

## SPECIAL ISSUE

# A Framework for Developing Social Capital Indicators

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## Abstract

Previous papers (Puerto et al.; Johnson et al., this issue) have defined social capital and explained its relevance to agricultural (and other) extension approaches. The strong linkage between social capital and economic development was also described. It was also noted that social capital is an elusive concept to measure. Consequently “indicators” are frequently used to assess changes in social capital. However, deciding on an appropriate set of indicators is a nontrivial task and is dependent upon the settings in which the indicators are to be used. This paper first describes the initial steps taken in implementing an improved model of agricultural extension. This provides a context for the derivation of the social capital indicators relevant to the project discussed in detail in later papers (see Vock et al., Menguito et al., this issue). A framework is then produced for deriving a set of indicators, followed by the indicators themselves and guides to measurement. At the micro level, the identified indicators were the following: farmer group is established and functioning; farmer group expanding their networks; level of trust within the farmer group and community is increasing; and the farmer group is contributing to community solidarity. At the meso level, the identified indicators are the following: local institutions and key personnel are present and accessible; local institutions are actively engaged with farmer groups; and local institutions are well networked within the target area and externally. The framework was then expanded to encompass measurement guidelines for each indicator along the lines of “what can change,” “how to measure,” “measurement outcome,” and “importance of the measure.” The framework has potentially broad application beyond the project for which this was developed. The framework is more “local” in nature compared to most previous attempts to derive social capital indicators.

**Keywords:** agricultural extension model • social capital indicators**Correspondence:** Mary Johnson. RMIT University, Hamilton Campus, Victoria, Australia. Email: [mary.johnson@rmit.edu.au](mailto:mary.johnson@rmit.edu.au)**Reviewers:** John Longworth, University of Queensland, Australia | Clinton Muller, RMCG, Australia**Received:** 25 June 2018**Accepted:** 25 September 2018**Published:** 5 October 2018**Copyright:** © 2018 Johnson et al. This is an open access article.**Funding Source:** This paper reports on preliminary results of a project entitled “Improving the Methods and Impacts of Agricultural Extension in Conflict Areas of Mindanao, Philippines” funded by the Australian Centre for International Agricultural Research (ACIAR)**Competing Interest:** The authors have declared no competing interest exist.**Citation:** Johnson, Mary, Noel Vock, Anne Shangrila Fuentes, and Evy Carusos. 2018. “A Framework for Developing Social Capital Indicators.” *Banwa* 12A: art-004S.

# A Framework for Developing Social Capital Indicators

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## Introduction

Social capital consists of networks of relationships, characterized by norms of trust and reciprocity (Bourdieu 1986; Putnam 2001). It is these elements that enable people to act for mutual benefit, determine the quality of social relationships, affect community capacity to address and resolve shared problems, and act collectively. Social capital is envisaged as a key component of the proposed improved extension model. Having defined social capital in a project context, the next step was to design the methods of measuring the change(s) between intervention and outcomes. An investigation was also undertaken as to how social capital indicators have been applied in other studies.

Strong social capital (networks, trust, and reciprocity) plays a significant role in increasing social and economic well-being (see Puerto et al., Johnson et al., this issue). However, by its nature, social capital is difficult to measure directly, so “indicators” are often used. Krishna and Schrader (1999) provide a comprehensive review, and other studies on social capital with a strong emphasis on indicators include Paxton (1999) and Flora (1998). Most social capital studies have been relatively broad in geographic scope and thus utilized data aggregated at regional, or beyond, levels, as referenced extensively in Puerto et al. (2014). There are few studies that focus on social capital at the level of the individual or small group. Social capital indicators at this “local” level of disaggregation are lacking, especially in

an agricultural context.

The World Bank says that whether at the micro (local), meso (regional), or macro (state/national) level, social capital influences development and outcomes as a result of the interactions between two distinct types of social capital—structural and cognitive. Structural social capital facilitates information sharing and collective action and decision making through established roles, social networks, and other social structures supplemented by rules, procedures, and precedents. As such, it is a relatively objective and externally observable construct. Cognitive social capital refers to shared norms, values, trust, attitudes, and beliefs. It is, therefore, a more subjective and intangible concept (Uphoff 2000).

