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## **3. Title of Funding Request**

“The role of social capital and informal social networks for poverty reduction in Northern Thailand”

## **4. Objectives and Methodology of Research**

### **4.1 Objectives and Hypotheses**

The objective of this research project is to broaden our so far very limited understanding of the role of social capital and networks in rural household economies of developing and transition countries with regard to overcoming deficiencies of other forms of capital, poverty and environmental effects. The discussion of differences and similarities in the households' endowment of social capital will contribute to a more distinct knowledge of the role and contribution of social capital in sustainable rural or economic development.

The central hypotheses of this research on social capital and networks are: (1) Different forms of social capital have distinct incremental effects on household welfare (e.g. income, expenditure). (2) Different forms of social capital are important for the access to scarce other resources (capital assets such as financial, physical and natural assets). (3) Rural poverty could be reduced more effectively by supporting certain forms of social capital or network structures.

The problem statement earlier and the three principal research hypotheses lead to the following more specific research objectives:

- Identification of social networks, which are relevant for rural development, with a special focus on their role for accessing resources (e.g. credit,



extension, etc.);

- Identification of different aspects of social networks, e.g. size, the strength of the relationships, and the range of the resources these relations provide access to, to establish the amount of someone's social capital and defining different forms of social capital (i.e. bonding and bridging see next section);
- Identifying the influence of the different social capital forms on various household outcomes and income generation activities.

## **4.2 Methodology of Research**

**Theoretical framework:** The standard criticism leveled at the social capital concept is that it is usually defined too broadly and is thus analytically useless. We therefore emulate scholars such as Lin (1999), defining social capital more narrowly and leanly as interpersonal networks (ties) plus resources. It is the resource that turns the social structure into social capital. Figure 1 illustrates how our definition fits into the household asset portfolio and how social capital and networks are interlinked.

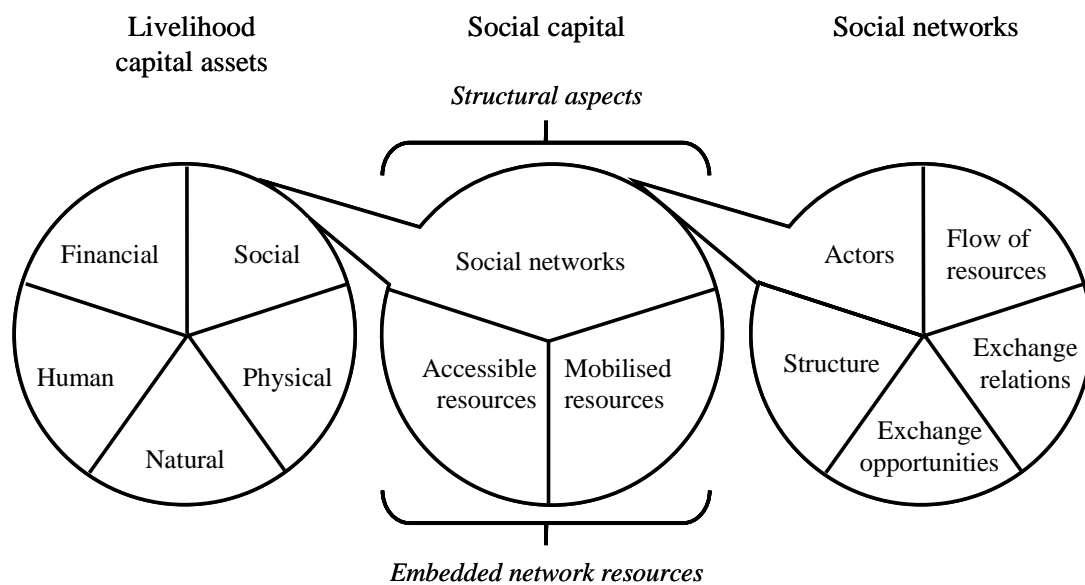
Our work is based on three forms of social capital: bonding, bridging, and linking. Bonding social capital relates to 'strong ties', while bridging social capital relates to 'weak ties'. Weak ties are characteristic of the infrequent interactions and peripheral relationships among more or less dissimilar individuals. Strong ties are characteristic of the intimate social circle of individuals with rather similar characteristics, such as can be found in relatively homogenous groups, for example family and close groups of friends. A third classification has been suggested, called linking social capital. This dimension refers to a person's ties to people in positions of authority, such as representatives of public (for example police) and private (for example banks) institutions. In this classification, bridging social capital is horizontal. It connects people of similar economic, social, and political status, such as one farmer to another farmer. Linking social capital is more vertical, connecting people to key political players and across power differentials, for example a farmer to credit officer (Woolcock and Narayan, 2000).

