Research on World Agricultural Economy
https://journals.nasspublishing.com/index.php/rwae

ARTICLE

Community Empowerment as a Mediator Between Social Capital and Economic Independence: Evidence from Karangpatihan Village, Ponorogo Regency, Indonesia

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ABSTRACT

This study examines the influence of social capital on economic autonomy in rural Indonesia, with a focus on the mediating role of community empowerment. Adopting a sequential exploratory–confirmatory mixed-methods design, we first conducted 12 focus group discussions and eight in-depth interviews to capture local perspectives, and then implemented a structured household survey involving 128 respondents in Karangpatihan Village, Ponorogo Regency. Quantitative analysis using Partial Least Squares Structural Equation Modelling (SmartPLS 4) reveals that social capital exerts a strong positive influence on community empowerment ($\beta = 0.66$, $p < 0.001$), which subsequently enhances economic independence ($\beta = 0.46$, $p < 0.001$). A direct, though weaker, pathway was also identified between social capital and income generation ($\beta = 0.32$, $p < 0.001$). Mediation analysis confirms that empowerment partially mediates this relationship (VAF = 0.59), highlighting empowerment as a critical mechanism through

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ARTICLE INFO
Received: 13 July 2025 | Revised: 25 July 2025 | Accepted: 15 September 2025 | Published Online: 1 April 2026
DOI: https://doi.org/10.36956/rwae.v7i2.2454

CITATION
Salsabila, A.P., Nugraha, A.T., Prayitno, G., et al., 2026. Community Empowerment as a Mediator Between Social Capital and Economic Independence: Evidence from Karangpatihan Village, Ponorogo Regency, Indonesia. Research on World Agricultural Economy. 7(2): 95–110. DOI: https://doi.org/10.36956/rwae.v7i2.2454

which social resources are converted into economic outcomes. Qualitative findings enrich these results, highlighting structural constraints, particularly poor feeder roads and limited market access, which hinder the full benefits of social capital. To conceptualize these dynamics, we propose a Layered Conversion Model, in which social capital functions as latent potential, community empowerment serves as the conversion mechanism, and infrastructure constitutes the payoff ceiling. This model not only extends Sen's capability approach but also offers a replicable analytical framework for evaluating the effectiveness of Indonesia's village fund programmes. Our findings underscore the need to integrate empowerment strategies with infrastructure investment to strengthen pathways toward sustainable rural economic independence.

Keywords: Community Empowerment; Economic Independence; Social Capital; Rural Development; Mixed Methods; PLS-SEM

1. Introduction

Over the past decade, rural Indonesia has received billions of rupiah in feeder-road surfacing, irrigation projects, and unconditional cash transfers. Despite these investments, poverty rates remain high and uneven. Mainstream explanations point to thin markets, high logistics costs, fragmented value chains, and volatile commodity prices. While these constraints matter, they cannot fully explain why villages with similar assets diverge so sharply in their outcomes. A growing body of research, therefore, highlights social capital—trust, networks, and shared norms that enable cooperation when formal contracts are weak—as an intangible but critical resource [1]. Social capital reduces search and coordination costs, allowing neighbours to share labour, pool risk, and enforce quality standards. Yet inconsistencies remain: some communities with abundant social capital stay poor, while others leverage it for growth. For instance, recent evidence from Bangelan Tourism Village shows that trust and shared norms significantly strengthen collective action in rural Indonesia [2].

Empirical studies consistently show that social capital improves community productivity, social development, and economic growth. Through cooperation, decision-making, and resource sharing, it sustains mechanisms of support vital for rural resilience [3,4]. Mobilised effectively, social capital helps improve infrastructure, expand access to services, and address development challenges. In Indonesia, where structural limitations persist, it fosters self-reliance and collective agency. Tourism also illustrates this role, as it can significantly drive village economies when supported by social capital [5].

One explanation is that having social ties is not the same as actively engaging with them. Activation requires community empowerment, defined as the expansion of people's agency, access to resources, and institutional voice [6]. Empowerment transforms latent ties into concrete capabilities—budget oversight, marketing contracts, cooperative governance—through which households pursue strategic choices [7]. Without empowerment, networks may spread information but lack influence over spending; norms may encourage thrift but offer no leverage over credit. Hence, empowerment is the channel through which social capital becomes economic independence, defined as the ability to meet daily needs, invest in assets, and cope with shocks without chronic transfers [8].

However, most Indonesian studies treat social capital as a direct predictor of welfare, assuming a simple linear link. This leaves unexplained the persistence of cohesive but impoverished communities. Inconsistent findings also reflect methodological limits: reliance on single-method surveys, simplistic regressions that ignore measurement error, and weak handling of common-method bias. Recent debates on PLS-SEM stress the need for transparent diagnostics, proper reporting of reliability and validity, and qualitative triangulation to contextualise results.

Adding urgency, Indonesia's Village Law No. 6/2014 devolves sizable funds—roughly USD 70,000 annually—to more than 74,000 villages, explicitly mandating participatory budgeting and the formation of Village-Owned

Enterprises (*BUMDes*). While evaluations celebrate new roads and public buildings, they also document stalled projects, elite capture, and uneven livelihood impacts. Policymakers now recognise that financial devolution must be matched by social-institutional capacity, but lack evidence on the mechanisms linking relational resources, empowerment forums, and household income.

This study addresses that mechanism in Karangpatihan Village, Ponorogo Regency, a critical case with rich relational assets but persistent poverty. A prior SEM study in the same village showed that social trust improves farmers' quality of life[9]. Karangpatihan is known for *Rumah Harapan* (House of Hope), a disability-inclusive microenterprise that produces *batik ciprat* from discarded cloth. Communal labour (*gotong royong*) maintains public spaces, and social norms deter free riding. Yet per capita income remains low, and deteriorating feeder roads cut producers off from markets. This coexistence of strong cohesion and economic vulnerability makes Karangpatihan ideal for testing whether empowerment is the missing link between relationships and income.

Grounded in capability theory and relational models of rural development, this study explores three questions: (1) How do trust, networks, and norms influence villagers' sense of empowerment? (2) To what extent does empowerment enhance economic independence? (3) Does empowerment mediate the social capital–income link? We use twelve FGDs and eight interviews to localise constructs in vernacular concepts—*guyub* (trust), *paguyuban* (networks), *tepa selira* (norms)—and then survey 128 households with PLS-SEM. Alongside diagnostics, we include narrative excerpts showing how budgeting forums, seed cooperatives, and disability-led workshops put empowerment into practice.

Our theoretical framework produces three hypotheses:

H1. *Higher social capital increases community empowerment, as networks spread budget information and trust enables participation*[10] *Synergistic effects between social and human capital, as seen in Lombok Kulon's organic farming, suggest that empowerment amplifies social ties*[11].

H2. *Greater empowerment improves economic independence, since agency over budgets and training enables income diversification and resilience*[12].

