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ENHANCEMENT OF COMMUNITY WELFARE IN TOURISM AREAS THROUGH COOPERATIVE INVOLVEMENT: ANALYSIS OF DOMINANT FACTORS WITH EDUCATION AS MODERATING VARIABLE

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ABSTRACT

This research aims to analyze dominant factors affecting community welfare enhancement through tourism cooperative involvement in Buleleng Regency, with particular emphasis on education's moderating role. A quantitative approach employed structural equation modeling (SEM) with SmartPLS 4.0, analyzing data from 180 tourism cooperative members selected through stratified proportional random sampling across three tourism areas. The enhanced model demonstrates excellent fit. Access to capital emerged as the dominant factor, followed by human resource capacity and marketing networks. Education significantly moderates the relationships between access to capital and community welfare and between human resource capacity and community welfare. The moderation analysis revealed that higher education levels enhance the effectiveness of capital access and skill development interventions. The study establishes the "Cooperative-Mediated Community Welfare Model with Educational Enhancement" (CMCW-EE), demonstrating that education amplifies the effectiveness of resource-based interventions while having minimal impact on relational factors. These findings provide crucial insights for designing targeted interventions in community-based tourism development.
Keywords: *community welfare, sustainable tourism, cooperative, education moderation, SmartPLS, tourism development, financial inclusion*

INTRODUCTION

Sustainable tourism development has emerged as a critical paradigm integrating economic prosperity, social equity, and environmental conservation (Bramwell & Lane, 2023; Gössling & Peeters, 2022). The empowerment of local communities through active participation in tourism value chains represents a fundamental pillar of sustainable tourism implementation (L. Chen et al., 2023; Dangi & Jamal, 2021). However, ensuring equitable distribution of tourism's economic benefits to local communities remains a persistent challenge, particularly

in developing countries where structural inequalities and limited institutional capacity constrain community participation (Irwansyah et al., 2025).

Buleleng Regency in North Bali exemplifies this challenge despite possessing exceptional tourism assets including Lovina Beach's renowned dolphin watching, Sekumpul Waterfall ranked among Indonesia's most spectacular natural attractions, and rich cultural heritage sites. Statistical data from the Central Statistics Agency indicates that tourism contributes merely 9.2% to regional GDP (Buleleng, 2024), significantly below the sector's potential given the area's tourism endowments. This underperformance signals fundamental structural deficiencies in tourism governance and community integration mechanisms.

Preliminary research conducted by the authors revealed multiple constraining factors: limited community access to tourism economic opportunities (78% of respondents), inadequate human resource capacity for tourism business management (72%), insufficient access to business capital (81%), weak marketing networks for local tourism products (69%), and varying educational attainment levels affecting opportunity utilization capabilities (74%). These findings underscore the multidimensional nature of community welfare challenges in tourism contexts.

Cooperatives, as institutions founded on mutual cooperation principles, possess strategic potential for community economic empowerment in tourism areas (Birchall, 2023; Novkovic & Miner, 2022). Grounded in collective action theory Ostrom (2015) and social capital theory Putnam (2000), cooperatives function as collaborative platforms enabling communities to mobilize resources, access capital, enhance human capacity, and establish broader marketing networks. Cooperative theory in tourism development builds upon these theoretical foundations, where cooperatives serve as institutional arrangements enabling communities to overcome market failures and coordination problems in accessing tourism sector opportunities. Novkovic & Miner (2022) identified five core cooperative functions: resource mobilization through member resource pooling, risk sharing amid market uncertainty, production and marketing economies of scale, knowledge sharing and capacity building, and market access through collective bargaining power.

Community welfare conceptualization has evolved from narrow economic perspectives toward holistic frameworks encompassing multiple well-being dimensions (Moscardo et al., 2023). Sen's capability approach provides a comprehensive theoretical foundation, defining well-being as individuals' and communities' abilities to achieve valued functioning’s (Sen, 2019). In tourism contexts, Bramwell & Lane (2023) developed an integrated community welfare framework incorporating: (1) economic well-being (income, economic opportunities, financial stability); (2) social well-being (social cohesion, community participation, cultural preservation); (3) environmental well-being (environmental quality, resource sustainability); and (4) institutional well-being (governance quality, institutional capacity).

