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Author(s): Le Anh Tuan, Alison Cottrell and David King

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LE ANH TUAN, ALISON COTTRELL,
AND DAVID KING

Changes in Social Capital: A Case Study of Collective Rice Farming Practices in the Mekong Delta, Vietnam

Collective rice cultivation has long been a traditional agricultural practice for the majority of farmers in the Mekong Delta of Vietnam. Group-based rice farming practices date back at least to the era of French colonization (1858–1954), when many farmers were landless and worked as tenants. Despite difficulties in rural life through poverty and war, or perhaps because of these challenges, collective rice cultivation practices persisted over time. These practices endured throughout the French colonial era, the First and Second Indochina Wars (1954–1975), and the period of socialism following reunification in 1975. However, the popularity of group-based rice farming in the Delta finally began declining in the late 1990s, with little evidence of it currently remaining.

This rich history of collective farming traditions demanded a high level of social capital among rice farmers, who were driven by the need to collaborate to overcome difficulties in rice production. Yet surprisingly little has been written about the history of social capital in Vietnam, particularly in reference to collective rice farming. In the existing literature, authors have made reference to trends in social capital associated with events such as land reform, collectivization and decollectivization, adoption of new rice farming

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technologies, and market liberalization.¹ However, there appears to be little detail on how social capital manifests in specific situations. There is also little discussion of how the decline of collective cooperation in farming in the contemporary era might affect, and be affected by, social capital changes among households and within communities.

This study aimed to understand how certain components of social capital among rice farmers have changed over time, from the era of French colonization to the late 1990s, when many aspects of social capital appeared to be strongly in decline, at least among Mekong Delta farmers. The study used a mixed methods approach, including document analysis and surveys, to explain these changes in social capital.² Document analysis was used for the period when mutual aid was first established in the early twentieth century (if not before), until the early 1990s. To establish a causal and descriptive inference for this growth in mutual aid based on social capital, we used a comparative-historical method to explain the sequence of changes.³ Our focus was on important social, economic, and political junctures mentioned in the literature as having affected the stock of social capital. To explain the period when mutual aid started to decline in popularity in the late 1990s, we based analysis primarily on qualitative data from social surveys conducted in the Mekong Delta. Finally, we examined the current stock of social capital among farmers' traditional rice farming network using qualitative and quantitative data from recent surveys. We then inferred changes in the nature of social capital using this mixed methods approach.

Our study concludes that the decline of mutual aid groups stemmed from a number of factors: mounting pressure on crop timing as a result of shortened crop duration and synchronized irrigation; changes in social relations as a consequence of absentee landlordism and land fragmentation following the 1993 Land Law; and an increasingly open market that allows farmers to access credit and assistance from business enterprises, rather than from neighbors and kin as in the past. The decline in need for mutual aid in rice farming appears to have also lessened the need for other forms of social capital among farmers, as evidenced by weaker neighborhood ties among farm families in our An Giang study site.

In this article, we explore the concept of social capital in the social science literature and its applicability to the case study in the Mekong Delta, then

explore the relationship between collective rice farming practices and the need for different types of social capital over time. We discuss the current state of farming practices in the Mekong Delta through an examination of social relations among farmers in An Giang province, and conclude with a discussion of the implications of the decline of collective action for future development projects.

Social Capital

Social capital is a concept that describes circumstances in which individuals can use membership in groups and networks to secure benefits.⁴ The concept helps explain how the problem of incentives for selfishness can be overcome to achieve a mutually beneficial cooperative way of getting things done.⁵ Typically, social capital implies voluntary cooperation that is self-enforcing and based on informal, unwritten institutions and norms. According to a World Bank research paper:

Social capital refers to the internal social and cultural coherence of society, the norms and values that govern interactions among people and the institutions in which they are embedded. It is the glue that holds societies together and without which there can be no economic growth or human well-being.

Without social capital, society at large will collapse, and today's world presents some very sad examples of this.⁶

The concept of social capital can be traced back at least to the works of de Tocqueville (1840), Hanifan (1920), Jacobs (1961) and Bourdieu (1983).⁷ However, the growth in popularity of social capital has led to a concomitant growth of different interpretations of the concept.⁸ For example, Pierre Bourdieu has defined social capital as "The aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationship of mutual acquaintance or recognition."⁹ But for James Coleman, "social capital is defined by its function. It is not a single entity, but a variety of different entities having two elements in common: that all consist of some aspect of social structure, and they facilitate certain actions of individuals—whether persons or corporate actors—who are within the structure."¹⁰ From Robert Putnam: "social capital refers to features of social organization, such as networks, norms, and trust, that facilitate coordination and cooperation for mutual benefit."¹¹

Irrespective of different definitions, social capital, at its core, is a material concept that connects individuals through networks, norms, and trust for a shared, mutual benefit. Hence, social capital is important for explaining collective action in the context of different social, economic and political settings. Ostrom and Ahn suggest that theorists of social capital open discourse on the topic by putting collective action at the center of economic and political problems.¹² Collective-action theory (known also as first-generation collective-action models) often assumes homogeneous, selfish individuals at its core. Social capital, which considers factors including norms, networks, and trust, has neither been properly understood nor captured even to a limited extent in these first-generation collective-action models. However, understanding how social capital facilitates collective action allows us to step beyond these first-generation models.

If social capital facilitates efficient bargaining, harnessing social capital could provide information that may make additional cooperation possible.¹³ Groups should be able to commit to an institution that provides a sensible way to govern the commons. One should be looking not only for the features of institutions that facilitate good outcomes, but how to build these institutions and what makes them stable.¹⁴ For example, different communities have different methods to arrive at consensus. These methods needed to be customized to the local settings to enable the execution of good, people-centered arrangements.¹⁵ Pretty and Ward provide a useful framework for investigating social capital in any particular setting. They consider social capital to consist of four major components: trust; reciprocity and exchange; common rules, norms and sanctions; and connectedness, networks and groups.¹⁶

Social norms are principles that guide individual behaviors based on shared beliefs about how individuals should behave in a particular situation.¹⁷ As such, social norms are typically unconditional, which means group members are expected to observe/abide by the norms/rules. But even when they are conditional, they are not necessarily “future-oriented,” and more importantly, norms are shared by people whose approval or disapproval, to certain extent, sustains them.¹⁸ The concept of norms is based on three dimensions: expectations, values, and behavior.¹⁹ Elster has suggested that people are predisposed to adherence to norms because of their tendency to avoid the “feelings of embarrassment, anxiety, guilt, and shame” that they

may suffer when going against the norms, or they wish to conform to norms for positive emotions.²⁰ According to James Coleman, the need for a social norm arises in situations where actions of one individual affect other people around him, or when “actions cause positive or negative side-effects for other people.”²¹