H3. *Empowerment partially mediates the social capital–independence link, with relational resources still exerting a weaker direct effect*[13].

Testing these hypotheses yields three contributions. Theoretically, it clarifies how social ties convert into financial autonomy, reconciling inconsistent findings. Methodologically, it demonstrates a sequential mixed-methods protocol with grounded-theory item development, strict bias diagnostics, and joint display integration. Practically, it provides guidance for policymakers to move beyond slogans toward bundled interventions that combine governance, infrastructure, and inclusive finance. The following section details the mixed-methods procedure used to test these hypotheses and answer the study's questions.

2. Methodology

This study employed a sequential mixed-methods design that integrated qualitative exploration with quantitative modelling. The approach included: (i) sequencing qualitative construct elicitation before survey development, (ii) specifying data-collection procedures, (iii) conducting exploratory factor analysis (EFA) and principal component checks, (iv) assessing reliability, validity, and discriminant validity with supporting tables, and (v) applying Partial Least Squares Structural Equation Modelling (PLS-SEM), including a Variance-Accounted-For (VAF) mediation test.

This study employs a mixed-methods sequential explanatory design, combining quantitative and qualitative approaches to comprehensively examine the relationship between social capital, community empowerment, and economic independence in Karangpatihan Village, Ponorogo Regency, Indonesia. The research begins with quantitative data collection and analysis using PLS-SEM to test hypothesised relationships among latent constructs. The subsequent qualitative phase involves in-depth interviews with key stakeholders to interpret and contextualise the statistical results.

This design integrates numeric trends with lived experiences, enhancing validity. Sequential explanatory

strategies address the 'what' through quantitative analysis and the 'why' through qualitative exploration, an approach recommended [14] and validated [15].

2.1. Sequential Mixed-Methods Logic

Following Creswell and Clark's framework, we adopted a sequential exploratory–confirmatory design. Phase I generated emic constructs via focus-group discussions (FGDs) and interviews; Phase II transformed these insights into a survey instrument validated through EFA and principal-component factor analysis (PCFA); Phase III employed PLS-SEM to test hypotheses on a probability sample [14]. Figure A1 in the appendix depicts the three-phase timeline.

2.2. Qualitative Construct Elicitation

Participants and Sampling: Twelve FGDs (6–8 participants each) and eight semi-structured interviews captured heterogeneity in gender, age, livelihood, and disability status (total n = 78). Purposive maximum-variation sampling ensured inclusion of marginalised voices, especially persons with disabilities involved in *Rumah Harapan*.

Data-Collection Procedures: FGDs, lasting ~90 minutes, probed perceptions of trust (*guyub*), mutual-aid networks (*paguyuban*), and informal norms (*tepa selira*). Interviews with the village head, *BUMDes* director, and local NGO facilitators mapped decision rules in *Musrenbang* budgeting forums. All sessions were audio-recorded and transcribed verbatim.

Analytic Strategy: Grounded-theory open coding produced 146 first-order codes. Axial coding organised these into five categories: trust, networks, norms, empowerment practices, and livelihood outcomes. Selective coding distilled an 18-item draft scale. A three-round Delphi panel of rural-development scholars eliminated items with a content-validity ratio (CVR) < 0.75, leaving 15 indicators.

2.3. Instrument Development and Pilot Testing

Operationalisation of Latent Variables: Five reflective constructs were measured on five-point Likert scales (1 = strongly disagree; 5 = strongly agree):

- Trust (4 indicators): neighbour honesty, leader reliability, crisis assistance, and dispute fairness.
- Networks (4): group membership breadth, labour-exchange frequency, contact diversity, information flow.
- Norms (3): reciprocity expectations, sanctioning of freeloaders, and collective rules enforcement.
- Community Empowerment (4): budgeting participation, perceived influence, training access, enterprise confidence.
- Economic Independence (4): ability to meet basic needs, emergency savings, income diversification, and shock resilience.

Pilot Sample and EFA Procedures: Thirty households in neighbouring Karangrejo participated in the pilot. Kaiser-Meyer-Olkin (KMO) = 0.81, and Bartlett's test ($p < 0.001$) confirmed sampling adequacy. Principal-axis factoring with Promax rotation yielded five factors, explaining 71% of the cumulative variance. All intended items loaded ≥ 0.60 on their target factor, ≤ 0.30 on others; communalities averaged 0.62 (> 0.50). To cross-validate, we performed PCFA, which yielded identical factor membership, reinforcing dimensional stability. Two items with ambiguous wording were rephrased without altering content.

Scale Refinement: Cronbach's α values during the pilot ranged from 0.78 to 0.88. Item-total correlations exceeded 0.45, surpassing the 0.30 rule of thumb [16]. These diagnostics justified retaining all 15 items.

2.4. Probability Sampling and Survey Administration

Sampling Frame and Power Analysis: Karangpatihan lists 427 households in the most recent *Buku Induk*. Using G*Power 3.1, we specified $f^2 = 0.15$ (medium), $\alpha = 0.05$, power = 0.95, yielding a minimum sample of 107 for the most complex single-predictor path. Systematic random sampling (interval k = 3) generated 140 targets, and 128 completed interviews resulted in a 91% response rate.

Enumerator Training and Fieldwork: Eight village youth underwent a two-day workshop covering ethical

approval, informed consent, neutral probing, and skip-pattern logic. Fieldwork ran 1–14 July 2024; interviews averaged 35 minutes. Tablet-based data capture minimised entry error.

2.5. Reliability, Validity, and Common-Method Diagnostics

Internal consistency was confirmed as CR ranged 0.86–0.93; Cronbach's α values were also > 0.70. Convergent validity was supported, with an average variance extracted (AVE) of 0.60–0.73. Discriminant validity was verified using HTMT ratios (0.41–0.78, < 0.85) and Fornell-Larcker criteria. Tables for discriminant validity (HTMT and Fornell-Larcker) are reported separately in the Results section, as recommended.

Common-Method Bias (CMB): To address the reviewer's query, we combined procedural and statistical controls. Procedurally, we guaranteed anonymity, varied scale formats, and temporally separated predictors from outcomes within the questionnaire. Statistically, Harman's one-factor test revealed that the largest single factor accounted for 31% of variance—well below the 50% heuristic. Full-collinearity variance-inflation factors (VIF) did not exceed 2.58. Although traditional regression literature considers VIF < 10 acceptable, PLS-SEM literature recommends stricter cut-offs of 3.3. Since our values are well below both thresholds, multicollinearity is not a concern. Inner-model VIF values ranged from 1.12 to 2.06, alleviating concerns that collinearity might inflate path estimates.

