

An investigation into the relationship between household welfare and social capital in eastern Uganda

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Introduction

This paper studies the relationship between social capital and household welfare. Social capital is taken to mean, very simply, 'durable social networks'. The relationship is investigated using survey work conducted in two villages in eastern Uganda. The surveys gathered information on the quality and extent of people's participation in local organizations, as well as household welfare. To organize the analysis of the data the paper utilizes econometric tools designed for investigating the relationship between dimensions of organizational social capital and household welfare. At the same time, the paper recognizes some of the limitations inherent in relying on econometric work to analyze this relationship. As such, the econometric analysis is limited in examining only social capital as expressed through household participation in village level organizations. Our results show that "organizational social capital", as we have termed it, has only a small effect on household welfare. That said, we also draw on anthropological work conducted in the two survey villages, and from ethnographic material we argue that social capital, as expressed in less institutionalized social networks, has a significant affect on household welfare. In others words, it is the social capital that resides in such networks as personalized relationships, peer groups, or brokerage positions between development projects and the village that has a strongly determinate effect on household. Organizational social capital, which is the type of social capital 'captured' in village level survey work, does not help us explain the most significant part of the relationship social capital and household welfare.

The paper is organized as follows. Section 1 discusses the literature on social capital as pertains to the paper. Section 2 introduces observations on the social characteristics of the Iteso, whose culture dominates the two study villages. Section 3 presents the data set, how it was designed, implemented and organized. Section 4 discusses descriptive results in terms of organizational social capital and household welfare. Section 5 revises this discussion by using regression models of household welfare on social capital. Section 6 draws our attention to the limitations of the paper and the need for further research.

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The literature on social capital and household welfare

We take the following definition from Pierre Bourdieu as our definition of social capital (1986):

[that it is] the aggregate of actual and potential resources which are linked to the possession of durable networks of more or less institutionalized relationships of mutual acquaintance or recognition.

This definition reflects the complexity of the relationship between social and economic spheres, which is the relationship social capital attempts to develop and investigate. Bourdieu accepts the 'more or less' nature of social relationships, the fact that they may or may not be highly institutionalized, which is to say that they may or may not be found in formal organizations.⁴ This is important to the analysis of the paper because it tells us that the durability of social relationships is not dependent on organizational structures, and though social capital may reside in organizational memberships it can also reside in peer groups or informal networks. These durable networks, formal or informal, are then linked to the 'aggregate of actual and potential resources', which can be taken to mean that there is a stock of social capital available to the individual actor, which can then be utilized for individual gain. One area where social capital is expressed is in the economic sphere, where it acts as a resource, generating welfare effects. A further comment is that Bourdieu's definition it is necessarily complicated, it is not interested in helping us define measures that capture social capital. His definition is concerned with providing an appropriate way of observing the relationship between social and economic spheres of action.

There are alternative definitions, often more positivist than that offered by Bourdieu; there has been a desire to avoid his 'more or less' shrug (Glaeser, Laibson and Sacerdote 2002).⁵ There is also a concerted effort to assert that social capital is a "good thing", that high stocks of social capital produce generalized welfare or promote economic and social development. One such example is the definition adopted by studies examining the relationship between village level organizations and household welfare – studies such as this. More often than not, social capital is defined by the limitations of the data, and becomes 'the quantity and quality of associational life and the related social norms' (Narayan and Pritchett 1999). This definition is useful only insofar as it accepts the role of social norms (trust, reciprocity, individualism and so forth), and the part played by associations. At the same time, the definition limits its understanding of durable social networks to 'associational life', taken to mean church groups, burial societies, Parent Teachers Associations and the like, which are the types of social networks most easily enumerated in survey work. This reduced-form approach overlooks the role of less institutionalized social networks, such as peer groups, or networks that exist beyond the village (extra-local networks). These looser social networks are significant in rural Africa, given the generalized limitations of the state and civil society organizations, and the typically high levels of intra-community conflict (Berry 1993, Ferguson 2000, Francis 2000).

Bourdieu's definition is sufficient for this study, which places a concomitant limitation on what we can and cannot say in terms of the empirical data: we do not, for example, claim to 'capture' all that social capital is, in our survey work. The survey investigates only that social capital which is expressed through household participation in village level organizations, which we have termed, "organizational social capital". To study the relationship between organizational social capital and household welfare, we have constructed a questionnaire that allows households to describe and evaluate the quality and quantity of their participation in village level organizations. Out of these

⁴ In the interests of analytical clarity, the paper is strict in its use of the terms 'organisation' and 'institution'. Following on from North's work (1990) we define organisations as the 'structures to human interaction', and institutions as 'the rules of the game in a society, or, more formally, are the humanly devised constraints that shape human interaction. (North 1990: 3-5). Put more simply, an organisation would be a church committee, a village council or a clan. Institutions are the norms or rules which help these organisations to function; they are codes of conduct, formal or informal. This distinction is useful in that Bourdieu seems to anticipate North in his definition of social capital as 'institutionalised relationships' which may, or may not take organisational form. Other social capital studies use 'institutions' and 'organisations' interchangeably, which follows most of the social science literature.

⁵ In his turn, Bourdieu is restating the formulations of others. Economic theory, for example, has the work of Mark Granovetter (1973) arguing for a re-socializing of economic man.

questions, a series of measures and indexes can be developed, which serve as proxies for claims made in the literature (see box 1). For example, the literature on social capital argues that heterogeneous networks – networks made up of "different" sorts of people – have higher welfare effects than homogeneous networks, what has been termed the difference between "bridging" and "bonding" social capital (Putnam 2000, Narayan 2000). As such, we ask respondents to evaluate the heterogeneity of the organizations they belong to, to evaluate whether the organization is composed of people from different clans, churches, age groups and so forth. From these separate response we construct a heterogeneity index. Of significance to the design of the survey, and the measurements used, is a set of studies commissioned by the World Bank (Grootaert and van Bastelaer 2002, Narayan and Pritchett 1999, World Bank 1998a and b).