We explore these concepts in our study by examining a case where rice farmers in An Giang, Vietnam were expected to cooperate effectively in order to apply successfully an agricultural technology developed for rodent management. The introduced technology is empirically cost-effective and environmentally friendly compared to existing farmers’ rodent management practice. Thus, our assumption was that the farmers, with their tradition of mutual aid practices, would adopt the technology through voluntary cooperation and organization among themselves to lower production costs thanks to informal transactions, where it is not necessary to monitor and enforce all the transactions.²² However, the trial of the technology was not as expected and its wide-scale adoption seemed challenging, since farmers found collaborating to collectively adopt the introduced technology difficult. Thus, our study decided to look back at the mutual aid farming practice of rice farmers in the past, such as when they had to collaborate in irrigation, labor exchange, and in other activities beyond farming. Yet, at the time this study was done in 2007, rice farmers no longer adopted mutual aid practices. Therefore, collaborating with each other at the field level to collectively adopt the introduced technology for rodent management was challenging. By analyzing the socioeconomic constraints that rice farmers faced in adopting the introduced rodent management technology, we found that social capital (manifested in trust, norms of reciprocity, and social networking) among rice farmers had declined. Consequently, organizing their cooperation to adopt the introduced technology for which they had no strong demand (primarily because they can use chemical controls instead) proved extremely difficult. Our findings suggest that when collective works are required among farmers, such as might be the case with introduced agricultural and rural development projects, it is important to understand the existing level of social capital among the target community, and to determine if such stock of social capital is sufficient to facilitate long-term collective action so as to design an appropriate development intervention approach.

Methods and Data

We used a mixed methods approach for this study. First, a comparative historical method was used for the analysis of academic literature on the history of cooperative farming techniques and mutual aid in particular. Then, for understanding of the contemporary context, we purposely selected two districts—Tri Tôn and Tịnh Biên of An Giang province in the Mekong Delta—to allow in-depth study (see Figure 1 for location of the study site). We chose these districts for two reasons: first, they are typical of intensive rice-growing areas in the Mekong Delta and have experienced the same historical events as other parts of the Mekong. Second, we benefited from a quantitative data set collected under a project that was designed to promote the use of collectively-based environmentally-friendly rodent control management, administered by the Plant Protection Department of Vietnam (PPD) with technical support from the Commonwealth Scientific and Industrial Research Organization (CSIRO) and the International Rice Research Institute (IRRI).

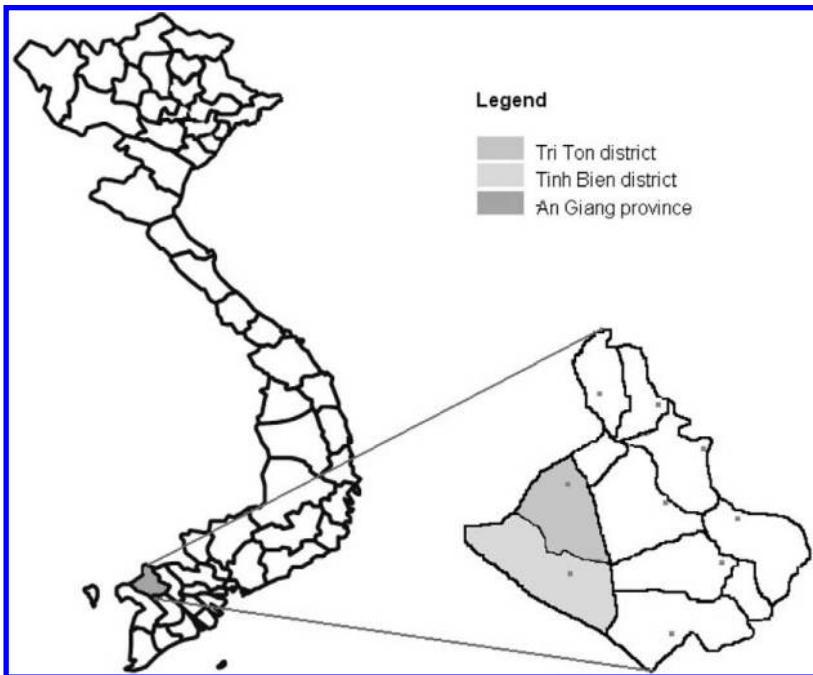


FIGURE 1: Location of Study Sites.

The study in An Giang employed qualitative and quantitative methods. The qualitative method used focus group discussions, key informant interviews, informal interviews, participant observation, field observation techniques, and comparative-historical analysis. Research participants for the qualitative research included rice farmers, representatives from communal government agencies, district departments of agriculture and rural development, district plant protection departments, and local opinion leaders. We recruited ten groups of farmers (five from each selected commune of the two districts) for group discussions, comprising seventy-three farmers in total, and interviewed thirty-three farmers during two field trips that were conducted ten months apart, using a prepared guide for the discussions and interviews. We used the same guides for all research participants. However, the focus of content varied depending on the knowledge, roles, and responsibilities of the research participants.

We used the quantitative data set for the study sites in the Mekong Delta that was collected by the team at the IRRI and PPD under a project funded by the Australian Center for International Agricultural Research. The data set was collected via a household survey of 240 randomly selected participants (120 from each district). These data were entered and checked by the team at PPD, IRRI and CSIRO. We then analyzed the data using SPSS Statistics.²³ We recorded qualitative data using note-taking instead of a tape recorder to allow for open discussion. Notes were taken by two persons and were cross-checked at the end of each day before being transcribed. To ensure trustworthiness, validity, and reliability, in addition to methodological and data source triangulation, we solicited feedback on the data and our preliminary analysis results from research participants in our second trip for follow-up discussions.

History of Social Capital in the Mekong

In the Mekong Delta today, rice cultivation is primarily done individually. Yet in the past, it was done collectively, typically by groups of people who were linked by kin, neighbor and/or friendship. These self-help groups were known as *dàn công*, meaning “labor exchange group” or “mutual aid group.” Mutual aid reflects a form of social capital that persisted in rice farming communities in the Mekong Delta over many decades until it was eventually

abandoned in the 1990s. This section briefly reviews the history of rice farming in the Mekong Delta, focusing on critical social events in history that were described in the literature to have been associated with the ups and downs of mutual aid.

COLONIAL PERIOD (1858–1954)

The farmers in the Mekong delta have a long history of collective farming through the organization of mutual aid groups.²⁴ In An Giang, labor exchange to help each other in rice farming was common from the time of the French colony and it appears from the literature to have been considered a social norm. This norm was so highly observed that seldom were there cases where a group member broke the rules. Breaching the rules or norms would mean that breakers wanted exclusion from the group. The consequences were very likely to impair their prestige, and put their rice cultivation at risk from labor sanctions imposed by other group members.