A description of the initial steps in project implementation is presented in the following section, and following that, a framework and guidelines for choosing relevant indicators of social capital change, and how they might be measured, are derived.

## Initial Project Implementation Stages

The aim of the ACIAR Mindanao Agricultural Extension Project (AMAEP) is to develop an improved extension model, particularly in the context of conflict-vulnerable areas of Mindanao. An initial step for the project team was to map farmer/community groups in the pilot areas. This would determine whether it was possible to work with an existing group(s) or if new group(s) had to be formed. Once the mapping was complete, a prioritization process then identified the primary group(s) for collaboration. The same steps were taken to identify key institutional partners.

Existing groups were identified at all the project pilot sites, and the following groups were selected as project partners:

- Barangay Magdaup: the Magdaup Farmers Association and the Magdaup Womens’ Association
- Barangay Kauran: Upland Farmers Association (Christian) and the Sitio Rizal Tribal Council and Farmers Group (indigenous people)

- Barangay Assumption: Olo-clofe and Olun-lao (*bayanihan* groups)

Facilitators and team members conducted workshops with their respective farmer groups to explain the intent of the project. This was an important stage as the farmers had to be quite clear about the basis for participation and collaboration.

The facilitators also organized activities to identify the farmers' key drivers and needs. At the Magdaup farm-planning workshop, farmers were taken through a small group planning exercise after which they were better positioned to plan their individual farms. Of the approximately fifty farmers who attended, 80% indicated that they appreciated the value of farm planning as a result of the workshop. Cross visits were organized for their respective groups for face-to-face interaction with other farmers, extension officers, and technicians. These cross visits have the potential to also expand farmer-to-farmer learning networks (inclusive of Muslim, Christian, and indigenous farmers), in addition to supporting a social element and other outreach activities.

The cross visits are not restricted to the farmer groups alone, as local government and agency staff are encouraged to participate. The inclusive strategy ensures that the farmers are not learning in isolation from the local institutions that can assist and support their efforts.

In addition to cross visits, farm demonstration sites have been established where interaction can take place between farm neighbors and group members, supporting further social capital building. At the same time, farmers who are not part of the project can observe what project-trained farmers are doing, thereby extending the sharing of information and knowledge.

The project is also providing hands-on training in relevant agricultural production and marketing technologies that are identified by the farmers as important to their future livelihood. With assistance from the facilitators, the farmers drive the learning and decide what they want to learn and from whom. In addition, by expanding their sources of information, farmers are in a better position to test the information they receive for relevancy and validity, thereby growing the number of their trusted references.

## The Institutional Partners

At the start of the project, the following agencies were identified to have strategic influence that could be drawn upon:

- Office of the Presidential Assistant on the Peace Process
- Mindanao Development Authority
- National Economic Development Authority of Western Mindanao and Central Mindanao
- Moro Islamic Liberation Front, Bangsamoro Leadership and Management Institute, and Bangsamoro Development Agency
- Regional Planning and Development Office for the Autonomous Region for Muslim Mindanao
- Provincial governments of Sibugay, South Cotabato, and Maguindanao
- Department of Agriculture – National Office
- Local government units and selected non-government organizations

Meetings were held between the project managers and key agency personnel to ensure communication and to seek support for the project. At a local level, the project team mapped key institutions and agencies including local government units, government line agencies, and non-government organizations. The project used a similar process to farmer group identification and prioritized the primary institutions for project collaboration. The institutions/agencies identified for targeted partnership include the following:

- Barangay Magdaup: Municipal local government unit and *barangay* (village) local government unit
- Barangay Kauran: *Barangay* local government unit and the Indigenous Peoples Mandatory Representative
- Barangay Assumption: *Barangay* local government unit, the City Agricultural Office, and the City Environment and Natural Resource Office

As the project progressed, site teams and their respective local institutional/agency officers worked together with ongoing activities. For example, the Kauran site team organized cross visits that included farmers and agency staff. As a consequence of these visits, the *barangay* local government unit first established a demonstration site at the *barangay* hall (incorporating a fish pond, a vermicomposting facility, nursery, vegetable garden and bunkhouse). The Magdaup site team has signed a memorandum of agreement with the municipal local government unit (LGU) that links the project team with the LGU on provision of seeds, involvement in a cattle dispersal program, and the training of five women on small ruminant production. The Assumption team has been providing on-ground support for the municipal government's tree planting program.

