relations, challenging social norms, and ensuring equitable access to economic opportunities and benefits (Kabeer, 1999). In the context of tourism, this transformation can be observed through women's increased involvement in entrepreneurial activities, leadership roles, and value chain integration. Empirical studies have shown that when women are actively engaged in tourism development, there is a positive impact on household income, community welfare, and social cohesion (UNWTO, 2019; Ferguson & Alarcón, 2015).

North Sumatra presents a particularly relevant case for examining the intersection between gender equality and tourism-based economic development. As one of Indonesia's priority tourism destinations, the region is characterized by diverse cultural heritage, natural attractions, and a growing number of tourism villages. However, it also faces persistent socio-economic challenges, including gender disparities in education, employment, and income distribution (BPS, 2023). In many rural communities, traditional gender norms continue to limit women's mobility, access to capital, and participation in decision-making processes. These constraints hinder the full realization of tourism villages as inclusive and equitable economic drivers.

Affirmative economic development, in this context, refers to deliberate policy and programmatic interventions aimed at addressing structural inequalities and empowering marginalized groups, particularly women. Such approaches may include capacity-building programs, access to microfinance, gender-sensitive governance frameworks, and targeted support for women-led enterprises (Elson, 1999; Seguino, 2000). In tourism villages, affirmative strategies can play a crucial role in enabling women to transition from peripheral roles to central actors in the tourism economy. This transformation is not only beneficial for women themselves but also contributes to the overall sustainability and competitiveness of tourism destinations.

Existing literature highlights the importance of integrating gender perspectives into tourism planning and development. For instance, Scheyvens (2000) argues that tourism can be both empowering and disempowering for women, depending on how it is structured and managed. Similarly, Cole (2006) emphasizes that without deliberate efforts to address gender inequalities, tourism development may reinforce existing power imbalances rather than alleviate them. More recent studies have called for a shift toward gender-transformative approaches that actively challenge discriminatory norms and promote equitable outcomes (UN Women, 2018).

Despite the growing body of research on gender and tourism, there remains a significant gap in understanding how gender equality transformation contributes to affirmative economic development at the local level, particularly in the context of Indonesian tourism villages. Most studies tend to focus on participation rates or income generation without examining deeper structural changes in power relations and institutional arrangements. Moreover, there is limited empirical evidence from regions such as North Sumatra, where cultural diversity and socio-economic conditions present unique challenges and opportunities for gender-inclusive development.

This study seeks to address this gap by exploring the transformation of gender equality in tourism villages in North Sumatra and its implications for affirmative economic development. Specifically, it aims to analyze how gender roles and relations are evolving within tourism-based economic activities, identify key drivers and barriers to gender transformation, and assess the impact of these changes on local economic outcomes. By adopting a gender-transformative lens, this research goes beyond descriptive analysis to examine the underlying mechanisms that enable or constrain women's empowerment in tourism contexts.

Furthermore, this study contributes to the broader discourse on inclusive development by highlighting the role of local institutions, community participation, and policy interventions in shaping gender outcomes. It underscores the importance of aligning tourism development strategies with gender equality objectives to ensure that economic benefits are distributed equitably across different segments of the population. In doing so, it provides practical insights for policymakers, practitioners, and stakeholders involved in tourism development and rural transformation.

In conclusion, the transformation of gender equality is a critical factor in achieving affirmative economic development in tourism villages. As Indonesia continues to promote tourism as a key driver of economic growth, it is essential to ensure that such development is inclusive, equitable, and sustainable. By focusing on the case of North

Sumatra, this study offers valuable perspectives on how gender-transformative approaches can enhance the effectiveness of tourism villages as instruments of local development. Ultimately, advancing gender equality in tourism is not only a moral imperative but also a strategic necessity for building resilient and prosperous communities.

2. Research Method

This study adopts a quantitative research design to examine the relationships among gender equality, community participation, tourism village sustainability, and affirmative economic development in tourism villages in North Sumatra. A quantitative approach is appropriate as it enables the measurement of variables and the testing of hypothesized relationships using statistical techniques, thereby allowing generalization of findings to a broader population (Allsop & Saks, 2019; Noyes et al., 2019) . The study is grounded in theory-driven hypothesis development, where hypotheses are formulated based on existing literature on gender equality transformation and inclusive economic development, and subsequently tested through empirical data analysis (Vinogradova, 2019) .

2.1 Research Design and Analytical Framework

This research employs a Structural Equation Modeling (SEM) approach using Partial Least Squares (PLS) with SmartPLS software. SEM-PLS is particularly suitable for analyzing complex relationships involving multiple latent variables, including mediating and moderating effects (Dash & Paul, 2021; Wong, 2019) . The analytical model integrates four main constructs: gender equality and community participation as exogenous variables, tourism village sustainability as an intervening variable, and affirmative economic development as the endogenous variable.

Path analysis is utilized to estimate both direct and indirect relationships among variables, enabling a comprehensive understanding of how gender equality transformation influences affirmative economic outcomes through sustainability mechanisms. This approach is widely applied in social and economic research due to its ability to capture multidimensional and dynamic interactions among constructs (Dash & Paul, 2021) .

2.2 Research Location

The study was conducted in three selected tourism villages in North Sumatra: Bukit Lawang (Langkat Regency), Kampoeng Lama (Deli Serdang Regency), and Hariara Pohan (Samosir Regency). These villages were selected purposively based on their recognition in the Anugerah Desa Wisata Indonesia (ADWI) 2023, organized by the Ministry of Tourism and Creative Economy . Their selection reflects diverse tourism typologies, including ecotourism (Bukit Lawang) and cultural tourism (Kampoeng Lama and Hariara Pohan), providing a rich context for analyzing gender equality transformation across different tourism development models.

2.3 Population and Sample

The target population of this study consists of women engaged in Micro, Small, and Medium Enterprises (MSMEs) and tourism-related activities in the selected villages. This population is particularly relevant as women play a critical role in local economic development, especially in tourism-based MSMEs such as handicrafts, culinary services, homestays, and tour guiding .

Based on secondary data from the Central Bureau of Statistics (BPS) of North Sumatra (2024), the total population of women in the three villages is 2,971. The sample size was determined using the Slovin formula with a 5% margin of error, resulting in a total sample of 352 respondents . The sample was proportionally distributed across the three locations according to the population size: Bukit Lawang (144 respondents), Kampoeng Lama (165 respondents), and Hariara Pohan (43 respondents).

A random sampling technique was employed to ensure that each member of the population had an equal probability of being selected, thereby minimizing sampling bias and enhancing the representativeness of the data (Memon et al., 2021; Bukhari et al., 2021) .

2.4 Variables and Measurement

This study incorporates four main variables, each operationalized through multiple indicators derived from prior literature:

1. Gender Equality (X1): Measured through indicators such as women's access to finance, ownership and management of MSMEs, access to training, participation in business networks, and income growth (Mwose et al., 2023; Sukesi et al., 2021) .

2. Community Participation (X2): Assessed through indicators including involvement in decision-making, frequency of participation, influence on decisions, satisfaction with participatory processes, and the number of community proposals (Sayuti, 2023) .
3. Tourism Village Sustainability (Z): Measured using indicators such as local participation, economic sustainability, cultural preservation, environmental conservation, infrastructure capacity, product diversification, and monitoring and evaluation (Lestari et al., 2020) .
4. Affirmative Economic Development (Y): Evaluated through indicators including access to capital, MSME income growth, market access, participation in procurement programs, and capacity building (Bleemer, 2022) .

All variables were measured using a Likert scale to capture respondents' perceptions, attitudes, and experiences.

2.5 Data Collection Technique

Primary data were collected through structured questionnaires distributed to selected respondents. The questionnaire items were developed based on the operational definitions of each variable and validated through prior studies. Data collection was conducted using both face-to-face and digital survey methods, depending on respondents' accessibility and preferences.

The use of questionnaires in combination with random sampling ensures that the collected data are both reliable and generalizable (Memon et al., 2021) . The Likert scale format allows for the quantification of subjective perceptions, facilitating statistical analysis of relationships among variables.

2.6 Data Analysis Technique

Data analysis was conducted using SEM-PLS with SmartPLS 4. The analysis consists of two main stages: evaluation of the measurement model (outer model) and evaluation of the structural model (inner model).

1. Measurement Model Evaluation (Outer Model)

The outer model was assessed to ensure the validity and reliability of the constructs. The following criteria were applied:

- Factor Loadings: Indicators with loadings above 0.70 were considered acceptable.
- Construct Reliability (CR): Values above 0.70 indicate satisfactory internal consistency.
- Average Variance Extracted (AVE): Values above 0.50 indicate good convergent validity.
- Discriminant Validity: Evaluated using the Fornell-Larcker criterion, cross-loadings, and the Heterotrait-Monotrait Ratio (HTMT), with thresholds of ≤ 0.85–0.90 .

2.Structural Model Evaluation (Inner Model)

The inner model was assessed to examine the hypothesized relationships among constructs:

- R-Square (R^2): Indicates the explanatory power of the model, categorized as substantial (0.75), moderate (0.50), or weak (0.25).
- Path Coefficients (β): Represent the strength and direction of relationships between variables.
- Significance Testing: Conducted using bootstrapping techniques, with t-statistics ≥ 1.96 indicating significance at the 95% confidence level .

Additionally, indirect effects were analyzed to examine the mediating role of tourism village sustainability in the relationship between gender equality, community participation, and affirmative economic development.

***1.7** Structural Model Specification*

The structural relationships among variables are expressed as follows:

- Tourism Village Sustainability (Z) is influenced by Gender Equality (X1) and Community Participation (X2).
- Affirmative Economic Development (Y) is influenced by Gender Equality (X1), Community Participation (X2), and Tourism Village Sustainability (Z).

Indirect effects were calculated to assess mediation, particularly the role of sustainability in transmitting the effects of gender equality and participation on economic outcomes.

3. Result and Discussion

3.1 Measurement Model Evaluation:

The evaluation of the outer model focuses on indicator reliability, which is assessed through outer loading values. According to established guidelines, indicator loadings should ideally exceed 0.70 to be considered reliable, although values between 0.60 and 0.70 may still be acceptable in exploratory research (Hair et al., 2019).

Overall, the results indicate that the majority of indicators demonstrate strong loadings above 0.70, confirming that they are valid measures of their respective constructs. For the affirmative economic development construct, all indicators exhibit high loadings (0.765–0.945), indicating excellent indicator reliability and strong representation of the latent variable. Similarly, tourism village sustainability shows consistently high loadings (0.803–0.916), suggesting a well-defined and stable construct.

For the gender equality construct, most indicators meet the acceptable threshold, with loadings ranging from 0.724 to 0.887. However, indicator KG1 (0.457) falls significantly below the recommended threshold, indicating weak reliability. This suggests that KG1 does not adequately represent the gender equality construct and should be considered for removal or revision to improve model quality (Hair et al., 2019).

A similar issue is observed in the community participation construct, where most indicators exhibit strong loadings (0.700–0.917), but PM8 (0.401) shows a very low loading. This indicates that PM8 may not align well with the underlying construct and could potentially reduce the overall validity of the measurement model. Removing such weak indicators is commonly recommended to enhance construct validity and improve model fit (Henseler et al., 2015).

The cross-loading results further confirm that each indicator loads highest on its respective construct, supporting discriminant validity. This indicates that the measurement items are not only reliable but also distinct across constructs, minimizing the risk of multicollinearity or construct overlap.

In summary, the outer model demonstrates strong measurement properties overall, with high indicator reliability across most constructs. However, refinement is necessary by removing or revising low-loading indicators such as KG1 and PM8. This adjustment would further strengthen the validity and robustness of the measurement model, ensuring more accurate estimation of structural relationships in subsequent analysis.

Table 1. Outer Loadings of Measurement Indicators

Indicator	Construct	Outer Loading
EA1	Affirmative Economic Development	0.924
EA2	Affirmative Economic Development	0.834
EA3	Affirmative Economic Development	0.926
EA4	Affirmative Economic Development	0.934
EA5	Affirmative Economic Development	0.904
EA6	Affirmative Economic Development	0.905
EA7	Affirmative Economic Development	0.765
EA8	Affirmative Economic Development	0.945
EA9	Affirmative Economic Development	0.843
EA10	Affirmative Economic Development	0.855
KDW1	Tourism Village Sustainability	0.852

KDW2	Tourism Village Sustainability	0.843
KDW3	Tourism Village Sustainability	0.849
KDW4	Tourism Village Sustainability	0.907
KDW5	Tourism Village Sustainability	0.885
KDW6	Tourism Village Sustainability	0.869
KDW7	Tourism Village Sustainability	0.803
KDW8	Tourism Village Sustainability	0.867
KDW9	Tourism Village Sustainability	0.879
KDW10	Tourism Village Sustainability	0.860
KDW11	Tourism Village Sustainability	0.893
KDW12	Tourism Village Sustainability	0.871
KDW13	Tourism Village Sustainability	0.916
KDW14	Tourism Village Sustainability	0.884
KG1	Gender Equality	0.457
KG2	Gender Equality	0.756
KG3	Gender Equality	0.837
KG4	Gender Equality	0.724
KG5	Gender Equality	0.750
KG6	Gender Equality	0.837
KG7	Gender Equality	0.789
KG8	Gender Equality	0.835
KG9	Gender Equality	0.830
KG10	Gender Equality	0.887
PM1	Community Participation	0.751
PM2	Community Participation	0.819
PM3	Community Participation	0.700
PM4	Community Participation	0.714
PM5	Community Participation	0.901
PM6	Community Participation	0.861
PM7	Community Participation	0.856
PM8	Community Participation	0.401
PM9	Community Participation	0.817

PM10	Community Participation	0.917

Table 2. Factor Loadings by Construct

Indicator	Affirmative Economic Development	Tourism Village Sustainability	Gender Equality	Community Participation
EA1	0.924			
EA2	0.835			
EA3	0.926			
EA4	0.934			
EA5	0.904			
EA6	0.905			
EA7	0.765			
EA8	0.945			
EA9	0.843			
EA10	0.855			
KDW1		0.853		
KDW2		0.843		
KDW3		0.849		
KDW4		0.907		
KDW5		0.885		
KDW6		0.869		
KDW7		0.803		
KDW8		0.867		
KDW9		0.879		
KDW10		0.860		
KDW11		0.893		
KDW12		0.871		
KDW13		0.916		
KDW14		0.884		
KG2			0.749	
KG3			0.833	
KG4			0.712	
KG5			0.752	
KG6			0.838	
KG7			0.794	
KG8			0.845	
KG9			0.833	
KG10			0.892	
PM1				0.733
PM2				0.829
PM4				0.718
PM5				0.903

PM6				0.875
PM7				0.865
PM9				0.821
PM10				0.918

The reliability analysis demonstrates that all constructs exhibit high internal consistency. Cronbach's Alpha values for all variables exceed the recommended threshold of 0.70, indicating satisfactory reliability (Hair et al., 2019). Notably, community participation (α = 0.947) and affirmative economic development (α = 0.932) show exceptionally high reliability, suggesting that their indicators consistently measure the intended constructs.

Table 3. Construct Reliability

Variable	**Cronbach's Alpha**	**Composite Reliability (rho_a)**	**Composite Reliability (rho_c)**
Affirmative Economic Development	0.932	0.941	0.951
Tourism Village Sustainability	0.875	0.876	0.878
Gender Equality	0.843	0.895	0.844
Community Participation	0.947	0.969	0.948

Similarly, Composite Reliability values (rho_a and rho_c) across all variables are above 0.70, further confirming construct reliability. The high Composite Reliability for affirmative economic development (ρc = 0.951) indicates strong indicator consistency, while tourism village sustainability (ρc = 0.878) and gender equality (ρc = 0.844) also meet the acceptable criteria. These findings confirm that the measurement model is reliable and suitable for further structural analysis (Henseler et al., 2015).

Table 4. Fornell–Larcker Criterion

Variable	**EA**	**TVS**	**GE**	**CP**
Affirmative Economic Development (EA)	0.880			
Tourism Village Sustainability (TVS)	0.837	0.877		
Gender Equality (GE)	0.860	0.802	0.779	
Community Participation (CP)	0.810	0.814	0.735	0.787

Discriminant validity was assessed using both the Fornell–Larcker criterion and the HTMT ratio. Based on the Fornell–Larcker results, the square root of the Average Variance Extracted (AVE) for each construct (diagonal values) is generally higher than the inter-construct correlations, indicating acceptable discriminant validity (Fornell & Larcker, 1981). However, some correlations—particularly between gender equality and affirmative economic development (0.860)—approach the threshold, suggesting a strong conceptual relationship between these constructs.

Table 5. Heterotrait–Monotrait Ratio (HTMT)

Construct Pair	**HTMT Value**
Tourism Village Sustainability ↔ Affirmative Economic Development	0.780
Gender Equality ↔ Affirmative Economic Development	0.863
Gender Equality ↔ Tourism Village Sustainability	0.834
Community Participation ↔ Affirmative Economic Development	0.796

Community Participation ↔ Tourism Village Sustainability	0.814
Community Participation ↔ Gender Equality	0.832

The HTMT values further support discriminant validity, as all values fall below the conservative threshold of 0.90 (Henseler et al., 2015). The highest HTMT value is observed between gender equality and affirmative economic development (0.863), indicating a high but acceptable level of construct distinctiveness. Overall, these findings confirm that each construct captures a unique aspect of the conceptual model while maintaining theoretical coherence.

Table 6. Average Variance Extracted (AVE)

Variable	**AVE**
Affirmative Economic Development	0.779
Tourism Village Sustainability	0.732
Gender Equality	0.768
Community Participation	0.741

All constructs demonstrate strong convergent validity, as AVE values exceed the recommended threshold of 0.50 (Hair et al., 2019). This indicates that more than 50% of the variance in the indicators is explained by their respective constructs.

The highest AVE is observed for affirmative economic development (0.779), suggesting that its indicators strongly represent the construct. Similarly, gender equality (0.768), community participation (0.741), and tourism village sustainability (0.732) all exhibit robust convergent validity. These results confirm that the measurement model has adequate explanatory power at the indicator level.

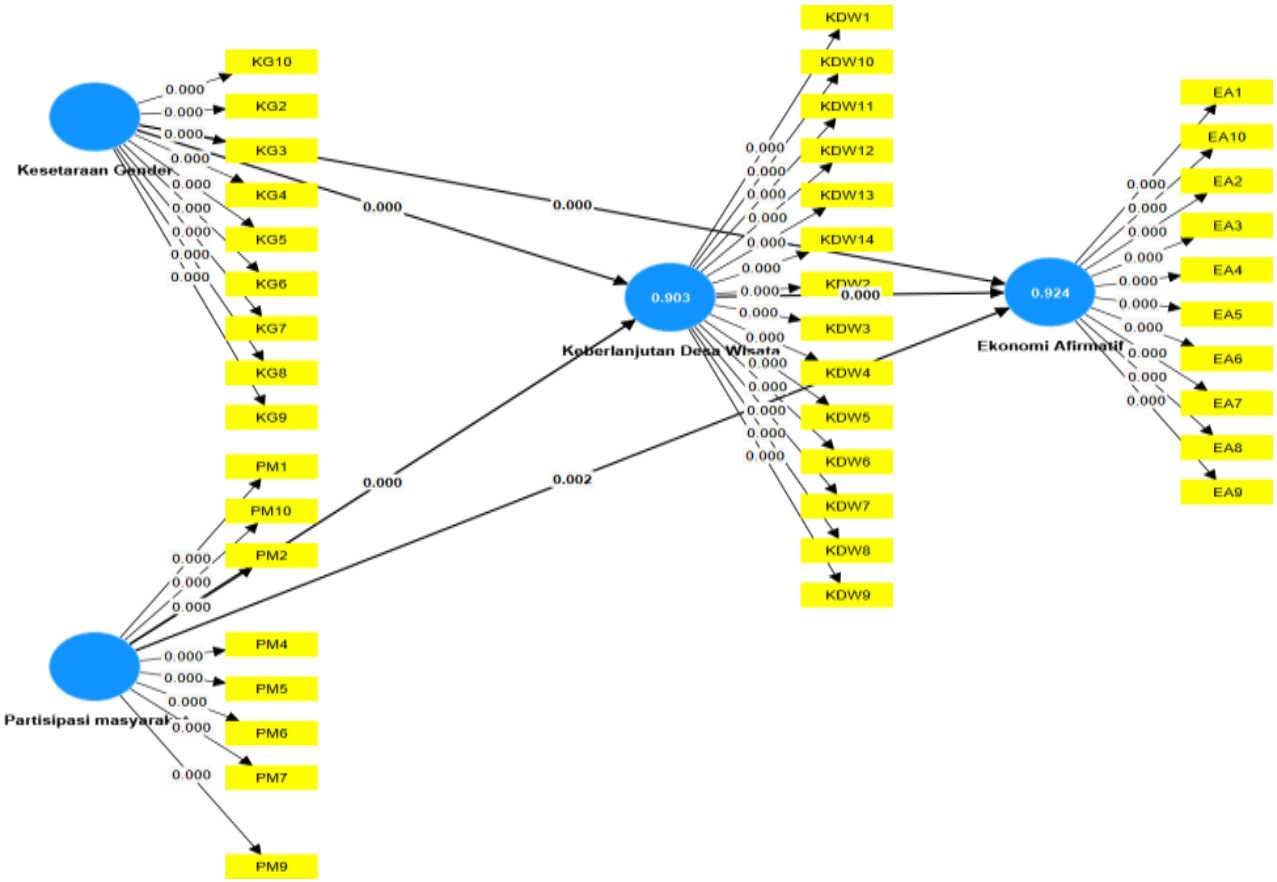
Table 7. Latent Variable Correlations (Inner Model)

Variable	**Affirmative Economic Development**	**Tourism Village Sustainability**	**Gender Equality**	**Community Participation**
Affirmative Economic Development	1.000			
Tourism Village Sustainability	0.875	1.000		
Gender Equality	0.764	0.864	1.000	
Community Participation	0.732	0.833	0.771	1.000

The correlation matrix reveals strong relationships among the latent variables. Tourism village sustainability shows a very strong correlation with affirmative economic development (0.875), reinforcing its critical role as a mediating variable in the model. This aligns with prior findings that sustainability is a key driver of inclusive economic growth in tourism contexts (UNWTO, 2019).

Gender equality also exhibits strong correlations with both sustainability (0.864) and economic development (0.764), indicating its central role in shaping both structural and outcome variables. Similarly, community participation demonstrates substantial correlations with sustainability (0.833) and economic development (0.732), highlighting its importance in fostering inclusive and participatory development processes.

While these high correlations indicate strong relationships, they remain within acceptable limits, as confirmed by the discriminant validity tests. Overall, the inner model supports the theoretical framework, suggesting that gender equality and community participation are key antecedents of sustainability and affirmative economic development in tourism villages.



3.2 Direct Effects

The results of the structural model indicate that all hypothesized direct relationships are statistically significant, as evidenced by T-statistics greater than 1.96 and p-values below 0.05, confirming the robustness of the proposed model (Hair et al., 2019).

Table 8. Direct Effects of Structural Relationships

	Original sample (O)	**Sample mean (M)**	**Standard deviation (STDEV)**	**T statistics (|O/STDEV|)**	**P-values**
Gender Equality → Affirmative Economic Development	0.313	0.310	0.053	5.896	0.000
Gender Equality → Tourism Village Sustainability	-0.259	-0.259	0.048	5.368	0.000
Community Participation → Affirmative Economic Development	-0.239	-0.235	0.078	3.061	0.002
Community Participation →	0.186	0.186	0.042	27.971	0.000

Tourism Village Sustainability					
Tourism Village Sustainability → Affirmative Economic Development	0.916	0.915	0.065	14.128	0.000

First, gender equality has a positive and significant effect on affirmative economic development ($\beta = 0.313$, $p < 0.001$). This finding suggests that improved access to resources, financial inclusion, and economic participation among women directly contribute to strengthening inclusive economic outcomes in tourism villages. This result is consistent with previous studies emphasizing that women's empowerment enhances household income and local economic resilience (Kabeer, 1999; Mwose et al., 2023).

However, gender equality shows a negative and significant relationship with tourism village sustainability ($\beta = -0.259$, $p < 0.001$). This unexpected finding may reflect transitional dynamics, where increased gender equality challenges traditional socio-cultural structures, potentially creating short-term tensions that affect sustainability dimensions. Similar observations have been noted in contexts where shifts in gender roles disrupt established institutional arrangements before stabilizing in the long term (Seguino, 2000).

Furthermore, community participation negatively influences affirmative economic development ($\beta = -0.239$, $p = 0.002$). This counterintuitive result may indicate inefficiencies in participatory processes, such as unequal power distribution, elite capture, or lack of capacity among community members. In such cases, participation may not translate into effective economic outcomes unless supported by institutional strengthening and capacity-building initiatives (Cooke & Kothari, 2001).

In contrast, community participation has a positive and highly significant effect on tourism village sustainability ($\beta = 0.186$, $p < 0.001$). This confirms that active community involvement is essential for maintaining environmental conservation, cultural preservation, and long-term viability of tourism villages (Lestari et al., 2020).

Finally, tourism village sustainability exhibits a very strong positive effect on affirmative economic development ($\beta = 0.916$, $p < 0.001$), indicating that sustainability acts as a key driver of inclusive economic growth. This finding highlights the importance of balancing economic, social, and environmental aspects to achieve equitable development outcomes (UNWTO, 2019).

3.3 Indirect Effects

The mediation analysis reveals that tourism village sustainability plays a significant mediating role in the relationship between exogenous variables and affirmative economic development.

Table 9. Indirect Effects (Mediation Analysis)

Indirect Path	**Original Sample (O)**	**Sample Mean (M)**	**Standard Deviation (STDEV)**	**T-Statistics**	**P-Value**
Gender Equality → Tourism Village Sustainability → Affirmative Economic Development	-0.237	-0.238	0.052	4.589	0.000
Community Participation → Tourism Village Sustainability → Affirmative Economic Development	1.086	1.086	0.096	11.304	0.000

The indirect effect of gender equality through sustainability is negative and significant ($\beta = -0.237$, $p < 0.001$). This result reinforces the earlier finding that while gender equality directly promotes economic outcomes, its indirect

pathway through sustainability may be constrained by structural or cultural barriers within tourism systems. This suggests the need for more integrated gender-sensitive sustainability frameworks to align empowerment initiatives with long-term development goals (UN Women, 2018).

Conversely, community participation demonstrates a strong positive indirect effect through sustainability ($\beta = 1.086$, $p < 0.001$). This indicates that while participation may not directly enhance economic outcomes, it significantly contributes to sustainability, which in turn drives affirmative economic development. This finding underscores the importance of strengthening participatory governance as a pathway to sustainable and inclusive economic growth (Scheyvens, 2000).

3.4 Model Fit and Predictive Power

The R-square values indicate a high level of explanatory power of the model. The model explains 92.4% of the variance in affirmative economic development and 90.3% of the variance in tourism village sustainability, which can be categorized as substantial (Hair et al., 2019).

Table 10. Coefficient of Determination (R^2)

Variable	R-Square	Adjusted R-Square
Affirmative Economic Development	0.924	0.923
Tourism Village Sustainability	0.903	0.903

These results suggest that the combination of gender equality, community participation, and sustainability provides a strong predictive framework for understanding affirmative economic development in tourism villages. The high explanatory power also indicates that the model is well-specified and capable of capturing the complex relationships among variables.

4. Conclusion and Recommendation

This study provides empirical evidence on the role of gender equality transformation in promoting affirmative economic development within tourism villages in North Sumatra. The findings confirm that gender equality is a significant driver of inclusive economic outcomes, particularly through enhancing women's access to resources, economic opportunities, and participation in local economic activities. This aligns with the broader theoretical perspective that women's empowerment contributes to economic growth and social welfare.

However, the study also reveals complex and sometimes contradictory relationships. While gender equality has a positive direct effect on affirmative economic development, its negative relationship with tourism village sustainability suggests the presence of transitional challenges in aligning gender-inclusive practices with existing socio-cultural and institutional structures. Similarly, community participation, although essential for sustainability, demonstrates a negative direct effect on economic outcomes, indicating potential inefficiencies in participatory mechanisms, such as unequal power dynamics or lack of capacity among participants.

Tourism village sustainability plays a pivotal role as a mediating variable, significantly influencing affirmative economic development and strengthening the indirect effects of both gender equality and community participation. This highlights that sustainable development practices—encompassing economic, social, and environmental dimensions—are crucial in translating social capital and gender inclusion into tangible economic benefits.

Overall, the model exhibits strong explanatory power, indicating that the integration of gender equality, community participation, and sustainability provides a robust framework for understanding inclusive economic development in tourism villages. The findings underscore the importance of adopting a holistic and transformative approach to rural tourism development that not only promotes economic growth but also ensures equity and long-term sustainability.

Based on the findings of this study, several recommendations can be proposed for policymakers, practitioners, and future research:

1. Strengthening Gender-Responsive Policies: Policymakers should develop and implement gender-responsive policies that enhance women's access to capital, training, and market opportunities. Special attention should be given to increasing women's participation in decision-making processes within tourism governance structures.

2. Improving the Quality of Community Participation: Efforts should be made to transform community participation from a procedural activity into a meaningful and inclusive process. This includes capacity-building programs, leadership training, and mechanisms to prevent elite capture, ensuring that participation contributes effectively to economic outcomes.
3. Enhancing Sustainable Tourism Frameworks: Tourism village development should adopt integrated sustainability frameworks that balance economic growth with cultural preservation and environmental conservation. Sustainability should be positioned as a strategic pathway for achieving affirmative economic development.
4. Targeted Support for Women-Led MSMEs: Governments and development agencies should provide targeted financial and technical support to women-led MSMEs, including access to microfinance, digital platforms, and business development services to enhance competitiveness and scalability.
5. Institutional Strengthening and Governance Reform: Local institutions managing tourism villages should be strengthened to ensure transparency, accountability, and inclusiveness. Institutional reforms are necessary to align gender equality initiatives with sustainable development goals.
6. Future Research Directions: Future studies should explore longitudinal approaches to better understand the dynamic nature of gender transformation and its long-term impact on sustainability and economic development. Additionally, qualitative research could provide deeper insights into cultural and institutional barriers affecting gender equality in tourism contexts.

By implementing these recommendations, tourism villages in Indonesia can better harness the potential of gender equality and community participation to achieve inclusive, sustainable, and affirmative economic development.

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