Sanders and Nee (1996) outline three mechanisms of social capital that positively affect economic success. Social capital can offer 1. instrumental support, 2. productive information, and 3. psychological aid. Instrumental support drawn from social capital can directly affect performance by providing, such things as startup capital or 'free' labor. Social capital can also disseminate productive information. An important feature of social capital is information exchange that inheres in social relations. Information is important in providing a basis for action. But acquisition of information is costly. As a minimum it requires attention and time, which are always



in scarce supply (Coleman, 1988). Finally, social relations provide psychological aid. Maintaining social relations can prevent business dissolution caused by personal problems and can ensure that effort and motivation are not seriously impaired during times of emotional stress.

**Figure 1 Assets, social capital and networks**



Source: Authors' figure

The aforementioned three mechanisms have distinct effects on the different forms of social capital. Bonding capital provides an individual with information that helps preserve his/her interest, even when the individual has not actively searched for this information (Lai and Wong, 2002). It also may help households to surmount periods of illiquidity, lack of labor, or periods of illness. Bonding social capital is important for coping with and mitigating idiosyncratic shocks. However, it may be less useful in times of covariate shocks. The core network is vulnerable to covariant risk, as it is likely to be hit as a whole. Furthermore, it is assumed that information or resources accessed though different strong ties are redundant, that is everybody in the core network of strong ties has the same resources available. Thus, the strength of bridging social capital lies in its access to additional resources through its connection to other networks outside one's core network. By breaking out of one's own, close social circle using weak ties, one can access resources not otherwise available. The strength of linking social capital lies in its access to positions that are vertically higher in the social hierarchy. The higher the rank of the person with whom they are formed, the more useful are the ties. An individual is likely to be able to draw on more resources if s/he is connected to an influential person. It may also help in periods of covariate



shocks because vertical networks are often unaffected by such shocks. Linking social capital may thus work even better than bridging social capital.

**Sample and data:** In Vietnam our survey focuses on Son La province. Here, in 2007/2008, we interviewed the same households that had previously been interviewed as part of the Vietnamese Household Living Standard Survey (VHLSS) (2004). According to the General Statistics Office (GSO) in Hanoi, these household are a representative sample of households in Son La province. However, in two districts of Son La, research permission was denied due to the villages' sensitive border location and other security issues. Some households could not be found again due to migration. Migration had been prompted mainly by the construction of a huge hydroelectric dam. For instance, one survey village had migrated in its entirety and we were not able to track down those households. Our sample is therefore somewhat smaller (minus 25% households) than the VHLSS for Son La. In Thailand a representative sample of households was drawn in the Chiang Dao district, Chiang Mai province in northern Thailand, using a three-stage random sampling procedure (communes, villages, households).

Our survey was divided into two phases (with a three to four-month time interval). Two reasons played a role in the adoption of this procedure: (1) An extensive interview in which the respondent had to answer all the questions in one row might have been perceived as too burdensome for the respondent. (2) Some of the data from the first interview were used as input for the second round. Due to the short time lag between the two survey rounds, we also experienced a low level of attrition (less than 5%) caused by migration, death, and refusal. The two survey rounds covered all information concerning social capital and social networks of the households, as well as information on basic income and other household assets.

