

SPECIAL ISSUE

Approaches to Understanding Social Capital in Farm Communities of Western Mindanao

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Abstract

Previous papers (Menz; Puerto et al., this issue) have defined and developed the concept of social capital as it relates to agricultural extension in general and specifically to the our proposed extension model. This paper emphasizes and describes various innovative approaches to understanding the nature of social capital within farming communities in conflict-vulnerable areas of Mindanao, Philippines. The relevance of each approach is explained in the context of the project, along with the practical outcomes from applying those approaches. Lessons learnt in each case are detailed and should be useful to field practitioners. It is not possible to select any particular approach as preferable as this decision will depend upon the specifics of the situation along with the relative cost of data collection. Indeed the various approaches are complementary and can be used in concert. The tools described here have proven to be feasibly applied in the difficult and complex environment of Western Mindanao.

Keywords: conflict · farm communities · Mindanao, Philippines · social capital

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Introduction

This paper describes a variety of complementary approaches to understanding social capital in an area that is conflict-vulnerable and characterized by a large number of small-scale farmers, as is the case in Mindanao, Philippines. The primary objective of those farmers is production for family food supply. The ultimate aim of the ACIAR Mindanao Agricultural Extension Project (AMAEP), of which this paper reports a part, is to develop innovative agricultural extension programs, with a focus on social capital development.

A study of agricultural extension effectiveness in Mali (Reid and Salmen 2000) found that social cohesion, which is internal to the community, is the primary precondition for development. If a village has both social cohesion and a qualified dynamic external agent, then there are higher success rates in agriculture and other development endeavors. Robertson (2012) contended that decentralized, participatory, market-driven extension systems have been successful in augmenting farmer capabilities and that a focus on this particular form of development is especially appropriate in conflict situations, where hierarchical and rigid structures cannot work. Understanding the nature of social capital and then identifying where it can be strengthened becomes a necessary component to an improved extension model.

Such an understanding of social capital (includes networks, communication, trust) at the respective sites has enabled the project team, facilitators, and farmer groups to co-plan projects and activities. This foundational work is contributing to stronger networks, capitalizing on existing nonproject work and identifying new opportunities, and ensuring effective communication between various parties and interest groups.

Social Capital

Social capital was explored through the presence of networks, group membership, and social relations; and levels of trust, reciprocity, and leadership existing within farming communities of three case study sites in Mindanao, Philippines: (1) Koronadal City, South Cotabato; (2) Municipality of Ampatuan, Maguindanao; and (3) Municipality of Ipil, Zamboanga Sibugay. These elements of social capital (i.e., networks, memberships, social relations, trust, reciprocity, and leadership) enable people to act for mutual benefit, determine the quality of social relationships, and affect a community's capacity to address and resolve shared problems and act collectively. In communities where there is a need to strengthen social cohesion and community trust, it is also important to deliberate on community needs and ensure fair, inclusive, and transparent approaches while engaging with relevant institutions and partners to build strategic relationships in support of those communities.

In this study, social capital is identified and explored through the existence of social structures (their nature, status, strength, etc.), networks, relationships and dynamics among partners, the health of the social groups (number of members, whether active/inactive, activities initiated, the frequency and quality of meetings, or has the group gone dormant/defunct), and trust and reciprocity that exists in the communities.

Gathering Social Capital Data

For two years, the research team conducted an ongoing series of activities to collect the data

at the pilot study sites needed to describe the current and evolving nature of social capital. The use of multiple data sources reflects the multidimensional nature of social capital. One or two sources are inadequate for achieving a clear situational understanding. When the project began, the research team conducted a desktop study of the pilot sites, and the initial information available provided a basic understanding of the then current institutional and farmer issues.

The next step was to conduct a baseline survey of both farmers and relevant institutions to gather additional quantitative and qualitative data regarding the pilot sites and to check the consistency of stakeholder perceptions with the desktop survey and also between groups (i.e., between the farmers and local institutions/agencies). Subsequent to the baseline surveys, additional data-collecting activities included community mapping and analysis, group health assessment, in-depth social surveys and trust games (each of the latter two at one site only), workshops, and observational work (Table 1).

Over time, data collection, review, and analysis can reflect and accommodate changes that may occur within the participating groups and communities. This enables better-targeted and timely responses from the project team.

A review of the data collection methods by the project team have subsequently refined the survey tools (especially the farmer survey) to ensure more practical and replicable methods that can be easily adopted for future sites.

Key learning about the methodology for measuring social capital:

- Determine the social capital indicators to be used.

- Gather data using different approaches at different time intervals.
- Build a description of current and evolving stocks of social capital.
- Review methodology techniques with a view to improvement.

Synthesis of Data

The use of multiple sources reflects the multidimensional nature of social capital. The data collection methods are practical and replicable and can be readily adopted or adapted for other sites.

The following sections show data synthesized from the eight sources to build a picture of the social capital. Data is described either as being site-specific information or common across all sites (where learning can be aggregated without losing context and content). The syntheses are presented against three elements of social capital: networks, memberships/groups, and trust/reciprocity. Key project learning against each of the three elements—(1) networks, (2) memberships and groups, and (3) trust and reciprocity—is also presented at the end of each section.

Networks

Networks of interaction form the basis for collective action and enhanced community well-being (Putnam 1995). These networks assist local people to take social, environmental, and economic action and drawing on community spirit, provide local solutions to problems that government(s) alone cannot provide. However, government can

TABLE 1 Social Data Collection Methods Used in the Three Study Sites

Data collection method	Barangay Kauran, Ampatuan Municipality	Barangay Magdaup, Ipil Municipality	Barangay Assumption, Municipality Koronadal
Initial desktop study	✓	✓	✓
Farmer baseline survey (<i>barangay</i> level)	✓	✓	✓
Institutional baseline survey	✓	✓	✓
Community mapping	✓	✓	✓
Institutional/partner mapping	✓	✓	✓

foster and support increased community activity, as the provision of infrastructure and resources are within the remit of their control. Thus, efforts for increased intra- and inter-community social interaction can be enhanced through resourcing and supporting social networks. Furthermore, individual and community decisions are not made in an economic or social vacuum; rather, they are made within a variety of social networks, societal beliefs, and public policy contexts. Strengthened social networks that encourage community leadership, mobilize local and regional effort, and ensure that priority needs are met can also better inform and build on government initiatives and investment. Collective action requires networks and flow of information between individuals and groups.

In exploring the nature and extent of the networks, the farmer baseline study began with gathering information on household characteristics (e.g., age, education level) to obtain a profile of the case study communities. (Full reports are available for Barangay Magdaup [Johnson, Fuentes, and Carusos 2014a]; Barangay Kauran [Johnson, Fuentes, and Carusos 2014b], and Barangay Assumption [Johnson, Fuentes, and Carusos 2014c].) The farmer respondents were then asked about their marketing arrangements (e.g., where they sold their farm produce). Understanding where farmers, buyers, and sellers congregate provides an indication of the extent of networks and networking. Results show that the majority of Ampatuan farmers sell their produce through the local marketing place, while Ipil farmers sell both locally and to neighboring marketplaces (Table 2). The Assumption respondents sold to marketplaces that extended well beyond their local area, which provides opportunities for expanding both their social and business networks.

Ampatuan and Ipil respondents identified significant constraints to networking, including the bad state of the roads, availability of transport, and access to and connection with traders. Roads are often impassable, especially after heavy rain and landslides; equally, transport services are limited. Identifying more traders and expanding marketing networks is a strategy that many of the respondents would like to pursue.

Conflict

Conflict had a significant effect on people's mobility and therefore their ability to network (Table 3). Survey respondents across all sites reported that in times of conflict, people rarely go to neighboring villages and children are too scared to go to school. Women are particularly vulnerable and are required to take on new roles. For example, the women would go to the fields or to the market to sell produce. When displaced, people had problems with food, shelter, and health (e.g., community hygiene concerns). The most affected were the indigenous peoples (IPs), because conflict incidents often occurred in their areas.

The Ipil institutional survey specifically reported that conflict (including hold-up, kidnapping, and carnapping) had severely impacted upon the ability of support service agents (i.e., local government units) to travel to certain areas. This then greatly reduced the extent to which services were provided to communities, resulting in adverse economic and social outcomes. Personal interactions, networking, travel and social cohesion within the affected Ipil communities were significantly affected. The Ipil farmer respondents expressed that they needed

TABLE 2 Preferred Selling Marketplaces for Farmers from the Three Study Sites

<i>Barangay</i> (village)	Marketplace in local <i>barangay</i>	Marketplace in neighboring <i>barangay</i>	Marketplace in nearby township	Marketplace in distant township	Marketplace in regional market
Ampatuan (n = 65)	92.3%	10.8%	-	1.5%	-
Ipil (n = 45)	33.3%	68.9%	11.1%	-	-
Assumption (n = 40)	17.3%	49.3%	36.0%	16.0%	33.3%

TABLE 3 Impact of Conflict on Farming and Community in the Three Study Sites

<i>Barangay</i> (village)	Displacement	Cannot access information	Cannot go to fields	Prevents adoption of technology
Ampatuan (n = 46)	71%	40%	39%	39%
Assumption (n = 65)	12%	30%	39%	30%
Ipil (n = 44)	98%	89%	84%	82%

increased support from an authorized agency or agencies. In the absence of this, the situation was being addressed through strategies that included the following:

- Coordination/consultation among locals
- An “on-call basis” of services where farmers went to visit the Municipal Agricultural Office rather than vice versa
- Appropriate coordination with the Imam (Muslim religious leader) and the Philippine National Police
- Organizing the women’s association

As conflict settles down and it becomes easier to move about, farmers can participate in activities—e.g., field tours and cross visits—that build their networks and knowledge.

The Assumption site, on the other hand, was constrained by a poor telecommunication system, with limited or no mobile signal. This was compounded by unfavorable road conditions and limited means of transportation that cumulatively made networking very difficult. The first priority identified by the community was to improve service to farming communities within the *barangay* (village) through road repair and maintenance, although how to finance this infrastructure had not been established. Among the Ampatuan respondents, 81.5% noted unreliable and costly transportation as impediments.

Another indicator of networking relates to sources of information. The farmer survey respondents were asked where they sourced information about farm technologies, business management, market prices, policy and regulation, and crop/livestock. The results are consistent across Ampatuan and Ipil, with the primary source of information being individual

farmers and farmer leaders, followed by traders and private companies. This only differed for the Assumption site where farmers and farmer leaders were primary sources, followed by government organizations. This suggests that in the main, networks are limited to the local area, which is logical and understandable, given constrained mobility.

Mapping of community groups and key institutional partners was completed early on in the project, which provided valuable information about the existing networks in the project sites. An added benefit of the institutional survey was that it enabled widespread consultation with governors, mayors, municipal, and *barangay* local government unit (LGU) officials, and non-government organizations to inform them about the project, seek feedback, and establish communication processes. Facilitators could then use the information to strategize and plan how best to strengthen existing networks and where to establish new links. This is covered in the next section.

Key learnings about networks are as follows:

- Networks at the project sites are formed for social, cultural, and economic reasons.
- Conflict impacts networks and networking through reduced mobility and low levels of trust and personal safety.
- Poor telecommunication and transport infrastructure (i.e., mobile services and roads) retard the development of networks.
- Networks are mostly limited to local and neighboring areas.
- Mapping community groups and

institutional partners provides additional information about networks and how they are used.

Membership and Groups

Extension methods can be intended to influence individual or group decisions, and the extension method used may be influenced by this consideration. An important cultural/societal form of group work practiced in the Philippines is the *bayanihan* system, where farmer work groups make voluntary work contributions for a common benefit.

The farmer baseline survey asked respondents to nominate membership of associations and groups, the length of membership, and whether they held a position in the organization. Across all sites, the farmer respondents could identify social, cultural, and business groups and associations in their respective community. The respondents revealed relatively high levels of group membership (Table 4). Groups in this context include farmer associations, community groups, and social groups

The average term of group membership is two to three years, which is a characteristic common to all sites where groups form and then disband within a relatively short period. This is explained by the treatment of groups by non-government organizations, government agencies, and others as beneficiaries that are linked to the duration of the project or initiative. People join groups to become project beneficiaries, and inevitably, once the projects are completed, the groups tend to disband as they have no further purpose or function.

This common approach does not build social capacity, nor does it empower communities; on the contrary, the approach reinforces a dole-out mind-set that cultivates short-term dependency

and limited community capacity building. Hence, the survey results show the term of memberships as two to three years. A focus is required on building capacity and social capability with farmers, their service providers, and partners, as that focus will help people identify their own needs, develop their own skills, and establish governance arrangements that can endure.

The number of farmer survey respondents who held leadership positions (i.e., group chair or president, *barangay* captain, treasurer) varied between sites, but was relatively low at five to six respondents per site. The project is developing and implementing activities that nurture leadership skills among group members. These include cross visits, exposing the members to other groups and role-model farmers. In addition, the farmer survey revealed that information is sought from leader farmers so building capacity and nurturing group members in leadership will increase the strengths within groups and communities. Leadership does not necessitate group members taking elected leadership positions, which they may be reluctant to do. Rather, the approach is for members to develop their own skills and knowledge as role models, and this may eventually lead to more leaders.

The facilitators carried out a mapping and analysis exercise to further explore the characteristics of community groups and institutions in the pilot sites. Prior to the exercise, they talked to the *barangay* chairman and councillors and group leaders to gather local information, which was then used during the mapping and analysis.

Subsequent to mapping the networks, the facilitators created detailed observations and notes of their respective pilot sites to provide greater detail and context to community and institutional profiling. These observations (Table 5) include information on organizations, area of scope, the

TABLE 4 Group Characteristics of Farmers from the Project Sites

<i>Barangay</i> (Village)	Membership in a group	Average length of membership	Number of leadership positions
Ipil (n = 41)	65%	2 years	3
Assumption (n = 57)	77%	3 years	14
Ampatuan (n = 63)	75%	3 years	5

TABLE 5 Social Analysis Matrix for Farmer Groups in Ipil, Zamboanga Sibugay

Characteristics	<i>Bayanihan</i> groups	Datu Sahol Bulol Barangay Association (DASABA)
Area of scope	Covers 5 out of 7 sites, namely, Datal Fitak, Lubon, Ladol, Oloc Lofe, and Olum Lao	<i>Barangay</i> -wide
Activities	Taking turns in providing farm labor services to members of the team such as land preparation, weeding, and harvesting	Cattle dispersal Peanut production Communal vermi composting
Members	5–15 members led by a team leader	40
Officers/ structures	Informal	President
Years of existence	Many	3 years
Networks/ Linkages	Cooperating with the <i>Barangay</i> Council and the City Environment Natural Resource Office	Supported by Mindanao Rural Development Program, a government program with support from World Bank
Organizer	Self-organized	City Agriculture Office
Status	Active and visible	Seems to be inactive according to the <i>Barangay</i> Council due to lack of follow-ups

types of activities, membership, years of existence, networks and linkages, organizers, and status (i.e., active or inactive).

Since the initial community and institutional mapping activities, the mapping approach has been modified to involve participating farmer members directly in the process, especially in identifying strategic institutional partners. This is proving to be more effective, as the community has direct input and “own” the process of selection and prioritizing.

Gender

Philippine studies show that social capital is influenced by gender (Milagrosa and Slangen 2006) and that women play a significant role in increasing social capital by encouraging better community relations and strengthening networks and groups. Accordingly, the farmer survey explored the role of women in the groups—i.e., were women members and/or leaders? Response to these questions from all sites indicated that

women’s associations can make an important contribution to social capital and will be further explored. The case study on the Magdaup Women’s Association describes the many and various activities that the group members have tried, with consistent disappointments. The project approach has been to first invest in training members by having them attend the farmer field school and then plan a vegetable-growing venture and support with seed.

Another activity undertaken by the facilitators was to assess the status of the participating farmer/community groups currently collaborating with the site teams on project activities, with a view to building greater group self-reliance. A ten-point checklist was developed to assess the health and success of the groups and determine what are the likely indicators of that health and success (Table 6).

Each site team rated their two farmer groups against the ten-point checklist using the group health indicators as a guide. The rating was from 1 (very poor) to 5 (very good). The site teams then selected two criteria from the ten-point checklist

TABLE 6 Group Health Ten-Point Checklist for Group Health

Key criteria	Possible indicators
1. Sense of purpose and shared vision and goals	<ul style="list-style-type: none">• Documented list of achievable goals• Regular discussion of progress and direction
2. Participatory decision making	<ul style="list-style-type: none">• Well-organized and well-attended group meetings• All members being encouraged to participate and speak up• Experienced farmers mentoring less-experienced ones• Members supporting each other by sharing information and visiting each other's farms
3. Trust between members and systems in place for conflict resolution	<ul style="list-style-type: none">• The group being well-respected in the community• Members confident about raising difficult issues with each other• Conflict or tension addressed in a timely and respectful manner• The group using communication methods that are appropriate to members
4. Good communication between members	<ul style="list-style-type: none">• Members readily working with each other and sharing information
5. Appropriate representation	<ul style="list-style-type: none">• The group being well-represented by a cross-section of the relevant community• New members welcome• Membership changes over time to maintain representation
6. Good opportunities for learning/skills development/capacity building	<ul style="list-style-type: none">• Group regularly coming up with its own suggestions for learning• Group being prepared to try new approaches and techniques• Documentation of training needs/skills development
7. Effective leadership including succession planning	<ul style="list-style-type: none">• Presence of an active and inclusive leader who respects the values of the group• Capacity building of members to take on leadership roles in the future (training, mentoring)• The leader having the general support of members
8. Good partnerships and linkages with external organizations	<ul style="list-style-type: none">• Strong links with the local government unit• Strong links with other appropriate non-government organizations and agencies• Being proactive in seeking new linkages
9. Ability to mobilize resources	<ul style="list-style-type: none">• Group capitalizing on existing funding opportunities• Resource sharing arrangements with other groups
10. A good level of self-motivation and enthusiasm	<ul style="list-style-type: none">• Active in creating their own agenda• Regular of meetings and events• Project activities being undertaken and completed

that they believed could help ensure better group health and self-reliance.

For the most part, facilitators rated their groups as “average to good” against the group health indicators. Only two groups were rated “poor to average.” The criteria chosen as the most important for ensuring better group health and self-reliance varied across the sites. The Magdaup group criteria were (1) “self-motivation and enthusiasm” and (2) “ability to mobilize resources.” The Kauran group criteria were (1) “a sense of purpose and shared vision and goals” and (2) “opportunities for learning, skills development, capacity building.” Finally, the Assumption group criteria were (1) “partnerships and linkages with external organizations” and (2) “a sense of purpose and shared vision and goals.”

Where needed, the site teams identified actions that could be implemented under the project for improving group function and well-being. Not all groups required this. For example, the actions for the Magdaup Farmer Association group were to (1) facilitate a process of organizational assessment and planning and (2) provide or facilitate basic training on project development, particularly proposal writing to relevant agencies. The Kauran Tribal Leaders Group’s actions, on the other hand, included a cross visit with a well-structured and functioning IP group where ideas could be exchanged and there was a provision of appropriate IP leadership training. For the Assumption Bayanihan Groups a workshop would be held to assist members better identify the group’s purpose and goals in addition to facilitating linkages with relevant institutional support agencies.

Key learnings about membership and groups are as follows:

- In the past, groups have had short life spans—being formed for dole-outs.
- Few members seek leadership roles—some nurturing of leadership skills is required.
- Leadership does not necessitate people being in elected positions.
- Need to identify community leaders who can support project participation.
- The project team needs to include

members of participating groups in the community and institutional mapping activities.

- Group health indicators that identify strengths and weaknesses are needed to facilitate the prioritizing of activities to improve the health of group members.

Trust and Reciprocity

Social capital may be understood as interpersonal trust expressed through the relationships that exist among a society’s members, its institutions, and organizations (Reid and Salmen 2000). At the individual level, citizen involvement in the local community and its voluntary activities teaches the “habits of the heart” (Bellah 1985) of social behavior—trust, reciprocity, and cooperation.

The baseline survey drew out subjective perceptions of trust to provide an indication of the level and distribution of trust or distrust at the pilot sites. Survey respondents were asked to consider the impact of conflict on personal interactions and social cohesion from the perspectives of men, women, the youth, and the aged.

Ipil respondents (64%) said that conflict affected people in various ways including the loss of trust, especially among newcomers. They also noted that they could no longer participate in community activities or share their farming ideas with one another. This is significant as individual farmers/farmer leaders were identified as a primary source of farming information. Instead of unity, farmers find themselves fending for themselves and reported that they were quite wary of each other, especially if there is tribal conflict.

Over 70% of Ampatuan respondents said that conflict impacted on personal interactions. They have no peace of mind, especially women and indigenous groups. Tension is felt among individuals, and mobility is very limited, with people not being able to stay long in the market. Only 36% of Assumption respondents said that conflict impacts on personal interactions. The respondents recorded that they needed to be careful with what they say, so perhaps there was a reluctance to answer survey questions about conflict. The respondents also observed that in

conflict times, they just stayed in hiding, afraid that something bad might happen to them if they went outside. They were also scared to talk with other people and stayed alert and vigilant.

Loss of trust was cited throughout the baseline surveys, and the farmer survey revealed that land ownership issues often result in tension and mistrust. For example, vested interests (e.g., large landowners and commercial developers) make land claims, resulting in farmers being forced to cease farming due to armed conflict.

At face value, these descriptions reveal low levels of trust in some of the communities; however, further research shows more promising levels of trust. This research involved a behavioral method called the trust game to measure trust at the individual level (Predo et al. 2015). The primary idea of the trust game is to move beyond questionnaires to actually observe how people respond to experimental situations involving trust relationships. It was conducted at project site Ampatuan, Maguindanao, to measure initial (early project) levels of trust and trustworthiness. The trust game was played by fourteen farmer project participants. (For the full report, see Predo et al. [2015].)

The trust game findings illustrated that subject-participants sent and returned non-zero amounts, indicating a level of trust between them. These results are in consonance with the findings from previous trust games (Glaeser et al. 2000; Gong and Yang 2010). After the trust games were completed, subject-participants were then individually surveyed using a questionnaire relating to their socioeconomic characteristics and questions relating to trust and solidarity. Among the independent variables included in the model, age, being a native of the place, and household size were found significant in that they negatively influenced respondents' trusting behavior. This meant that younger people had a higher propensity for trusting other people in the community than older people. Similarly, respondents who were native in the area with known conflict environment had a tendency to have difficulty trusting other people as compared to those who have migrated to the area.

Farmers with a bigger household tended to trust other people less, perhaps being more

inward looking toward their own family. A trusting respondent behavior, on the other hand, was significantly and positively influenced by education level and household income. The result for the education variable may imply that farmers with elementary education have higher trust than those with other levels of education. Further, it implies that trust can be developed even among those with lower-level education.

In terms of household income, respondents with higher income tended to exhibit a higher level of trust among their peers. This finding has significant implication as trust and, subsequently, social capital could propel economic development.

The analysis elicited various-sized relationships between trust (as measured by the trust game) and the socioeconomic characteristics of the survey respondents. These relationships point to possible avenues for enhancing trust, and thus, social capital.

Key learning about trust and reciprocity are as follows:

- Baseline farmer surveys indicate low levels of trust across the sites.
- Yet trust games demonstrated positive levels of trust (within groups).
- Age, being local, and household size were found to negatively influence the trusting behavior of respondents.
- Education level and household income positively influenced the trusting behavior of respondents.

Conclusion

This research utilized multiple methods to gather data to describe the levels of social capital at three sites. The information provided a comprehensive profile of the participating communities, including how people network, how far the networks extend, what groups are formed and why, how information is shared, and what levels of trust and trustworthiness exist.

Knowledge transmission occurs through reciprocal interactions such as networks. For example, in the case of marketing farm products, the better-connected farmers appear to be better

informed on prices and trade beyond their local village. Networks facilitate collective action and decision making by increasing the benefits of working together. Important information for the project team was to describe the scope and operation of networks and internal diversity of membership.

Using membership in local associations and groups as an indicator of social capital consisted of quantifying the associations/groups and their members; measuring various aspects of membership (i.e., diversity of members); and understanding institutional functioning (i.e., group health, leadership, democratic processes).

Measuring trust and reciprocity required engaging participants in a trust game and asking them about their expectations about and experiences with behavior requiring trust. Other relevant questions included the extent to which people received or would receive assistance from members of their community or network in case of various emergencies (e.g., loss of income, illness).

No attempt is made to prioritize methods, since cost, data availability, and other factors will significantly influence the choice. More than one method may be applied in a particular situation since each method can provide different insights. The learnings from applying the various methods were detailed and will be a useful guide to others wishing to try.

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