Under colonization, mutual aid groups were formed to enable farmers from different households to help each other with labor-intensive farm work such as land preparation, transplanting, irrigation, and harvesting.²⁵ People who worked in mutual aid teams were normally kin or residential neighbors who assisted one another in heavy agricultural tasks, and often this assistance went beyond farming to non-farm works such as house repairs or construction of thatched houses. Helping each other in water irrigation, for example, was a particularly important task, as this work is not only strenuous for individuals but also relies on interconnected sluices and canals, making teamwork indispensable. To raise water to an appropriate level, and then to successive fields at different levels, teams of scoopers needed to work together.²⁶

Thus mutual aid groups were considered a “village institution of loose organization but great importance,” in which “each farmer tends to establish a network of relatives, neighbors, and friends within which he exchanges labor in the course of the rice cycle.”²⁷ Mutual aid in farming was particularly common among low-income households. In lower-income families, it was common that “all members are expected to make some direct contribution to the sustenance of the group.”²⁸ In such a collective society, it was considered “repugnant” for farmers to work on their own.²⁹ Mutual aid was

therefore not only an important way of enabling rural people to achieve sufficient agricultural production, but also served important roles in enabling village sociality.³⁰

POST-COLONIAL PERIOD (1954-1975)

During the post-colonial period in South Vietnam, most land was privately owned and agricultural activities were aimed at commercial purposes.³¹ By 1955 and the end of French colonization, approximately 40 percent of the rice land area in the Republic of Vietnam (RVN) was held by just 0.25 percent of the rural population, with these large landholdings belonging to both French and Vietnamese owners.³² The economic stratification of peasants in the RVN was acute because of this land concentration, and resulted in increased numbers of landless laborers and smallholders renting out their labor to middle-class and well-to-do landowners.³³ Throughout the 1960s, as a result of the lingering impacts of colonialism, these large differences with regard to wealth, income and power distribution became more common in South Vietnam. Even in this challenging context, however, reciprocal assistance remained an important component of the labor supply. During the post-colonial period, it was estimated that 75 percent of villagers in South Vietnam remained involved in mutual assistance for agricultural production.³⁴

Labor exchange continued during the post-colonial period and was so common that people who worked on labor exchange teams typically did not get paid. They simply took turns working in each other's fields on a reciprocal basis. One of the typical mutual works that required high cooperation was distribution of water. Well-coordinated irrigation enables sufficient water to be supplied to the paddy fields to ensure optimum crop outputs.³⁵ In the Mekong Delta, working in a collaborative manner with farm neighbors to control water levels through manual irrigation remained indispensable. Despite the necessity for cooperation, however, water management did not always go smoothly and disputes over irrigation sometimes occurred. These disputes became more common after land reforms in 1955 prioritized the establishment of individual private property rights.³⁶

In 1971, a second land reform, known as the "Land-To-The-Tiller" law, was implemented in the RVN. This reform aimed to further reduce land

concentration among the remaining landlords.³⁷ But despite this reform, mutual aid remained popular, according to Nancy Wiegiersma. There were two main factors that supported the continued exchange of labor in mutual aid groups. First, the land reforms in 1971 specified that the maximum area of land distributed to farmers was three hectares, a farm size that would be adequate for a typical household for subsistence farming, but which might require labor assistance from others to cultivate. Second, tenant farmers who cultivated land belonging to others were given priority in land redistribution. This meant the reform helped previously untenured recipients secure a tenured status. This, in turn, encouraged the new landowners to increase investment on their own land and, at the same time, allowed them to remain in their mutual aid groups. These factors explained why labor exchange continued to grow without suffering from the two land reforms. Wiegiersma does note that there was some evidence of a loss of social cohesion in villages following the first land reform in 1955. However, the operation of mutual aid, in aggregate, remained dominant.³⁸

POST-REUNIFICATION (1975-1990)

Mutual aid continued to operate after reunification in 1975. According to Professor Võ Tòng Xuân, during attempts at socialist collectivization in the South from 1976 to 1988, mutual aid groups became even more common.³⁹ Farmers in aid groups continued to support each other in labor-intensive activities, because the means of production (such as tractors, threshers, water pumping machines, and draft animals), which were originally owned individually, had been pooled for use in collectively managed cooperatives. Kirsch notes that during the collectivization era in the Mekong Delta, members of collective agricultural cooperatives still engaged in individual farming on private plots through the support of mutual help groups. By 1985, nearly ten years after collectivization, 80 percent of agricultural households in the Mekong were estimated to still be farming individual plots with the assistance of organized mutual help groups.⁴⁰

Farmers reported that when *lúa mùa*, a traditional rice variety that takes approximately six months to ripen, was still used, labor exchange was vital to rice farming. Cows and buffalo were then the main means of production power. Because cattle were rare, farmers needed to borrow animals from

other farmers to prepare their soil and in return would work for the animal owner. In addition, because the irrigation system was poor in the post-war era, water could not be provided in a synchronized manner. As a result, not all farmers could grow rice at the same time, leaving room for need for labor exchanges.

Other significant trends following reunification in 1975 included government efforts to improve agricultural production in the Mekong Delta. In addition to expanding irrigation systems, farmers also started to use new techniques such as high-yielding varieties and relevant crop protection devices. To accelerate production to fit with the new farming systems, farmers used broadcasting of seed, for instance, in lieu of transplanting, which took considerably more time and labor. Herbicides were increasingly used and the increasing need for labor at peak times became demanding.⁴¹ From 1983, mechanization in the Mekong Delta also started to increase, with the number of large tractors expanding by 60 percent as compared to the situation in 1975.⁴²

In 1988, when de-collectivization started despite labor exchange still being common, the increasing need for labor at peak times began to make it difficult for farmers to fully commit to labor rotation through mutual aid.⁴³ Cecelia Luttrell noted that when labor became increasingly scarce, renting out of labor “has once again become a major component of the rural economy and social structure.”⁴⁴ At approximately the same time in the early 1990s, the government introduced a new rice variety to replace *lúa mùa*, locally called *thần nông* [farm god], whose major characteristic was shortened crop cycles. Together with increasingly synchronized irrigation thanks to government investments, increased mechanization led to declines in need for mutual aid. A further blow to mutual aid occurred under a new land law in 1993. Under the new law, farmland could be transferred, exchanged, inherited, leased, and used as collateral. This freed up the land market and allowed land trading, which eventually led once again to land concentration. By the late 1990s, when farm lands were transferred under the new law, poor farmers began to sell more land, which disrupted farm neighborhoods and social networks.

By the time of our research, these trends appeared to have culminated in a strong decline in mutual aid in farming. Reciprocity among farmers

appeared minimal, with mutual support among farm neighbors being reduced to activities such as observation of one's neighboring farm to check for pests or anything unusual happening. Despite a previous lengthy existence, social norms of reciprocity and mutual aid were nearly absent as a direct impact of recent agrarian reforms, as we explain further below.

Examination of Contemporary Social Capital in the Mekong Delta

In order to assess the impact of the decline of collective farming, we looked at social capital as an indicator of potential for collective support. As we noted previously, social capital has been defined by numerous authors in a number of ways, and the lack of an agreed-upon definition may derive from the nature and focus of empirical studies on which the definitions are grounded. Because social capital is an intangible construct, empirical measures of social capital that are relevant to one culture may be irrelevant in another context.⁴⁵ There is also a lack of consensus on how social capital should be measured.⁴⁶ Despite these difficulties, social capital is commonly described as composed of trust, norms (for example, of reciprocity), and networks (or memberships) that facilitate collective action for mutual benefits.⁴⁷

Social capital can be categorized into two forms. A structural form facilitates collective action for mutual benefits based on roles and social networks that already exist and are enhanced by rules, procedures and precedents. A cognitive form is manifested in norms, values, attitudes and beliefs, and acts to encourage collective action for mutual benefit. These two forms of social capital complement each other. Structural social capital exists in the way people are connected through their networks to support a particular purpose and it is observable and modifiable in one way or another. However, cognitive social capital is not as easily visible because it is manifested through people's attitudes, thoughts and actions.

To investigate evidence of contemporary practices reflecting social capital, we did surveys in two districts of An Giang province in the Mekong Delta. Assessment of social capital in this study focused on aspects that could clearly demonstrate any changes in norms, trust, reciprocity and networks for collective rice farming practices. To better understand associational life and activities in the community, we assessed the degree to which farmers

produced rice individually and without assistance from others and their relations with people beyond their family. To this end, assessment occurred at two levels: the household level (to assess cognitive social capital) and the group level (to assess structural social capital).

FARMERS' PROFILE

Approximately 70 percent of farmers in our survey were younger than 50 years of age. The majority of farmers (nearly 70 percent) had completed primary school education, some (nearly 20 percent) had completed secondary education, and the remainder had a high school education. Within a family, the husband typically had a higher level of education than the wife (see Table 1). Most of the farmers had approximately twenty years' experience in rice cultivation.

TABLE 1: Profile of Farmers in the Study Sites

Characteristics	Mean	Mode	Range	SD
	n=223			
Age (years)	46	43	70	12.276
Household size	4.74	4	13	1.704
Number of children	2.9	2	9	1.664
Farming experience (in years)	18.9	20	58	10.892
Time allocated to farming (months per year)	6.98	6	11	2.016
Membership in local organizations	2.22	1	5	1.717
Education level (*)	2.35	2	3	0.650

NOTE: On educational level, coding is as follows: 0: Illiterate, 1: Preschool education, 2: Primary school, 3: Secondary school, 4: High school, 5: Vocational school, 6: University.

Most farmers (more than 96 percent) owned their rice lands with the remainder renting fields and working as tenants. The farm sizes varied from very small (less than 0.5 hectares) to very large (more than 10 hectares). (See Table 2). Nearly all (90 percent) of the farmers grew rice as their main crop, and only a very small proportion of them grew a cash crop (primarily cucumbers). They used four modern rice cultivars: IR50404, AG24, OM2514, and IR64 (in descending order of frequency of use).

TABLE 2: Landholdings Distribution among Farmer Households (n=226)

Area of landholdings	Frequency (hhs)	Percentage of sample
<0.5	22	10%
0.6-1	44	19%
1.1-2ha	62	27%
2.1-3ha	38	17%
3.1-4ha	21	9%
4.1-5ha	7	3%
5.1-6ha	15	7%
6.1-10ha	9	4%
>10ha	8	4%

NOTE: Mean: 2.97, Median: 1.90, Mode: 1.00, SD: 3.93, Variance: 15.50, Range: 26.82, Min: 0.18, Max: 27.00.

Farmers were busy throughout the year, especially during the cropping seasons. The majority were busy four to nine months a year for their farm work (see Table 3). To overcome family labor shortages they hired external laborers for rice farming for most stages of a crop. Hired labor typically came from the local neighborhood or from neighboring communes and were expected to undertake heavy tasks such as dike repair, sowing of rice, replanting of young rice (to replace plants that failed to survive after sowing), pest control, harvesting, threshing, and transporting of produce. Most hired laborers for the cropping season were male, except at the harvesting stage when more females were employed. A farmer with large landholdings hired up to seventy female laborers at a time for rapid harvesting (see Figure 2).

Farm machinery and tools were very common among the households surveyed. The most widely used farming equipment was water pumps and

TABLE 3: Typical Time Allocation for Agricultural Activities (n=268)

<i>Duration of farming activities</i>	<i>Percentage of hhs</i>
1-3 months	3%
4-6 months	46%
7-9 months	41%
10-12 months	10%
	100%

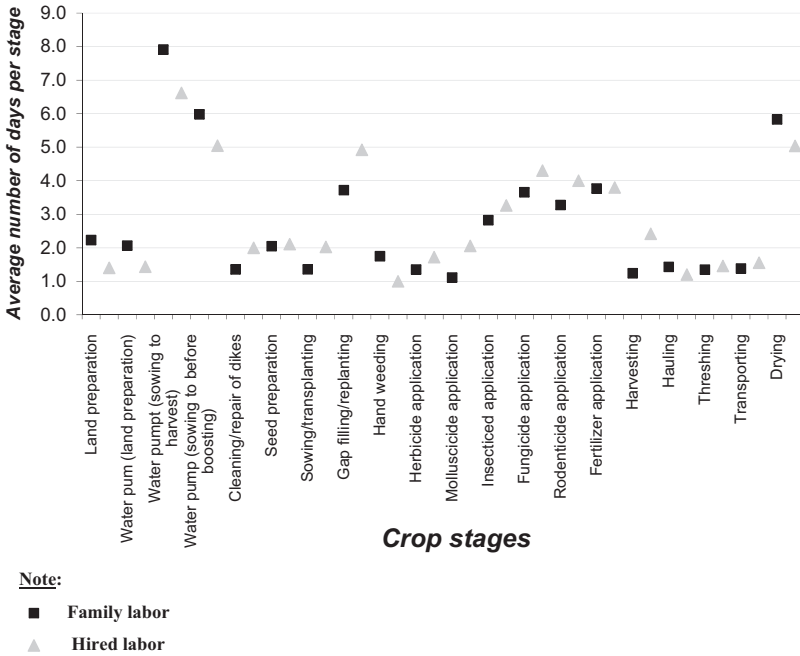


FIGURE 2: Labor Distribution in the 2006 Summer-Autumn Season.

pesticide sprayers. Motorcycles were also widespread. Boats were available in thirty-seven respondents' households in this flood-prone area. Fish ponds and rice drying courts were only found in well-to-do households.

HOUSEHOLD LEVEL SOCIAL CAPITAL

To assess the level of social capital for an individual farmer, we investigated the degree to which a farmer produced rice individually by assessing key issues: their rodent control practices; their confidence in making daily decisions; the degree to which they hired labor; the available means of production; and their access to credit.