***Measuring social capital and its different forms:*** There are as many ways to measure social capital as there are definitions. However, if social capital is to be more than a metaphor, it needs to refer to things that can be observed and measured (Uphoff and Wijayaratra 2000). In contrast to human capital, which is based on individuals, social capital resides in relationships (Coleman 1988). Relational data in the form of network data are ideal for measuring social capital (Herrmann-Pillath and Lies 2001). Our measurement of social capital was therefore based on the personal network of respondents. A personal network is defined as the sum of all relationships an individual has. Only ties that are connected to resources are measured, thus enabling us to identify the resource network of the respondent. The extent to which an individual has access to resources depends on that person's ties and on the strength of those ties (Sobel 2002).



The data gathered from the personal network of the respondent are used as the basis for our different measures of social capital. We applied four different cluster analyses (k-means) for measuring tie strength and social distance to identify our social capital variables (two for the Thai data and two for the Vietnamese data). After excluding missing values, the sample comprised 3679 persons in the Thai data and 4261 in the Vietnamese data.

**Cluster analysis - tie strength:** Bonding and bridging social capital are distinguished by the strength of the tie between the respondent and his personal network member. To measure tie strength we employed a similar approach to that of Zhao (2002), who used four different variables to estimate tie strength: role relationship (core family, other family, friend, and acquaintance), frequency of contact per month, duration of relationship in years, and closeness.<sup>1</sup> In the case of tie strength, two clusters were determined upfront (weak ties, strong ties).

**Cluster analysis - social distance:** Linking social capital is differentiated by the social distance between the respondent and his personal network member. Social distance is measured using three different variables: 1. whether the respondent considers that he or she has a higher or lower social status than the other person, 2. the difference in occupations as measured by the Standard International Occupational Prestige Scale (SIOPS) developed by Ganzeboom and Treiman (1996),<sup>2</sup> and 3. whether the interviewed person has a leading position in any group he is attending in comparison to his personal network member. In case of social distance, three clusters were determined at the outset (very low, low, high). Theoretically, linking capital can become negative (see left-hand side of Figure 2). Imagine a high ranking government official in a small village. All his ties to the villagers would be across a power differential. But the social distance from his viewpoint would be negative while the social distance from the villagers' point of view would be positive. However, such persons are by definition rarely found and make up only a very small part of the sample. Particularly in research concerning peasants in northern Vietnam and Thailand, this problem can be disregarded because poorer people often lack ties to people in power. We also assume small changes in social distance to be negligible. Thus, the two lower clusters of the cluster analysis (negative and low distance) have been grouped together.

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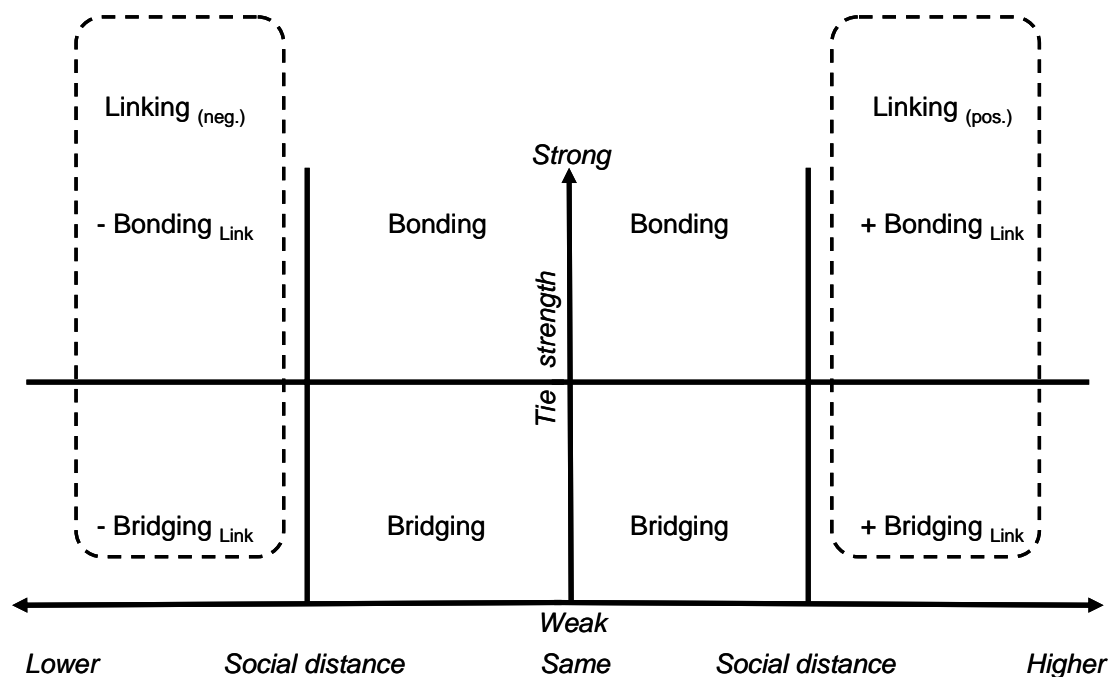
<sup>1</sup> The respondent's perception of the 'closeness' or intensity of the relationship is a good measure for the strength of the relationship. We used a 5-point Likert scale to estimate the closeness of a relationship, with higher scores indicating greater closeness.

