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Determining the Role of Social Capital in Linking Smallholders with Agribusiness

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Abstract

Improving smallholder welfare in the rural sectors of developing countries requires improving access to both input and product markets. Success, however, in developing sustainable and mutually beneficial links between smallholders and agribusiness has been variable.

Two recent ACIAR studies concluded that there may be more to linking smallholders with the agribusiness sector than individual smallholder characteristics. This paper hypothesizes that social capital influences the ability of individual smallholders to take advantage of emerging agribusiness opportunities. It outlines a project proposed by the authors that aims to test this hypothesis and examine the potential for social capital to help alleviate rural poverty while maintaining social and environmental balance.

Key words: social capital, agribusiness, smallholders, rural development, Indonesia

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1. Introduction

Improving smallholder welfare in developing countries requires improving access to agribusiness opportunities. Two recently completed ACIAR projects[4] indicated that the characteristics of the community, not just individual smallholders may be important in determining who participates effectively in the market for new agricultural commodities. While the age of the smallholder, size of holding and education may play a role in influencing a smallholder's ability to become involved in contract farming production systems (Simmons et al, 2005), the ability of particular groups to access contracts, manage (and hence access) community finance systems and government assistance programs may also be influenced by other factors such as the strength of the group and the reputation and ability of the group leader. Johnson *et al* (2002, p.2) found that "failure to recognize and explicitly incorporate the concept of social capital as an input into agro-industrialization may limit the effectiveness of programs and projects that promote agro-industrialization as a means to alleviate rural poverty."

This paper introduces a proposed study to evaluate the role of social capital[5] in facilitating links between agribusiness[6] and smallholders. It outlines the proposed project area which includes the *subak* (irrigated rice systems) and *desa adat* systems[7] of community and land management in Bali and Lombok. It details the proposed methodology and the expected impacts of the research.

2. Social capital and rural development

2.1. General literature

The concept of social capital has become firmly established in the literature of both theoretical and applied social science, including economics, since the mid 1990s. It has also become popular in development policy circles since it seemingly identifies a previously overlooked resource to be harnessed towards specific ends.

Economists and other social scientists have sought to determine empirically whether and how the social capital of rural communities affects their economic and social performance. An early study by Narayan and Pritchett (1999) focused on Tanzanian rural households and found that household expenditure was associated positively with access to social capital. Grootaert (1999) examined how the social capital of rural households, particularly as expressed by their memberships in local associations, affects household welfare and poverty in Indonesia. For low income households, he found that returns to social capital are higher than returns to human capital. The reverse was true for higher income households. Winters et al. (2002) analysed econometrically how the asset positions of rural households in the Mexican *ejido* sector affect their participation in, and returns from, income-earning opportunities. They

[4] (ADP/2000/100 – "Contract farming, smallholders and rural development in East Java, Bali and Lombok" and ADP/2000/126 – "Microfinance for agricultural producers in NTB Province, Indonesia: Issues and opportunities for a sustainable financial intermediary system")

[5] Coleman (1990) defined social capital as inhering in the structure of inter-personal relations, yielding value by enhancing individuals' abilities to further their interests. Social capital is embedded in society rather than in any one individual, but is given value by the individuals and organizations that use it to further their individual or collective interests. This definition is used and developed in this study.

[6] Agribusiness can include a vast array of interactions between production and consumption. Three areas identified as being of particular importance to this region of Indonesia are; relationships between private output orientated firms and smallholders; the success of micro-level farm finance and government livestock distribution programs.

[7] These institutions provide food security, welfare assistance, social stability, environmental protection and tourism opportunities (Sutawan 2005)

found that household social capital plays a critical role in these respects, but that the nature of the role can vary according to the type of opportunity and the type of social capital.

The focus of Johnson et al. (2002) on the economic role of social capital in rural Colombia was not on households but on how it affects the economic performance of agro-industry enterprises. They hypothesized that social capital is a key input to the process of agro-industrialization, because:

> "Individuals and groups who can work collaboratively and establish and maintain both trust-based relationships and networks of contacts will have an advantage over their competitors who cannot. The reason is that agro-enterprise firms compete in complex supply chains that are technically demanding, information intensive and require coordination among different actors and different stages of the process. Where markets fail and transaction costs are high, social capital can make a significant contribution to firm performance by providing access to information and reducing the costs of contracting and coordination. Failure to recognize and explicitly incorporate the concept of social capital as an input to agro-industrialization may limit the effectiveness of programs and projects that promote agro-industrialization as a means to alleviate rural poverty." (ibid p.2)

This hypothesis was supported by their econometric analysis, which found that social capital, as measured by the number of relationships an agro-enterprise firm maintains, was associated significantly and strongly with its economic performance. Indeed, investing in social capital was found to yield higher returns than investing in physical capital or labour.

