

Social Capital in Sustaining Cross-Sector Collaboration for Food Diversification Policy Implementation: Trust, Networks, and Norms in Rural Governance

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ABSTRACT

Food security and diversification constitute strategic development agendas requiring multi-stakeholder involvement across governmental, private, and community sectors. However, policy success depends not merely on program design and local commodity potential but fundamentally on the quality of sustainable cross-sector collaboration. This study investigates the role of social capital in sustaining cross-sector collaboration during food diversification policy implementation in rural agricultural communities. Employing a qualitative case study methodology, data were collected through in-depth interviews with key informants representing local government agencies, legislative bodies, agricultural extension workers, farmer groups, women farmer organizations, non-governmental organizations, and academics. The findings reveal that collaboration sustainability is determined by three interconnected social capital dimensions: trust, networks, and norms. Trust between stakeholders develops through consistent mentoring, transparent program management, and sustained presence of implementing actors at the grassroots level. Social networks function as connective infrastructure enabling information exchange, program coordination, and capacity strengthening among farmer organizations. Meanwhile, social norms and values serve as collective behavioral guidelines maintaining solidarity, mutual assistance, and shared commitment throughout program implementation. Significantly, the research demonstrates that social capital in rural communities remains embedded within local cultural traditions that regulate collective decision-making processes before agricultural activities commence. These traditions function not only as ceremonial practices but as social mechanisms strengthening trust, expanding networks, and reinforcing collective norms in policy implementation. This study recommends strengthening collaborative governance frameworks that integrate local cultural values into food diversification policy design to ensure contextual relevance, participatory engagement, and long-term sustainability.

Keywords: *Social Capital; Cross-Sector Collaboration; Food Diversification Policy; Collaborative Governance; Local Wisdom*

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INTRODUCTION

Food security and diversification have emerged as critical priorities in contemporary development agendas, requiring coordinated action across multiple sectors to address complex nutritional, economic, and environmental challenges. The global discourse on sustainable food systems increasingly emphasizes that achieving food security necessitates not only agricultural productivity improvements but also diversification strategies that reduce dependency on single staple crops while enhancing nutritional outcomes and economic resilience (Nugroho et al., 2025). Cross-sector collaboration involving government agencies, private enterprises, civil society organizations, and community groups has become an indispensable governance approach for implementing comprehensive food policies that address

multidimensional challenges. However, research consistently demonstrates that the effectiveness of such collaborative arrangements depends fundamentally on the quality of relationships, trust dynamics, and shared normative frameworks among participating actors (Thow et al., 2025). This recognition has generated growing scholarly interest in understanding how social capital, as a relational resource embedded in networks and norms, contributes to sustaining productive collaboration in food policy implementation.

Social capital theory, particularly as articulated by Putnam (1995, 2000), provides a robust conceptual framework for analyzing collaborative governance dynamics in policy implementation contexts. Putnam conceptualized social capital as comprising three interconnected elements: trust that enables cooperative behavior, networks that facilitate

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information exchange and coordination, and norms of reciprocity that reinforce collective action commitments.

Recent scholarship has extended this framework to demonstrate that social capital significantly influences policy outcomes in agricultural and food security interventions, particularly in developing country contexts where formal institutional mechanisms may be weak or incomplete (Lai et al., 2025; Akbar et al., 2025). The distinction between bonding social capital (intra-group connections among homogeneous members), bridging social capital (inter-group linkages across diverse actors), and linking social capital (vertical connections between communities and institutions) has proven particularly valuable for understanding how different relational configurations support or constrain cross-sector collaboration effectiveness.

Rural agricultural communities in developing nations often possess distinctive forms of social capital embedded within indigenous knowledge systems and traditional cultural practices that govern collective decision-making, resource management, and production activities. Research on local wisdom in Southeast Asian contexts has documented how traditional practices function as mechanisms for building trust, coordinating collective action, and transmitting normative expectations across generations (Rosada et al., 2024). These cultural institutions create shared understandings and behavioral expectations that can either facilitate or complicate

integration with modern policy frameworks requiring multi-actor coordination. Understanding how traditional social capital interacts with formal collaborative governance arrangements thus becomes essential for designing contextually appropriate food diversification policies that leverage existing community strengths while addressing contemporary development challenges.