<sup>2</sup> Prestige measures are generated from the popular evaluation of occupational standing. They reflect the classical sociological hypothesis that occupational status constitutes the single most important dimension in social interaction (Ganzeboom and Treiman 1996).



Bonding and bridging capital can also be regarded as positive or negative. However, we assume all relationships to be positive or at least neutral to the person's social welfare.<sup>3</sup> Hence, for the econometric analysis, we only have positive social capital to deal with. Linking social capital can be connected either to bridging social capital, when the link is connected by way of a weak tie, or to bonding social capital, when the link is connected via a strong tie. Consequently, we have four different measures of social capital: 1. bonding, 2. bridging, 3. bonding<sub>link</sub>, and 4. bridging<sub>link</sub>. For the analysis, these different measures of social capital are added up for each person, leaving us with four different social capital variables.

**Figure 2 The different forms of social capital**



Source: Authors' figure

**Personal network data collection:** We used the name and position generator to measure personal networks and to create measures of individual social capital. These are well established survey tools in sociology, but are rarely applied in development economics. The name generator asks questions about certain domains of the personal network, such as: 'Whom can you ask to help you fix your car?' Then the name of this person is recorded. Later, more questions can be asked about that person, for instance to ascertain the person's sex, age, occupation, and so forth, or to establish the

<sup>3</sup> This may not always be the case. Particularly vertical relationships – manifested here in linking social capital – may in a different context result in a patron-client relationship, which often has a very exploitive character (Szreter and Woolcock 2004). But bonding social capital, too, may have negative effects, for example through excessive claims from personal network members connected via strong ties (Portes and Landolt 2000).



relationship of this person to the respondent. This part of the survey is called ‘name interpreter’. The name generator has often been criticized for being biased towards strong ties, because the first names that people recall are usually those of persons who have been known to them for a long time, or whom they meet more often, and so forth. As a result, the amount of bonding social capital may be overstated. The ‘position generator’ partly corrects for this. In its pure form it does not create names and it has no name interpreter. The respondents are asked whether they know or do not know persons from a sample of occupations, such as: ‘Do you know a primary school teacher’ or ‘Do you know a judge’? However, a simple yes/no answer does not suffice for our social capital measures. The name of the ‘teacher’ and so on was therefore also recorded and a name interpreter was applied to each of the names.

**Name generator:** A single name generator question may generate results biased towards a single form of social capital; for example the question ‘whom would you ask to borrow a large amount of money?’ will reveal a large number of close relationships such as core family members and ultimately result in a very large amount of bonding social capital (Marin and Hampton 2007). In the light of this, we applied ten different name generators. The name generator questions are all based on specific resources, skills or knowledge that can potentially be exchanged among rural people, such as borrowing of money or obtaining information about formal credits. This leaves little room for the respondents to interpret the questions differently. The specific items, skills, or knowledge were determined during several group discussions with farmers in northern Thailand and Vietnam. The name generator questions ask only about areas important to rural inhabitants and in which a more or less regular exchange is taking place. We restricted the number of persons named per question to a maximum of three to limit the interview burden on the respondent.