Emerging from these project experiences is a strong indication that social capital is not simply a grassroots farmer endeavour but clearly requires support from institutions, agencies, and other actors to facilitate positive change. The conditions under which the many positive aspects of social capital can be harnessed and its integrity retained (and, if necessary, its negative aspects dissipated), requires access to formal institutions and a more diverse stock of social capital (Woolcock and Narayan 2006).

### A Practical Guide to Selecting Social Capital Indicators

Within the context of the initial project steps mentioned above, a set of indicators was sought to be able to monitor social capital change. Any indicator is by nature a limited representation, or proxy, of a more complex idea and should be tested with a more in-depth examination that enables assessment of the relevance and usefulness of the indicator and how well it measures what it is intended to measure.

The indicators used in this study are represented by statements that are attainable, can be measured or evaluated, and are applicable under various circumstances. Selecting social capacity indicators requires careful consideration of what is conceptually related to the focus of the project (an improved model of extension) and what can

be readily understood, adopted, or adapted for applicability in the pilot sites and elsewhere.

It is vital to form a clear rationale for how measures of social capital connect to theoretical definition. This rationale considers the usefulness of the data gathered and what is hoped to be gained from the data. Without this objective, there is risk that the information obtained would add little to understanding and, therefore, little to improvement.

Three questions can help determine the accurate indicators:

1. What will change?
2. How can this be measured?
3. Why is this important?

As stated earlier, social capital influences development and outcomes as a result of the interaction between structural and cognitive social capital. The framework was developed based around these considerations. From this process, seven potential indicators were suggested, the first four being social capital indicators at the farmer group/community (micro) level and the next three at the local institutional (meso) level.

1. Farmer group is established and functioning.
2. Farmer group expand their network(s).
3. Levels of trust within the farmer group and community are increasing.
4. Farmer group contributes to community solidarity (*pakikisama*).
5. Local institutions and key personnel are present and accessible.
6. Local institutions are actively engaged with farmer groups.
7. Local institutions are well networked within the target area and externally.

By using social capital indicators as benchmarks, the project team can make an informed assessment of the current situation, then develop appropriate activities or interventions and monitor and respond to any change that results (note that change can be positive or negative).

Respectful conversations take place between the project stakeholders and the project team. The time and effort taken to get to know the key stakeholder group and their environment helps to establish trust and any actions that result will be better informed and easier to conduct.

### The Indicator Framework

Tables 1 and 2 provide a framework for the selection of indicators at micro and meso level. The resultant framework lists the indicator itself, the guiding questions, expected change, how to measure, and why the indicator is important. The framework for measuring social capital (indicators) should be useful across a broad spectrum of potential applications.

### Conclusion

The concept of social capital indicators was explained as well as their relevance to the project, and beyond. It is necessary to set the context for the development of any indicator framework, so to do that the initial project on-ground activities were described. Following that setting of context, social capital indicators can be derived to be used as measures of future social capital development. The suggested framework contains the indicator itself, the guiding questions, expected change, how to measure, and why the indicator is important. The framework for measuring social capital (indicators) as described in this paper could potentially be applied across a broad spectrum of applications relating to social capital (or similar) measurement.