The agricultural sector remains the economic backbone of many rural regions in developing countries, contributing significantly to gross domestic product while providing primary livelihoods for majority populations. Statistical evidence indicates that agriculture, forestry, and fisheries contribute over 30 percent of regional economic output in many agrarian districts, demonstrating the sector's centrality to local welfare and development trajectories (Ardiansyah et al., 2024). This economic dependency underscores the critical importance of food security policies that can effectively mobilize diverse stakeholders around shared developmental objectives. Cross-sector collaboration in food policy implementation typically involves local government agencies, legislative bodies, agricultural extension services, farmer organizations, women's groups, private sector actors, and civil society organizations, each bringing distinctive resources, perspectives, and interests to collaborative processes. Table 1 presents the typical stakeholder composition in food diversification policy implementation.

Table 1. Cross-Sector Stakeholders in Food Diversification Policy Implementation

Sector	Key Actors	Primary Role in Collaboration
Government	Agricultural agencies, food security offices, village administration	Policy formulation, resource allocation, program coordination
Legislative	Regional parliament, oversight committees	Budget approval, policy oversight, constituency representation
Extension Services	Agricultural extension centers, field officers	Technical assistance, farmer training, innovation transfer
Community	Farmer groups, women farmer organizations, traditional leaders	Local implementation, collective action, knowledge sharing
Civil Society	NGOs, community-based organizations, academics	Advocacy, capacity building, independent monitoring

Source: Adapted from Nugroho et al. (2025); Ardiansyah et al. (2024)

Despite growing recognition of collaboration's importance, research consistently identifies that cross-sector coordination in food policy implementation remains challenging due to weak inter-agency synergies, fragmented stakeholder engagement, and insufficient attention to relational dimensions of governance (Suryana, 2014; Payne et al., 2022). Studies demonstrate that food diversification programs frequently operate in silos, with agricultural, trade, health, and small enterprise sectors pursuing parallel agendas without meaningful integration. This coordination deficit contributes to implementation gaps between policy intentions and ground-level outcomes. Furthermore, collaborative arrangements often remain superficially administrative rather than substantively engaged, lacking the trust

foundations and normative commitments necessary for sustained collective action. These challenges underscore the need for deeper understanding of how social capital can strengthen collaboration quality and durability.

Rural communities with strong agricultural traditions often possess significant reservoirs of social capital manifested through collective practices governing planting cycles, harvest activities, and communal decision-making processes. Empirical research demonstrates that traditional agricultural rituals and deliberative forums function as social mechanisms that build trust among participants, establish shared expectations for collective behavior, and create interpersonal bonds that extend beyond ceremonial contexts into everyday economic and political interactions

(Warsito et al., 2022). These traditional institutions represent pre-existing collaborative infrastructure that can potentially be leveraged for contemporary policy implementation, provided that formal governance arrangements are designed to complement rather than displace indigenous practices. Understanding how to integrate traditional social capital with modern collaborative frameworks thus emerges as a critical practical and scholarly challenge.

The theoretical significance of this inquiry extends to fundamental questions about how social capital operates within collaborative governance arrangements. While Putnam's framework emphasizes trust, networks, and norms as analytically distinct elements, empirical research suggests these dimensions function interdependently, with each reinforcing the others in complex feedback relationships (Coleman, 1990; Fukuyama, 2001). Trust facilitates network formation and maintenance, networks provide contexts for trust development and norm transmission, while norms create expectations that sustain both trust and network engagement. Understanding these interactive dynamics within specific cultural and policy contexts can advance theoretical understanding of how social capital contributes to collaborative governance effectiveness, particularly in developing country settings where formal institutional structures may be weaker and traditional social structures correspondingly more influential.

Despite substantial scholarly attention to both social capital theory and collaborative governance, significant research gaps persist regarding their intersection in food diversification policy contexts. First, Thow et al. (2025) examined cross-sectoral policy action for nutrition at global and national levels but focused primarily on formal institutional mechanisms without systematically investigating how informal social capital embedded in local communities influences collaboration sustainability at the implementation level. Second, Ardiansyah et al. (2024) analyzed collaborative governance strategies in food diversification but emphasized coordination, trust, and commitment as discrete variables without examining how these elements function together as integrated social capital within specific cultural contexts. The present study addresses these gaps by investigating how trust, networks, and norms as interconnected social capital dimensions contribute to sustaining cross-sector collaboration in food diversification policy implementation within communities where traditional cultural practices continue shaping collective action patterns. This research aims to: (1) analyze how trust among stakeholders develops and sustains cross-sector collaboration in policy implementation; (2) examine how social networks facilitate coordination and information exchange among diverse actors; and (3) investigate how collective norms embedded in local traditions reinforce collaborative commitments and guide stakeholder behavior throughout program implementation.