**Position generator:** The position generator was primarily applied to measure weak ties. This data collection tool builds on a sample of occupations and asks respondents to indicate contacts in each of the occupations. The position generator utilizes a person’s occupation as an indicator of the resources available to that person. A person’s occupation is a good indicator of his/her social roles and resources, and hence the kinds of help that s/he might be able to provide. The sample of occupations should range widely in prestige and represent different sectors of the economy in order to meet the theoretical goal of measuring access to different parts of the social structure and their differing resources. The occupations should have fairly large populations since few people, if any, will know anyone in a very rare occupation. The occupations should have clear titles that all respondents will understand. If good census information is available, one should always use occupational titles from the census. Furthermore 15-30 different occupations are a good number to gain



meaningful results. In Vietnam no detailed labor statistics were available. For this reason, and to enhance comparability, in the Vietnam survey we used the same list of occupations as we used in Thailand. We asked a representative sample of 26 different occupations, selected from the national ‘labor force survey’ in Thailand.

***Changes and problems:*** After a good start logistical problems occurred in Vietnam. The research permit was revoked and it took eight months to regain it. Two main causes could be identified, first Son La is still a sensitive area. Police in the Yen Chau district reported unauthorized movement of foreigners to higher authorities. The province authorities got somehow the impression that those foreigners were related to the Uplands program of the University of Hohenheim (which was untrue) and halted all administrative processes. As our project was associated to the Uplands Program we were affected too. The second reason for the delay was the very late and sometimes inappropriate response from the Vietnamese partner institutions to this situation. During that time no field research activities were possible, even not for Vietnamese researchers. Therefore, the whole field research was delayed. Furthermore, it was more difficult than anticipated to find qualified Vietnamese researcher. Only after two years of the beginning of the project a PhD student was identified. In Thailand we were not able to find a qualified PhD student at all. This plus the lacking research permit led to a delay of the quantitative and to the cancellation of the qualitative research component including the planned complete network analysis. Thus, part of the research objectives could not be carried out as planned. Hence, not all data are yet analyzed and the data are not as deep as anticipated.

## **5. Results**

In our analyses we distinguish between three different forms of social capital: bonding, bridging, and linking. Measured by four different variables: 1. bonding, 2. bridging, 3. bondinglink, and 4. bridginglink. The hypothesis is that different forms of social capital have a distinct influence on different outcomes. Our analyses reveal that social capital does play a role, but not as much as the theoretical literature has implied. Especially, the widely assumed positive effects of bridging and linking social capital did not fulfill their promise. On the contrary, bridging and linking social capital in particular proved to have the opposite effect when being significant. This is surprising as most theoretical literature suggested the opposite following the famous argument of Granovetter (1973) ‘the strength of weak ties’. However, bonding social capital exerts some influence and if significant is always positive on the outcome (see Table 1). This finding supports another example from Asia, namely Bian (1997) who brought the positive effects of strong ties back into the discussion. It is safe to assume that those households with more bonding social capital use it to receive more informal





help to cope with difficult situations such as loan repayment problems or getting better access to formal credit. Thus, in these special cases the main positive features of bonding social capital i.e. support in hard times seems to be working here. Another explanation for the positive effect of bonding social capital on loan repayment performance could be that households with a higher number of strong ties are more deeply and better connected within the village society. Hence, shame or social pressure may also play a role. In contrast to bonding social capital, bridging and linking social capital have partly negative effects on loan repayment. Thus, we must reject the assumption that knowing influential persons on a casual basis has positive effects on loan repayment performance, for example through information sharing. Consequently, we assume that the negative effects of bridging and linking social capital, such as collusion and nepotism, outweigh its positive effects. It may be rather premature to talk of collusion here. But, Vietnam is famous for its ‘old boys’ networks. Anecdotal evidence from our survey showed that the biggest loan (VND 300 mn, which is by far the biggest outlier we have in our survey; the official maximum amount is 30 mn) is not with the VBARD but with the VBSP. The mandate of the VBSP, however, is to cater to the poor. Apparently the head of household is a relative of a credit officer. At the moment this seems to be an isolated case of such behavior. Moreover, as evidence from Thailand has shown, bending the rules in special cases does not lead automatically to bad repayment behaviors (Coleman 2006). But the crashes in rural finance caused by local elites during the 1970s and 1980s have not been forgotten and it is therefore worthwhile keeping a close eye on personalized lending.