Rodent Management Practices

Farmers were found to conduct rodent management on their own unless they were encouraged to take collective action at the instigation of the local government. Despite farmers consulting a number of sources for advice on rodent management, their own decisions based on their own experiences

predominated ($\chi^2 = 12.125$, $df=2$, $p=0.002$). Other sources of advice normally had no influence on how and when rodents would be controlled.⁴⁸ The fact that rodents were controlled individually indicated farmers had confidence in the way they managed rodents, and they did not need to rely on actions of others to influence their decisions.

Farmers' Confidence

It was expected that farmers' ability to make general decisions in their daily life would correlate with their experience, farm size, quantity of production, crop yields, age and formal education.⁴⁹ However, quantitative analyses show that, of these factors, only education was associated with farmers' ability to make daily decisions, and this relationship was relatively weak ($G=0.215$, $p=0.038$).⁵⁰ This result suggests that there could be other unstudied factors that are more fundamental to farmers' decision-making ability.

Labor Availability

Most farmers hired local laborers to assist them in their rice cultivation. Depending on farm size, the number of laborers hired ranged from a few to tens of laborers engaged in different tasks throughout the season (see Figure 2). Very large landholders might have hired hundreds of laborers over a whole cropping season. There were no cases where farmers reported exchanging labor with other farmers through mutual aid. The widespread availability of hired laborers suggests that farmers can afford to pay for hired labor to support their rice production, and that they are no longer reliant on kin, neighbors or friends.

Means of Production

Most farmers reported having basic production assets to support rice cultivation. Motorcycles and boats were available in many households. Heavy work such as plowing, threshing and transportation of produce could be contracted through local services and equipment rental. Therefore, reliance on manual workers and mutual aid for heavy work has primarily been replaced by mechanization and open markets for services.

Capital for Agricultural Inputs

Agricultural inputs such as seeds, fertilizers, pesticides and the like were normally not purchased by cash but on credit. These services were

competitive and are very common in An Giang, as well as in other parts of the Mekong Delta. Farmers prefer the credit system, because payment does not need to be made until the harvest. Although interest rates were charged for such services (typically ranging from 0 percent to 10 percent per month), the rates were, by and large, acceptable to farmers.⁵¹ This service was so convenient that borrowing of money from family members became rare. In addition to these local credit services, other sources of funding for rice production were available from local banks. However, although loan applications were increasingly easier to obtain, farmers typically only used banks for investments of one year or more or when a large up-front payment was needed. There were no cases where farmers reported borrowing money from neighbors or relatives for their rice farming, suggesting that they are more financially stable in their rice production than they were in the past. Indeed, given the fast-growing credit market, financial services were easily accessible at the community level, which released farmers from reliance on traditional sources of financial support such as kin, friends or neighbors (see Table 4).

TABLE 4: Sources of Capital Used for Agricultural Inputs

Source for Input	Number of responses	Percentage (n=223)
Savings	168	39
Input supplier	167	39
Local bank	74	17
Family member	11	3
Leaser	10	2
Cooperative	1	0
Other	1	0
Wholesaler	0	0

The above data suggest that farmers were far more independent in their rice production than in the past. Other supporting evidence also suggested that improved household economic status has allowed farmers to become more self-sufficient. The increasing independence of farmers has meant that they are no longer dependent on their traditional support networks for mutual aid. Therefore, to understand more about how contemporary social capital among farmers has changed with the decline in mutual aid, we

investigated farmers' associational life, especially relationships with residential neighbors, farm-plot neighbors, kin and friends.

GROUP LEVEL SOCIAL CAPITAL

To understand social capital changes at the group level, we investigated farmers' associational life and activities, especially the current state of connectivity within former mutual aid networks (e.g. kin, neighbor and friends). In particular we investigated communication channels and the relationship between these channels and the ability to make daily decisions, associational involvements and memberships, norms of reciprocity and social trust, and the issue of consensus building.

Communication Channels

Farmers reported that the major groups they make daily contact with are their friends, neighbors, and relatives. They frequently meet with these people to discuss issues related to agricultural production. The three most commonly discussed issues are crop production, purchase of agricultural inputs, and marketing of farm produce. Although farmers responded that siblings are the emotionally closest kin, they tended not to be the people that farmers have daily contact with, suggesting that their siblings were not always geographically proximate (see Figure 3).

In terms of ability to make general daily decisions, most farmers reported that they are able to make decisions that affect their daily life: 15 percent said they can always make necessary decisions; 35 percent almost always; and almost 50 percent said only sometimes. Relatives and friends were the primary contributors to the ability of farmers to make daily life decisions, while residential neighbors and farm neighbors were more responsible for farmers' daily agricultural updates. Kin, particularly siblings, appeared less important in agricultural information updates. There was a strong relationship between farmers' ability to make daily decisions and the networks they maintained for daily information updates with friends, residential neighbors and relatives (in descending order of importance).⁵² We also assessed farmers' beliefs about the strength of social cohesion in their village and their perceptions about their personal network, but we found no strong relationship between these two factors.⁵³

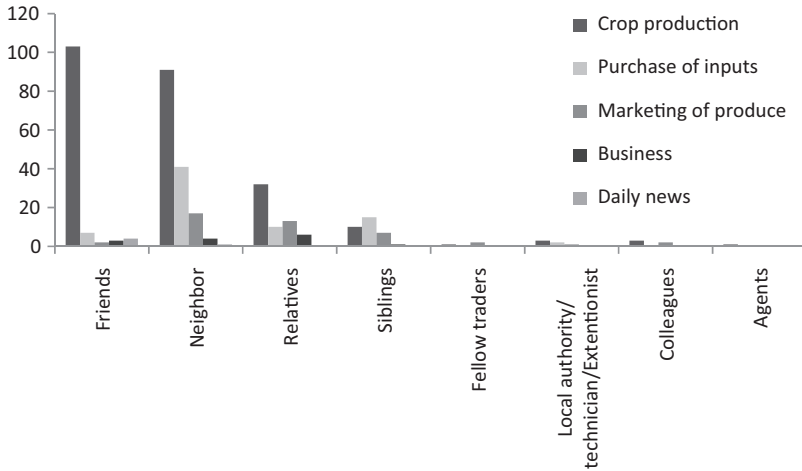


FIGURE 3: Farmer Daily Communication Sources and Topics (n = 223).

It is clear that despite farmers having daily contact with lots of different people, when it comes to day-to-day decision-making, farmers tend to consult the relatives and friends they trust the most and from whom they feel most comfortable making a request. This pattern of communication suggests that friends and relatives do remain important in supporting farmers' daily decision making. However, it appears that siblings are not part of farmers' daily face-to-face information channels for agricultural production support, likely because farmers' siblings are geographically distant. In our assessment of relations and distance between farmers and their networks, it was found that neighboring farm owners are not likely to be farmers' kinsmen (as shown in Table 5). There was a very small likelihood of a farmer having a farm neighbor who was also his kin, which is very different than in the past when farmers and kin were geographically close to each other and might farm plots next to each other. Land law reforms and land markets, as well as migration pressures, were the likely cause of these land ownership changes.