METHODS

This study employed a qualitative descriptive-analytical research design utilizing a case study methodology to investigate the role of social capital in sustaining cross-sector collaboration during food diversification policy implementation in a rural agricultural district. The qualitative approach was selected because it enables researchers to examine complex social phenomena within their natural settings, facilitating interpretive understanding of how participants construct meaning around collaborative relationships and social capital dynamics (Creswell & Poth, 2018; Denzin & Lincoln, 2018). The research site was purposively selected as an agricultural region where food diversification programs have been implemented through multi-stakeholder collaboration involving government agencies, legislative bodies, extension services, farmer organizations, and civil society actors. Primary data were collected through in-depth semi-structured interviews with purposively selected informants representing diverse stakeholder categories: local government officials responsible for agricultural and food security policy, legislative committee members overseeing food-related programs, agricultural extension center directors, farmer group association leaders, women farmer organization representatives, non-governmental organization personnel engaged in community development, and academic researchers with expertise in agricultural policy and social capital. Secondary data were obtained through document analysis of policy regulations, program implementation reports, and relevant administrative records.

Data analysis followed the thematic analysis approach developed by Braun and Clarke (2006), which enables systematic identification, organization, and interpretation of patterns within qualitative data. The analytical process proceeded through iterative phases: data familiarization through repeated reading of interview transcripts and documentary materials; initial coding to identify concepts related to trust, networks, and normative dimensions of collaboration; theme development through grouping related codes into coherent analytical categories; theme review and refinement to ensure internal consistency and external distinctiveness; and theme definition to articulate the specific contribution of each identified pattern to understanding social capital's role in sustaining collaboration. Analysis proceeded inductively, allowing themes and meanings to emerge from empirical evidence rather than being imposed from predetermined theoretical categories, while simultaneously maintaining dialogue with social capital theoretical frameworks (Miles et al., 2014). To ensure analytical rigor and trustworthiness, the study employed multiple validation strategies including triangulation across data sources (government officials, community members, civil society representatives) and methods (interviews, document analysis, observation), member checking with key informants to verify interpretive accuracy, and peer debriefing to challenge analytical assumptions (Lincoln & Guba, 1985; Yin, 2018).

RESULTS AND DISCUSSION

Trust as Foundation for Cross-Sector Collaboration

Trust emerged as the foundational element of social capital enabling sustainable cross-sector collaboration in food diversification policy implementation. The research findings demonstrate that trust among stakeholders develops through consistent patterns of interaction characterized by transparency, reliability, and demonstrated commitment to shared objectives rather than through formal institutional mandates alone. Implementing actors who maintained regular presence at the grassroots level, provided sustained technical assistance, and demonstrated genuine concern for community welfare successfully cultivated trust that extended beyond their official roles to encompass the programs and policies they represented. This pattern reflects what Putnam (2000) characterized as generalized trust that enables cooperation across social boundaries, though in this context trust formation exhibited strong dependence on personalized relationships built through repeated face-to-face interactions rather than abstract institutional confidence.

The findings reveal that trust development in cross-sector collaboration proceeds through distinct phases corresponding to different stages of policy implementation. Initial trust formation occurs during program introduction when stakeholders assess whether implementing agencies demonstrate genuine commitment and adequate competence. This assessment draws heavily on local cultural frameworks that emphasize collective

consensus-building before undertaking significant activities. Communities traditionally conduct deliberative gatherings where all relevant parties articulate expectations, negotiate arrangements, and commit to shared undertakings before commencing agricultural work. These cultural practices establish templates for evaluating whether policy implementation processes afford appropriate respect to participatory decision-making norms. When formal program introduction processes mirror traditional deliberative patterns, initial trust formation proceeds more smoothly because stakeholders recognize familiar procedural logics. Conversely, top-down implementation approaches that bypass community deliberation encounter resistance rooted in perceived disrespect for established social protocols governing collective action.