**Table 1: Summary of regression results**

Independent variables	SC_Bo	SC_BoLi	SC_Br	SC_BrLi
Dependent variables				
<i>Vietnam</i>				
Repayment problems (yes = 1, no = 0)	-	-	-	-
Loan was rescheduled (yes = 1, no = 0)	-	-	-	-
How many months was the loan rescheduled? (month)	<b>Sig. neg.</b>	-	-	<b>(Sig. pos.)</b>
Potentially credit constrained, formal credit only (0% - 100%)	<b>Sig. neg.</b>	-	-	-
<i>Thailand</i>				
Late in interest payment (yes = 1, no = 0)	-	<b>Sig. pos.</b>	-	-
Late payment of principal and/or are unable to pay back on time (yes = 1, no = 0)	<b>Sig. neg.</b>	-	-	<b>Sig. pos.</b>
<i>Vietnam and Thailand</i>				
Late in interest payment (yes = 1, no = 0)	-	-	-	-
Late payment of principal (yes = 1, no = 0)	<b>Sig. neg.</b>	-	-	-
Unable to pay back on time (yes = 1, no = 0)	-	<b>Sig. pos.</b>	<b>(Sig. pos.)</b>	-



What are the policy recommendation that can be deducted? Although it seems not to be a problem at present, linking social capital has the potential to increase the rate of credit default. Therefore, any lender would be well advised to keep those informal links of borrowers to better positioned persons under control. The best way of doing this would be to make the procedures for credit approval, delays, etc. as transparent as possible. As stated for instance by Brinton (2000), high transparency is the best way to overcome ‘old boys’ networks. Another possible solution would be to assign credit officers regularly to new intervention areas or to areas distant from their region of origin. Frequent transfer of government personnel and reorganization of supervisory responsibilities might help prevent individuals from building personal bureaucratic empires (Appold 2001). As our analyses so far focused on the rural credit market, the most obvious measures to foster bonding social capital among rural households would be the use of credit group schemes with joint liability to strengthen the relationships of the members. Furthermore, group members should be encouraged to cooperate in a variety of activities even private ones to further strengthen their relationships. Nevertheless, as social capital is context specific in another context those recommendations could lead to collusion of group members and thus resulting in increasing default rates. Also negative effects of strong ties are known in other area as they may hamper the adoption of innovation and can protect social inequalities and social change. If our findings on social capital will hold on other areas (access or exclusion to other services such as extension, adoption of innovation, etc.), will be decided by our ongoing analysis of the data. The prominence of bonding social capital in the rural Southeast Asian context could, on the one hand, mean that the information society has not yet reached those areas and thus the information gathering attribute of bridging and linking social capital is not that important. On the other hand, it could also be that in an Asian context bonding social capital has similar attributes as the other two forms of social capital.

## **6. List of Publications from this Project**

- Dufhues, T., Buchenrieder, G., Euler, D.G., and N. Munkung. 2009. *submitted in December 2009 under review to be resubmitted in spring 2010* ‘Network based’ social capital and individual loan repayment performance. *Journal of Development Studies*
- Dufhues, T., Buchenrieder, G., and Q. Hoang Dinh. *submitted in February 2010*. Social capital and loan repayment performance in Northern Vietnam. *World Development*.
- Hoang Dinh, Q., Dufhues, T., and G. Buchenrieder. *submitted in February 2010*. Social capital and credit constraints: A case study from Vietnam. Paper submitted to the International Symposium on “Sustainable Land Use and Rural Development in Mountainous Regions of Southeast Asia” from July 21-23, 2010. Hanoi, Vietnam: The Uplands Program (SFB 564) of the Hohenheim University (UHOH), Hanoi University of Agriculture (HUA), Thai Nguyen



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## **8. Date, Signature of Project Co-ordinator/s**

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Gertrud Buchenrieder  
Principal Project Co-ordinator

Date: