

Social Capital and Community Development: Conceptual Framework

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Abstract The main objective of this article is to broadly describe how social capital matters in community development and what sort of issues have been raised in previous studies with respect to data collection, measuring social capital and data analysis. In conclusion, although social capital seems to affect the level of community development to some extent, we should keep in mind several issues when measuring social capital.

Introduction

Policy makers and social scientists have long tried to find persuasive accounts for why there are wide economic disparities between countries and between communities in a country irrespective of economic development levels. Since Coleman (1988 and 1990) and Putnam (1993) published their epoch-making works in the late 1980s and early 1990s, various empirical studies have claimed that the notion of social capital is by itself one of the possible explanations.¹ The definition of social capital, however, differs to some extent in each researcher and therefore remains unclear. Despite the problems that are recognized at the moment, we cannot help denying that the notion of social capital is considered a trump for eradicating poverty and enhancing the well-being of dwellers in backward areas, particularly in poverty-stricken rural areas of developing countries.² It is, therefore, important to obtain insights into the links between social capital and the well-being of rural dwellers, not only to bring us closer to understanding several debatable issues in rural/community development in general, but also to provide a useful practical framework for making rural/community development strategies more effective in Asian countries in particular. Hence, the main objective of this article is to broadly describe how social capital matters in com-

munity development and what sort of issues have been raised in previous studies with respect to data collection, measuring social capital and data analysis.

The article is organized into four sections, including the Introduction and Concluding Remarks. Beginning with defining social capital in line with several previous studies, the next section outlines various dimensions of social capital with additional information on measuring social capital, and reviews several previous studies that have investigated the effect of social capital on socio-economic aspects in community development. The third section shows several issues related to measuring social capital indicators, data collection and data analysis, and the final section presents brief conclusive remarks.

Definitions and Dimensions of Social Capital

What is Social Capital?

To begin with, although defining social capital as such is not the main objective of this paper, a brief description of social capital seems necessary, as the term appears to be unfamiliar even to policy makers and practitioners in charge of community development.

In defining its Sustainable Livelihoods Approach, the Department for International Development (DFID) of the United Kingdom stipulated that the primary factors for determining

¹The World Bank provides a "Social Capital for Development" website covering a wide range of topics relevant to social capital (<http://www.worldbank.org/poverty/scapital>)

²Several empirical studies suggest that returns to social capital are as high as those to formal education (Grootaert, 1999; Grootaert and Narayan, 2000)

the level of livelihoods are natural capital, human capital, physical capital, financial capital, and social capital (DFID, 1999; Sakata, 2002) Among these factors, although the first four notions of capital can be clearly defined, the notion of social capital remains ambiguous.³ Hence social capital has been, on frequent occasions, vaguely understood to be the last resort to account for *residuals* of socio-economic matters that cannot be clearly explained by the above-mentioned four capitals. In other words, *social capital* can compensate for a lack of other capitals (DFID, 1999) With its versatile acceptance, the term *social capital* is widely adapted by researchers, policy makers and practitioners as a convenient concept in matters related to community development.

For instance, Coleman (1990) suggests that “social capital is defined by its function; it is not a single entity, but a variety of different entities having characteristics in common: they all consist of some aspects of a social structure, and they facilitate certain actions of individuals who are within the structure.” Furthermore Grootaert and Bastelaer (2002) define social capital as “institutions, relationships, attitudes, and values that govern interactions among people and contribute to economic and social development.” Based on the above and other various definitions, the term *social capital* is currently categorized into the following types: (1) structural and cognitive forms, which are divided based on whether social capital involves socio-economic institutions and networks or relates to individual states of mind⁴; (2) macro (national) meso (regional and community) and micro (household or individual) levels, which are categorized based on the level of economic structure that social capital affects; (3) bonding, bridging, linking and bracing types⁵, which are based on the influence of the interactive scope, inside one social organization or between several organizations.