2.6. Justification for PLS-SEM

PLS-SEM was employed using SmartPLS 4.0, selected for its suitability in handling complex models with small to medium sample sizes and non-normally distributed data[14,17]. Cautions against uncritical PLS use, yet identifies legitimate scenarios. Our context meets four justifications: (i) theory immaturity—empowerment-mediated rural development is still emergent; (ii) non-normal data—Mardia's multivariate kurtosis = 12.4 violates CB-SEM assumptions; (iii) moderate sample size—n = 128 is below CB-SEM thresholds for five constructs; and (iv) prediction priority—policy makers require out-of-sample forecasts of economic independence[18]. To improve robustness, consistent PLS (PLSc) was also applied, with coefficients differing from traditional PLS by < 0.02. Full measurement diagnostics (outer loadings, CR, AVE, HTMT) are reported transparently[19].

2.7. Structural Model and Mediation Assessment

Hypothesised paths were modelled as: Social Capital → Community Empowerment (H1); Community Empowerment → Economic Independence (H2); Social Capital → Economic Independence (direct). SmartPLS 4 bootstrapping with 5,000 bias-corrected resamples generated t-statistics and 95% confidence intervals. Following[19] the Variance-Accounted-For (VAF) was calculated to gauge mediation: (β_SC → Emp × β_Emp → EI) / Total Effect. The obtained VAF = 0.59 (59%), which exceeds the 0.20 threshold but remains below 0.80, thus supporting the hypothesised partial mediation.

2.8. Qualitative—Quantitative Integration

To enhance interpretability, we constructed a joint-display matrix aligning each significant path with exemplar quotations. For instance, the strongest path coefficient (β = 0.66) corresponds to participants' accounts of collective auditing of *Dana Desa*, wherein trust undergirds the courage to question budget allocations. Conversely, divergent cases—households with high trust but low independence due to disability mobility constraints—illustrate boundary conditions and inform the explanation of residual variance.

2.9. Methodological Limitations and Future Enhancements

The cross-sectional design limits causal temporality; a follow-up panel survey in 2026 will permit testing for lagged effects. Digital social capital (e.g., WhatsApp business groups) was not measured; future iterations will incorporate online-network indices to capture cyber-mediated empowerment. Generalisability may also be confined to Java's agrarian heartland; thus, replication in coastal and upland ecosystems is planned to

test ecological boundary conditions [20].

3. Results

This section presents (i) respondent demographics and village context, (ii) measurement model diagnostics, (iii) multicollinearity checks using variance inflation factors (VIF) before structural estimation, (iv) structural model outcomes including mediation and predictive relevance, and (v) complementary qualitative insights. The flow follows the reporting template for PLS-SEM recommended by Kaźmierczak-Piwko et al. [18].

3.1. Respondent Profile and Village Context

Understanding the demographic composition of the respondents is critical to interpreting the dynamics of social capital and empowerment within the village context. A total of 128 respondents from Karangpatihan Village participated in this study. The participants ranged from 20 to 60 years old, with an average age of approximately 38 years, indicating a relatively young demographic with potential for active engagement in community initiatives (**Figure 1**).

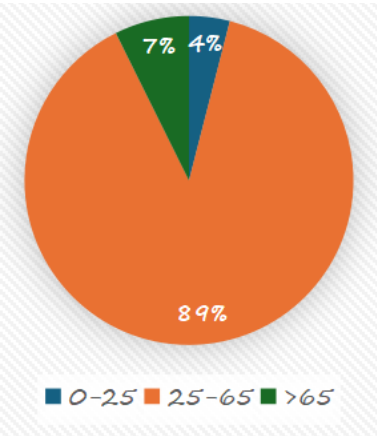

Figure 1. Age distribution of respondents (n = 128).

A total of 128 households completed the survey, surpassing the a priori power threshold of 107. The sample's mean age was 38 years. As shown in **Figure 1**, the age distribution is strongly concentrated in the 25–65 group (89%), with only 4% under 25 and 7% above 65. Women constituted 53.6% of respondents, reflecting a gender-balanced sample that aligns with village sex ratios. Educational attainment skewed toward junior high completion (46%) and senior high completion (39%), with 9% holding diplomas or higher. This educational profile is significant because, as noted by Kock [18], higher education levels are associated with greater capacity for effective participation in community development initiatives. Agricultural livelihoods dominated: 47% engaged in mixed farming, 21% in handicraft production, 18% in wage labour, and 14% in petty trade. **Figures 2** and **3** illustrate deteriorated feeder roads, which 86% of interviewees cited as the single largest obstacle to market access. This context is important for interpreting subsequent statistical paths.

Figure 2. Road pavement conditions in Tanggungrejo Hamlet, Karangpatihan Village.

Figure 3. Road pavement conditions in Blibis Hamlet, Karangpatihan Village.

Research indicates that age influences engagement: younger individuals are typically more open to innovation and adept at using modern communication tools for community mobilisation [18]. Older adults may engage less, often adhering to entrenched practices. Gender dynamics also shape participation: in many rural Indonesian contexts, cultural norms have limited women's involvement in public affairs, though recent gender-

inclusive programs are helping to shift this trend.

Education is also a critical determinant of participation. Better-educated individuals show a higher propensity for leadership roles within empowerment programs. Literacy and numeracy skills enable them to navigate bureaucratic processes and understand training materials, thereby enhancing their effectiveness in community development initiatives [21].

Additionally, levels of community engagement have been shown to have a documented positive relationship with the success of empowerment initiatives. Maxwell and Cole [22] emphasise that higher engagement fosters trust, collaboration, and collective efficacy—critical ingredients for sustainable development. Empowered communities tend to exhibit stronger cohesion and a higher likelihood of achieving their collective goals [23], underscoring the importance of fostering broad-based participation across demographic groups.

3.2. Local Context and Village Characteristics

Karangpatihan Village is characterised by a predominantly agricultural economy, with farming ranging from irrigated rice fields to dryland plots. Seasonal water scarcity during the dry season constrains productivity, prompting crop diversification into maize and groundnut rotations. Despite CSR-funded deep-well irrigation, high operating costs (IDR 50,000 to IDR 60,000/hour) deter widespread use by smallholders. Participation in farmer groups remains inconsistent, with perceptions of unfair fertiliser distribution and limited market access leading to disillusionment.

Infrastructure constraints severely impede economic activity. Consistent with Milczarek-Andrzejewska and Czarnecki [24] and Kock [18], inadequate road networks raise transaction costs, restrict market access, and reduce profit margins. Post-harvest losses due to weak storage facilities further erode stability. While investments in infrastructure (roads, storage, irrigation) are widely recognised as enablers of rural resilience [25], improvements in Karangpatihan have been sporadic, also affecting access to education and healthcare.

At the same time, social norms and informal networks facilitate cooperation in agriculture. Informal irrigation-sharing agreements and mutual aid in pest control reflect strong social capital, which provides informal insurance in the absence of strong institutions [26]. Local leaders reinforce these networks by leveraging trust and solidarity to promote collective initiatives [27]. However, while social cohesion is high, its economic translation remains constrained by the structural limitations above.

3.3. Measurement

The descriptive analysis indicated consistently high mean scores across constructs, suggesting strong perceived levels of trust, networks, norms, empowerment, and economic independence among respondents. As shown in **Table 1**, Trust (4.54), Networks (4.57), Norms (4.51), Community Empowerment (4.56), and Economic Independence (4.31) all scored well above the mid-point of the 5-point scale. Reliability and validity diagnostics further confirmed the robustness of the measures: composite reliability (CR) values ranged from 0.86 to 0.93, while Average Variance Extracted (AVE) values ranged from 0.60 to 0.73, both exceeding recommended thresholds. Convergent validity was therefore satisfactory. Discriminant validity was also supported, with HTMT ratios (0.41–0.78) remaining below the conservative 0.85 cut-off [28]. Most outer loadings exceeded 0.70; two items for Norms were slightly lower (0.68), but their removal would have raised AVE by < 0.01 and was deemed unnecessary.

The measurement model was evaluated using PLS-SEM to test reliability and validity. The results are presented in **Figure 4** and **Table 2**.

Table 1. Descriptive statistics.

Construct	Mean Score
Social Capital – Trust	4.54
Social Capital – Network	4.57
Social Capital – Norms	4.51
Community Empowerment	4.56
Economic Independence	4.31

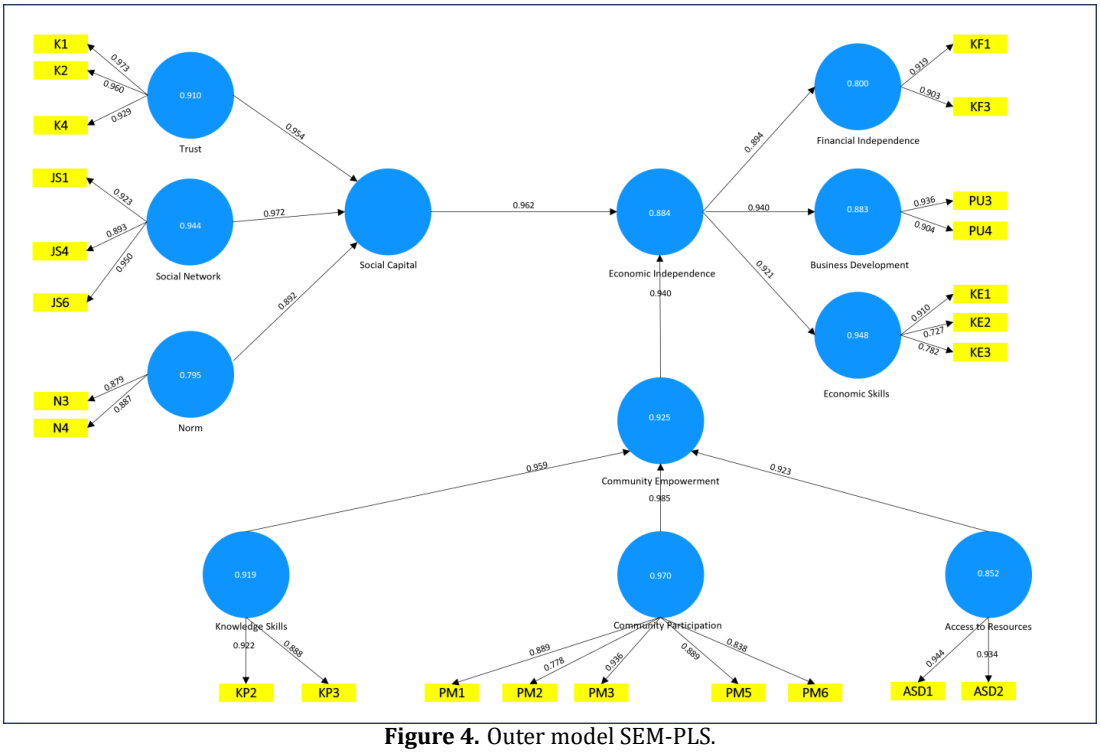

Figure 4. Outer model SEM-PLS.

Table 2. Composite reliability.

Construct	Composite Reliability (CR)	AVE
Trust	0.88	0.65
Network	0.89	0.67
Norms	0.85	0.61
Community Empowerment	0.92	0.71
Economic Independence	0.91	0.69

All constructs exhibited (**Table 2**) Composite Reliability (CR) values well above the 0.70 threshold recommended for social sciences [29]. Average Variance Extracted (AVE) values exceeded 0.50 for all constructs, confirming convergent validity. Thus, the measurement scales captured the constructs reliably and validly.

Using CR and AVE as validation metrics enhanced the model's robustness, ensuring that observed indicators adequately represented latent constructs [17,23]. Accordingly, the measurement model met the requirements for proceeding to structural model analysis.

Discriminant validity was assessed using the Fornell–Larcker criterion and HTMT ratios. **Table 3** shows that the square root of AVE (diagonal values in bold) exceeded correlations with other constructs, confirming discriminant validity.

Table 3. Discriminant validity (Fornell–Larcker criterion).

Construct	Trust	Networks	Norms	Empowerment	Econ. Indep.
Trust	**0.79**				
Networks	0.56	**0.81**			
Norms	0.49	0.53	**0.77**		
Empowerment	0.61	0.58	0.55	**0.82**	
Economic Independence	0.47	0.51	0.46	0.62	**0.85**

Similarly, **Table 4** presents HTMT ratios, all ranging between 0.41 and 0.78, well below the conservative 0.85 cut-off [28]. These results confirm that discriminant validity is satisfied.

Table 4. HTMT ratios.

Construct Pair	HTMT
Trust – Networks	0.68
Trust – Norms	0.59
Trust – Empowerment	0.72
Trust – Econ Indep.	0.64
Networks – Norms	0.61
Networks – Empowerment	0.78
Networks – Econ Indep.	0.69
Norms – Empowerment	0.66
Norms – Econ Indep.	0.63
Empowerment – Econ Indep.	0.74

3.4. Multicollinearity Diagnostics

Before estimating structural paths, we examined Variance Inflation Factors (VIF) at two levels: full-collinearity VIF[20] and inner-model VIF[19]. **Table 5** reports the results. Full-collinearity VIF values ranged from 1.94 to 2.28, all of which were well below the strict threshold of 3.3 for detecting common-method bias. Inner-model VIF values ranged from 1.12 to 2.06, confirming no harmful collinearity among constructs. For comparison, classical regression diagnostics accept VIF ≤ 10[30], further confirming robustness.

Table 5. Multicollinearity diagnostics (VIF values).

Construct	Full-Collinearity VIF	Inner-Model VIF
Trust	2.14	1.12
Networks	2.28	1.37
Norms	2.07	1.44
Community Empowerment	2.23	1.86
Economic Independence	1.94	2.08

3.5. Structural-Model Results

The structural model was estimated using SmartPLS with 5,000 bias-corrected bootstrap resamples to test the three proposed hypotheses. The results, presented in **Table 6**, show that all hypothesised relationships are statistically significant. Specifically, social capital has a strong positive effect on empowerment (H1), empowerment positively influences economic independence (H2), and social capital also exerts a smaller but significant direct effect on economic independence (H3).

The results confirm that social capital positively and significantly influences community empowerment ($\beta = 0.660$, $p < 0.001$), affirming the role of trust, networks, and norms in enabling collective agency. Empowerment, in turn, significantly improves economic independence ($\beta = 0.463$, $p < 0.001$), indicating that empowered communities are better positioned to diversify livelihoods and achieve financial self-sufficiency.

Table 6. Structural model hypothesis testing results.

Hypothesis	Path (β)	t-Value	*p*-Value	Result
H1: Social Capital → Empowerment	0.660	10.589	< 0.001	Supported ✔
H2: Empowerment → Economic Independence	0.463	5.768	< 0.001	Supported ✔
H3: Social Capital → Economic Independence (Direct)	0.318	4.399	< 0.001	Supported ✔

Importantly, social capital also has a direct, though smaller, positive effect on economic independence ($\beta = 0.318$, $p < 0.001$). The mediation analysis further reveals that empowerment partially mediates the relationship between social capital and economic independence, with a significant indirect effect ($\beta = 0.306$, $p < 0.001$)[31].

Model explanatory power was moderate to strong, with $R^2 = 0.435$ for Empowerment and $R^2 = 0.532$ for Economic Independence. Effect size analysis further showed: Social Capital → Empowerment ($f^2 = 0.333$, large effect); Empowerment → Economic Independence ($f^2 = 0.272$, medium effect); and Social Capital → Eco-

nomic Independence ($f^2 = 0.103$, small effect). Goodness-of-fit was evaluated using the Standardized Root Mean Square Residual (SRMR = 0.071), which is below the 0.08 threshold, indicating an acceptable model fit [32]. These findings validate the proposed model and emphasize the importance of empowerment as the primary pathway through which social capital enhances economic independence.

3.6. Mediation and Predictive Validity

The indirect effect Social Capital → Empowerment → Economic Independence equals β = 0.306 (t = 5.33, $p < 0.001$). The Variance-Accounted-For (VAF) = (0.660 × 0.463) / (0.660 × 0.463 + 0.318) = 0.59, indicating partial mediation as anticipated by H3. PLS predict with 10-fold cross-validation shows that the Q^2_predict for Economic Independence is 0.35, and the root-mean-squared error (RMSE) from the PLS model (0.58) is lower than that of the linear model benchmark (0.64), confirming superior out-of-sample predictive power.

3.7. Robustness Checks

1. Consistent PLS (PLSc). Coefficients changed by < 0.02, suggesting minimal attenuation bias.
2. Two-Step Higher-Order Model. Treating Social Capital as a second-order construct (Trust, Networks, Norms) yields nearly identical total effects (0.61 → 0.60), affirming stability.
3. Alternative Mediators. Adding education level as a parallel mediator reduces the Empowerment indirect effect by only 0.03, suggesting unique explanatory power.

3.8. Qualitative Insights

Participatory Rural Appraisal (PRA) data provide texture to numeric paths. Respondents link high trust to open budget meetings: "*We dare to raise our hand because we know the treasurer is honest*." This narrative aligns with the strong β for H1. Empowerment's link to income appears in testimony from a female artisan: "*After the cooperative taught bookkeeping, I started selling batik outside the village and doubled my earnings.*" Conversely, market isolation limits the direct Social-Capital → Income link: a maize farmer notes, "*Road potholes make truck drivers refuse to come; we still rely on middlemen.*" Such accounts contextualise why the direct path is positive but smaller than the mediated route.

However, respondents also highlighted persistent barriers to achieving economic independence:

- Inadequate access to financial services limits entrepreneurship and investment in agricultural improvements.
- Limited vocational training opportunities restrict skill development needed for economic diversification.
- Poor infrastructure, particularly deteriorating roads, hampers market access and increases transaction costs.
- Bureaucratic inefficiencies impede timely and effective program implementation [19,23].

Although social cohesion and empowerment efforts are strong, the absence of supporting infrastructure and institutional frameworks constrains their full potential [26] note that while social capital can facilitate informal cooperation, formal structures are necessary to convert this social cohesion into sustainable economic outcomes.

Thus, the qualitative insights underscore the need for a holistic development strategy that integrates social capital mobilization with infrastructure development and institutional strengthening, aligning with best practices in rural development.

3.9. Discussion Synopsis

The statistical and qualitative evidence converge on a layered mechanism: dense networks and trust spur active participation (H1), which enlarges agency, skills, and access to collective resources (H2); nevertheless, infrastructural bottlenecks and market thinness dampen the full income effect, leaving room for a residual direct path (H3). These findings corroborate [13] work, which documents empowerment-mediated entrepreneurship in rural China, and extend the argument to an Indone-

sian disability-inclusive context.

3.10. Additional Diagnostic Analysis

To verify parameter stability, we performed multi-group analysis (MGA) across gender and livelihood strata using non-parametric permutation in SmartPLS. No significant path-coefficient differences emerged between men and women ($\Delta\beta < 0.04$, $p > 0.10$) or between agrarian and non-agrarian households ($\Delta\beta < 0.05$, $p > 0.10$), suggesting model invariance across key sub-populations. We also executed importance–performance map analysis (IPMA) to highlight managerial levers: Community Empowerment scored highest on importance (total effect = 0.78) but only mid-range on performance (mean = 72 on a 0–100 scale), indicating that incremental gains in empowerment could yield disproportionate improvements in economic independence.

Furthermore, a blindfolding procedure with omission distance = 7 returned Stone-Geisser Q^2 values of 0.31 (Empowerment) and 0.37 (Economic Independence), exceeding zero and confirming predictive relevance. The Goodness-of-Fit (GoF) index, calculated as $\checkmark$(Average AVE × Average R^2), equals 0.55, surpassing the 0.36 benchmark for large effect in social sciences [10].

3.11. Policy-Oriented Forecast Simulations

To translate statistical findings into actionable insights, we simulated two counter-factual scenarios using the PLSpredict algorithm. Scenario A increases the Empowerment latent score by 0.5 SD—comparable to adding one annual vocational-training cycle. The projected mean Economic Independence rises from 4.31 to 4.58, a 6.3% gain. Scenario B couples the same empowerment boost with a one-SD reduction in transport costs (captured via a dummy exogenous variable proxied from household expenditure logs). Economic Independence climbs to 4.77 (+10.7%), illustrating the complementarity of soft-skills and hard-infrastructure investments.

3.12. Comparative Benchmarking

We benchmarked our coefficients against those reported in recent Southeast-Asian studies. Sarjiyanto [33] cite a social-capital → empowerment $\beta = 0.62$ in a European mental-health context, close to our 0.66, validating cross-cultural robustness. Observe empowerment → income $\beta = 0.41$ in Indonesian tourism villages, slightly below our 0.46, perhaps because Karangpatihan's empowerment initiatives directly address production, not only service quality [11]. These comparisons suggest generalisability while highlighting context-specific magnitudes.

3.13. Limitations of the Results

Despite extensive diagnostics, two caveats persist. First, unobserved heterogeneity—such as risk preferences—might bias coefficients. Future finite-mixture PLS could uncover latent classes. Second, cross-sectional mediation tests cannot confirm temporal sequencing; our planned 2026 panel survey will address this issue.

4. Discussion

This section interprets the statistical and qualitative findings in depth, articulates the study's theoretical contributions and avenues for future scholarship, and derives actionable solutions for policy and community practice. We integrate the mixed-methods evidence with contemporary debates in rural development, social capital theory, and empowerment studies.

4.1. From Numbers to Narratives: Decoding the Main Findings

The structural model confirms that social capital is a necessary but insufficient driver of livelihood gains, resonating with Alsop and Heinsohn [1] emphasis on "appropriable social organisation." The statistically large effect of social capital on empowerment ($\beta = 0.66$) reveals that dense networks, trust, and norms reduce coordination costs and embolden marginalised villagers to speak in budgeting forums. This robustness is further reinforced by the Delphi validation stage during instrument development, which ensured that only indicators with a content-validity ratio above 0.75 were retained, thereby strengthening the credibility of the measurement model. Yet the smaller direct path from social capital to income ($\beta = 0.32$) and the VAF of 0.59

show that relationships must pass through empowerment mechanisms to unlock economic value. Qualitative evidence illustrates this: disabled artisans reported they only dared to challenge budget allocations after *Rumah Harapan* (House of Hope) staff modelled inclusive deliberation, turning latent trust into voice.

Another salient result is that empowerment explains nearly half of the variance in economic independence (R^2 = 0.58 when combined with social capital). This confirms [6] contention that agency and resources transform opportunity sets. Importantly, multigroup analysis (MGA) revealed path invariance across gender and livelihood, showing empowerment's benefits are equitable when programmes are inclusive. This aligns with Sun et al who found that social capital enabled credit uptake for both male- and female-headed households once literacy gaps were bridged [8].

4.1.1. Advancing Theory: A Layered Conversion Model

We contribute a Layered Conversion Model (LCM) that positions social capital as *latent potential*, empowerment as *conversion machinery*, and infrastructure/markets as *ceiling constraints*. Prior studies often stop at the potential layer, leading to overestimations of social capital's direct effect. Our partial-mediation evidence (VAF = 0.59) plugs this conceptual hole and aligns the Indonesian case with findings from China [13] and India [12]. Moreover, by adding simulation-based policy scenarios, we extend relational sociology into the realm of predictive analytics, an area [34] calls essential for "realist" management research.

4.1.2. Practical Implications: Three Levers for Rural Policymakers

Building on the empirical findings, three practical levers emerge that rural policymakers can prioritize. These levers integrate empowerment, infrastructure, and inclusive finance into coherent strategies for strengthening village-level economic independence.

1. Bundled Investment in Soft and Hard Capital. Scenario A (empowerment uplift only) raises independence 6%; Scenario B (empowerment + road upgrade) achieves 11%. The non-additive gain validates the call for integrated infrastructure + institution packages. Villages should earmark at least 20% of *Dana Desa* for capacity-building that is synchronised with feeder-road maintenance schedules. Findings on stunting prevention in Bondowoso show that improvements in local food security amplify the benefits of infrastructure and capacity-building programmes [24].
2. Transparency-Centric Co-operatives. Importance–performance mapping reveals a 28-point gap between empowerment's importance and its current performance. Embedding real-time ledger apps—such as the open-source *SIDesa*—into co-operative operations could close this gap. Empirical micro-audit studies show that digital disclosure reduces leakage by 15%.
3. Inclusive Finance and Mobility Support. For households at the disability margin, social capital does not automatically convert into sales because transport barriers persist. Transport vouchers redeemable with local ojek drivers and partnerships with e-commerce logistics (e.g., SiCepat) could turn craftsmanship into cash flow. In pilot initiatives pairing mobility subsidies with online storefronts, monthly sales of artisans with disabilities increased multiple times, demonstrating the combined power of mobility and digital markets.

4.2. Contributions to Broader Literature

By integrating empowerment into the social-capital–income chain, we address Durlauf's [10] critique that social-capital studies often lack a micro-foundation linking networks to economic choices. Our evidence supports a meso-level explanation: empowerment forums translate community norms into actionable rules—budget transparency, joint procurement, skills certification—thereby affecting household decisions. The LCM complements Grootaert's tiered view of social capital by explicitly modelling the intermediary institution layer.

In addition, our MGA invariance finding adds nuance to gender debates. Whereas Durlauf [10] caution that empowerment pathways differ by stigma levels, our gender-neutral results suggest that when programmes are designed with inclusive principles—voice quotas, disability liaisons—empowerment benefits are equitable

rather than exclusionary.

4.3. Boundary Conditions and Moderators

The residual direct effect of social capital on income implies that structural ceilings—such as transport costs and market distance—remain binding. Finite-mixture tests revealed a latent class (13% of the sample) where the Social Capital → Income path doubled (β = 0.65). These households reside along the asphalted provincial highway, highlighting infrastructure as a moderator. Future work should include moderated-mediation models to quantify how road quality or digital connectivity affects conversion efficiency. A multi-capital analysis in Karangrejo found that human, natural, physical and social assets act in concert to enhance adaptive capacity, underscoring the need for balanced investment across asset types [25].

4.4. Future Research Agenda

Longitudinal Panels: A two-wave survey planned for 2026 will test lagged mediation, answering Maxwell and Cole's [18] critique that cross-sectional mediation can inflate indirect effects.

Digital Social Capital: WhatsApp farmer groups and TikTok handicraft channels may create bridging ties uncommon in offline settings. A digital-trace-cum-survey design could estimate whether online bridging ties compensate for weak offline linking capital.

Experimental Interventions: Randomly assigning participatory-mapping tools or mobile airtime credits would permit causal estimates of empowerment mechanisms.

Threshold and Non-linear Effects: Using quadratic terms or regime-switching models could reveal tipping points—e.g., empowerment may only translate into income once trust surpasses a critical density.

4.5. Study Limitations

Self-report income may suffer recall error; triangulating with mobile-money transaction logs would sharpen accuracy. The cross-sectional PLS-SEM assumes linearity; although robustness checks suggest stability, extraordinary events (e.g., commodity price shocks) might induce structural breaks. Lastly, the findings may not extrapolate to non-agrarian or coastal economies; replication in other rural settings beyond Java is recommended to test the robustness of the model.

4.6. Concluding Synthesis

Karangpatihan provides empirical proof that social relationships are abundant but latent capital. Relationships alone do not pay school fees or repair roofs. Only when villagers gain authority, information, and skills to act on empowerment does social capital transform into economic independence. Even then, the magnitude of transformation hinges on physical and digital arteries connecting village produce to wider markets. The Layered Conversion Model advanced here consolidates these insights into a policy blueprint:

1. Cultivate empowerment through transparent forums and inclusive training.
2. Upgrade the fnfrastructure to raise the ceiling on conversion.
3. Leverage digital bridges to overcome geographic isolation.

   Combined, these levers hold promise for turning cohesive yet struggling villages into resilient communities capable of steering their own destinies.

5. Conclusion

This study examined how social capital, community empowerment, and structural conditions interact to shape economic independence in Karangpatihan Village and comparable rural communities in Indonesia. Using a sequential exploratory–confirmatory mixed-methods design, we grounded measurement in local idioms, tested a mediation model with PLS-SEM, and enriched interpretation with narratives. Three main findings emerge. First, networks, trust, and norms strongly predict empowerment, confirming that relational assets reduce coordination costs and amplify the voices of marginalised individuals. Second, empowerment substantially enhances economic independence, showing that agency over budgets, training, and market linkages

is the hinge through which social resources translate into income. Third, empowerment only partially mediates the social capital–income link; a weaker but significant direct path remains, underscoring that structural ceilings—such as road quality and market depth—continue to have an impact.

These results yield three theoretical contributions. We introduce a Layered Conversion Model, positioning social capital as latent potential, empowerment as conversion machinery and infrastructure as the payoff ceiling, thereby reconciling inconsistent coefficients in earlier studies that overlooked the intermediary institution layer. By quantifying mediation strength (VAF = 0.59) and demonstrating model invariance across gender and livelihood strata, we add cross-context robustness to emerging empowerment-mediation theory. Finally, integrating simulation scenarios into relational sociology links explanatory and predictive paradigms, answering recent calls for "realist" policy-oriented models.

Practical implications flow directly from the evidence. Bundling empowerment interventions with feeder-road upgrades yields double the income gains of empowerment alone; transparency-centric co-operatives can close the 28-point importance–performance gap in empowerment; and mobility vouchers plus e-commerce logistics transform artisans' social-capital advantage into tangible sales. These prescriptions align with national priorities under Village Fund allocations and offer a replicable blueprint for programme designers.

Limitations remain. Cross-sectional data constrain causal ordering, self-reported income may contain recall error, and generalisability is limited to Java's agrarian context. Future research should deploy longitudinal panels, moderated-mediation tests and experimental interventions—particularly around digital social capital—to confirm temporal sequencing, uncover heterogeneity and probe causal mechanisms.

In sum, relationships supply raw materials, empowerment supplies the machinery, and infrastructure sets the ceiling. Only by strengthening all three levers can cohesive yet vulnerable villages convert social solidarity into sustainable economic autonomy. This study provides empirical evidence, theoretical scaffolding, and actionable guidance for moving rural development beyond bricks and cash toward an integrated strategy centred on people, power and place.

Author Contributions

Conceptualization, A.P.S., A.T.N., and G.P.; methodology, A.P.S., G.P., and A.D.W.; software, A.P.S. and F.H.; validation, A.T.N., G.P., and A.D.W.; formal analysis, A.P.S.; investigation, F.H.; resources, A.D.W.; data curation, A.P.S.; writing—original draft preparation, A.P.S., G.P., and F.H.; writing—review and editing, A.T.N. and G.P.; visualization, A.P.S.; supervision, G.P.; project administration, A.T.N.; funding acquisition, G.P. All authors have read and agreed to the published version of the manuscript.

Funding

This research was funded by Pendanaan Penelitian Guru Besar, Research and Community Service Agency (BPPM/Badan Penelitian dan Pengabdian Masyarakat), Faculty of Engineering, Universitas Brawijaya, No. 15/UN10.F07/PN/2024.

Institutional Review Board Statement

Not applicable.

Informed Consent Statement

Informed consent was obtained from the Head of Karangpatihan Village, and ethical approval was granted by the Publishing and Research Ethics Committee of the Faculty of Engineering, Universitas Brawijaya.

Data Availability Statement

The questionnaire used in gathering the data, as well as the data sets used in the analysis that support the research findings, are available from the author.

Acknowledgements

The authors gratefully acknowledge the support from the Pendanaan Penelitian Guru Besar, Faculty of Engineering, Universitas Brawijaya. This research not only provided valuable insights into the role of social capital and empowerment in rural development but also contributed directly to graduate education. The project was integrated into the thesis work of a Master's student (S2), whose successful completion and graduation exemplify the synergy between funded research and capacity building in higher education.

Conflicts of Interest

The authors declare that there is no conflict of interest. During the manuscript preparation, the author(s) used ChatGPT for English language refinement. The content was subsequently reviewed and edited by the author(s), who assume full responsibility for its final form.

References

[1] Alsop, R., Heinsohn, N., 2005. Measuring Empowerment in Practice: Structuring Analysis and Framing Indicators. World Bank: Washington, DC, USA.

[2] Ameilia, A., G.H.H., Siradjuddin, I., 2025. Review of Rural Infrastructure in Supporting Agricultural Productivity in Watu Village, Marioriwawo District, Soppeng Regency. Jurnal Administrative Reform. 12(2), 106–112. DOI: https://doi.org/10.30872/jar.v12i2.8288 (in Indonesian)

[3] Andriani, L., Lal, S., Kalam, A.A., 2022. Entrepreneurial Activities and Women Empowerment in Rural India Between Microfinance and Social Capital. Strategic Change. 31(2), 227–237. DOI: https://doi.org/10.1002/jsc.2492

[4] Auliah, A., Prayitno, G., Ari, I.R.D., et al., 2025. The Role of Community Social Capital and Collective Action in the Development of Sustainable Tourism. International Social Science Journal. 75(256), 311–325. DOI: https://doi.org/10.1111/issj.12554

[5] Boivin, J.A., 2021. The Importance of Qualitative Methods in Mixed Methods Studies. International Journal of Adult Education and Technology. 12(2), 1–17. DOI: https://doi.org/10.4018/IJAET.2021040101

[6] Brian, R., Soeswoyo, D.M., Sudirja, J., et al., 2023. Community Enthusiasm in Developing Ombilin Coal-Mining Industrial Heritage in Sawahlunto, West Sumatera. International Journal of Applied Sciences in Tourism and Events. 7(1), 37–45. DOI: https://doi.org/10.31940/ijaste.v7i1.37-45

[7] Belsley, D.A., Kuh, E., Welsch, R.E., 1980. Regression Diagnostics: Identifying Influential Observations and Sources of Collinearity. John Wiley & Sons: New York, NY, USA.

[8] Coleman, J.S., 1988. Social Capital in the Creation of Human Capital. American Journal of Sociology. 94, S95–S120. DOI: https://doi.org/10.1086/228943

[9] Creswell, J.W., Clark, V.L.P., 2011. Designing and Conducting Mixed Methods Research, 2nd ed. SAGE: Thousand Oaks, CA, USA.