As indicated by this study, it is not only the relationships within a social unit – an agro-enterprise, village, irrigators' association, etc. – that are likely important for its performance but also the relationships that the unit maintains with other social units. Narayan and Cassidy (2001) argued in fact that the influence of social capital is most profound in terms of the relationships it facilitates between heterogeneous social units, citing as evidence the findings of several projects conducted as part of the World Bank's Local Level Institutions Study. They observed that in the absence of outside allies, the social capital of poor communities typically remains a poor substitute for the resources and services provided by the state.

Cleaver (2005) identified accordingly the tendency in development policy circles to oversimplify the social capital concept such that it diverts attention from issues of inequality and structural constraints on empowerment of the poor. She found from her ethnographic research in rural Tanzania that social relationships can constrain as often as they enable, and that the norms and other institutions they embed often serve to reproduce relations of inequality and marginalization. Thus, "the poorest people are both more dependent on their ability to exercise agency than others and less able to do so effectively" (ibid. p.904). Along similar lines, Thorp et al. (2005) accepted that the social capital underpinning group formation and maintenance is important for poverty alleviation, but hypothesized that the chronically poor can be disadvantaged in group formation due to their lesser access to agents capable of pushing their interests politically. Thus groups formed successfully among the poor can tend to exclude the even poorer, particularly groups associated with market functions.

These arguments regarding the importance of external agents for allowing rural communities to reap economic advantages – in terms of livelihood stability, employment generation, poverty reduction, and quality of basic services – have been supported empirically by research into Rajasthani villages by Krishna (2002, 2003). His econometric analysis found that economic development performance was associated most strongly with a combination of high intra-village social capital, on the one hand, and ready access to agents capable of targeting this capital towards incentives arising from the external environment, on the other. The agents found in this setting to be most important in this respect were a new set of young village leaders, relatively more educated and experienced in dealing with government operations and market operations, who had emerged and gained strength in the previous two decades. It was concluded that such agency is critical in situations lacking the kinds of institutions that enable villagers to connect with the state and the market. In such situations, the utility of a given

stock of intra-village social capital can be strengthened significantly by investing in the development of agents and other 'intermediary institutions' aware of the opportunities available in the market and government programs and able to connect villagers with these opportunities.

Concerns have been raised that influential rational-choice models of social capital, wherein individuals are conceived as consciously using social relationships and institutional arrangements to escape from disadvantaged positions, can lead too easily to 'victim-blaming' where individuals become viewed as responsible for their own deficits of agency and social capital more generally. Cleaver (2005) argued that it is far from easy in practice for the chronically poor to overcome such deficits given that their efforts to do so are often channeled along paths that reproduce their disadvantage and dependency. For instance, Blair (2005) found how in rural Bangladesh the poor and poorest rely on patron-client ties to mitigate their poverty from day to day, but that these ties serve only to reinforce their disadvantage into the longer term.

Krishna (2003) implicitly recognized these concerns, identifying an important role for rural development programs in helping to foster middle-level institutions, including village leaders, with potential to help rural people break free of the economic and cultural constraints on their efforts to escape poverty. He was optimistic in this regard, observing 'experience shows that agency strength can grow rapidly even within short period of time' (ibid. p.26). This observation echoes an earlier empirical finding of Krishna and Uphoff (1999) that history does indeed significantly influence a household's or village's current stock of social capital, but that by itself it does not do so strongly. Krishna (2003 p.26) cautioned against one-size-fits-all models for such middle-level institutions, arguing that such institutions 'are more likely to succeed if they are folded in with what villagers already have and what they can hold accountable in terms of local knowledge and everyday understandings of right and wrong'.