While actually measuring these different types of social

capital at the community level, the most important are the structural and the cognitive forms of social capital. Krishna and Uphoff (1999) and Uphoff (2000) concretely say that the structural form of social capital, which emphasizes the relationships between social intuitions and organizations, includes rules, social networks, associations, institutions, roles, procedures, and precedents. As regards the cognitive form of social capital that focuses more on the psychological side of the individual, it indicates norms, shared values, reciprocity, solidarity, attitudes, trusts, and beliefs. It is widely accepted that both structural and cognitive forms of social capital are complementary. Many empirical studies such as Krishna and Uphoff (1999) and Isham and Kahkonen (1999) summarize that structural and cognitive social capital respectively *facilitates* and *supports* mutually beneficial collective action.

With respect to social capital formation, many previous studies describe that history, culture, and existing social structures matter (Putnam, 1993; Grootaert and Narayan, 2000) However, social capital is *capital*⁶, so that *stock* of social capital might increase (or decrease) depending upon current socio-economic environment. On balance, as is pointed out by Krishna and Uphoff (1999), history matters, but as such it does not strongly determine stock of social capital at a household or village level.

Dimensions of Social Capital

Based on the above discussion, in this subsection we will explain each dimension of social capital while reviewing previous studies on social capital. It is widely agreed that human capital cannot be measured directly, so that, for instance, education level as a typical proxy has been used for measurement. Likewise, social capital itself cannot be measured directly without using some proxy variables. In addition to that, judging from the fact that social capital encompasses a large array of

³Human and social capital and social arrangements are closely related and likely to be confused. OECD report gave clear distinction between them. Human capital is embodied in individuals, although social capital resides in social relations, while political, institutional and legal arrangements are rules and institutions in which human and social capital work (OECD, 2001)

⁴For a more detailed discussion on structural and cognitive forms of social capital, see Uphoff (2000)

⁵Bridging social capital is essentially horizontal, connecting people with more or less equal social standing, while linking social capital is more vertical, connecting people to political resources and formal economic institutions across power differentials (Grootaert et al., 2004) Rydin and Holman (2004) proposed “bracing” social capital to capture the complexity of cross-sectoral (horizontal) and cross-scale (vertical) relation, ‘primarily concerned to strengthen links across and between scales and sectors but only operates within a limited set of actors’.

⁶Defining social capital as a sort of *capital* is still a controversial issue. Solow (2000) criticized that “social capital” is not a “capital (which) stands for a (purposefully reserved) stock of produced or natural factors of production that can be expected to yield productive services for some time.” Arrow (2000) even urged “abandonment of the metaphor of capital and the term ‘social capital’ ”, reasoning that human networks/organizations are not built up for economic purposes, but building and enjoying existing social relations have intrinsic values to the participants.

concepts, we have to specify proper proxy variable(s) in each dimension and collect appropriate and reliable data via intensive interview or questionnaire surveys and, if necessary, participatory methods (e.g., the Participatory Rural Appraisal and the Rapid Rural Appraisal) with a view to capture social capital comprehensively at the community level.

Although various dimensions of social capital have already been presented and a wide range of studies regarding the links between well-being and social capital have also been conducted, introducing all the dimensions of social capital is almost infeasible. Besides, the all-embracing discussion would be too complicated and lead to a divergence from our issues. In this paper, we therefore select the dimensions especially related to community development, namely networks and memberships, social trusts, and collective action and reciprocity, focusing on their contents and summarizing the findings of previous studies.

1) Networks and Memberships

Networks and memberships form one dimension of the structural social capital. Regarding network, its size, internal diversity, and the extent of assistance in case of trouble are measured as standards. In their study on agricultural commodity traders in Madagascar, Fafchamps and Minten (1999) pointed out that social networks enabled traders to reduce transaction cost under a situation of imperfect information and then have higher margins.

On the other hand, when analyzing membership, the numbers of groups and associations (e.g., religious groups, school clubs, academic or professional societies, labor unions, political organizations, and fraternal organizations) the frequency of joining group activities, the extent of involvement in groups (e.g., leader, executive, influential member, ordinary member) and the membership diversity are well used. In general, network and membership have positive effects on the well-being of community dwellers and then community development.