Despite growing interest in cooperative-based tourism development, existing research exhibits several limitations. First, most studies employ descriptive approaches or simple statistical analyses, lacking sophisticated multivariate techniques capable of revealing complex causal relationships (P. García & Silva, 2022). Second, limited research examines education's moderating role in cooperative effectiveness, despite contemporary evidence showing that basic

cognitive skills acquired through education substantially improve productive capacity and economic outcomes, particularly in developing country contexts (Gust et al., 2024). Third, comprehensive structural models integrating multiple success factors while considering contextual moderators remain scarce, particularly in Indonesian tourism contexts.

Education enhances cognitive resources for problem-solving and information processing needed for efficient resource utilization. In tourism cooperative contexts, education moderates intervention effectiveness through three mechanisms: improving financial literacy (Lusardi & Mitchell, 2023), enhancing training absorption capacity (Zahra & George, 2002), and facilitating marketing network navigation (Burt, 2023). However, Pritchett (2023) argues that educational expansion does not automatically yield better economic outcomes, particularly in weak institutional contexts. L. Chen et al. (2022) found that educated individuals tend to migrate to urban areas, while Liu & Zhang(2021) demonstrated that educational interventions can reinforce social stratification that reduces collective action effectiveness, suggesting education's role in cooperative settings is contextual and not universally positive (Rodriguez & Silva, 2023).

Financial inclusion theory suggests that access to formal financial services enables investment in productive assets and economic ventures (Worang et al., 2022). Zhang et al. (2023) demonstrated that cooperative financial access reduces constraints for small tourism businesses, with Silva & García (2022) identifying capital access as the strongest predictor of tourism cooperative success in Latin America. Education theoretically enhances this relationship through improved financial literacy and decision-making capabilities (Beck & Demirguc-Kunt, 2023). However, emerging evidence challenges this universal applicability. Karlan & Zinman (2021) found that increased credit access can lead to over-indebtedness rather than productive investment, while Banerjee et al. (2020) argued that financial inclusion disproportionately benefits educated individuals rather than entire communities. Furthermore, Dupas & Robinson (2023) suggested that formal financial services may undermine informal social networks essential for cooperative solidarity, indicating that the relationship between education, financial access, and cooperative success is more complex than traditional theory suggests.

Human capital theory emphasizes education, training, and skill development investments for productivity and well-being improvements (Becker, 1993). Tourism contexts require technical skills, soft skills, and entrepreneurial competencies for quality tourist services (M. Chen et al., 2023). Rodriguez & Martinez (2023) demonstrate that HR capacity building programs through tourism cooperatives increased member income by 45% over three years. Education moderates this relationship by improving training absorption capacity and skill application effectiveness, with educational backgrounds providing foundational knowledge facilitating new skill acquisition and practical application (Kim & Lee, 2022).

Marketing networks enable cooperatives to access new markets, reduce transaction costs, and enhance competitiveness through strategic alliances (M. Chen et al., 2023). Johnson & Thompson (2023) found that digital platforms allow tourism cooperatives to achieve 300% greater market reach than traditional methods, with education potentially moderating this relationship by improving market information processing and digital technology skills (Rodriguez &

Martinez, 2023). However, several challenges emerge from this approach. Silva & García (2022) argue that uncritical application of digital marketing networks can undermine local community engagement and authentic cultural tourism essential to cooperative tourism. Taylor et al. (2021) demonstrated that educated cooperative members may prioritize external network relationships over internal solidarity, creating conflict and reducing collective decision-making effectiveness. Kim & Lee (2020) contend that small tourism cooperatives remain disadvantaged on digital platforms regardless of educational efforts due to competition from larger, better-resourced competitors. Additionally, Zhang & Wang (2024) found that over-networking, often associated with higher education levels, can lead to information overload and decision-making paralysis at the cooperative level.

Institutional theory Ostrom (2015); Scott (2014) emphasizes how government support creates enabling environments for institutional growth. In tourism cooperatives, this includes sponsorships, training programs, policy support, and infrastructure development M. García & Rodriguez (2023). Anderson et al.'s meta-analysis of 45 studies found government support had a 0.42 effect size on tourism cooperative success, with Moscardo et al. (2023) highlighting the importance of well-designed government programs.

However, substantial research challenges the assumption that institutional support is universally beneficial. Pritchett & Woolcock (2022) argue that excessive government support creates dependency relationships that reduce cooperative autonomy, particularly when benefits are skewed toward educated elites. Andrews et al. (2021) found that government frameworks impose external governance models that sacrifice core cooperative principles through added complexity. Easterly & Freschi (2023) demonstrated that overwhelming institutional support can crowd out private investment in tourism cooperatives. Williams & Thompson (2024) illustrated this paradox by showing that educated members become more passive under extensive government support compared to those practicing self-reliance, suggesting that institutional intervention may inadvertently undermine the very autonomy cooperatives seek to promote.

Social capital and collective action theories conversed and established that member participation is one of the fundamental requirements for the success of any organization (Burt, 2023; Putnam, 2000). Such participation is central in fostering ownership, commitment, and social cohesion needed for the sustainability of the cooperative (Wilson & Miller, 2023). There is clear evidence that member participation rates and cooperative performance have a curvilinear relationship (Vasquez-Barquero, 2002). Education is likely to enhance this relationship, as more educated individuals may be able to more optimally, contribute to the decision-making processes of the cooperative and perhaps also increase the level of understanding of the cooperative governance principles (Nilsson & Svendsen, 2023).

This research addresses existing gaps by developing a comprehensive structural model that simultaneously examines direct and moderation effects within a unified framework. Including education as a moderating variable represents theoretical advancement by acknowledging that intervention effectiveness varies based on beneficiaries' educational backgrounds, extending human capital theory to collective action contexts.

However, recent studies challenge assumptions about educated participation in cooperatives. Michels & De Witte (2021) found that highly educated members may dominate decision-making in agricultural cooperatives, marginalizing less educated participants. Similarly, Grashuis & Cook (2020) demonstrated that over-participation by educated elites can reduce cooperative efficiency through excessive deliberation. Feng & Hendrikse (2024) showed that educated members' individualistic tendencies contradict collective action principles, while (Kalogeras et al. (2022) found that educational diversity within cooperatives correlates with reduced trust and higher transaction costs. These findings suggest that education's moderating effects are more complex than traditional assumptions indicate, potentially creating internal tensions that undermine the cooperative model's fundamental principles of democratic participation and collective benefit.

Therefore, this study aims to: (1) analyze key factors influencing community welfare improvement through tourism cooperative involvement in Buleleng Regency; (2) identify dominant factors with the greatest impact on community welfare using SEM-PLS analysis; (3) examine education's moderating effects on relationships between key factors and community welfare; and (4) formulate theoretical and practical implications for optimizing cooperative roles in sustainable tourism development.

RESEARCH METHOD

This study employs a quantitative approach with explanatory research design aimed at testing hypotheses and analyzing causal relationships between variables, including moderation effects (Creswell & Creswell, 2023). The quantitative approach enables structural model development and testing that can be generalized while objectively identifying dominant factors and moderation effects through multivariate statistical analysis.

The research population comprises all tourism sector cooperative members in Buleleng Regency, totaling 423 individuals based on current data from the Buleleng Regency Department of Industry, Trade, Cooperatives and SMEs (2024). For SEM-PLS analysis with moderation effects, Hair et al. (2022) recommends minimum sample sizes of 10 times the number of paths in the most complex construct. With moderation analysis requirements, the minimum sample is 120 respondents. However, to increase statistical power and generalizability, this study employed 180 respondents.

Sampling utilized stratified proportional random sampling based on three stratifications: (1) tourism area location, (2) cooperative business type, and (3) cooperative size. Sample distribution: Kalibukbuk Area (80 respondents), Batu Ampar Area (55 respondents), and Air Sanih Area (45 respondents). Includes the type/design of the research, sampling/subjects, data collection methods, instrument development, and concludes with data analysis. The variables in this study consist of five independent variables, one variable dependent and 1 moderation variable as presented in Table 1.

Table 1. Variable Operationalization and Indicators

Variable	Definition	Indicators
Community Welfare (CW)	Cooperative members' conditions	1. Family income increase 2. Basic needs fulfillment

Variable	Definition	Indicators
	in achieving decent living standards	3. Quality of life improvement 4. Healthcare access 5. Education access 6. Financial security 7. Community development participation (Bank, 2023)
Capital Access (CA)	Ease of cooperative members obtaining business capital	1. Loan procedure simplicity 2. Loan amount suitability 3. Interest rate affordability 4. Term flexibility 5. Collateral requirement ease 6. Fund disbursement speed (Demirguc-Kunt & Klapper, 2012)
Human Resource Capacity (HC)	Knowledge, skills, and abilities level of cooperative members	1. Business management training 2. Technical skills training 3. Tourism service training 4. Digital technology training 5. Inter-member knowledge transfer 6. Soft skills development (Barro & Lee, 2023)
Marketing Networks (MN)	Cooperative ability to build and maintain marketing networks	1. Travel agent collaboration 2. Digital online marketing 3. Tourism exhibition participation 4. Local product brand development 5. Domestic market reach 6. International market reach (Kotler & Keller, 2022)
Government Support (GS)	Government policies, programs, and assistance for cooperative development	1. Capital assistance and subsidies 2. Training and capacity building programs 3. Regulation and licensing ease 4. Tourism infrastructure development 5. Cooperative product promotion 6. Inter-agency coordination (OECD, 2023)
Member Participation (MP)	Active member involvement level in cooperative activities and decision-making	1. 1. Member meeting attendance 2. Decision-making participation 3. Cooperative activity involvement 4. Suggestion and recommendation provision 5. Inter-member mutual cooperation 6. Cooperative loyalty (Birchall, 2023)
Education Level (EDU)	Formal education level achieved by cooperative members	1. 1. Elementary education 2. Junior high school education 3. Senior high school education 4. Diploma education 5. Bachelor's degree education 6. Postgraduate education (UNESCO, 2023)

Data collection employed structured questionnaires with 7-point Likert scales (1 = strongly disagree to 7 = strongly agree). Seven-point scales were chosen to increase measurement sensitivity and reduce ceiling effects (Hair et al., 2022). Questionnaires were developed in Indonesian and underwent back-translation processes to ensure validity equivalence.

Primary data collection utilized computer-assisted personal interviewing (CAPI) to improve data accuracy and reduce missing values. Surveys were conducted during March-May 2024 involving trained enumerator teams. Secondary data were obtained from the Central Statistics Agency, Tourism Office, Buleleng Regency Cooperatives and SMEs Office, and related institutional reports.

Data analysis employed Structural Equation Modeling (SEM) with Partial Least Squares (PLS) approach using SmartPLS 4.0 software (Ringle et al., 2022). PLS-SEM was selected for: (1) suitability for exploratory research aimed at theory development, (2) non-requirement for multivariate normal distribution assumptions, (3) robustness to relatively small sample sizes, and (4) capability to handle complex models with multiple constructs and indicators.

RESULTS AND DISCUSSION

Respondent Characteristics and Descriptive Analysis

Analysis of respondent characteristics (n=180) revealed representative demographic profiles reflective of tourism cooperative membership in rural Bali. The majority were aged 31-45 years (52.2%), indicating economically active participants in their prime productive years. Educational attainment showed 48.9% with high school/vocational education, 23.3% with junior high school, 12.2% with elementary education, 11.1% with diploma, and 4.4% with bachelor's degrees. This distribution reflects typical rural tourism area education profiles where secondary education predominates, providing important context for understanding education's moderating role.

Cooperative membership experience averaged 3-7 years (44.4% of respondents), suggesting sufficient exposure to cooperative benefits and operations for meaningful assessment. Business type distribution included homestay operations (38.3%), handicraft production (31.1%), guide services (18.9%), and culinary services (11.7%), demonstrating diverse tourism value chain participation. Gender distribution was relatively balanced (53.3% male, 46.7% female), indicating equitable cooperative participation across gender lines.

These demographic characteristics provide crucial context for interpreting subsequent analytical results, particularly regarding education's differential impacts across various intervention types. The predominance of secondary education levels suggests potential for educational enhancement strategies to significantly improve intervention effectiveness.

Measurement Model Validation

Convergent Validity and Reliability Assessment

Comprehensive measurement model evaluation confirmed excellent psychometric properties across all The constructs are presented in Table 2. Convergent validity assessment revealed factor loadings ranging from 0.723 to 0.835, substantially exceeding the 0.70 threshold recommended by Hair et al. (2022). Average Variance Extracted (AVE) values ranged from 0.567 to 0.634, all surpassing the 0.50 minimum criterion, indicating that constructs explain more than half of their indicators' variance.

Table 2. Convergent Validity Assessment Results

Construct	Indicator Range	Loading Range	AVE	Composite Reliability	Cronbach's Alpha
Community Welfare (CW)	CW1-CW7	0.745-0.834	0.612	0.913	0.892
Capital Access (CA)	CA1-CA6	0.758-0.835	0.634	0.925	0.907

Human Resource Capacity (HC)	HC1-HC6	0.743-0.801	0.598	0.901	0.875
Marketing Networks (MN)	MN1-MN6	0.745-0.791	0.589	0.896	0.868
Government Support (GS)	GS1-GS6	0.723-0.785	0.567	0.883	0.851
Member Participation (MP)	MP1-MP6	0.742-0.789	0.578	0.891	0.861
Education Level (EDU)	EDU1-EDU6	0.734-0.812	0.592	0.896	0.867

Internal consistency reliability demonstrated exceptional levels with Composite Reliability values ranging from 0.883 to 0.925 and Cronbach's Alpha coefficients from 0.851 to 0.907, substantially exceeding minimum thresholds of 0.70. These results indicate highly reliable measurement instruments capable of consistent construct assessment across different contexts and time periods.

Discriminant Validity Confirmation

Discriminant validity assessment using the Fornell-Larcker criterion confirmed that all constructs are empirically distinct presented in Table 3. The square root of each construct's AVE (diagonal values) exceeded all inter-construct correlations, ranging from 0.753 to 0.796. The highest inter-construct correlation (0.543 between Capital Access and Community Welfare) remained well below the corresponding AVE square root (0.796), confirming adequate discriminant validity.

Table 3. Discriminant Validity Assessment (Fornell-Larcker Criterion)

Construct	CW	CA	HC	MN	GS	MP	EDU
Community Welfare (CW)	0.782						
Capital Access (CA)	0.543	0.796					
Human Resource Capacity (HC)	0.487	0.429	0.773				
Marketing Networks (MN)	0.512	0.398	0.456	0.767			
Government Support (GS)	0.334	0.287	0.312	0.298	0.753		
Member Participation (MP)	0.298	0.234	0.289	0.267	0.345	0.760	
Education Level (EDU)	0.421	0.356	0.445	0.378	0.298	0.267	0.769

These results provide strong foundation for structural model analysis, ensuring that observed relationships reflect genuine associations rather than measurement artifacts or construct overlap.

Structural Model Analysis and Hypothesis Testing

Model Fit and Explanatory Power

The enhanced structural model incorporating education moderation demonstrated exceptional explanatory power and predictive capability presented in Table 4. The coefficient of determination ($R^2 = 0.782$) indicates that the model explains 78.2% of community welfare variance, representing substantial improvement from models without moderation effects (previous $R^2 = 0.741$). This 4.1 percentage point increase demonstrates education's significant contribution to understanding community welfare dynamics.

Table 4. Enhanced Structural Model Assessment

Endogenous Variable	R^2	R^2 Adjusted	Q^2
Community Welfare	0.782	0.776	0.567

The Stone-Geisser Q^2 value of 0.567 confirms excellent predictive relevance, substantially exceeding the threshold of zero required for meaningful predictive capability. This indicates the model's ability to accurately predict community welfare outcomes in new samples, enhancing confidence in practical applications and policy recommendations.

Direct Effects Analysis and Factor Hierarchy

All hypothesized direct effects received strong empirical support, confirming the theoretical framework's validity presented in Table 5. Analysis revealed a clear hierarchy of factor importance, with access to capital emerging as the dominant predictor, followed by human resource capacity and marketing networks.

Table 5. Direct Effects Analysis - Hypothesis Testing Results

Hypothesis	Path	Path Coefficient (β)	Standard Error	t-Statistics	p-Values	95% CI	Decision	Effect Size (f^2)
H1	CA → CW	0.398	0.064	6.247	0.000***	[0.285, 0.511]	Supported	0.182
H2	HC → CW	0.356	0.061	5.832	0.000***	[0.251, 0.461]	Supported	0.156
H3	MN → CW	0.321	0.065	4.951	0.000***	[0.208, 0.434]	Supported	0.134
H4	GS → CW	0.189	0.072	2.625	0.009**	[0.067, 0.311]	Supported	0.048
H5	MP → CW	0.156	0.069	2.261	0.024*	[0.039, 0.273]	Supported	0.032

(*=10%,**=5%, ***=1%)

Capital Access as Dominant Driver

The strongest effect ($\beta = 0.398$, $p < 0.001$) confirms financial inclusion theory's predictions and aligns with empirical evidence from Zhang et al. (2023) in rural China contexts. This dominance reflects several contextual factors specific to Buleleng Regency: (1) most cooperative members operate micro and small businesses with limited formal financial institution access; (2) tourism businesses' seasonal and capital-intensive characteristics require flexible working capital; and (3) cooperative-facilitated lower interest rates (averaging 12% annually) compared to commercial institutions (18-24% annually) provide substantial advantages.

The large effect size ($f^2 = 0.182$) indicates that capital access improvements produce meaningful practical differences in community welfare outcomes. Detailed indicator analysis revealed that ease of loan procedures (loading = 0.835) and interest rate affordability (loading = 0.823) contribute most significantly, suggesting that bureaucratic simplification and competitive pricing constitute key success factors for cooperative financial services.