A separate strand of the literature on the social capital concept has focused on the challenges of operationalising the concept for research and policy analysis. Krishna and Uphoff (1999) questioned whether the concept was real enough to be measured in the field. Krishna and Shrader (1999) pointed to the proliferation of tools for measuring social capital and highlighted the need for coherence wherever possible across the suite of tools being applied. They found that the specific scale against which social capital is measured may have to be constructed separately for each different context, but that instruments can be devised that give underlying coherence to the different scales constructed. Towards this end they developed a 'Social Capital Assessment Tool' (SCAT) with scope to be flexible in application but rigorous in analysis. Grootaert et al. (2004) made a further contribution in this direction by developing the 'Integrated Questionnaire for the Measurement of Social Capital' (SC-IQ) which, like the SCAT, is intended for application in developing countries. Nevertheless, they cautioned that:

> "… the SC-IQ should not be seen as the final word on how to collect social capital data. It remains a work in progress. Social capital is a relatively young topic in the social sciences and our conceptual and theoretical understanding continues to develop. In parallel, our ability to measure social capital also continues to increase."(ibid p.18)

2.2. Relevant ACIAR research

ACIAR has become interested in the potential role of social capital in rural development through it's involvement in two particular projects in Indonesia. These projects have attempted to define who benefits from smallholder and agribusiness linkages and how best to further develop these linkages. The first project (ADP/2000/100) highlighted important smallholder characteristics that influenced their ability to link with agribusiness through contracts. These included farm size, smallholder's age, education and participation in smallholder groups (Winters et al 2005, Simmons et al 2005). The study, however, did not answer the question as to why one community was able to enter a contract while another seemingly similar community was not. Patrick (2004 p.ix)) concluded that:

> "…with regard to the seed rice contract, participation was influenced by irrigated land ownership and group (*subak*) membership…. Instead of individual smallholder characteristics influencing participation it was community characteristics and social capital."

The second project (ADP/2000/126) aimed to develop community micro-finance delivery systems appropriate for Lombok. They found problems at both ends of the credit delivery process:

- banks were reticent to work with community groups as they perceived that these groups did not have the institutional or community structures/incentives to ensure repayment, and
- groups were generally formed for the specific purpose of accessing finance, these groups did not have a sense of community and mutual respect but generally regarded access to credit as an individual right with no need to repay debt.

The project concluded that delivery systems needed to pay particular attention to issue such as; "the use of effective groups, community participation,… recognition of local power, values and situations" (Muktasam 2001 p.11)

This conclusion was confirmed during a project scoping study (funded by ACIAR) which visited micro-finance institutions in Bali to evaluate reasons for their success and compare this with the lack of success in Lombok. The impressions are that in Bali the micro-level credit is made available through the *desa adat* institutions and rules (*awig awig*) which are still strong and can encourage (and enforce) repayment schedules. This community strength is not so evident in Lombok. Discussions were also held with provincial government agencies (Department of Livestock and BPTP) involved in rural development (e.g. livestock distribution) who perceived that similar difficulties and issues have arisen when implementing sustainable livestock development programs.

ACIAR has also been involved in work that examined the role of social capital and the adoption of soil conservation practices in the Philippines (Cramb 2005). He analysed individual responses to the development within a community of social capital which facilitated improved access to information and technology support. Cramb concluded that the (bridging) social capital generated by smallholders' participation in landcare groups was important in influencing their adoption of soil conservation practices. He stressed the importance of the role of government in maintaining "this valuable source of social capital, the quality of services it provides, and hence the momentum of the landcare initiative." (p.224).

2.3. Australia

In Australia, governments and industry R&D agencies are concerned about the increasing difficulties producers in many industries are facing in accessing appropriate marketing channels due to the depreciation or removal of rural and regional infrastructure. These difficulties lead to low rates of adoption of new technologies, and the consequent but broader issue of the sustainability of rural and regional communities. The triple bottom line is a requirement for most investment evaluations in most government and private agencies (Griffith et al., 2004), although the social aspects have not been well handled to date. Coincidentally, considerable R&D effort is being focused on analysing supply chain relationships and the factors constraining adoption of new methods and products. Focus group procedures are a key part of this effort in many agencies. In the NSW Department of Primary Industries (DPI) for instance, a decision support system called Beef-N-Omics has been re-developed to assist beef producers understand the profitability implications of a range of changes to beef cattle production, marketing and management practices. This software is being demonstrated to producers through a small workshop format, with follow-up activities planned for each group on a regular basis. Frequently, producers choosing to take part in these groups will already be part of a supply chain alliance. These activities are also part of the industry monitoring and evaluation strategy of the CRC for Beef Genetic Technologies (Beef

CRC). This coincidence of interest in the social implications of investment in rural and regional Australia, the roll out of the Beef-N-Omics software and funding by the Beef CRC provides an ideal platform to test or validate, in a developed country context, the outputs of the proposed project including the measures of social capital and its determinants.

3. Proposed project aim and objectives

There is increasing perception that social capital may play a role in both an individual's and a community's ability to access agribusiness opportunities in both developed and developing countries. Based on the growing body of international research and the conclusions of ACIAR and DPI projects this proposed project will test whether or not communities with higher levels of social capital are more likely to be able to access agribusiness opportunities.

The aim of the project is to evaluate the role that community characteristics, in particular social capital, play in alleviating rural poverty through improving the ability of smallholders to link with agribusiness. The specific objectives are to:

Objective 1: Understand the nature of, and differences between, community-agribusiness relationships in Bali and Lombok;

Objective 2: Identify the roles of social capital in developing mutually beneficial partnerships/linkages between smallholders and agribusiness in Bali and Lombok;

Objective 3: Assist the development of linkages between agribusiness and communities that enhance smallholder welfare.

4. The project area

4.1. Agriculture in Bali

Agriculture in Bali is dominated by self-sufficient rice production, government support programs and groups/traders selling to the tourism and supermarket sectors. Private firm investment in the sector is low and a coordinated approach to agricultural production and marketing minimal. While irrigated land is being diverted from agriculture (1.5 per cent or 750 ha per year) the increasing number of tourists is increasing the demand for a large range of new commodity types.

Agriculture in Bali contributes 21 per cent of the provincial GDP (compared to 63 per cent from tourism). It is the major employer with the sector employing 40 per cent of the workforce compared to 39 per cent in the tourism sector (Erawan 2003). Bali has an unemployment rate of 11 per cent (Bali Bureau of Statistics 2004). While the Balinese economy is dependent upon tourism this sector is susceptible to shocks (e.g. SARS, cholera, and terrorist attacks in October 2002 and October 2004) which lead to substantial short-term unemployment and poverty. During these times the agricultural sector plays a significant role as a 'safety' sector as the unemployed return to their villages. The importance of agriculture with regard to GDP and welfare support and the concern for the future viability of the *subak* and *desa adat* institutions has encouraged national and regional government to develop programs that improve access to finance and increase productive capacity in rural communities.

4.2. Agriculture in Lombok

Agricultural systems in Lombok are a more typical example of a developing rural economy, with wages and land prices more closely related to returns from agriculture. There is potential to increase private agribusiness investment (e.g. tobacco, maize and poultry industries) and there is also potential to improve the effectiveness of government development programs (e.g. delivery of finance, livestock distribution programs). *Nusa Tenggara Barat* (NTB) Province

of which Lombok is a part, is one of the poorest Indonesian provinces. In NTB, 57 per cent of households have been classified as poor (700,000 households) with the majority of the poor living in rural areas (NTB Provincial Office of Family Planning 2003).

Many government (provincial and national) programs have been implemented to increase smallholder income in NTB. However, most of these programs have failed to realise the expected benefits. As a result, some communities have developed a negative perception of governments' ability to assist long-term development and many regard government as a source of free credit and grant money with no ensuing responsibilities to repay or develop sustainable systems. To some extent, the failed approaches have been blamed for the deterioration of traditional community structures such as *gotong royong* (which involves communities working together to construct public facilities such as irrigation channels) and the decreasing importance of informal leadership structures. It is perceived that in Lombok, the sense of community is reduced and hence the accountability and ability to work together is limiting smallholder development. NTB provincial government attempts to provide local financial institutions such as farmer cooperatives, *Lembaga Keuangan Mikro* (LKM) and Rural Financial Management Units (UPKD), have not been as successful in Lombok as they have in Bali (*Lembaga Perkreditan Desa* or LPDs).

In both Bali and Lombok, governments are concerned about the targeting of development programs. They are aware that while development assistance programs can be facilitated through groups, finding or forming appropriate groups within communities can be difficult. The University of Mataram (UNRAM) is keen to learn from the experiences of LPD success in Bali and make recommendations with regard to the types of community factors that must be in place to maximise the chance of sustainable, viable rural finance institutions.

Understanding the contribution of social capital to economic and social development will require evaluating its role in smallholder and community-level decision making. Until there is a better understanding of this relationship it will not be possible to address the important policy question of how social capital can be maintained and nurtured so as to enhance the quality and sustainability of rural livelihoods.

5. Proposed research methodology

5.1. Research strategy

Previous research into social capital highlights the challenges involved in measuring its availability in specific contexts, comparing availability across different contexts, and extrapolating findings from one context to another in respect of how social capital relates to economic and other performance variables of interest. Hence, attempts to develop 'grand theories [about social capital] spanning countries and continents' may be misguided, and 'a middle level of analysis' that limits comparisons to social units 'that are culturally not too dissimilar' may be more fruitful (Krishna and Shrader 1999 p.7).

The case-study approach (as used by Krishna 2002) proposed for this project is well suited for a middle level of analysis. The identification of differences between case study groups will assist in the identification of the key factors that lead to alternative decision making processes. The study by Johnson et al. (2002) for example, examined five different regions as cases. These regions were chosen 'because they are all centers of agro-industrial activity; yet differ in their historical/cultural dynamics and institutional contexts' (ibid. p.6).

With the case-study strategy normally integrating qualitative and quantitative data collection techniques, it has further advantages for research into topics as complex as social capital. While quantitative techniques have the advantage of being able to be replicated, qualitative techniques can identify aspects that cannot be measured directly. While various studies have sought to develop standardized survey instruments for quantitative measurement of rural social capital, the consensus seems to be that it is counter-productive to standardize such

instruments to the degree that they leave no room for adaptation to qualitative knowledge of local circumstances (Grootaert et al. 2004).

Krishna's (2002) quantitative analysis of links between the social capital and socio-economic performance of 64 Rajasthani villages was designed on the basis of his prior case-study qualitative research in 16 of these villages. Johnson et al. (2002 p.5) similarly used a complementary mix of qualitative and qualitative techniques, explaining that 'a limitation of much of the quantitative social capital literature is that while it identifies interesting and statistically significant relationships between variables, the causality and policy implications are often not clear'. With qualitative techniques typically less structured than quantitative techniques and hence facilitating more active participation from stakeholders, they offer advantages beyond knowledge generation towards building stakeholders' ownership of the research and, thus, their preparedness to apply its findings.

The context dependence of research into social capital, and the newness of this research compared to that on physical and human capital, highlights the importance of developing research partnerships with stakeholders well positioned to access the local knowledge needed to understand the contexts of cases chosen for study. Accordingly, the research strategy proposed for this project depends on significant inputs from partner institutions in Bali and Lombok. Partners will need a strong understanding of the social capital concept and will be relied on to provide the important contextual basis for survey design and analysis.

5.2. Method

This section details the method proposed for delivery of the project objectives. In addition it summarises the activities to be undertaken under each objective.

Objective 1

The activities under this objective will provide an overview of issues and opportunities arising in relationships between agribusiness and agricultural communities in Bali and Lombok, and confirm the nature and measurement methodology to be used to define agribusiness linkage.

- Initial project team consultation will confirm project objectives and plan initial key informant interviews to scope the range, nature and benefits of agribusiness relationships/opportunities with agricultural communities in Bali and Lombok. This initial consultation will ensure a common understanding of social capital, community and agribusiness and ownership of the project by all stakeholders.
- Initial semi-structured interviews of key informants in Bali and Lombok will be undertaken. The interviewees will include representatives of agricultural communities, private agribusiness, public agribusiness, and NGOs. The choice of key informants will be guided by in-country partners and a review of relevant documentation. Data from these interviews will be validated and complemented by secondary data, and evidence from earlier ACIAR projects ADP/2000/100 and ADP/2000/126.

Objective 2

The activities under this objective will identify (given the definition of agribusiness used in this study) how social capital contributes towards mutually-beneficial linkages between agribusiness and agricultural communities, and particularly towards linkages benefiting smallholders.

- Model conceptually how social capital interacts with other factors to affect performance by agricultural communities in linking with agribusiness opportunities. This model development will draw from an extensive literature review. A key starting point will be the model that Krishna's (2002) econometric analysis found best accounts for relationships between the social capital of Rajasthani villages and their economic development performance.

- The next step will be to appraise how the conceptual model translates to the contexts of selected rural communities. These communities will be a subset of the full sample. The appraisal will collect qualitative and quantitative data for each community via interviews with households and community leaders. The quantitative data will enable an exploratory analysis of the hypotheses underlying the conceptual model, and will thereby allow refinement of these hypotheses prior to finalising the operational model. The qualitative data will facilitate translation of the variables in the conceptual model into ones relevant to the specific context of the case study, and development of valid and reliable instruments for measuring these variables. In addition, it will help (i) attribute causality within estimated quantitative relationships, and (ii) interpret the implications of the quantitative findings for policy and practice.

- The primary data collection will entail structured face-to-face interviews across a stratified random sample of 60 agricultural communities (30 each in Bali and Lombok). It is anticipated communities in Bali and Lombok will be stratified as High, Middle and Low on the basis of evidence (secondary data or advice from expert panel) of their performance in linking with relevant agribusiness opportunities. For each of Bali and Lombok, an equal number of communities will be randomly sampled from the communities assigned each of these rankings. For each community, the model variables will be measured by integrating data, where relevant, from interviews with individuals, leaders and focus groups from that community. 20 randomly-selected individuals will be interviewed from each community. The leaders to be interviewed will be identified from the prior interviews with individuals. It is anticipated that around 180 leaders will be interviewed across the 60 communities.

- The econometric technique to be applied in estimating the model will be decided when the model is finalised. To the extent that we might expect community performance in linking with specified agribusiness opportunities to be measured as a discontinuous variable (e.g., high, middle and low performance), the appropriate technique would then involve limited dependent variable regression (e.g., ordered probit).

- Semi-structured interviews will be undertaken with agribusiness stakeholders to elicit the criteria applied by agribusiness for selecting communities/individuals to work with. Around 20 interviews in total will be undertaken in Bali and Lombok (and also possibly in Java where some of the relevant agribusiness entities may be based). Aside from providing additional evidence with which to validate the model, the criteria elicited will help (a) communities better target their efforts in attracting agribusiness partners, and (b) governments, NGOs etc. develop programs/policies more successful in linking agricultural communities, and particularly smallholders, with emerging agribusiness opportunities.

Objective 3

The activities under this objective will promote communication and adoption of the findings from activities under Objective 2 to key stakeholders, thus expediting the targeting of programs/policies at developing mutually beneficial relationships between agricultural communities (particularly smallholders) and agribusiness.

- An evaluation lessons learned from NSW beef industry and their applicability to agricultural communities in Bali and Lombok will add to the usefulness of the project both in Australia and in Indonesia. The modeling framework developed and estimated for the Bali and Lombok communities will be validated in a developed country context. The relevance to the NSW beef industry of the insights gained from the Bali and Lombok analysis will also be identified. Data collection for the NSW case will entail structured face-to-face interviews across a random sample of beef cattle producer workshops set up to roll out the Beef-O-Nomics software decision support system. At least 20 such groups would be surveyed. Similarities and differences between the Indonesian and Australian

groups would be highlighted, and particular insights gained from either set of groups would be passed on to the other. This activity will be funded by the Beef CRC.

- A priority of the project will be to establish fora to facilitate linkages between agricultural communities in Bali and Lombok with agribusiness. Focus groups will be established to identify implications of findings for rural development policy and practice, and develop a draft strategy for communicating these implications. Final project workshops will be held in Bali and Lombok to discuss findings, implications for policy and practice, and draft a communication and impact strategy.
- It will also be important to ensure that project results are integrated in the appropriate Indonesian rural development policies. The project will assist government and NGOs develop a policy framework to link appropriate community groups in Bali and Lombok with agricultural development opportunities.

6. Expected impacts

6.1. Capacity building

Knowledge and skill sharing between Indonesian and Australian researchers will lead to improved capacity to undertake social capital research and improved capacity to develop and implement targeted research and extension programs. Study and field visits to and from Australia will provide opportunities for researchers to better understand how smallholders groups and agribusiness develop their linkages and promote mutual benefits.

Focus group discussions, workshops, and publications of research findings will enhance public recognition and professional standing of researchers and institutions. These activities will assist the Indonesian collaborating organisations and their staff in developing project design, management, and facilitation skills.

6.2. Economic

Improving smallholder income

Access to contracts has increased smallholder income in East Java and Lombok and income security in Bali (Patrick 2004, Simmons et al 2005). A simplification of the information collection process (reduction in transaction costs) and ability of smallholders and firms to interact could see these benefits spread to other producers in these areas. At present the investment by companies such as Pioneer Seeds in Bali and Lombok is low due to institutional and infrastructure restrictions. Reduction of these limitations which could lead to increased inclusion of smallholders in export-orientated seed production activities and significant increases in household income (Simmons et al 2005). These contracts also include access to high quality inputs, credit, guaranteed price and management support.

Government plays a major role in developing the agriculture sector through programs such as livestock distribution programs. These programs depend on government working with groups. Improved group selection and management processes will ensure more efficient allocation of government resources and improved chances of program success. The potential to improve smallholder welfare will be through:

- improved access to input and product markets;
- improved productivity through the adoption of new agricultural technologies;
- potential for better quality and a broader range of agricultural products;
- potential to reduce production costs through better linkages with input suppliers;
- better prices for commodities produced by smallholders;
- reduced transaction costs;
- more focused/targeted government rural development programs.

Improving job opportunities

There are also agricultural sector benefits of improving these linkages. Greater potential for market-orientated, more intensive production will encourage the development of rural support services such as input suppliers, transport and product buyers. This will provide employment opportunities for both skilled and unskilled labour and encourage investment into this sector.

Improved village economic status

A stronger agricultural sector may also play a role in strengthening other sectors within the community. Higher income from agriculture and improved links with private and public investment may encourage further links to develop within the tourism and industrial sectors. Improving job opportunities within the community may also strengthen threatened community structures.

Improved agribusiness economic performance

A reduction in transaction costs and access to appropriate inputs (land and labour) will be an incentive for agribusiness to invest in the longer-term in these areas. There is potential to improve the relationship between smallholders and the supermarket and tourism industries within both Bali and Lombok.

6.3. Social

The *subak* is not only an irrigation management system but also the basis of community culture. If the system continues to decline, culture and community strength and stability will decline. Continued loss of *subak* areas to development will have negative implications for the tourist industry since rice terracing is a major tourist attraction, particularly in Bali. Communities and government agencies in Lombok can learn from a strong *subak/desa adat* system in Bali and develop and implement programs and policies to strengthen these communities.

Improved economic performance of the agricultural sector will encourage labour to return to the sector, both through increased demand for farm labour and in supporting input and output service industries. This will reduce unemployment and crime and strengthen family/community links. Increased demand in the domestic labour market may also reduce the demand for family members to look for work and in foreign labour market (e.g. Malaysia and Middle East).

Increasing rural income and experience in working with external partners will increase the potential to interact with, and attract, a broad range of public and private investment into their communities. It may lead to improvements in village infrastructure and access to improved health and education resources.

7. Conclusion

A growing body of literature is adding weight to the concept that social capital plays an important role in the rural development process. Previous work by one of the authors (Muktasam 2001) has highlighted that the delivery of sustainable finance systems seems to be more successful when community strength and trust is strong (e.g. Bali) rather than when it is weak (e.g. Lombok). Likewise, the question remains in Bali as to why some groups of individuals are able to access farming contracts while groups of farmers who have similar individual characteristics and resource availability do not.

The project will play a significant role in defining the role of social capital in linking with agribusiness and hence improving the welfare of smallholders. It will assist farmer groups develop relationships with agribusiness groups and vica versa. It will lead to a reduction in the farmer and agribusiness transaction costs involved in developing these relationships. It will also assist supporting agencies better target extension and technology transfer projects,

and thereby, deliver rural development assistance more equitably and efficiently. Specifically, the project will lead to:

- better targeted government assistance programs;
- better understanding of agricultural community priorities (social, economic and environmental);
- increased opportunities for smallholders to link with agribusiness;
- improved understanding of what is required by communities to link with agribusiness; and
- increased smallholder income.

References

Bali Bureau Statistic (2004). *Bali in Figures*. BPS Bali, Denpasar.

Blair H. (2005). 'Civil society and propoor initiatives in rural Bangladesh: Finding a workable strategy'. *World Development* 33(6), pp921-936.