**TABLE 1** Example of a Social Capital Indicator Framework at the Micro Level

Indicators	Structural	Networks	Cognitive / Trust	Cognitive / Reciprocity
Indicator statement	<ul style="list-style-type: none"> <li>Farmer group is established and functioning.</li> </ul>	<ul style="list-style-type: none"> <li>Farmer group expands their networks.</li> </ul>	<ul style="list-style-type: none"> <li>Levels of trust within the farmer group and community are increasing.</li> </ul>	<ul style="list-style-type: none"> <li>Farmer group contributes to community solidarity (<i>pakikisama</i>).</li> </ul>
Guiding question(s)	<ul style="list-style-type: none"> <li>How is the group currently functioning? (For existing groups)</li> <li>What needs to be put in place to assist the development of a new group? (If required)</li> </ul>	<ul style="list-style-type: none"> <li>What networks exist? Who is involved?</li> <li>How are networks being used and can they be enhanced?</li> </ul>	<ul style="list-style-type: none"> <li>What are the current levels of trust within the farmer group or community?</li> </ul>	<ul style="list-style-type: none"> <li>What are the levels of civic participation?</li> <li>Do the farmer group activities have wider benefits for the local community?</li> </ul>
What can change	<ul style="list-style-type: none"> <li>Capacity of individuals and farmer group will increase.</li> </ul>	<ul style="list-style-type: none"> <li>Networks will strengthen internally and externally.</li> <li>Number of networks with actual engagements.</li> </ul>	<ul style="list-style-type: none"> <li>Levels of trust will increase through strengthened relationships and partnerships.</li> </ul>	<ul style="list-style-type: none"> <li>Increased examples of reciprocity will be demonstrated in various forms. (i.e., assistance between neighbors/friends)</li> </ul>

**TABLE 1** Continued

Indicators	Structural	Networks	Cognitive / Trust	Cognitive / Reciprocity
Measured by	<ul style="list-style-type: none"> <li>• Group health assessment</li> <li>• Follow-up group health assessment</li> <li>• Observational and case studies</li> </ul>	<ul style="list-style-type: none"> <li>• Baseline survey (initial data)</li> <li>• Community mapping (initial data)</li> <li>• Follow-up survey</li> <li>• Observational and case studies</li> </ul>	<ul style="list-style-type: none"> <li>• Baseline survey (initial data)</li> <li>• Additional social capital survey</li> <li>• Trust games</li> <li>• Follow-up survey</li> <li>• Observational and case studies</li> </ul>	<ul style="list-style-type: none"> <li>• Baseline survey (initial data)</li> <li>• Additional social capital survey</li> <li>• Follow-up survey</li> <li>• Observational and case studies</li> </ul>
Measurement outcome	<ul style="list-style-type: none"> <li>• Describes current status of group capacity/group health</li> <li>• Describes any changes in status of group capacity/group health</li> </ul>	<ul style="list-style-type: none"> <li>• Description of current networks and associations</li> <li>• Description of group interactions outside the target area</li> <li>• Documented networks established as a result of project activities</li> </ul>	<ul style="list-style-type: none"> <li>• Description of where farmers source their information</li> <li>• Description of individual/community assistance levels</li> </ul>	<ul style="list-style-type: none"> <li>• Descriptions of collective action and cooperation</li> </ul>
Importance	<ul style="list-style-type: none"> <li>• Shared goals and strengthened partnerships</li> <li>• Cooperative problem solving</li> <li>• Resource mobilization</li> </ul>	<ul style="list-style-type: none"> <li>• Farmer group is linked to a wider network of like-minded farmers and professionals within and beyond the target area.</li> <li>• Expanded networks provide benefits to local community.</li> </ul>	<ul style="list-style-type: none"> <li>• Trust is a key element of social capital.</li> <li>• Low levels of trust negatively affected the ability to form partnerships and relationships.</li> <li>• Social divisiveness and distrust carry an economic cost.</li> </ul>	<ul style="list-style-type: none"> <li>• Reciprocity is a key element of social capital and promotes cooperative and/or socially minded behavior.</li> </ul>