Associational Involvement and Membership

According to Laura Morales Diez de Ulzurrun, interaction within associational activities builds social trust, norms of reciprocity and social networks. These are achieved through face-to-face interactions that help people develop trust with people beyond their usual acquaintances, thanks to

TABLE 5: Odds Ratio (Kin/Non-Kin)

Distance (in metre)	100	200	300	400	500	500- 1,000	>1,000- 5,000	>5,000- 10,000
Odds (<i>kin</i>)	0.452	0.077	0.037	0.043	0.004	0.476	0.244	0.011
Odds (<i>non-kin</i>)	2.212	12.947	26.895	23.091	264.000	2.099	4.096	87.333
Odds ratio (<i>kin/non-kin</i>)	0.204	0.006	0.001	0.002	0.000	0.227	0.060	0.000

NOTE: Odds Ratio (OR) is used to quantify how strongly the presence or absence of property A is associated with the presence or absence of property B in a given population.

positive cooperative outcomes.⁵⁴ In terms of associational activities in the study sites, Figure 4 shows that farmers participated in numerous local meetings, and they tended to participate in neighbor and hamlet meetings more than governmental meetings. Although one-third of farmers claimed membership in the communal Farmers' Association, none of them reported involvement in meetings conducted by this association except via a few meetings of local farmers' clubs affiliated with it. Farmers' official membership in local organizations related to farming was therefore very limited. This situation was also common in other parts of the Mekong. On the part of farmers, it also appears that the demand for networking to support rice farming, both formally and informally, was not strong.

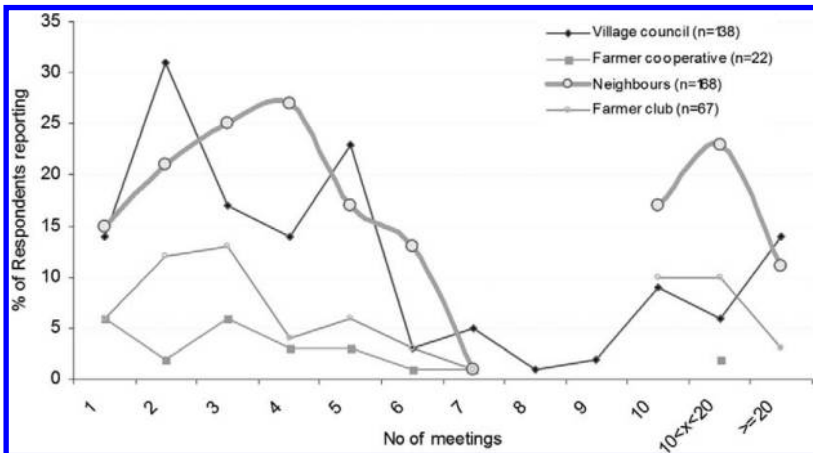


FIGURE 4: Sources of Associational Life and Frequency of Local Meetings.

Despite this, we also noted that farmers were inclined to do charitable works outside of agriculture, especially for their local community. Eighty-three percent of respondents (n=174) reported working with other people in their village or neighbors to do something for the benefit of their community in the past year (see Figure 5), implying that social reciprocity, while on the decline in agriculture, is not totally absent from Mekong village communities.

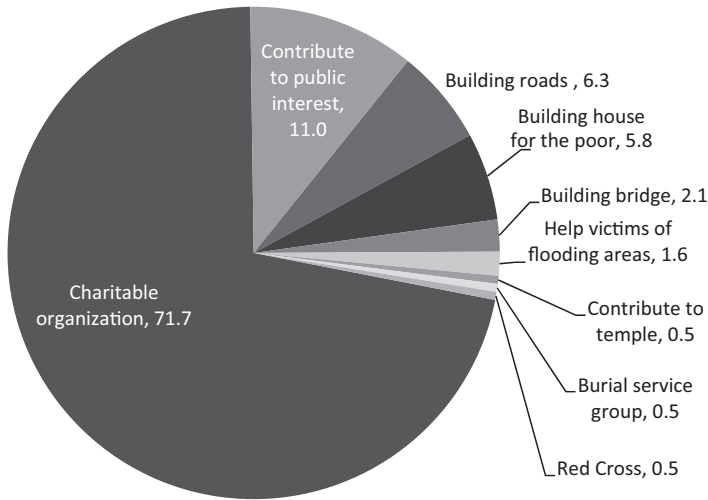


FIGURE 5: Voluntary Works by Type of Works (n=191).

Social Trust

Social trust plays an important role in developing a civic culture and community development.⁵⁵ It reduces transaction costs in economic activities and is considered an indicator of the health of social relations within a community, potentially affecting the way social capital is formed.⁵⁶ It is sometimes used as “the best or only single indicator” to measure social capital.⁵⁷

Residential neighborhood relationships were a good indicator of social cohesiveness and trust at the local level. Generally, it was observed that neighbor relationships were very good. Neighborhoods continued to be the place where farmers went to exchange information, and where young children could be sent when adults worked in their fields. Indeed, neighborhoods were important in the sense that they may be the main geographically

proximate source of support, especially in cases where relatives live farther away. Neighborhoods were also the places where farmers enjoyed their leisure time, having chats or sharing meals. In cases where neighborhood relations were particularly good, money could also be borrowed.

However, when it came to making daily decisions, kin and friends appeared to play a more important role than neighbors.⁵⁸ With the exception of cases where residential neighbors were siblings or relatives, sensitive matters such as money borrowing, personal disclosure, or seeking consultation about one's own family's issues tended to be limited to the farmers' own family networks. Labor exchange among residential neighbors was almost non-existent, despite some reported cases where mutual help was fostered through good relations. In the past, neighbors commonly helped each other repair or build houses. This was based on the understanding that support could be returned when needed. However, this kind of labor exchange was not common, as labor for house repair or construction was typically hired. Unpaid support was only common among siblings and relatives. Nevertheless, some exceptions existed where good neighbor relationships through mutual aid were maintained.

In short, despite neighborhood cohesiveness superficially appearing to be the same as it was when mutual aid groups were still operational, we believe social trust has declined. Farmers explained that with household economic improvements, previously open communication had declined. For example, one farmer suggested that when it came to his neighborhood, only 30 or 40 percent of farmers still depended on neighbors for general or daily help. Nonetheless, farmers did appear to be very keen on doing charitable work. The level of involvement varied among farmers; those with limited financial resources typically concentrating on fundraising, whereas those who were better-off preferred making in-kind or financial support. Donations of rice after harvest were common and regular enough that in many communes special motorboats were devoted to collecting rice donations during harvesting season. However, farmers stated that they preferred donations to go to their own kin.

Farm Neighbors

Farm neighborhoods experienced dramatic changes following the 1993 Land Law and the discontinuation of mutual aid. Land reform in particular led to

land concentration. In the study site, there were many cases where farm lands were owned by people who lived in other districts or provinces; these land-owners did not directly farm, but hired local labor to manage their crops. In Lạc Quới commune alone, it was estimated that two-thirds of rice lands were owned by people who were not local residents. Land concentration was not limited to An Giang, and has been a growing concern in all of the Mekong Delta. Given this problem, it was very difficult to maintain and develop farm neighbor relationships, as there was low capacity to build trust and cooperation due to high rates of absentee ownership. The fact that many owners were not local made it difficult to use newly introduced agricultural technology that required collective action to be successful.

As an example, the issue of inter-field roads to support transport of farm products was sometimes problematic, and a factor which affected farm neighbor relations. Given the lack of roads, negotiation among farmers to arrange for paths to allow produce to be transported during harvest was very important. Transport of produce over fields typically compacts the soil, making preparation for the new crop more difficult; farmers were therefore hesitant to allow pathways for others through their lands. Similarly, disputes over the arrangement of labor for maintenance of irrigation channels among upstream and downstream farmers was not always smooth, making good relationships among farm neighbors more challenging.

Farmers who reported close relations with both residential neighbors and farm neighbors were becoming rarer; likewise for the case of kin. However, in places where land fragmentation was less extensive and farmers were local residents, communication was frequently maintained among farmers with adjacent fields, usually on a daily basis. At the field level, daily communication was most commonly observed between residential neighbors, followed by relatives and siblings. When communication was maintained daily, general help between farmers, such as borrowing money, child care, exchanging of farming equipment, etc. was more likely to occur.⁵⁹

Consensus Building

When a collective action was needed, farmers reported that they required the facilitating role of the communal People's Committee and Farmers'

Association, who could initiate mobilization to achieve a particular collective action. Farmers indicated that they found it hard to reach a consensus on their own in their daily farming activities. They stated that arriving at a consensus among them was very challenging, and that their fellow farmers did not typically have a strong and long-term commitment to an agreed set of actions. This was due to differences in opinions and preferences for decision-making regarding issues that take place on one's own field.

At the field level, it was evident that farmers no longer relied on their traditional sources of support from residential neighbors, farm neighbors and kinsmen to cultivate their crops. The need to cooperate among rice farmers at the field level no longer seemed to be a rational choice for rice farmers, as taking care of oneself appeared to be the best choice. Farmers themselves acknowledged that they are now more individualized than before, though they said the values of kinship and good neighbor relations remain unchanged.

Discussion and Conclusion

The foregoing analysis provides clear evidence of changes in social capital among rice farmers in the Mekong Delta of Vietnam. The discontinuation of mutual aid among rice farmers was due to several factors that cumulatively contributed to the process of change. Increased use of modern rice varieties, apart from their benefits in productivity, augmented labor pressure on farmers' traditional support networks. Improved access to reliable irrigation, in addition to enhancing land-use productivity, also introduced an increasing labor shortage, especially at peak times during cropping seasons. Further, given the enactment of the revised Land Law in 1993 that recognized farmers' individual right to land use, the land market was freed up, resulting in increased land trading. The consequence has been an increased disparity of land size, as poor farmers sell off their lands due to economic shocks. These changes in land ownership have disrupted the relationships that traditionally fostered labor exchange practices. The decline in the exchange of labor was then exacerbated by the liberalized rice market, which encouraged private rice production (see Figure 6).

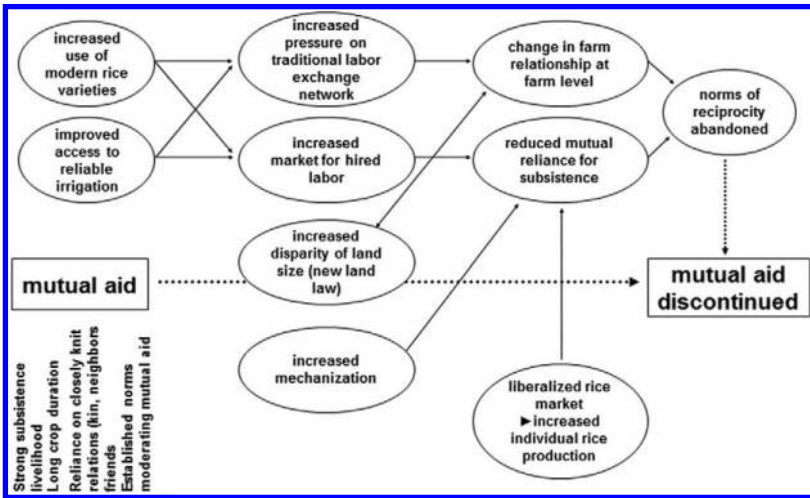


FIGURE 6: Illustrative Causal Mechanisms for Decline of Mutual Aid.

When the reliance on labor from mutual groups decreased, farmers moved away from norms of reciprocity. As traditional labor exchange networks for rice production gradually declined, there was a concomitant increase in individual rice farming practices. The consequence, at the end of this process, was a decrease in reciprocity among farmers of the same farm neighborhood, resulting in challenges for consensus building and collective action. Although kinship relations and residential neighborhoods remain important for spiritual and social aspects, they no longer play the role that they used to in terms of group farming. Overall, individual rice farming has become the new norm in An Giang. While the social factors that influenced these changes in social capital in rice farming practices could be different in other parts of the Mekong Delta, given the cascading impact of each factor we are likely to see similar consequences elsewhere as a result of these processes and policies of agrarian reform.

We conclude from the above analysis that the historical existence of mutual aid was fostered simultaneously by a high need for collective farming to ensure subsistence and the availability of closely knit human networks, or social capital, that facilitated the exchange of labor. The degree of cooperation at the farm level has decreased compared to the past, as reflected in the levels of trust, networks, and norms of reciprocity. With the ongoing land

concentration due to land markets, and the lessening dependence among rice farmers on mutual aid, the rebuilding of relationships among rice farmers has become challenging. This new situation resulted in certain difficulties for the mobilization of collective action for collective goods at the field level, causing issues for projects requiring collective action. Restoring social capital among rice farmers in the Mekong Delta will require government, or development partners, to understand the existing stock of social capital of the target communities to appropriately design their development intervention approaches.

Our study suggests that given the decreased stock of social capital among rice farmers in the Mekong Delta, agricultural production activities that require consensus building for long-term collective action need to be thoroughly analyzed to understand potential constraints, and there is a need for careful design of development programs and interventions. Failure to analyze social capital among the target groups may result in program failure, particularly in agricultural production projects or natural resources management of common pool resources that require collective action. It is important for any development program that requires collective action that social capital be analyzed among the target groups in order to make appropriate interventions right from the design stage of the program. Since social capital is important to the success of collective action, a lack of social capital may become a potential risk to intended development outcomes if it is not well understood. The government may need to initiate actions at the policy level to overcome the decreasing stock of traditional social capital, particularly for rural agricultural development in which sustainable collective action of target communities determines the success of the planned development programs.

LE ANH TUAN* is Social Development Specialist at the World Bank, Vietnam. Alison Cottrell is Associate Professor in the College of Marine and Environmental Sciences, and Deputy Director of the Centre for Disaster Studies at James Cook University, Australia. David King is Associate Professor in the College of Marine and Environmental Sciences, Director of the Centre for Disaster Studies, and the Centre for Tropical Urban and Regional Planning, James Cook University, Australia. This paper is the result

*author for correspondence (leanhtuan.hp@gmail.com)

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ABSTRACT

This paper describes how the social capital of rice farmers of the Mekong Delta of Vietnam, as manifested in the tradition of collective farming practice, has changed. Collective rice farming persisted for decades, irrespective of critical events that challenged its continuation, due to two key factors: the high need for collective farming to ensure subsistence, and the availability of a closely knit social network that facilitated the exchange of labor. Despite its longevity, the practice of collective farming, particularly in terms of labor exchange and mutual aid in farming activities, has not been maintained under current agrarian reforms. Land reform, increased mechanization, and shortened crop cycles leading to labor shortages have all resulted in individualized rice farming, making mobilization for spontaneous collective action at the community level challenging.

KEYWORDS: *social capital, rice farming, collective work, Mekong, agriculture, agrarian reform*

Notes

1. Some of the typical works that we reviewed to understand the changes in social capital in the Vietnam include: James B. Hendry, *The Small World of Khanh Hau* (Chicago: Aldine Publishing Company, 1964); Gerald Hickey, *Village in Vietnam*, (New Haven: Yale University Press, 1964); Benedict Kerkvliet and Doug Porter,

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 7. Alexis de Tocqueville, “Of the Use which the Americans Make of Public Association in Civil Life,” “Of the Relation between Public Association and the Newspapers,” “Relation of Civil to Political Associations,” and “How the Americans Combat Individualism by the Principle of Self-interest Rightly Understood,” [1840] in *Democracy in America*, vol. 2, ed. Philips Bradley (New York: Alfred A. Knopf, 1990: 24, 106), cited in Ostrom and Ahn, *Foundations of Social Capital*; Lyda Judson Hanifan, “Social Capital – Its Development and Use,” [1920] in Elinor Ostrom and T.K. Ahn, *Foundation of Social Capital* (Cheltenham, United Kingdom: Edward Elgar Publishing, 2003), 78–90; Jane Jacobs, “The Uses of City Neighbourhoods,” [1961] in Ostrom and Ahn, *Foundation of Social Capital*, 112–40; and Pierre Bourdieu, “Ökonomisches Kapital, kulturelles Kapital, soziales Kapital” [Economic Capital, Cultural Capital, Social Capital] in *Soziale Ungleichheiten*, ed. Reinhard Kreckel (Goettingen: Otto Scharz & Co., 1983), 183–98.
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23. Although the sample size is 240, the n value varies in Tables 1-3 because only valid responses were analyzed.
24. See for example Kerkvliet and Porter, *Vietnam's Rural Transformation*; Ottfried Kirsch, *Vietnam: Agricultural Cooperatives in Transition Economies* (Heidelberg: Research Centre for International Agrarian and Economic Development, Discussion Paper No. 59, 1997); Pingali and Võ Tòng Xuân, "Vietnam: Decollectivization and Rice Productivity Growth"; and Wiegiersma, *Vietnam: Peasant Land, Peasant Revolution*.
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28. Hickey, *Village in Vietnam*, 245.
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30. Kirsch, *Vietnam: Agricultural Cooperatives in Transition Economies*.
31. Rambo, *A Comparison of Peasant Social Systems*.
32. Pingali and Võ Tòng Xuân, "Vietnam: Decollectivization and Rice Productivity."
33. See Rambo, *A Comparison of Peasant Social Systems*, and MacDonald Salter, "The Broadening Base of Land Reform in South Vietnam," *Asian Survey* 10, no. 8 (1970): 724–737.
34. Wiegersma, *Vietnam: Peasant Land, Peasant Revolution*.
35. Hendry, *The Small World of Khanh Hau*.
36. Hendry, *Small World of Khanh Hau*; Wiegersma, *Vietnam: Peasant Land, Peasant Revolution*. These land reforms brought land to 148,400 families by 1961; see Salter, "The Broadening Base of Land Reform."
37. By 1970, about 60 percent of rice land was still farmed by tenant farmers with each tenant farmer averaging two hectares. The rent that they had to pay was around 25 percent or more of their crop. See Wiegersma, *Vietnam: Peasant Land, Peasant Revolution*.
38. Wiegersma, *Vietnam: Peasant Land, Peasant Revolution*.
39. Võ Tòng Xuân, "Rice Production, Agricultural Research, and the Environment," in *Vietnam's Rural Transformation*, ed. Benedict Kerkvliet and Doug Porter (Boulder, CO: Westview Press, 1995), 185–200.
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 47. Krishna and Uphoff, “Mapping and Measuring Social Capital.” Likewise, trust, reciprocity, exchange, common rules, norms, sanctions, and connectedness, and networks and groups, as identified by Pretty and Ward. See Pretty and Ward, “Social Capital and the Environment.”
 48. In our statistical analysis, p values were insignificant for other reported sources of advice, including farmers’ partners, extension staff, mass media, training knowledge, or agricultural input suppliers.
 49. Before doing statistical tests, we recorded data for these variables in groups to avoid skewed frequency distribution across the groups and to ensure representativeness for each group level.
 50. Goodman and Kruskal’s gamma test was used to measure rank correlation: $G=0.103$, $p=0.209$ for age; $G=0.053$, $p=0.555$ for experience; $G=0.003$, $p=0.972$ for rice area owned; $G=0.08$, $p>0.05$ for total production quantity; $G=0.058$, $p=0.622$ for yield level.
 51. Interest rates charged to farmers by local suppliers varied from 0 to 10 percent per month (mean=2.3, mode=3, SD=1.184).
 52. $G=0.308$, $p=0.004$, $n=147$ with relatives; $G=0.429$, $p=0.000$, $n=179$ with their friends; $G=0.122$, $p=0.203$, $n=163$ for house neighbors and $G=-0.126$, $p=0.141$, $n=170$ for farm neighbors.
 53. Partial correlation shows that the association between farmers’ ability to make daily decisions and the degree to which they assessed the social cohesion of their village ($r_s=0.399$, $p<0.01$) becomes even higher when controlling for “relatives” ($r_{\text{relatives}}=0.424$, $p<0.001$) and “friends” ($r_{\text{friends}}=0.428$, $p<0.001$).
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58. Though the composition of the friend network is not known in detail, the frequent report of the usefulness of this channel indicates that farmers place a high level of trust in their friend network, which supports them in addition to their kinship network.
59. Chi-square = 12.533 with $df=1$, $p<0.001$, $n=79$.