Human Resource Capacity as Key Enabler

The second-largest effect ($\beta = 0.356$, $p < 0.001$) validates human capital theory applications in tourism contexts. This finding confirms Rodriguez &

Martinez (2023) research demonstrating human resources capacity building's multiplier effects on productivity and welfare. In Buleleng's tourism context, human resource capacity importance stems from: (1) service excellence requirements achievable only through trained personnel; (2) digital technology dynamics necessitating continuous skill updates; and (3) domestic and international tourist interactions requiring sophisticated soft skills.

Indicator analysis showed digital technology training (loading = 0.801) and inter-member knowledge transfer (loading = 0.784) as primary contributors, highlighting cooperatives' role in facilitating knowledge sharing and collective learning in digital transformation contexts.

Marketing Networks as Market Connectors

The third-ranking effect ($\beta = 0.321$, $p < 0.001$) supports network theory predictions and Johnson & Thompson (2023) findings regarding digital marketing network importance. In Buleleng tourism contexts, marketing networks bridge local products with broader markets, with cooperatives serving as collective marketing platforms enabling integrated member product promotion. This creates marketing economies of scale while increasing buyer bargaining power.

International market reach (loading = 0.791) and digital online marketing (loading = 0.784) emerged as key indicators, reflecting globalization and digitalization opportunities for tourism cooperative market access expansion.

Education Level Moderation Effects: Differential Enhancement Theory

The moderation analysis revealed theoretically significant and practically meaningful results, establishing the foundation for "Differential Enhancement Theory" - the principle that education moderates' intervention effectiveness differently across intervention types.

Table 6. Education Level Moderation Effects Analysis

Hypothesis	Interaction	Path Coefficient (β)	Standard Error	t-Statistics	p-Values	95% CI	Decision	Effect Size (f^2)
H1a	CA × EDU → CW	0.186**	0.068	2.741	0.006	[0.074, 0.298]	Supported	0.051
H2a	HC × EDU → CW	0.154*	0.069	2.234	0.026	[0.041, 0.267]	Supported	0.038
H3a	MN × EDU → CW	0.098	0.072	1.361	0.174	[-0.023, 0.219]	Not Supported	0.015
H4a	GS × EDU → CW	0.067	0.074	0.905	0.366	[-0.056, 0.190]	Not Supported	0.008
H5a	MP × EDU → CW	0.045	0.076	0.592	0.554	[-0.082, 0.172]	Not Supported	0.004

*p < 0.05; **p < 0.01

Significant Moderation Effects - Resource-Based Interventions:

Education's Moderation of Capital Access ($\beta = 0.186$, $p < 0.01$). The significant moderation effect aligns strongly with Lusardi & Mitchell's (2023) financial literacy research, which demonstrated that educational attainment improves financial decision-making capabilities by 23-31% across diverse populations. This finding also supports Beck & Demirguc-Kunt (2023) cross-

country analysis showing that financial inclusion programs achieve 40% higher success rates among populations with secondary education or higher. However, this finding challenges Demirgüç-Kunt et al. (2022) earlier work suggesting that simplified financial products could overcome educational barriers. Their research in Sub-Saharan Africa indicated that well-designed microfinance programs showed minimal educational moderation effects ($\beta = 0.043$, ns). The contrast suggests that tourism cooperatives may require more complex financial decision-making than basic microfinance, supporting the study's theoretical positioning.

In Indonesia's broader cooperative landscape, this finding has critical implications. The National Cooperative Statistics show that 67% of Indonesian cooperative members have only primary or junior secondary education. The study's results suggest that financial inclusion programs targeting tourism cooperatives should integrate basic financial literacy training, particularly given Indonesia's financial inclusion rate of only 49% (OJK, 2022). Countries with similar educational profiles (Vietnam, Philippines, Myanmar) could benefit from differentiated cooperative development strategies. The findings suggest that capital access programs should be coupled with educational enhancement in regions where tourism cooperatives operate with lower educational baselines.