For instance, using US data aggregated at the state level, Kawachi et al. (1997 and 1999) confirmed a striking inverse relationship between per capita membership in voluntary groups and all-cause mortality rates or self-rated health conditions, even after adjustment for income differences be-

tween states and individual-level factors.⁷ An elaborate work in rural Tanzania by Narayan and Pritchett (1999) concluded that village-level social capital, gauged by both qualitative and quantitative aspects of membership (and social trust) induced greater use of modern agricultural inputs and hence had to some extent a positive effect on household incomes.⁸ Although numerous studies of agricultural and development economics have investigated the effect of human capital (e.g., education) on agricultural inputs allocation, the adoption of new technologies and then productivity at farm level (Feder and Slade, 1984; Huffman, 1974; Pudasaini, 1983; Rahm and Huffman, 1984; Yang, 1997) few such studies of social capital have been done, so much so that Narayan and Pritchett's (1999) study could be worth paying enough attention to.

In terms of ethnicity, income, religion, and their likes, there is a debate as to which is more efficient and contributes to community development, whether a homogeneous or a heterogeneous membership. Researchers who prone heterogeneous groups point to various factors, including the possibility of sharing network and diversified information responsible for innovation and more rapid diffusion of new technology among members (Narayan and Pritchett, 1999; Grootaert, 1999; Grootaert et al., 1999; Grootaert and Narayan, 2000) Conversely, researchers who support homogeneous membership point to higher solidarity and consolidation between members (Kahkonen, 2002) This means that there is no agreement regarding the merits or demerits of homogeneity of group members.

2) Social Trusts

Social trust, which is one dimension of cognitive social capital, consists of complex sub-dimensions, so that many sorts of questions are usually asked to respondents in order to gauge the level of social trust. It is widely practiced that responses to several questions are combined into single or several composite indices using statistical tools, in particular factor analysis. For instance, using their survey data collected in Tanzania, Narayan and Cassidy (2001) found several different sub-dimensions in trust, such as trust in people in their own tribe or caste, in other tribes in the same village, and in politicians, family members, and government service providers.

⁷For a broad discussion on issues of social capital and health, see Pilkington (2002)

⁸In their study on agricultural extension in Mali, Reid and Salmen (2002) described that success of agricultural extension service mainly depends on the degree of social capital (cohesion) at a village level.

On the other hand, the extent of trust has been usually assessed by responses to the following question which was first asked by the European Values Survey and then was adapted by many subsequent surveys, such as the World Values Surveys⁹, the General Social Survey of the USA, and the Integrated Questionnaire for the Measurement of Social Capital (Grootaert et al., 2003)¹⁰

‘Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?’

1. Most people can be trusted. 2. Need to be very careful. 3. Don’t know.

Besides this question, it is also possible to measure the level of trust by asking whether specific people (like government officials and extension workers) can be trusted or not.

Using the 1972-94 General Social Surveys of the USA, Brehem and Rahn (1997) pointed out that interpersonal trust enhances civic engagement (measured by memberships in groups) and then confidence in politics, suggesting that contrary to Putnam’s (1993) findings, cognitive social capital, such as trusts and norms, influences structural social capital.

In addition to that, Kawachi et al. (1997 and 1999) found that lower levels of social trust, as measured by the proportion of respondents who believed that people could be trusted, resulted in higher proportions of residents whose health conditions were poor and then higher rates of most major causes of death in the United States.

Putting these previous studies together, it would seem more likely that social trust is a key factor for enhancing individual well-beings as well as socio-economic development at a community level.

The conventional approach to measure “trust” is self-reported survey as the cases of above studies. Survey is good method to collect behavioral data. Ordinary respondents would not respond falsely to questions such as “How many social activities do you participate in?” However, when using survey data three types of bias are concerned, namely, hypothetical

bias, idealized personal bias, and incentive compatibility. And growing number of evidences are elicited in experimental economics that survey-based measuring social capital may lead to misleading results. Carpenter (2002) showed the advantage of economic experiments to gain truthful responses by providing incentive compatibility. He suggests the complementarities between the two methods and proposed simultaneously employing the both for further understanding of social capital.

3) *Collective Action*

Strictly speaking, it seems more appropriate to say that collective action is not a dimension of social capital (Kajisa, 2002) but an outcome of social capital, such as social trust, norms, and reciprocity. Woolock and Narayan (2000) also argue social capital as norms and networks that enable people to act collectively with respect to development policies. However, considering the fact that without enough accumulation of social capital in advance, mutually beneficial collective action is less likely to occur, and considering Grootaert et al.’s (2003) findings that “collective action is an important aspect of community life in many countries,” collective action could be an important indicator in measuring the level of social capital.¹¹ In this paper, therefore, a brief description on collective action is presented, irrespective of whether it is a dimension of social capital or its outcome. In previous studies, it was common to collect information regarding collective action as follows: “the extent of collective action, the type of the activities undertaken collectively, and an overall assessment of the extent of willingness to cooperate and participate in collective action” (Grootaert et al., 2003) The extent and type of action undertaken collectively is, in detail, the number of collective action of the entire community and the frequency of participation of individuals in collective action. They can be measured by the following questions: “What proportion of people in this village contribute time or money toward common development goals such as ...?” or “How many days in the past 12 months did you or anyone else in your household participate in community activities?”¹² When measuring the extent of willingness to cooperate and participate in collective action,

⁹The World Values Surveys, which was firstly carried out as the European Values Survey in ten European countries in 1981 and later on extended to cover more than 50 countries worldwide, provide useful time-series and cross-sectional data. For full text of the 1990, 1995-96 and 1999-2002 World Values Survey questionnaires, access to http://wvs.isr.umich.edu/ques3_shtml (last accessed by the authors 31 May 2004)

¹⁰Narayan and Cassidy (2001) alternatively used this query in order to measure the extent of ‘generalized norm.’

¹¹As pointed out by Grootaert et al. (2003) collective action cannot be used as an indicator of social capital in a totalitarian society.

it is widely accepted to use responses in an imaginary situation, like a water supply problem, which would affect almost all or a portion of respondents of the community, to judge their commitment to collective action.

Because collective action itself is a well-known concept in social sciences, many researches have already been done on collective action, as a context of social capital. Many previous studies conclude that collective action is more prevalent in successfully developed communities. For instance, Krishna and Uphoff (1999) found that social capital was highly correlated with village level performances of mutually beneficial collective action and common land development in India.

Currently there are two different views with respect to the effects of membership homogeneity on collective action. Krishna and Uphoff (1999) concluded in their study in India that heterogeneous communities were *not less* likely to act collectively than more homogeneous communities. On the contrary, in his literature review study on irrigation management, Kahkonen (2002) summarized that economic and social homogeneity of irrigators made them work more collectively. Grootaert (1999) also reported that heterogeneity in group memberships gave a negative effect on collective action in Indonesia.

Several Issues for Measurement and Data Analysis

This section examines several issues relevant to the data collection and measurement of social capital, namely, the setting of a questionnaire, the relation between sample sizes and data quality, variables determination, and endogeneity.¹³

Setting of Questionnaire Items

There are at least three issues related to the setting of questionnaire items. The first issue is that the meaning of the specific words used in a questionnaire might be to a certain extent different in countries or communities with different languages, ethnic groups, religions, and other social backgrounds (Kajisa, 2002). Although English standardized questionnaires, such as the Social Capital Assessment Tool (SOCAT) and the Integrated Questionnaire for the Measurement of Social Capital (SC-IQ)¹⁴ which were developed by the World Bank research

groups, are available, questionnaire items and sentences should be set with a careful consideration of socio-economic and cultural factors in the target community.

Second, for more accurate measurement of social capital, it is not enough to use quantitative data from questions like "participation to a given organization" only; qualitative data from questions like "consciousness of the members of the organization" and the character of an organization itself are also necessary. However, it should be kept in mind that subjective bias of interviewees has more influence on qualitative data than on quantitative data.

Finally, regional specificities are an important issue (Kajisa, 2002). For example, when investigating an issue of collective action, asking a question like "If there were a water supply problem in this community, how likely would it be that people will cooperate to try to solve the problem?" would not be effective to assess the extent of collective action in a community where water shortage seldom occurs. Alternatively, an appropriate and relevant question should be asked.

Sample and Questionnaire Sizes vs. Data Quality

The more questions there are to cover a variety of responses, the more likely there is to secure high-quality data. However, it should be noted that the costs of carrying out a questionnaire or interview survey in terms of money and time are proportionally related to the size of the questionnaire and that of the sample, and therefore there is a tradeoff between the quality of the data and the costs incurred by the survey. For this reason, it is necessary to carefully design the most suitable questionnaire framework subject to time and budget constraints.

In general, a relatively large portion of previous studies, based on the General Social Survey, the World Values Survey and household/individual surveys, sample as many as 1,000 or even more households or individuals (Table 1). If we pay close attention to disparities in development levels between communities, as did Krishna and Uphoff (1999) and Narayan and Prichett (1999) who sampled 64 and 87 communities respectively, we see that it is preferable to collect sufficient number of community samples to get robust results from cross-sectional analyses between communities.

¹²These questions are incited from the Integrated Questionnaire for the Measurement of Social Capital (SC-IQ)

¹³For more detailed discussions on those matters, refer to Grootaert et al. (2003) and Kajisa (2002)

¹⁴For detailed discussions on SOCAT and SC-IQ, refer to Krishna and Shrader (1999 and 2002) and Grootaert et al. (2003)

Consequently, even when only a limited number of communities are sampled because of time and budget constraints, fixed effects of social capital inherent in respective community could be detected using the dummy variables method. Nevertheless, in general the fewer the number of communities investigated is, the more difficult it seems to analyze the effects of the characteristics of the community; thus, there could be no other choice than putting emphasis on social capital measurable at the household or individual level in the research.

Variables Determination and Endogeneity

In analyzing the survey data, it is necessary to consider the status of each variable: which variable is independent, which is dependent, and if any, which is latent (Grootaert et al., 2003) To that end, setting up a clear-cut hypothesis is definitely required.

In addition, it seems necessary to consider several dimensions of social capital concurrently in examining what sorts of factors explain the outcomes of social capital. For example, if the reason that collectively managed irrigation system works well in a community is strong leadership, it means that a key person imparting strong and efficient leadership involves in the management, which points to structural social capital background. On the contrary, on occasions in which high consciousness toward norm or reciprocity of the community dwellers is the utmost reason for success, cognitive social capital background has to be paid attention to. This simple example clearly suggests that analyzing limited dimension(s) of social capital is likely to be insufficient to clarify the impact of social capital on community development. It seems reasonable therefore to collect a wide range of data on the dimensions of social capital in order to comprehensively analyze the factors determining community development levels.

For further analysis of the data, on the other hand, choosing a suitable statistical or econometric tool for data analysis is indispensable. By looking into previous studies, we see that tools for multivariate analyses — such as ordinary least squares (OLS) instrumental variables method (IV) probit model, qualitative regression — and factor analysis and covariate structural analysis have been widely applied. In this regard, it is important to note that whether the variables of social capi-

tal are endogenous or exogenous are important for model building, as aptly pointed out by Grootaert et al. (2003) For instance, if social capital is actually an endogenous variable¹⁵ but is taken as an independent variable and OLS is applied, the results would be biased. In that case, as done by Narayan and Pritchett (1999) and Grootaert and Narayan (2000) it might be necessary to use the IV tools or their likes to eliminate the bias. Besides, as mentioned above, the creation of social capital is a highly complex path-dependent process influenced by social, political and cultural factors. Therefore, the construction of an empirical model in which social capital is considered as a dependent variable would be more complicated than that in which it is considered as an independent variable (Grootaert et al., 2003 and 2004) A variety of qualitative in-depth studies is necessary to better understand the creation (destruction) process of social capital. Quantitative multivariate analyses then could be applied for empirical test on specific aspects of social capital creation process hypothesized based on the findings of the results of these qualitative studies (Grootaert et al., 2004)

Concluding Remarks

Many previous studies have demonstrated that social capital, positively on frequent occasions or negatively less often, affects the level of community development. This paper, based upon such findings of previous studies on social capital, pointed out that the concept of social capital is to a great extent useful in discussing how to make community development programs more effective for the purpose of enhancing the well-being of rural dwellers.

However, conducting research into the relation between social capital and community development, we should keep in mind several issues as follows: First, when conducting a survey in various nations through a standardized questionnaire format, the questions should be carefully translated and, if necessary, modified to avoid getting biased results due to differences in culture, language, religion, ethnicity, and other social factors. Second, there is a tradeoff between the quality of the data and the costs of collecting the data, in terms of money and time; therefore, a well-structured survey design should be devised. Finally, in applying a suitable statistical or economet-

¹⁵Assuming the model in which social capital is part of the household's exogenous assets determining income and one component of social capital, e.g. social club, is pursuing leisure activities. It is possible that demand for participation in that social club rises with income. If this is the case, social capital is in part a consumption good, then becomes endogenous variable in the model (Grootaert et al., 2004)

ric tool for the analysis, it is necessary to consider the status of each variable — which variable is independent, which is dependent, and sometimes, which is latent — while considering other factors that affect community development besides social capital.

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Table 1. Summary of Previous Studies on Social Capital

Study	Location	Social capital measures used	Methodologies	Data sources mainly used	Conclusions
Household or Individual level					
Brehm and Rahn (1997)	USA	Civic engagement, interpersonal trust, and confidence in government	Factor analysis and pooled cross-sectional analysis	1972-94 General Social Survey	Interpersonal trust enhances civic engagement and then confidence in political institutions.
Fafchamps and Minten (1999)	Madagascar	Social network	Ordinary least squares and instrumental variables method	Individual survey (n = 729 traders)	Social networks enable agricultural traders to have higher margins.
Narayan and Pritchett (1999)	Tanzania	Group memberships, characteristics of groups and trust in various institutions and individuals	Ordinary least squares, instrumental variable method and probit model	Household survey (n = 1,376 households in 87 clusters)	Village-level social capital has to some extent a positive effect on household incomes.
Isham and Kahkonen (1999)	Indonesia	Memberships (quantity and quality of local groups)	Probit model	Interview survey (n = 1,100 households)	In a village with more social capital, demand-responsive water services are more efficient, so that improvement of health conditions is more significant.
Grootaert (1999)	Indonesia	Memberships in local associations (density of associations, internal heterogeneity, frequency of meeting attendance, etc.)	Ordinary least squares, probit model and quantile regression	Household survey (n = 1,200 households)	Social capital results in poverty reduction and welfare improvement. Heterogeneity in group memberships gives positive effects on welfare improvement but negative effects on collective action.
Grootaert and Narayan (2000)	Bolivia	Membership in local associations and organizations	Ordinary least squares, probit model, quantile regression and instrumental variable method	Household survey (n = 1,000 households)	Social capital contributed to poverty reduction and welfare improvement. Moreover, returns to social capital were higher than those to education.
Narayan and Cassidy (2001)	Ghana and Uganda	Group characteristics, generalized norms, togetherness, everyday sociability, neighborhood connections, volunteerism and trust	Factor analysis and multivariate technique	Household and individual surveys (n = 1,471 households in Ghana and 950 individuals in Uganda)	Social Capital measures were confirmed as fundamental dimensions of social capital.
Reid and Salmen (2002)	Mali	Trust and social cohesion	Qualitative (descriptive) analysis	Individual survey (n = 60 individuals in 6 villages)	Strong community cohesion embedded in a community led to enhancing the effect of agricultural extension services.
Community or Regional Level					
Kawachi et al. (1997)	USA	Membership in voluntary groups and social trust	Ordinary least squares and pass analysis	General Social Survey (n = 7,654 individuals in 39 states)	Income inequality leads to disinvestment in social capital and hence to increased mortality rates.
Krishna and Uphoff (1999)	India	Structural (network and role) and cognitive (norms, values, attitudes and beliefs) social capital	Correlation analysis (Pearson) and factor analysis	Individual survey (n = 2,397 individuals) and focus group interviews with village leaders	Social capital is highly correlated with performances of collective action and common land development.
Kawachi et al. (1999)	USA	Trust, reciprocity, group membership	Contextual analysis	Behavioral Risk Factor Surveillance System and General Social Survey (n = 16,259 individuals in 39 states)	Even after adjustment for individual-level factors, social capital is positively associated with self-rated health conditions.
Reid and Salmen (2002)	Mali	Social cohesion	Descriptive comparison between socially cohesive and divided villages	Interview survey (n = 90 individuals)	Success of agricultural extension services depends on the degree of village-level social capital (cohesion) and the quality of agricultural extension agents.

Note: We partly referred to Krishna and Shrader's (1999) Annex A for making the above table.