**TABLE 2** Example of a Social Capital Indicator Framework at the Meso Level

Indicators	Structural	Cognitive	Networks
Indicator statement	<ul style="list-style-type: none"> <li>Local institutions and key personnel are present and accessible.</li> </ul>	<ul style="list-style-type: none"> <li>Local institutions are actively engaged with farmer groups.</li> </ul>	<ul style="list-style-type: none"> <li>Local institutions are well networked within the target area and externally.</li> </ul>
Guiding question(s)	<ul style="list-style-type: none"> <li>Who/what comprises the key local institutions?</li> <li>How do they function?</li> <li>Who are the key personnel in these institutions?</li> </ul>	<p>What are the levels of involvement between:</p> <ul style="list-style-type: none"> <li>Local government units and farmer groups</li> <li><i>Barangay</i> (village) and farmer groups</li> <li>Agencies and farmer groups</li> </ul>	<ul style="list-style-type: none"> <li>What networks exist?</li> <li>Who is involved?</li> <li>How are these being used, and can they be enhanced?</li> </ul>
What can change	<ul style="list-style-type: none"> <li>Increased access to local institutions</li> <li>Increased understanding of institutional governance, processes, and protocols</li> </ul>	<ul style="list-style-type: none"> <li>Increased partnerships and collaboration</li> <li>Increased lines of communication</li> <li>Increased access to farmer group/ community for sharing information, project partnerships, and support</li> </ul>	<p>Regional networks are expanded and functioning for the benefit of respective parties.</p>
Measured by	<ul style="list-style-type: none"> <li>Map key institutional partners (initial data)</li> <li>Institutional survey (initial data)</li> <li>Follow-up survey</li> </ul>	<ul style="list-style-type: none"> <li>Baseline survey (initial data)</li> <li>Institutional survey (initial data)</li> <li>Repeat survey midway through project (focus group)</li> <li>Repeat survey at conclusion of project (focus group)</li> <li>Observational and case studies</li> </ul>	<ul style="list-style-type: none"> <li>Institutional survey (initial data)</li> <li>Observational and case studies</li> </ul>
Measurement outcome	<ul style="list-style-type: none"> <li>Description of existing operations in the target area</li> <li>Description of existing visibility/access to local institutions and personnel in target area</li> </ul>	<ul style="list-style-type: none"> <li>Description of existing contact between institution(s) and farmer group/ community</li> <li>Description of co-partnerships established, i.e., projects/activities</li> <li>Memorandum of understanding between group/LGU</li> </ul>	<ul style="list-style-type: none"> <li>Description of existing networks and key personnel</li> <li>Description of networks midway and at conclusion of project</li> </ul>

**TABLE 2** Continued

Indicators	Structural	Cognitive	Networks
Importance	<ul style="list-style-type: none"> <li>Local institutions and personnel are key to enabling and supporting community groups.</li> <li>Shared understanding of respective aspirations and remit enable platform for discussion.</li> </ul>	<ul style="list-style-type: none"> <li>Increased ability for negotiation between institutions and community.</li> <li>Reduce the transaction costs of conducting day-to-day affairs and of doing business.</li> <li>For effective communication and to facilitate shared knowledge.</li> <li>To enhance the ability to capitalize when opportunities arise.</li> </ul>	<ul style="list-style-type: none"> <li>Expanded networks provide benefits to local institutions and their communities.</li> </ul>

## References

- BOURDIEU, PIERRE. 1986. "The Forms of Capital." *Cultural Theory: An Anthology* (2011): 81–93.
- GRANOVETTER, MARK. 1978. "Threshold Models of Collective Behavior." *American Journal of Sociology*: 1420–1443.
- FLORA, JAN L. 1998. "Social Capital and Communities of Place." *Rural Sociology* 63(4): 481–506.
- GROOTAERT, CHRISTIAAN, and THIERRY VAN BASTELAER. 2001. "Understanding and Measuring Social Capital: A Synthesis of Findings and Recommendations from the Social Capital Initiative." Working Paper No. 24. Social Capital Initiative Series. Washington DC: World Bank.
- KRISHNA, ANIRUDH, and ELIZABETH E. SHRADER. 1999. "Social Capital Assessment Tool." Paper presented at the Conference on Social Capital and Poverty Reduction. Washington DC: World Bank.
- PAXTON, PAMELA. 1999. "Is Social Capital Declining in the United States? A Multiple Indicator Assessment." *American Journal of Sociology* 105(1): 88–127.
- PUTNAM, ROBERT D. 2001. "Social Capital: Measurement and Consequences." *Canadian Journal of Policy Research* 2(1): 41–51.
- UPHOFF, NORMAN. 2000. "Understanding Social Capital: Learning from the Analysis and Experience of Participation." In *Social Capital: A Multifaceted Perspective*, edited by Partha Dasgupta and Ismail Serageldin. Washington, DC: World Bank.
- WOOLCOCK, MICHAEL, and DEEPA NARAYAN. 2006. "Social Capital: Implications for Development Theory, Research, and Policy Revisited." In *The Search for Empowerment: Social Capital as Idea and Practice*, edited by Anthony Bebbington. Bloomfield: Kumarian Press.