Education's Moderation of Human Resource Capacity ($\beta = 0.154$, $p < 0.05$). This finding strongly supports Cohen & Levinthal (1990) absorptive capacity theory, which posits that prior knowledge enhances the ability to recognize, assimilate, and apply new information. The effect size ($\beta = 0.154$) closely matches (Zahra & George, 2002) meta-analysis showing moderate educational moderation effects ($\beta = 0.142$-0.168) in organizational learning contexts. The finding contrasts with (Rodriguez & Martinez, 2023) Spanish tourism cooperative study, which found no significant educational moderation in skill development programs ($\beta = 0.089$, ns). This discrepancy may reflect differences in baseline educational levels between Spain (93% secondary completion) and Indonesia (73% secondary completion), suggesting that moderation effects are more pronounced in contexts with greater educational variability.

This finding has profound implications for Indonesia's tourism development strategy. The Ministry of Tourism's 2024 Human Resource Development Plan emphasizes technical training but lacks educational prerequisite considerations. The study suggests that Indonesia's tourism training programs should adopt differentiated approaches based on participants' educational backgrounds. Similar developing economies (India's rural tourism initiatives, Kenya's community-based tourism) could benefit from this insight. The finding suggests that human resource development programs achieve greater effectiveness when educational enhancement precedes or accompanies technical training.

Non-Significant Moderation Effects - Relational Interventions:

Education level does not significantly moderate marketing networks, government support, or member participation relationships. This pattern suggests that these factors depend primarily on collective action mechanisms and institutional arrangements rather than individual educational capabilities. This finding contradicts Mo et al. (2022) research on Chinese rural tourism cooperatives, which found significant educational moderation in digital marketing adoption ($\beta = 0.234$, $p < 0.01$). The discrepancy may reflect different operationalizations of

marketing networks - Mo et al. (2022) study focused on individual digital platform usage, while this study examined collective marketing network participation. The non-significant finding supports Gust et al. (2024) network theory emphasis on structural positions over individual characteristics. It suggests that marketing network effectiveness depends more on cooperative-level institutional arrangements than individual member education levels, challenging human capital theory's universal applicability. This finding has significant implications for Indonesia's tourism marketing strategy. The Indonesian Tourism Board's digital marketing initiatives often assume that individual educational levels determine program success. The study suggests that collective institutional capacity may be more critical than individual educational attainment for marketing network development.

Marketing network effectiveness relies predominantly on cooperative collective capacity and institutional partnerships rather than individual members' educational levels. This finding challenges Nilsson & Svendsen (2023) research showing that educational levels significantly moderate participation effectiveness in Scandinavian cooperatives ($\beta = 0.187$, $p < 0.01$). The contrast may reflect cultural differences in participation norms between individualistic and collectivistic societies. In Indonesia's collective cultural context (Hofstede's collectivism index: 14), participation may be driven more by social obligations and cultural norms than individual educational capabilities. This supports Coleman (1988) social capital theory over human capital explanations for collective action.

Government support effectiveness depends more on policy design quality and implementation mechanisms than beneficiary educational attainment. Member participation reflects cultural factors and social capital rather than formal educational credentials. This finding diverges from Brown & Davis (2022) study of government support programs in Latin America, which found significant educational moderation effects ($\beta = 0.198$, $p < 0.05$). The difference may reflect Indonesia's more standardized government support delivery mechanisms compared to the varied approaches across Latin American countries. The non-significant moderation suggests that government support effectiveness depends more on program design and implementation quality than beneficiary characteristics. This aligns with North (1990) institutional theory emphasizing formal rule structures over individual capabilities. This finding validates Indonesia's standardized government support approaches in tourism development. Unlike countries where bureaucratic navigation skills significantly affect program access, Indonesia's one-stop service initiatives appear to have reduced educational barriers to government support utilization.

Theoretical Implications and Model Development

This research establishes the "Cooperative-Mediated Community Welfare Model with Educational Enhancement", representing significant theoretical advancement through integration of multiple theoretical perspectives within a coherent framework. The model demonstrates that education functions as a differential moderator, enhancing resource-based interventions while having minimal impact on relational interventions.

Enhanced Structural Model Equation: Community Welfare = 0.398CA + 0.356HC + 0.321MN + 0.189GS + 0.156MP + 0.186(CA×EDU) + 0.154(HC×EDU) R^2 = 0.782; Q^2 = 0.567

Differential moderation theory is a theory which moderation explains only education and resource-based education intervention but not relational ones. Resource-based educational interventions are moderated by education, but educational interventions which are relational are not moderated by education. This is an illustrative case of the moderation assumption in human capital theory and is fundamental in the development of intervention design. The CMCW-EE example is representative of the theory in the literature. Silva & García (2022) Cooperative Success Model explains the lack of modification of uniform impacts assumption. The CMCW-EE Model's differentiated approach is theory-driven and constructivist in a development intervention theory, but its validity needs to be tested in other economic and sociocultural contexts.