Trust maintenance throughout implementation requires ongoing transparency regarding program resources, benefit distribution, and decision-making processes. The research documents that trust erosion occurs rapidly when stakeholders perceive opacity in budget management, favoritism in assistance allocation, or exclusion from meaningful participation in program governance. Farmer organizations and women’s groups particularly emphasized that sustained trust depends on equitable treatment and inclusive consultation rather than merely receiving program benefits. This finding aligns with theoretical arguments that trust in collaborative governance contexts requires procedural justice perceptions, not only outcome satisfaction (Bryson et al., 2015). Table 2 summarizes the key trust-building mechanisms identified in cross-sector collaboration for food diversification policy.

Table 2. Trust-Building Mechanisms in Cross-Sector Collaboration

Trust Phase	Key Mechanism	Stakeholder Expectation
Initial Formation	Collective deliberation before program launch; participatory planning sessions	Respect for local decision-making traditions; inclusive consultation
Trust Deepening	Consistent presence; regular mentoring; reliable technical assistance	Demonstrated competence; genuine concern for community welfare
Trust Maintenance	Transparent resource management; equitable benefit distribution; open evaluation	Procedural fairness; accountability; sustained engagement
Trust Restoration	Acknowledgment of failures; corrective action; renewed dialogue	Responsiveness to grievances; commitment to improvement

Source: Field research data analysis (2024)

The empirical findings substantiate and extend theoretical propositions regarding trust’s role in collaborative governance. Coleman (1990) argued that trust emerges from repeated interactions within stable social structures that create expectations about future behavior. The research confirms this mechanism while demonstrating that traditional cultural institutions provide pre-existing structural contexts that shape trust formation dynamics in policy implementation settings. Trust development does not begin from zero but builds upon social foundations established through generations of collective practice. This cultural embeddedness of trust

aligns with Fukuyama’s (1995) argument that high-trust societies derive collaborative advantages from inherited moral traditions, though the present findings emphasize that these traditions require active maintenance and can be damaged by policy processes perceived as disrespecting established norms. Rothstein and Uslaner (2005) emphasized that trust derives from perceptions of institutional fairness and impartiality, a proposition strongly supported by findings that transparency and equitable treatment constitute essential trust maintenance conditions. Future policy design should incorporate systematic mechanisms for stakeholder consultation before

program launch and establish transparent governance procedures that reflect local deliberative traditions, as recommended by recent research demonstrating that culturally resonant participation structures strengthen both trust development and policy effectiveness (Nguyen et al., 2024).

Social Networks as Collaborative Infrastructure

Social networks constitute the structural dimension of social capital that enables information flow, resource mobilization, and coordinated action across diverse stakeholder groups in food diversification policy implementation. The research findings demonstrate that network connections among farmer organizations, extension services, government agencies, and civil society actors create communication channels that accelerate policy dissemination, facilitate problem-solving, and strengthen collective capacity for program implementation. Networks in the research context comprise both formal organizational linkages established through official collaboration agreements and informal relational ties developed through repeated personal interactions. The combination of formal and informal network dimensions proves essential for effective collaboration, with formal channels providing coordination structures while informal connections supply the interpersonal trust and flexibility necessary for adapting to implementation challenges.

The findings reveal that traditional collective practices function as network-building mechanisms that establish connections among diverse community members before formal policy implementation begins. Agricultural communities historically organize gatherings that bring together farmers, community leaders, traditional authorities, and increasingly government representatives to

deliberate on cultivation strategies and coordinate collective activities. These traditional forums create network ties that subsequently facilitate policy communication and implementation coordination. Farmer organizations reported that information about diversification programs often reaches members first through informal network channels rather than official government communications, with trusted peers serving as credible information sources. This pattern confirms the importance of what Granovetter (1973) termed ‘‘weak ties’’ that bridge otherwise disconnected social clusters, enabling information to flow across organizational boundaries. However, the research also demonstrates that network effectiveness depends on the quality of relationships within networks, not merely their structural extent.

Network analysis reveals both bonding and bridging dimensions operating in cross-sector collaboration for food diversification. Bonding networks within farmer groups and women’s organizations create strong solidarity and mutual support that enables collective action at the local level. These dense intra-group connections facilitate resource sharing, labor coordination, and emotional support during implementation challenges. Bridging networks connecting farmer organizations with government agencies, extension services, and civil society actors provide access to external resources, technical expertise, and policy influence that isolated community groups could not obtain independently. The research documents that effective collaboration requires both network dimensions: bonding networks mobilize local capacity while bridging networks access external support. Table 3 presents the key network functions identified in sustaining cross-sector collaboration.

Table 3. Network Functions in Cross-Sector Collaboration for Food Diversification

Network Type	Key Function	Contribution to Collaboration
Bonding (Intra-group)	Mutual support; resource sharing; labor coordination within farmer groups	Local implementation capacity; group solidarity; collective action mobilization
Bridging (Inter-group)	Information exchange; experience sharing; horizontal coordination across groups	Knowledge diffusion; best practice transfer; peer learning
Linking (Vertical)	Access to government resources; policy communication; technical assistance	External resource mobilization; institutional support; policy responsiveness
Traditional Forums	Collective deliberation; consensus building; social cohesion reinforcement	Pre-existing collaborative infrastructure; cultural legitimacy for collective action

Source: Field research data analysis (2024)

The network findings align with and extend theoretical frameworks articulated by Putnam (2000) and elaborated by subsequent scholars. Putnam distinguished between bonding and bridging social capital as serving different functions: bonding provides internal solidarity while bridging enables external resource access. The research confirms this distinction while demonstrating that both dimensions operate simultaneously in effective collaboration, with neither sufficient independently. Woolcock and Narayan (2000) introduced linking social

capital to capture vertical connections between communities and formal institutions, a dimension particularly relevant for policy implementation contexts where community groups must engage government agencies. The research documents that linking networks provide essential access to policy resources but remain vulnerable to disruption when key boundary-spanning individuals depart, suggesting that institutionalization of linking mechanisms beyond personal relationships constitutes a sustainability challenge. Furthermore, the

findings demonstrate that traditional deliberative practices provide pre-existing network infrastructure that modern policy implementation can leverage, extending understanding of how cultural institutions contribute to social capital formation. Policy implementation strategies should prioritize strengthening both horizontal networks among farmer organizations and vertical linkages with government agencies, while deliberately building upon traditional network structures rather than creating parallel communication systems, consistent with recommendations from recent research on community-based agricultural development (Ma et al., 2023).

Social Norms as Collective Behavioral Guidelines

Social norms constitute the normative dimension of social capital that establishes shared expectations, behavioral standards, and collective commitments guiding stakeholder conduct throughout cross-sector collaboration for food diversification policy. The research findings demonstrate that norms of reciprocity, mutual assistance, and collective responsibility embedded in local agricultural traditions fundamentally shape how community members engage with policy programs and relate to other collaboration partners. These norms function as unwritten rules that create predictability in social interactions, reduce transaction costs by obviating need for constant negotiation, and generate social pressure supporting cooperative behavior. Communities where such norms remain strong exhibit greater capacity for collective action and more sustainable collaboration patterns compared to contexts where traditional normative frameworks have eroded.

The research identifies multiple norm categories operating in cross-sector collaboration contexts. Reciprocity norms establish expectations that assistance provided will be returned, creating ongoing obligation relationships that bind stakeholders together over time. Mutual assistance norms, often expressed through traditional concepts

equivalent to communal labor sharing, generate presumptions that community members will support each other during challenging periods, including collective responses to program implementation difficulties. Transparency norms require that decisions affecting community welfare be made openly with opportunity for input from affected parties. Fairness norms mandate equitable distribution of benefits and burdens across stakeholders rather than concentration among privileged groups. These normative expectations emerge from and are reinforced through traditional practices that bring community members together for collective deliberation and shared activities. When policy implementation processes respect these established norms, collaboration proceeds more smoothly; when policies inadvertently violate normative expectations, resistance and disengagement result.

The findings reveal that norms function through both internalized commitment and social enforcement mechanisms. Stakeholders who have internalized collective norms experience collaborative participation as morally appropriate and intrinsically motivated rather than merely instrumentally advantageous. Beyond internalized commitment, communities maintain norm compliance through informal social sanctions including reputational damage, social distancing, and exclusion from future collective activities for those perceived as violating shared expectations. These enforcement mechanisms prove particularly effective in closely connected rural communities where reputation carries significant social and economic consequences. However, the research also documents that normative frameworks can constrain as well as enable collaboration, particularly when traditional norms conflict with policy requirements or when norm enforcement reinforces existing inequalities. Table 4 presents the key social norms identified in sustaining cross-sector collaboration.

Table 4. Social Norms Supporting Cross-Sector Collaboration Sustainability

Norm Type	Behavioral Expectation	Collaboration Function
Reciprocity	Assistance provided creates obligation for future return; mutual exchange balancing over time	Creates ongoing relationship bonds; sustains long-term engagement
Mutual Assistance	Community members support each other during difficulties; collective problem-solving	Collective resilience; shared responsibility for overcoming obstacles
Transparency	Decisions affecting community made openly; information shared truthfully	Accountability; informed participation; conflict prevention
Fairness	Benefits and burdens distributed equitably; no favoritism toward particular groups	Legitimacy; sustained participation; trust maintenance
Collective Commitment	Agreements made collectively binding on all participants; honor shared decisions	Coordination reliability; predictable stakeholder behavior

Source: Field research data analysis (2024)

The normative findings engage productively with and subsequent social capital scholars. Putnam (1995, 2000) emphasized norms of generalized reciprocity as theoretical frameworks developed by Putnam, Coleman,

central to social capital, arguing that communities where members expect assistance will be returned operate more effectively than those lacking such expectations. The research confirms reciprocity's importance while documenting that multiple norm types operate simultaneously, creating a complex normative environment that shapes collaboration dynamics. Coleman (1990) theorized that norms emerge from closure in social networks where repeated interactions create both internalized commitments and effective sanctions. The findings support this mechanism while demonstrating that traditional cultural practices provide institutional contexts that accelerate norm formation and strengthen enforcement. Ostrom's (1990) research on collective action for common-pool resource management identified norm-supporting conditions including clear group boundaries, locally appropriate rules, and effective monitoring. The research extends these insights to cross-sector collaboration contexts, demonstrating that similar conditions support normative frameworks sustaining policy implementation partnerships. Policy designers should recognize that effective collaboration requires not merely coordinating structures but normative foundations that generate shared expectations and mutual obligations, as emphasized by recent research demonstrating that governance arrangements aligned with local normative frameworks achieve greater sustainability than externally imposed coordination mechanisms (Degli Antoni & Grimalda, 2024).

CONCLUSION

This study demonstrates that the sustainability of cross-sector collaboration in food diversification policy implementation fundamentally depends on the strength of social capital manifested through three interconnected dimensions: trust, networks, and norms. Trust constitutes the foundational element that enables stakeholders to engage cooperatively, developing through consistent interaction patterns characterized by transparency, reliability, and demonstrated commitment to shared objectives rather than through formal institutional mandates alone. Trust formation and maintenance draw heavily upon local cultural traditions that emphasize collective deliberation before undertaking significant activities, creating templates against which communities evaluate whether policy implementation processes afford appropriate respect to participatory decision-making expectations. Social networks function as collaborative infrastructure enabling information flow, resource mobilization, and coordinated action across diverse stakeholder groups, with both bonding connections within community organizations and bridging linkages across sectors proving essential for effective implementation. Traditional deliberative forums provide pre-existing network infrastructure that modern policy implementation can leverage, suggesting that building upon rather than replacing indigenous collaborative practices enhances sustainability prospects. Social norms establish shared expectations, behavioral standards, and collective commitments that guide stakeholder conduct throughout

collaboration, with norms of reciprocity, mutual assistance, transparency, and fairness proving particularly important for sustaining engagement over time. These normative frameworks emerge from and are reinforced through traditional practices, demonstrating that social capital in rural communities remains deeply embedded within local cultural traditions that regulate collective decision-making. The three social capital dimensions operate interdependently, with trust facilitating network formation, networks providing contexts for norm transmission, and norms reinforcing both trust and network engagement in continuous feedback relationships. Policy designers seeking to strengthen collaborative governance for food diversification should therefore adopt integrated approaches that systematically address trust-building through participatory planning processes, network strengthening through both horizontal and vertical relationship development, and norm reinforcement through culturally resonant implementation procedures, recognizing that sustainable collaboration ultimately rests upon foundations of social capital accumulated through generations of collective practice rather than administrative arrangements alone.

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