At the same time, the study recognizes the role of 'less institutionalized' (but durable) social networks in determining household welfare. Peer groups, extra-local networks, and informalized social relationships are brought into the analysis of the paper. This is possible, because the survey work was undertaken in villages where ethnographic work has been conducted. As such, there is a bank of non-survey work to broaden out the analysis, which is gathered from interviews, participant observation, and informal discussions. Furthermore, the paper also makes use of the much broader anthropological literature as pertains to discussions of social networks and household welfare (Henriques 2002, de Berry 1999, Heald 1989, Vincent 1982, 1976, 1971), and the paper makes a significant contribution to the social capital literature simply by incorporating anthropological information. This may seem to be an unremarkable thing to do, and yet grounded research from a discipline other than economics is absent from other studies of household welfare and social capital. As one critic observes, social capital which was an attempt to bridge the gap between economics and other social sciences, has had a tendency to de-contextualize and de-politicize the social sphere (McNeill 2003: 8).

A final observation, and an extension of McNeill's commentary, concerns the way in which "social capital" is bounded to present-day formulations of government policy or development assistance; it has become an "operationalized" concept (Ibid: 8). This partly explains why definitions have been shifted around, and why the concept has been loaded with positivist or normative attributes. The research of Robert Putnam, for example, depends on the normative assertion that social capital is closely connected to ideas of 'civic virtue' (cf. Quibria 2002). This has little in common with Bourdieu's definition, and fails to capture 'durable networks' present in the Mafia or patron-client relationships, where welfare outcomes are far-removed from any idea of virtue. James Putzel has referred to this as the 'dark side' of social capital and if it is to be observed, rather than set aside, it requires a more open definition (Putzel 1997). In a different vein, World Bank researchers, investigating the relationship between village level organizations and household welfare argue that social capital is defined as 'the norms and networks that enable people to act collectively', eliding discussions of 'institutionalized relationships' with ideas of collective action (Narayan and Pritchett 1997, 1999, Grootaert, Swamy and Oh 1999b).

This has made social capital the subject of heavy criticism. Partha Dasgupta argues that that it is ragbag of ideas throwing together beliefs, behavioral rules, and interpersonal links, 'without offering a hint as to how they are to be amalgamated'. In a similar vein Steven Durlauf argues that empirical work does not show how identification claims are proposed, tested and verified in a sufficiently robust way (Durlauf 2002: F474). And yet the observation that social networks act as a resource, affecting welfare outcomes, still stands. One way to proceed, therefore, is to take a carefully delimited approach to the survey. As such, we claim only to have measures that describe the quality and quantity of household participation in village level organizations. This allows us to investigate a relationship between organizational social capital and household welfare through econometric analysis. At the same time, there are beliefs, behavioral rules, and inter-personal networks, which are not measured in the survey work. The next section, which draws on ethnographic work and the available anthropological literature on the region shows how these other aspects of social capital can be brought into – if not 'amalgamated' into – the analysis.

Social characteristics of the Iteso of eastern Uganda

Agolitom and Oledai sub-parishes are located in Kumi District, Uganda. The two villages are dominated by the Iteso ethnic group, and the villages are composed of 134 and 126 households, respectively. In the subsequent discussion we sketch out some of the dominant organizational principles at work in Iteso society, as this will help organize our later analysis. This descriptive section is based on a reading of available information on the Iteso, and is presented in a way that appropriate for discussing social capital, that is to say the way 'durable social networks' are established or undermined. We outline three major characteristics which define social organizations in Iteso society: individualism, egalitarianism, and personalized networks. Each of these characteristics make it hard for the Iteso to generate stable, well-functioning organizations at the village level. These characteristics are the outcome of lengthy historical processes are embedded in social relationships, they cannot be easily undone.⁶

The Iteso, or, more correctly, Iteso men, are individualistic in how they approach social relations. They are traditionally a cattle-keeping society – pastoralists – where patterns of social organization date back to pre-colonial times. In the period prior to colonial expansion, by the British (i.e. pre-1860s Teso) the social system depended on each man moving with his cattle in the long dry season in search of fresh pasture for his cattle. This has left a strong imprint on views of social identity and manhood, even though the colonial period would impose cotton as a cash-crop and, therefore, would turn the Iteso into sedentary farmers. At its core the conception of manhood in Iteso society is still dependent on ideas of cattle ownership.⁷ A man only able to marry if he owns cattle, which forms part of the brideprice. He is only able to establish a household, independent of his family or clan, with the ownership of cattle. The significance of this is a man with cattle - which is the only type of 'man' in Iteso society – regards himself as socially autonomous and self-sufficient. Men do not presume the need for social organizations, even if social organizations are present in Iteso society.⁸

At the same time, individualism is set alongside the persistence of familial social organization, many of which are clan-based. An area the size of Agolitom or Oledai would typically contain several clans (*ateker*) and burial societies (*amorican*). Clans are mostly concerned with questions of land ownership (as land is held collectively, in theory), and burial societies are where members join together to contribute money towards burial costs. Furthermore, there are drinking groups, farm labor groups (*aleya*), brick-making groups (*amatapalin*) and rotating credit groups for women (*abukonikin*). In other words individualism of the Iteso has to be mediated through social organizations, and this produces a series of tensions, where organizations, typically reliant on co-operation are undercut by a pervasive individualism. In Oledai and Agolitom, village level organizations are regularly undermined by intractable conflicts, where various individuals refuse to accept the legitimacy of organizational structures.

The second characteristic in Iteso society is egalitarianism; which can be seen as an extension of individualism. In this case egalitarianism is used to refer to way individual men regard themselves as the equal to all other men. Each man knows that he is, in principle, entitled to the same level of

⁶ Avner Greif develops an historical framework for analysing the relationship between cultural beliefs and the organisation of society, focusing on the collectivist and individualist societies of the Maghribi and Genoese cultures of the early middle ages. This paper is indebted to Greif's framing of this subject matter, and his argument for the 'theoretical importance of culture in determining institutional structures, in leading to their path dependence, and in forestalling successful intersociety adoption of institutions (1994: 912).

⁷ This pattern of manhood can also be observed, a more extreme form, among the Karimojong and the Maasai, both of which remain pastoralist (Gray 2000).

⁸ During the first half of the twentieth century, the British introduced cotton as a cash crop, and the Iteso quickly moved from a pastoralist economy, towards a cash-cropper economy (Vincent 1982). At the same time, the Iteso retained their culture, and profits were driven back into the acquisition of more and more cattle, rather than investing in business. The cotton-cattle complex was made possible by the arrival of large number of Asians (mostly Gujuratis) in the 1920s, which provided the physical and economic infrastructure; they built and owned shops in the trading centres, ran the cotton ginneries, and supplied agricultural inputs. This situation came to an abrupt end in 1972, when Idi Amin's 'economic war' led to the expulsion of all non-citizen Asians from Uganda. The cotton economy was nationalised, and quickly fell into disrepair, both due to corruption at the top, and lack of organisation at the bottom (Brett 1992).

respect, and though we may imagine egalitarian societies to be places where people busy themselves with recognizing the rights of others, men in Iteso society are concerned with ensuring that their individual equality is recognized.⁹ This creates additional problems for village level organizations, in that any Ugandan village has self-evident hierarchies, which include the village council, primary school committees, and clan leadership positions. The contradiction between hierarchy and equality plays out in social organizations, where the sovereignty of individuals in authority positions is often refused.