Cleaver F. (2005). 'The inequality of social capital and the reproduction of chronic poverty'. *World Development* 33(6), pp893-906.

Coleman J. (1990). *Foundations of Social Theory*. Cambridge: Harvard University Press.

Cramb R. (2005). 'Social capital and soil conservation: evidence from the Philippines." *Australian Journal of Agricultural Economics*, 49, pp211-226.

Erawan, N. (2003). " Macro economy development stategy of Bali Province", in Suarsana, K. (ed). *Bali Economy Development Strategy, Answer to Global Challenges*. Pengkajian Strategi Pembangunan Ekonomi Bali, Denpasar.

Griffith G., Davies B., Alford A., Herd R., Parnell P. and R. Hegarty (2004). An Assessment of the Economic, Environmental and Social Impacts of NSW Agricultures' Investment in the Net Feed Efficiency R,D&E Cluster, *Economics Research Report No. 18*, NSW Agriculture, Armidale, August.

Grootaert C. (1999). Social capital, household welfare, and poverty in Indonesia. *Policy Research Working Paper 2148*, World Bank, Washington, D.C.

Grootaert C., Narayan D., Jones, V. and Woolcock M. (2004), Measuring social capital: An integrated questionnaire. *World Bank Working Paper No. 18*, The World Bank, Washington, D.C.

Johnson N., Suarez R., and M. Lundy (2002). The importance of social capital in Colombian rural agro-enterprises. *CAPRi Working Paper No. 26*, CGIAR Systemwide Program on Collective Action and Property Rights, Washington, D.C.

Krishna A. (2002). *Active Social Capital: Tracing the Roots of Development and Democracy*. Columbia University Press

Krishna A. (2003). Understanding, measuring and utilizing social capital: Clarifying concepts and presenting a field application from India. *CAPRi Working Paper No. 28*, CGIAR Systemwide Program on Collective Action and Property Rights, Washington, D.C.

Krishna A. and E. Shrader (1999). 'Social Capital Assessment Tool'. *Paper read at Conference on Social Capital and Poverty Reduction*, The World Bank, Washington, D.C., June 22-24.

Krishna A. and N. Uphoff (1999). Mapping and measuring social capital: A conceptual and empirical study of collective action for conserving and developing watersheds in Rajasthan, India. *Social Capital Initiative Working Paper No. 13*, World Bank, Washington, D.C.

Muktasam A. (2001). Why rural credit programs fail: lessons learned from Indonesian rural development programs. *Paper presented at Micro-finance for Agricultural Producers in NTB, Indonesia Workshop*. November 15th, 2001.

Narayan D. and M. Cassidy (2001). ‘A dimensional approach to measuring social capital: Development and validation of a social capital inventory’. *Current Sociology* 49(2), pp59-102.

Narayan D. and L. Pritchett (1999). 'Cents and sociability: Household income and social capital in rural Tanzania'. *Economic Development and Cultural Change* 47(4), pp871-897.

NTB Provincial Office of Family Planning (2005). *Poverty and Household Resources in Nusa Tenggara Barat Province: An Analysis of Micro Data 2003*.

Patrick I. (2004). Contract farming in Indonesia: Smallholders and agribusiness working together. *ACIAR Technical Reports 54*, Canberra, Australia.

Simmons P., Winters P. and I. Patrick (2005). ‘An analysis of contract farming in East Java, Bali and Lombok, Indonesia.’ *Agricultural Economics* 33, pp513-525.

Sutawan N. (2005). ‘Subak facing global challenges’, in Pitana I.G. and Setiawan, I.G. (eds). *Subak Revitalisation in Entering Globalisation Era*. Andi Offset, Yogyakarta.

Thorp R., Stewart F. and A. Heyer (2005). ‘When and how far is group formation a route out of chronic poverty?’ *World Development* 33(6), pp907-920.

Winters P., Davis B. and L. Corral (2002). ‘Assets, activities and income generation in rural Mexico: Factoring in social and public capital’. *Agricultural Economics*, 27 pp139-156.

Winters P., Simmons P. and I. Patrick (2005). ‘Evaluation of a hybrid seed contract between smallholders and a multinational company in East Java, Indonesia.’ *Journal of Development Studies* 44(1), pp62-89