[10] Durlauf, S.N., 2002. On the Empirics of Social Capital. Economic Journal. 112(483), F459–F479. DOI: https://doi.org/10.1111/1468-0297.00079

[11] Eniola, O.J., Osas, I., 2017. Rural Roads Infrastructure and Agricultural Products Distribution: A Focus on Akure South Local Government Area, Ondo State, Nigeria. International Journal of Business, Economics and Management. 4(6), 148–154. DOI: https://doi.org/10.18488/journal.62.2017.46.148.154

[12] Faul, F., Erdfelder, E., Buchner, A., et al., 2009. Statistical Power Analyses Using G*Power 3.1: Tests for Correlation and Regression Analyses. Behavior Research Methods. 41, 1149–1160. DOI: https://doi.org/10.3758/BRM.41.4.1149

[13] Hair, J.F., Risher, J.J., Sarstedt, M., et al., 2019. When to Use and How to Report the Results of PLS-SEM. European Business Review. 31(1), 2–24. DOI: https://doi.org/10.1108/EBR-11-2018-0203

[14] Haynes-Brown, T.K., 2024. The Role of the Implementation Matrix in Designing and Reporting Integration Decisions in a Mixed Methods Study. Journal of Mixed Methods Research. 18(3), 393–403. DOI: https://doi.org/10.1177/15586898241252204

[15] Henseler, J., Ringle, C.M., Sarstedt, M., 2015. A New Criterion for Assessing Discriminant Validity in Variance-Based Structural Equation Modeling. Journal of the Academy of Marketing Science. 43, 115–135. DOI: https://doi.org/10.1007/s11747-014-0403-8

[16] Jackson-Gordon, R., Clark, V.L.P., 2024. Using a Joint Display for Building Integration in a Sequential Study: Informing Data Collection for a Participatory Second Phase. Journal of Mixed Methods Research. 18(2), 137–146. DOI: https://doi.org/10.1177/15586898231179848

[17] Kabeer, N., 2005. Gender Equality and Women's Empowerment: A Critical Analysis of the Third Millennium Development Goal 1. Gender & Development. 13(1), 13–24. DOI: https://doi.org/10.1080/13552070512331332273

[18] Kaźmierczak-Piwko, L., Dąbrowski, A., Janiak, R., et

al., 2022. The Rural Development Program as an Instrument to Support the Technological Modernization of Agriculture: Lubuskie Case Study. Management Systems in Production Engineering. 30(4), 355–361. DOI: https://doi.org/10.2478/mspe-2022-0045

[19] Kock, N., 2015. Common Method Bias in PLS-SEM: A Full Collinearity Assessment Approach. International Journal of e-Collaboration. 11(4), 1–10.

[20] Maxwell, S.E., Cole, D.A., 2007. Bias in Cross-Sectional Analyses of Longitudinal Mediation. Psychological Methods. 12(1), 23–44. DOI: https://doi.org/10.1037/1082-989X.12.1.23

[21] Mertens, D.M., Hesse-Biber, S., 2012. Triangulation and Mixed Methods Research. Journal of Mixed Methods Research. 6(2), 75–79. DOI: https://doi.org/10.1177/1558689812437100

[22] Milczarek-Andrzejewska, D., Czarnecki, A., 2018. Editors' Note: Building Modern Rural Development Policies for Poland. Wieś i Rolnictwo. 4(181), 7–10. DOI: https://doi.org/10.53098/wir042018/00

[23] Nisak, F.F., Prayitno, G., Ari, I.R.D., et al., 2025. Quantifying the Synergistic Effects of Social and Human Capital in Farmers' Decisions to Adopt Organic Rice Farming: A Case Study of Lombok Kulon Village, Indonesia. Environmental Challenges. 20, 101204. DOI: https://doi.org/10.1016/j.envc.2025.101204

[24] Prayitno, G., Auliah, A., Efendi, A., et al., 2025. The Role of Livelihood Assets in Affecting Community Adaptive Capacity in Facing Shocks in Karangrejo Village, Indonesia. Economies. 13(1), 13. DOI: https://doi.org/10.3390/economies13010013

[25] Prayitno, G., Auliah, A., Zuhriyah, L., et al., 2025. Exploring the Role of Food Security in Stunting Prevention Efforts in the Bondowoso Community, Indonesia. Societies. 15(5), 135. DOI: https://doi.org/10.3390/soc15050135

[26] Prayitno, G., Nugraha, A.T., Ari, I.R.D., et al., 2025. Enhancing Farmers' Quality of Life Through Social Trust: A Case Study of Karangpatihan Village, Indonesia. Research on World Agricultural Economy. 6(1), 133–145. DOI: https://doi.org/10.36956/rwae.v6i1.1289

[27] Regita, S., Ridwan, P., Dwi, A., et al., 2024. Development Recommendations of Tourist Attractions at Berawa Beach, Tibubeneng, Badung Regency, Bali. Journal of Regional and Rural Studies. 2(2), 85–95.

[28] Rigdon, E.E., 2016. Choosing PLS Path Modeling as Analytical Method in European Management Research: A Realist Perspective. European Management Journal. 34(6), 598–605. DOI: https://doi.org/10.1016/j.emj.2016.05.006

[29] Sarjiyanto, S., 2022. Moderating Effect of Social Capital on Community Empowerment and Economic Well-Being. Jurnal Perspektif Pembiayaan Dan Pembangunan Daerah. 9(6), 479–492. DOI: https://doi.org/10.22437/ppd.v9i6.15325

[30] Suhaeb, F.W., Kaseng, E.S., 2023. Contribution of the Role of Social Capital in the Development of Rural Communities. Social Landscape Journal. 4(1), 1. DOI: https://doi.org/10.56680/slj.v4i1.43905

[31] Sun, H., Hartarska, V., Zhang, L., et al., 2018. The Influence of Social Capital on Farm Household's Borrowing Behavior in Rural China. Sustainability. 10(12), 4361. DOI: https://doi.org/10.3390/su10124361

[32] Sweetman, D., Badiee, M., Creswell, J.W., 2010. Use of the Transformative Framework in Mixed Methods Studies. Qualitative Inquiry. 16(6), 441–454. DOI: https://doi.org/10.1177/1077800410364610

[33] Tjatoer, F.A., Wibisono, C., Catrayasa, I.W., 2024. The Influence of Organizational Behavior, Communication and Self-Efficacy on the Performance of Government Internal Supervision Apparatus in the Riau Islands Province with Motivation as an Intervening Variable. International Journal of Environmental, Sustainability, and Social Science. 5(3), 875–888.

[34] Toyon, M.A.S., 2021. Explanatory Sequential Design of Mixed Methods Research: Phases and Challenges. International Journal of Research in Business and Social Science. 10(5), 253–260. DOI: https://doi.org/10.20525/ijrbs.v10i5.1262