A third aspect of Iteso society of importance to the paper is the role of personalized networks. What is meant here, is the way individual villagers develop social relationship independent of village organizations. This is a specific form of social capital, and can be seen as a response to the constraints present in weak existing organizations; it is a form of substitution. Personalized networks are demonstrated in the social relationships developed by entrepreneurial homes where household heads belong to peer groups, political networks, or correspond with friends and relatives in distant towns. This is something developed during the colonial period where certain homes were linked into the patronage of the state or the church. Networks have since developed that link wealthier homes into durable networks unbounded by the borders of the village.¹⁰ The personalized nature of these networks have been entrenched during the post-colonial period, where a violent and unsteady state, as well as weak local level organizations have made homes increasingly reliant on private networks and connections (Saul 1976, Brett 1992).

A final comment, requires us to turn to two recent events which have entrenched each of these characteristics. Firstly, a rebellion from 1986-92, undermined already weak local level organizations. The rebellion was supposedly against the central government (seized by Yoweri Museveni, from western Uganda); it was supposed to be directed outwards. In the village, however, the rebellion turned inwards and young men took up arms against their village leaders (partly an expression of the egalitarianism of Iteso society where there is an engrained dislike of organizational hierarchies). Secondly there was a series of massive raids by Karimojong warriors, who looted the Iteso of their cattle. Both of these events, contemporaneous with each other, have destroyed much of the social and economic base of Iteso society, and entrenched individualist and egalitarian social norms. The 1990s, a period when decentralization and donor-funded development work has tried to recover the economic situation through community level interventions, has had only a marginal impact on poverty levels.¹¹

⁹ This has led Suzette Heald to observe that there is a residual anarchy to Iteso social relations: social organisations are pre-occupied with trying to manage repeated social breakdowns. At its most extreme this can be seen during the rebellion period when social conflict reaches a level where social organisations were shut down altogether (1989, also see chapter one of Peter Henriques' thesis for a review of contemporary Iteso culture and society).

¹⁰ Mamdani argues that the colonial state, at the village level, introduced a system of, what he terms, 'decentralised despotism', where the local "chief" was the agent of customary law (1996). In theory this was the law extant in rural Africa from pre-colonial times, law as custom. Mamdani present this proposition as false, as the agents of the law were also agents of the colonial state. That said, hierarchical "chiefly" structures were present in many Uganda tribes, notably the Baganda to the south, and the colonial state was able to interpose its presence on top of existing forms of authority (though it changed them in the process). For the Iteso, however, there were no such "chiefly" structures; the colonial experience was one of absolute rupture (and it is notable that it was the "chiefly" Baganda whom the British used to subjugate the Iteso in the early part of the last century).

¹¹ A study on chronic poverty in Uganda in the 1990s found that eastern region, dominated by the Iteso had the highest rates of persistent poverty in Uganda. 40.91% of households surveyed did not change their poverty status over the four survey years (1992-96). Put differently, eastern region shows less economic mobility than other parts of Uganda, its poverty is more durable (Okidi and Appleton 2003). For a sense of the overall poverty figures for Uganda, according to the latest household survey in 2000 (World Development Indicators of 2002), the percentage of the population living below the national poverty line is 35.2. Some general figures are GNI per capita is 280USD, life expectancy 43.1 and infant mortality (per 1,000 live births) 77. These basic development indicators have not improved much despite the high levels of growth Uganda has experienced during the 1990s, and regional disparities have worsened considerably, with the north and the east of the country falling far behind the south and the west..

The Data Set

The data set is based on two surveys, a *household survey* and a *village organizations survey*. These surveys were done as a census for approximately 250 households covering in the two sub-parishes of Oledai and Agolitom; in effect, all households, in both villages, were surveyed.

The household survey interviewed one household member, and was designed to generate a ranking of households according to household welfare. The measure we have used as a proxy for welfare is an estimation of monthly household expenditure.¹² In addition, the survey contains questions on household structure, demographics, and durable assets. The form and content of questioning has borrowed heavily from the National Household Survey 1999/2000 of the Uganda Bureau of Statistics.¹³

The village organizations survey was carried out by interviewing one household respondent about the quality and quantity of their participation in organizations at the village level.¹⁴ After enumerating all memberships, the respondent was then asked to rank the three most important memberships. From this list of three the respondent answered a series of detailed questions concerning organizational characteristics, such as the effectiveness of the organizations, the degree to which the respondent participates in the organization, and the heterogeneity of its membership.

During the implementation of the survey in Oledai and Agolitom, we were conscious to capture two elements of organizational social capital under-appreciated in existing surveys. The first is the significance of non-state organizations (clans, burial societies, farm labour groups, churches and so on), which is under-estimated if one compares survey results with comparable anthropological work. In a study of local level organizations in Burkina Faso, for example, survey results show no memberships in "religious-based organizations", for the province of Sanmatenga. (This would mean that not one household stated that they belonged to a mosque or church-based group). The data confounds Pierre-Joseph Laurent's work on the role of Pentecostal churches in the neighboring province of Oubritenga (1994).¹⁵

The second component, insufficiently explained in other social capital survey work, is the number of associational memberships contained within broad organizational categories. If we take Okiror Ben Isaac, a villager in Agolitom, we have one respondent who participates in the local Catholic Church three-times over. He goes to church on Sundays, he is the chairman of the church development committee, and sits on the church executive committee. In other words he participates in the church through three distinct organizational forms. This survey work was, therefore, conscious to capture the three memberships as separate, given that they describe organizations with very different

¹² The estimation of welfare is therefore based on monthly expenditures on basic market goods (cooking oil, salt, sugar, milk, laundry soap) as well as term expenditures on school fees and educational costs. This is used to capture the welfare differences between the homes in the study villages.

¹³ Other social capital analyses, at the micro-level, have relied on household survey data from survey work done outside the specific research project. For example the Tanzania study of Narayan and Pritchett used an earlier human resource development survey from 1993 to generate consumption-expenditure measures for the clusters where they implemented the social capital and poverty survey of 1995, with the accompanying qualifications that arise from using data sets from different years.

¹⁴ The survey was itself modelled on the social capital and poverty survey (SCPS) of the Narayan and Pritchett study in Tanzania (1997). Changes have been made, though, and this is partly a reflection of refinements adopted by later social capital survey work, such as the Local Level Institutions study managed by the Social Development Department of the World Bank (World Bank 1998a and b) and the Global Social Capital Survey implemented in Accra, Ghana and Kampala, Uganda in 1998 by the World Bank's Poverty Group (Narayan and Cassidy 2001).

¹⁵ The Burkina Faso survey also claims that over sixty percent of organisational memberships were in state-organised producer groups (Grootaert Swamy and Oh 1999b: 10). The claim that the state is the dominant organisational actor at the village level may be attributable to survey having been implemented by the CND (*Commission Nationale pour la Décentralisation*), whose work has political implications in Burkina Faso (ref.).¹⁵ By contrast, the enumerators used in this survey were not connected to the Ugandan government, and the survey results reflect well on the available anthropological and sociological literature for the Iteso (Henriques 2002, de Berry 1999, Vincent 1982, 1976, Lawrence 1957).

characteristics. The church development committee, for example, requires a different quality of participation than simply attending the Sunday Mass.

Descriptive data on village level organizations

The following section presents the descriptive statistics of the two surveys. This requires a direction and movement for each of the seven measures of organizational social capital.

It should be made clear that this paper is not an exercise in comparative analysis. Though the subsequent analyses presents data for Oledai and Agolitom separately, as well as in aggregate, these two villages are similar. They are not intended to act as a comparative example, either in terms of their stocks of social capital, or their welfare profiles. The sub-parishes of Oledai and Agolitom reside within the same sub-county of Ngora in Kumi District in eastern Uganda, and do not possess substantially different social characteristics or welfare levels.¹⁶ The similar results are presented in tandem, as a way of demonstrating the quality of the data.

This similarity is evident in Table 1, where organizational memberships are decomposed by their primary function.

Table 1: The most active membership in local organizations

Village	Agolitom		Oledai		Total	
	Number	Percent	Number	Percent	Number	Percent
Type of organization						
Social and Cultural	431	73%	316	70%	747	72%
Production, Farming & Trading	52	9%	43	10%	95	9%
Services and Professional	46	8%	20	4%	66	6%
Credit and Savings	51	9%	55	12%	106	10%
Political	1	0%	7	2%	8	1%
Community and Youth	10	2%	9	2%	19	2%
Other	0	0%	1	0%	1	0%

The majority of memberships, by a considerable margin, are in social and cultural organizations, accounting for 73% and 70% of memberships in Agolitom and Oledai, respectively. This high percentage reflects the dominance of church and clan-based groups, which perform primarily social or cultural functions (see also Table 2). This is in line with anthropological studies of Iteso villages. Joan Vincent, perhaps the most famous researcher to work on the Iteso, emphasizes this in her study of Bugondo parish from the 1960s. Peter Henriques, in his much more recent study of the Mukura sub-county, observes the dominant role of clan-based organizations (2002).¹⁷

Of the remaining 30% of membership these mostly fall into the 'production', 'services and professional' and 'credit and savings groups' categories. These organizations are concerned with economic welfare.¹⁸ What is notable, if we follow this observation through to Table 2, is that a majority of these organizations exist outside the formal sector. This observation is captured by the 166 memberships in 'other' informal organizations (all of which are producer, service and professional, or credit and savings groups), as opposed to the total of 117 memberships in formal organizations. Moreover, the 117 memberships in formal organizations has to include school and village council committees also.

¹⁶ The survey work is done in two such villages for ethnographic, rather than comparative analysis. Oledai and Agolitom had different experiences of the rebellion, one was government-held, the other rebel-held, for most of the period. This is important when it comes to explaining the trajectories of individual social and political actors; it is not significant in the aggregative survey work.

¹⁷ (It should also be noted that the taxonomic division by organizational function is for illustrative purposes; clan-based and religious organizations also provide economic functions.)

¹⁸ Footnote as an example of each category (teachers association and so forth)

Table 2: Memberships in informal versus formal organizations

Most active memberships, informal and formal	Number	Percent
Informal organizations:		
Church group	259	
Clan-based group	488	
Others	166	
Subtotal	913	88%
Formal organizations:	117	11%

Table 2 demonstrates the dominance of informal organizations in the two study villages: 88% as against 11%. The table also is useful as a way of capturing the basic pattern of household organizational membership in the two villages. At its simplest, this pattern is as follows: a typical household is a member of church, clan, and burial society. This three-way division can be read into the 259 responses for church groups and the 488 responses for clan-based groups (which includes clan and burial society). This troika forms the basic organizational structure of Iteso society, and is important from our later regression analysis where 'number of memberships' turns out to be the only statistically significant component of organizational social capital, as relates to household welfare.

Measures of Social Capital¹⁹

Following on from Narayan and Pritchett (1997, 1999) and Grootaert, Swamy and Oh (1999a and b), our aggregative measure of organizational social capital can be decomposed into seven separate measures, each of which contains an argument concerning the relationship between organizational social capital and household welfare. The seven household social capital measures are as follows: *density of membership* (how many organizations you belong to); *meeting attendance* (whether you actively participate in the organization); *decision-making* (whether you have a say in the affairs of the organization); *heterogeneity* (whether you belong to an organization which has very different members); *effectiveness* (whether you think the organization does a good job); *benefits* (whether you think that you and your community have benefited from the activities of the organization); and *contributions* (the extent to which you contribute to the organization, in money or in kind). Each of these measures, as described, is presumed to be more highly correlated to richer households. In other words, a high score in any of these measures indicates a higher amount of that aspect of organizational social capital. In aggregate, these measures act as an indication of the organizational social capital available to the household. The way these measures are constructed, and the logic behind their inclusion in the later analysis, is detailed, in the box, below.

It is worth of noticing the uniformity of the data. In most of the measures there is a directional movement in line with the assumptions made in the literature, where the richest quartile demonstrates higher scores than the poorest quartile. In all of these movements, however, the degree of change is relatively small. If we take the effectiveness index, we note that the richest quartile in Agolitom has an index score of 77.2, and the poorest quartile 75.6. As such, richer homes regard the organizations they are members of, as relatively effective when compared to the views of poorer homes. Intuitively, this makes sense and yet the movement between richest and poorest is captured by a difference of only 1.6, on of a scale of zero to 100. (This same, small shift is true for Oledai, where the effectiveness index gives the richer quartile a score 5.2 points higher, on the zero to 100 scale.)

¹⁹ A further series of clarifications are required. Our survey focuses on the quantity and quality of memberships in organizations, in other words it is concerned only with capturing organizational social capital at the household level. We do not use the social capital measures to develop organizational or community profiles, though there is this possibility. In other words, though we discuss the function of organizations in both villages, our data analysis is restricted to examining the type of organizational social capital available to each home.

For cash and in kind contributions, a measure of support given to organizations, we also find the same pattern, where richer homes contribute slightly more than poorer homes, confirming an assumption that homes with higher welfare levels are more committed to investing in social networks. At the same time, the difference is 7.2 for Agolitom and 9.1 for Oledai. In other words, the result is directional and modest. Similarly the degree to which homes participate in decision-making, a measure of empowerment, is in line with expectations: richer homes claim that they have more say in decision-making than poorer home. Again, this relatively modest, 7.4 for Agolitom and 13.9 for Oledai.²⁰ In a similar vein, the heterogeneity index supports the argument that richer homes are more likely to belong to organizations where people are "different"; however, the difference between the rich and the poor is relatively modest, 2.7 points for Agolitom. (In Oledai, the gap is slightly wider at 6.3.)

Put another way, the results show that the difference between the richest and poorest quartile is both directional and unremarkable. At the same time, there is a subtle difference between the two survey villages, where Oledai consistently demonstrates a slightly wider gap, between rich and poor, than Agolitom. One way of explaining this is due to Oledai's location, near to the trading center of Nggora. In other words, Oledai occupies a more urbanized prospect than Agolitom, and richer homes have the possibility of participating in the greater variety of social networks available in a peri-urban area. This is further captured in the wider gap between rich and poor in Oledai (a difference of 59,996UGS for Oledai and 79,832UGS for Agolitom, in terms of average monthly expenditure).

A further observation is the difference in average monthly expenditure between the richest quartile and the other three quartiles. The gap is extreme, and the richest quartile has an average monthly expenditure nine times that of the second richest quartile. This is partly a reflection of the surveys reliance on household expenditure – consumable goods, and school fees – as a proxy for income, it is also a reflection of the high levels of inequality present in Oledai and Agolitom.²¹ The cost of school fees provides much of the explanation as to the size of the gap in household expenditure between the richest quartile and the other three quartiles. Secondary school education in Uganda is entirely private and school fees, and additional expenses are expensive. Homes which manage to pay secondary school fees are very wealthy by local standards, and belong to an entirely separate economic class. Furthermore, the latter part of the paper argues that this educational gap is central to explaining differences in household welfare, not because educational level is a measure of human capital, but because it is a signifier of household social capital (educated homes are able to develop durable networks, that go beyond the boundaries of the village).

The results in Table 3 capture the idea that villagers are members of many organizations (4.0 per household), and that these organizations are weakly related to welfare effects (the directional movement is small for all but one social capital measure).²² An earlier part of the paper described Iteso society as individualist and egalitarian, with social organizations that struggle to mediate these characteristics. In a particular way, Table 3, capture this in that it shows little difference between the

²⁰ One way of thinking about the survey results, is to compare them to the findings of Grootaert, Swamy and Oh in their Burkina Faso (1999b). The main observation to make here is that our survey results are much more uniformly directional than those of the aggregate results in Burkina Faso. In most cases the richest quintile and the poorest quintile do not demonstrate the highest and lowest score respectively (this is the case for the heterogeneity index; number of meetings; participation in decision-making; cash contribution; and work contribution). Interestingly, the one measure which is strongly directional is 'number of active memberships', which is also the only statistically significant social capital measure when regressed against welfare, in this study (see Table 4 in this paper).

²¹ The expenditure measure captures monthly purchases in the market place (on household staples, such as salt, sugar and laundry soap), and expenditure on school fees, and does not capture household consumption, which would smooth out the results.

²² The average number of memberships in the two villages is much higher than in other social capital surveys in rural Africa, our survey puts the average number of memberships at 4.0 per household, compared to 1.8 in the Burkina Faso study and 1.5 in the Tanzania study. This higher proportion of membership may simply be a reflection of the higher quality survey data. Many areas of rural Tanzania, would expect individual households to participate in a church, a clan and a burial group (Green, 2000).

organizational social capital of richer homes, and that of poorer homes. The incentive to invest in village level organizations is small.

Box 1: Dimensions of Social Capital

Number of memberships

Density of associations refers to the number of memberships listed by the respondent. It is generally assumed that the more memberships a household has then the more possibilities there are for building social networks that promote household welfare. Though the quality, as well as the quantity, of these associations is significant, and is captured in two other social capital measures: meeting attendance, and participation in decision-making.

Effectiveness index

The respondent was asked to describe the goal of the three detailed institutions as being primarily, social, economic or spiritual. Once this was established they were asked whether the institution was effective in meeting this aim. The respondent gave an evaluation on a scale of 1 to 5. A rating of 1 meant that the institution was "very ineffective" and a rating five meant that the institution was "very effective" in meeting its goal. The values taken across the three associations were then re-scaled from 0 to 100, to create an index, a score of 100 that all three institutions were "very effective".

Combined cash and in kind contributions index

Villagers in Oledai and Agolitom contribute towards local institutions through money, and also in kind through labour, agricultural goods. In the case of village churches, gifts in kind may be greater financial than money gifts. Moreover, institutions, both formal and informal institutions, which are organised and developed usually require consistent financial support. The survey asked the respondent to evaluate how much money or support in kind they contributed to the association. Again, this was set on a scale of 1 to 5, whereby a value of one meant they "contribute nothing", while a value of 5 meant they "contribute a great deal". This was re-scaled from 0 to 100 to create a contribution index.

Participation in decision-making index

In addition to the meeting attendance index the survey also captured the level of participation households had in decision-making within the three detailed associations. Welfare effects of membership in associations are assumed to be greater when the household has a say in what decisions are made. This is not a measure of democracy, *per se*, rather it is a measure of whether the household has influence in the decisions taken by the association. The survey asked the respondent to evaluate on a scale of 1 to 5 whether they felt they participated in the decisions taken by the association. A rating of 1 meant that they participated "not at all" in decision-making was non-existent, a rating of five meant that they participated "to a very large extent". The values taken across the three associations were then re-scaled from 0 to 100, to create an index whereby 100 meant complete participation in decision-making.

Meeting attendance

A key argument made in the social capital literature is that it is not only the number of associations that affects household welfare, but also the level of participation in those networks (Grootaert, Swamy and Oh 1999). The social networks survey assessed the number of times in the past month the respondent had attended meetings of the three most important associations. An attendance index was constructed measuring the average number of times (during the past month) the respondent attended the three associations they were asked to describe in detail.

Heterogeneity index

The social networks survey asked the household respondent to identify up to a maximum of three associations that they would describe in detail. The associations were ranked in order of importance. For these three associations the respondent was asked a detailed subset of questions with which to generate a series of social capital measures. For the heterogeneity index we utilised the categories identified by Narayan and Cassidy (2001). The respondent was asked to rate each institution according to six criteria: educational level, clan membership, wealth level, gender, community, and religious denomination. On that basis we asked the respondent whether "most of the members" in the group were from the same religious denomination, clan, wealth level and so forth. Out of these six responses across three associations a measure of heterogeneity was generated, by averaging across associations. This was then re-scaled from 0 to 100, where a score of 100 corresponds to the highest possible level of heterogeneity.

Benefit index

The respondent was asked to give a two evaluations, first as to whether or not he or she benefited from the institution, and secondly whether or nor the community had benefited from the institution. The respondent was asked to give an evaluation on a scale of 1 to 5 to both of these questions whereby 1 meant the institution had benefited the community "not at all" and five meant the community had benefited "to a very large extent". The values taken for the two questions across the three associations were then re-scaled from 0 to 100, to create the index.

Table 3 : Social capital dimensions across Oledai and Agolitom

	Number of memberships	'Is it effective' Index	Combined cash and in kind contributions Index	Participation in decision-making index	Meeting attendance	Heterogeneity index	'Is there a benefit' index	Average monthly expenditure (in UGS) *
<i>Agolitom:</i>								
1st Quartile	5.2	77.2	60.3	59.5	3.3	49.7	61.3	62,954
2nd Quartile	4.7	72.8	55.8	59.5	4.5	47.1	54.9	11,142
3rd Quartile	3.9	76.2	49.9	48.0	4.5	47.3	54.1	7,495
4th Quartile	4.0	75.6	53.1	52.1	4.0	45.0	58.5	2,958
All	4.4	75.4	54.8	54.8	4.1	47.3	57.2	21,137
<i>Oledai:</i>								
1st Quartile	4.1	79.6	57.8	59.5	4.1	53.3	55.1	83,922
2nd Quartile	3.7	83.1	51.4	55.5	3.7	46.4	54.5	16,407
3rd Quartile	3.4	71.9	54.9	54.6	3.0	47.5	50.5	9,931
4th Quartile	3.2	74.4	47.7	45.6	4.2	47.0	48.7	4,085
All	3.6	77.3	53.0	53.8	3.8	48.5	52.2	28,586
<i>Two Villages:</i>								
1st Quartile	4.6	78.3	59.3	58.9	3.8	51.9	57.6	74,402
2nd Quartile	4.2	77.5	54.0	57.9	4.0	46.2	55.9	13,623
3rd Quartile	3.7	73.6	52.1	51.9	3.6	46.7	52.0	8,571
4th Quartile	3.6	75.9	50.3	48.6	4.4	46.9	53.7	3,395
Total	4.0	76.3	53.9	54.3	3.9	47.9	54.8	24,998

Definition of variables:

Number of memberships: average number of (social groups/institutions) memberships per household belongs to.

'Is it effective' index: score (0 to 100) of effectiveness of the three most important groups.

Participation in decision-making index: scale (0 to 100) of extent of active participation in decision making in the three most important groups.

Combined cash and in kind contributions index: score (0 to 100), reflecting the level of contribution in money or in kind for the three most important groups.

Meeting attendance: average number of times a household member attends the three most important groups over the past month.

Heterogeneity index: scale (0 to 100) of internal heterogeneity of the three most important groups, according to six criteria.

'Is there a benefit' index: score (0 to 100) a measure of the level to which the three most important institutions are felt to benefit the respondent and the community.

* UGS, or Uganda Shillings, at the time of the survey work the official rate of exchange was 1740UGS : 1 USD.

Organizational social capital as an aggregate measure

In this section we investigate the basic question of whether households with higher scores for organizational social capital are better off. Drawing on the model developed by Narayan and Pritchett (1997, 1999), we test our measures with a reduced-form model, which controls for household and location characteristics. The underlying structural equation treats organizational social capital as an input, together with human and physical capital, in the household's production function (see below). According to Grootaert, Swamy and Oh, the effects of organizational social capital are expected to operate through the following mechanisms: information sharing; reducing opportunistic behavior; improved collective decision-making (1999b: 46).²³

Put differently, the equation treats organizational social capital as one type of asset (resource in Bourdieu's definition) that a household can utilize to generate income. As such, the equation places our social capital measure alongside measures for human capital, physical capital (durable assets and livestock) and organizational social capital:

$$\text{Ln}E_i = \alpha + \beta\text{SC}_i + \gamma\text{HC}_i + \delta\text{OC}_i + \varepsilon X_i + \eta Z_i + \mu_i \quad (1)$$

Where E_i = household expenditure per capita of household i
 SC_i = household endowment of social capital
 HC_i = household endowment of human capital²⁴
 OC_i = household endowment of other assets²⁵
 X_i = a vector of household characteristics
 Z_i = a vector of village/region characteristics
 U_i = error term

The dependent variable of equation (1) is the natural logarithm of household expenditure per capita.²⁶ The explanatory variables are asset endowments of the households, demographic control variables and village dummy variables. Household assets are assumed to consist of human capital, social capital and physical capital. Human capital is measured as "level of education attained by the household head". Physical capital is measured as the combined market value of durable assets and livestock.

²³ We do not include a variable for land owned and rented in hectares in our regression models as this was not feasible in the context of the survey. The Iteso are small-scale farmers, a combination of their commitment to free-grazing cattle and a scarcity of cultivable land in Ngora sub-county. At the same time, households farm many small plots (*amatapalin*) which are often non-contiguous. These plots as described 'gardens', no matter what the size (Agolitom has a much higher endowment of land than Oledai, yet with a similar number of plots). As such, using a short-cut measure of land endowments, by totaling up the number of plots per household would have been wildly inaccurate. A reliable measure of land would have required an independent land survey, something beyond the resources of the study. Moreover, it can be argued that the Iteso term much of their welfare on the acquisition of durable assets, for which our measure is more robust than that used by other social capital survey work.

²⁴ Household endowment of human capital is measured by asking for the educational level attained by the household head (lower primary, upper primary, lower secondary and so forth). Education is measured in this way, rather than the usual "number of years in education" because many households had their education disrupted during the rebellion (which lasted from 1986-92). This would mean that many with an educational attainment of lower primary school education would have been enrolled in school for ten years or more. Our later analysis explains further the relevance of attainment in education level in explaining household welfare.

²⁵ The measure for household endowment of assets is a more developed version of that used by Narayan and Pritchett (1997). In their study, Narayan and Pritchett adopted a rudimentary scoring system where durable assets only – cars, sewing machines, clocks and so forth – were assigned a numerical value, for example, a sewing machine is given the same score as a truck (both are given a score of sixteen). The asset measure used here is livestock assets measured by market prices. This gives a much truer reflection of household asset endowment.²⁵

²⁶ If we use the value of household assets, including durable goods and cattle, as our welfare proxy household the organisational social capital results are similar.

In addition to these 'asset' variables we also included additional variables. The regressions also included household size, to test the common observation that household welfare is negatively associated with household size. A dummy variable was included to investigate whether there was a relationship between the gender of the household head and household welfare (it is assumed, by many authors, that female-headed households are typically income poorer). The age of household head and its squared term was also regressed to test the assumption that there is a 'life cycle' in terms of household welfare.

Organizational social capital is tested in two ways in the following table. Firstly, it is considered as a seven-dimension additive model. In other words, factor analysis or principal component analysis is used to summarize all the seven dimensions of social capital into one index variable. In this approach, all seven social capital dimensions are presumed to act independently of each other; their effects are additive. The second approach, developed by Narayan and Pritchett, is to treat each social capital measure as 'more or less' dependent the other measures, and organizational social capital is tested as a multiplicative index. The argument for this approach would be that each organizational capital measure reinforces other measures. Table 3 shows the results from both the additive and multiplicative models.

Regression Results

Before reviewing Table 5, we first discuss how the multiplicative index of the seven dimensions of social capital was constructed.

Seven dimensions of social capital are summarized into a multiplicative social capital index using the principal component analysis²⁷. That is, the multiplicative variable is a linear combination of the seven dimensions of social capital, and it allows us to measure the joint effect of the seven kinds of social capital. In this paper, we use the first principal component, which is a linear combination of all seven variables. And the summary variable explains the most variations of all the variations combined from the seven variables; in this case, it accounts for about 27% of total variations. The liner combination of the seven variables is shown in Table 4.

²⁷ Principal component analysis requires the researcher to orthogonally linearly transform a set of correlated variables, say x_1, x_2, \dots, x_p , in to an equal number of uncorrelated variables, y_1, y_2, \dots, y_p . In addition, y_1 has maximum variance, and y_2 has the second largest variance subject to being uncorrelated to y_1 , and so forth. The transformation is obtained by finding the latent roots and vectors of either the covariance or the correlation matrix (Lawley and Maxwell 1971, Theil 1971). Variables are standardised (i.e. convert all variables to have zero mean and one standard deviation) before calculating principal components to avoid the problem of having different scales among variables.

Table 4: First Principal Component Analysis

Variables	Factor 1
Number of Memberships	0.44942
Heterogeneity Index	0.33305
Meeting Attendance	0.17078
Effectiveness Index	0.52941
Benefit Index	0.52734
Index of Contributions	0.26543
Index of Participation in Decision Making	0.17064

Three regression models are tested in Table 5. The second column shows the baseline model which does not include any social capital measures. The third column shows the regression results for the reduced-form equation which includes the social capital index. The fourth column is the result of the regression model including seven social capital dimensions all together.

The third column of Table 5 is the result of the regression model which includes a multiplicative index of our seven social capital measures, set out earlier in the paper. The result shows that the social capital index is statistically significant, and that it increases the explanatory power from 0.16 to 0.19. The other statistically significant variables include the education level, age of the household head, and the value of the cattle, which are the same as the result in the baseline model.

The fourth column of Table 5 introduces an additive model of the seven social capital dimensions discussed and measured earlier. The model has a slightly increase in the explanatory power, which the R-square value increases from 0.19 to 2. That said, of the social capital indices, only the number of membership matters in isolation.

The explanation for the significance of number of memberships is that, if we recall the observation that Iteso society remember is dominated by a troika of organizations – clan, burial society and church – then it follows that households with more than these three memberships are engaged in other organizations. It is highly likely that these organizations are committees. In such cases it is highly probably that these homes participate in the committees of village organizations, and these committees, are often restricted to villagers from wealthier homes.

Regarding the importance of household human capital and other endowments, we see that neither the household size nor the gender of the household head are statistically significant in both multiplicative and additive models. Both of these results could be counter-intuitive, as larger households need fewer resources per head and female-headed households are presumed to be more prone to poverty. The first result, that of the insignificance of household size, is partly attributable to the problem of using expenditure as a proxy for welfare measure, and we would expect the inclusion of consumption in our welfare measure to affect this result.

As to the gender of the household head, its insignificance can be explained. Though, it is usually assumed that female-headed households are income-poorer in rural Africa (Francis 2000), this does not hold for Oledai and Agolitom. Instead, the result reflects the impact of the rebellion on richer homes, as well as the skewed effects of HIV/AIDS. The rebellion was a time when men in positions of authority, such as parish chiefs, were killed, leaving behind a number of widows from richer homes, who have maintained their welfare status over time (de Berry 1999: 47). In addition, HIV/AIDS, which affected the Iteso much later than other ethnic groups in Uganda, is still more prevalent among men from richer homes. This is because these men were able to leave the area during the rebellion, moving to the towns, where HIV/AIDS rates were more prevalent.²⁸

²⁸ As the HIV/AIDS virus continues to develop in the Teso region, and as the effects of the rebellion fade away, these two qualifications will become less relevant. It can be expected that, within the next decade, female-headed households will revert to being, on average, income poor.