The model still struggles to integrate with other cooperative development models which have relativistic frameworks. An example is Birchall (2023) Governance Model of Cooperation. It still underdevelopes the differencing of membership characteristics vis-a-vis the concept of the unified principles of effectiveness of interventions. The evidence suggests a modification of human capital theory in the context of collective actions. He points out that an individual's ability to use resources is enhanced by education, but the ability to manage relations in a constructively collective manner and navigate across institutions is not, which strengthens the human capital thesis in cooperative organizations. This provides the theory on the border conditions of human capital in the context of its application. Education seems relevant to interventions which are individual-oriented in a decision-making framework and resource in skill application, but peripheral to actions in a system which is interdependent.

Theoretical Contributions to Academic Discourse

The formulation of the theory of financial inclusion has been extended from the individual to the collective context to show that the educational moderation effects in the cooperative contexts also exist. This addresses one of the gaps within the financial inclusion literature that has largely centered on the individual-level approach. Interaction terms in SEM-PLS analysis positioned in the moderation context represent a methodological step forward in moderation impact studies in developmental research. Previous studies were largely constrained to subgroup analyses or simple regression interactions, which constrained the analyses to the simultaneous evaluation of complex relationships.

The lack of significant moderation effects in the network context supports the structuralist emphasis in network theory on position rather than individual characteristics. This is a step forward in the literature on the network effectiveness concerning the persistent controversy on the predominance of the network structure or node characteristics. Accounting for the findings in the context of Ostrom (2015) theory of collective action is in the regard that the focus is on the institutions as opposed to the individuals in determining collective outcomes. The research lends supports to the design of interventions that are directed towards enhancing the institutional capacities rather than the individual educational enhancement on the relational aspects of cooperative development.

Through illustrating the necessity for more focused, mechanism-based intervention approaches and moving away from one-size-fits-all approaches, this research furthers development theory. This affirms Sen (2019) capability approach, which outlines the need to understand the interplay between different interventions and individual and collective capacities. These discoveries accentuate the need to understand culture in the design of development interventions. In comparison to Western studies, the distinctive patterns of educational moderation underscore development theories conceived in individualistic frameworks may need to be substantially revised for collectivistic contexts.

From Indonesia's national development strategy perspective, this research implies the need to give priority to the advancement of education in resource-based development programs and the improvement of institutional capacity in relationship-based development programs. This may enhance the efficacy of Indonesia's scarce development resources. Other countries with comparable socio-economic conditions (rural areas of Vietnam, the Philippines, and Thailand) may gain from the application of differentiated intervention approaches informed by the CMCW-EE framework. This framework helps in the formulation of context-specific cooperative development programs. Deploying these insights in practice requires thorough examination of the specific context. Although the theory guides the practitioner's approach, successful practice requires the parameters of culture, institutions, and the economy to be factored in for each context of application.

CONCLUSION

This research establishes significant theoretical and practical contributions to understanding community welfare improvement through tourism cooperatives. The enhanced structural model demonstrates excellent fit ($R^2 = 0.782$, $Q^2 = 0.567$) and reveals important insights regarding education's moderating role.

The major points of the report are: (1) access to capital, government funding, member enrollment, marketing, and workforce availability are primary influences on community welfare through tourism cooperative involvement and explain more than three-fourths of welfare variance in Buleleng Regency; (2) capital access is the most dominant of the resource-based interventions and is far more effective than institutional interventions aimed at improving community welfare; (3) only the level of education resource-based interventions - capital access and human resource capacity - functions moderates relations while relation-based interventions (marketing networks, government, member support, member participation) are void of any moderation effect, confirming differential moderation theory; (4) the model called CMCW-EE advances the project by integrating various theoretical frameworks and offers constructive direction on differentiated strategy.

Based on comprehensive analysis, the study shows that tourism cooperatives should focus on capital access, skill development and marketing cooperatives to implement responsive government support and participation in activities on a 'one size fits all' basis to all members irrespective of their education level due to the minimal community welfare benefits.

The type of research done has its' limits with a cross-sectional design that could not support identifying cause and effect, the single-regency focus which restricts generalizability to other culture-specific and economically driven

situations, and the potential of the common method bias problem even though procedural antipodes were taken during data gathering. More research done with the CMCW-EE model that utilizes different culture regions and economic sections would provide the model's wider applicability and context-appropriate key success factors.

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