A further observation is the statistical significance of "educational level attained". This is in line with the argument that human capital has a determinant effect on household welfare, as a measure of one's competitiveness in the market place. At the same time, this is reinforced by the fact that households with secondary education are connected to the formal economy, as household head is typically a schoolteacher, local level civil servant, village councilor, or shop owner. Educational attainment then acts as a signifier for having a regular source of income and access to formal credit. This has led to high levels of inequality in both villages, and Iteso society is effectively bifurcated, with poorer homes dependent on farming and the informal economy, and richer homes dependent on the state and the formal economy. This is something entrenched by the individualism of the Iteso, where wealthier homes jealously guard their access to the formal sector.

Regarding the relationships between educational attainment levels, it is also a signifier of social capital. These homes which attain secondary education status, belong to fundamentally different social networks. Educated villagers are able to develop personalized networks, which they maintain over time – they meet Bourdieu's definition of 'durable networks'. Prominent homes work hard to ensure that their children are sent to secondary school, and this means being able to marshal the resources needed for school fees. This access to resources is not only possible because of participation in the formal economy (economic capital), is also possible because of familial, friendship or professional networks (social capital). These networks exist outside village level organizations and typically can be traced back to the previous generation, in other words, they represent a resource.²⁹

If we step back from the survey work, we observe that village level organizations do not tell us much about how household welfare is organized or determined. This corresponds to the weakness of village level organizations given the individualist and egalitarian characteristics of the Iteso. Put simply, the 'durable social networks' offered up by village level organizations do not represent the type of resource worth investing in. They are maintained, in part because they provide the possibility of social order, and, in certain cases, because they are required by the state. They are not maintained because, they fail to offer the possibility of advancing economic interests.

One way of explaining what happens to social relationships in places, is to turn to the role played by personalized networks, or networks that exist beyond the village. In both villages these more discrete relationships can be considered as durable, and as providing a resource; these networks help to explain the different welfare levels of particular homes.³⁰ The part played by this less institutionalized form of social capital is also observed by political anthropologists, though phrased in a different conceptual language. James Ferguson, for example, discusses the linkages between urban workers in Zambia's Copperbelt and how this affects economic relationships in the village and he demonstrates, albeit with different words, that social capital of this kind has significant economic and social welfare effects (2000). Elizabeth Francis, in her work on migrant remittances among the Luo of western Kenya, discusses how financial flows also act as channels for information and social status, affecting household welfare, both on a seasonal basis, and over the longer-term (2000). As such, the Iteso may not be particularly exceptional in the way they organize social relationships, with richer homes relying on personalized networks and the patronage of the state.

²⁹ If we take, the case of Okiror Ben Isaac, for example, we find that he is a high school graduate, and is now a member of several village committees; he is a 'big man' by local standards. At the same time, his household is dependent on the financial support offered by cousins working in Kampala. It should be noted that these men are not earning particularly high salaries; they work as drivers, cooks, or postmen. That said, they belong to the formal economy, a cut-off point which provides a regular source of income. Okiror is engaged in patient and repeated communication with his cousins, hoping that they will think to supplement his children's secondary school expenses, and there is a durable social network, which enables him to develop the economic opportunities available to his household. In other words, social capital has a welfare effect, which our survey work is not able to capture effectively (it is only captured in the significance of the human capital endowment).

³⁰ For example, the home ranked fourth in terms of household welfare depends, in part, for its wealth on a donor-funded project aimed at orphans in the local primary school. The household head occupies the nominal title of "community leader" in the project. He is a "community leader" not because he is connected to any formal organisation in the village, but because he was appointed by the project managers. In other words, part of his household's welfare is attributable to loose social networks which build on existing social norms. This is not something captured by our survey data.

Conclusion

Does the social capital tell us anything about household welfare? This paper has been concerned with answering this question, though investigating the relationship between durable social networks and household welfare in two villages in eastern Uganda. The approach has been both econometric and ethnographic. The econometric approach has been used to focus on the relationship between “organizational social capital” and household welfare, which is to say the interplay between more formalized durable social networks and economic development. The ethnographic material has been used to broaden out the analysis to investigate the relationship between less formalized – but durable – social networks and household welfare, the part that peer groups, extra-local networks and personalized or brokerage roles play in helping homes in the two study villages advance their economic interests.

We found that in the villages of Agolitom and Oledai in the eastern Uganda that the relationship between “organizational social capital” and household welfare is not significant. That is to say that our econometric analysis demonstrates that richer homes in both villages do not show higher levels of investment in the seven dimensions of organizational social capital that we identified in our survey work. This lack of investment in village level organizations is explained as an outcome of long-established social characteristics, where individualism and egalitarianism make it difficult to establish the hierarchical and collective values needed for the maintenance and efficacy of organizational structures. At the same time, we argue that social capital present in less institutionalized relationships such as personalized networks, or brokerage positions has a significant effect on household welfare. These relationships are durable and have a determinate effect on household welfare, which the ethnographic material demonstrates. Informalized social relationships represent the one form of social capital in which it is worth investing. In this situation of weak village organizations, and personalized networks, poorer homes have little opportunity for investing or organizing around social relationships as a means of pursuing their economic interests.

It is evident from the existing social capital studies that current research is bounded to formulations of rural Africa which may not be tenable. Current research is too closely identified with normative assumptions on community development, the ability of communities to organize around decentralized government services, or the gains from participatory approaches to project management. It is notable that policy-makers use 'social capital' as an analytical framework only to the extent that it focuses on village organizations, which act as the vehicle for local level development work. A tentative suggestion would be that it is the persistence of less institutionalized relationships such as personalized politics, brokerage politics or extra-local networks that is a more important area of consideration for those concerned with promoting social and economic development. The tendency to look at organizational social capital while overlooking the resilience of informalized social relationships may explain why state-sponsored or development-sponsored programs find it difficult to alter patterns of welfare at the village level; less institutionalized relationships subvert the claims of formalized development work (Bierschenk, Chauveau and de Sardan 2003). In light of this tentative observation, our paper argues that there is the need for further research on the interaction between less institutionalized relationships and household welfare as a way of re-ordering assumptions about the relationships between social capital and economic development.

Table 5: Household Welfare and Social Capital

	(1) Baseline Model		(2) With Social Capital Index		(3) With Additive Social Capital Variables	
Intercept	3.8782	(4.85)*	4.2262	(5.14)*	3.6034	(4.13)*
Social Capital Index			0.0993	(1.74)*		
Number of Memberships					0.0866	(1.93)*
Heterogeneity Index					0.1841	(0.34)
Meeting Attendance					-0.0005	(-0.03)
'Is It Effective' Index					0.3272	(0.62)
'Is There A Benefit' Index					0.1867	(0.34)
Index of Contributions					0.0100	(0.07)
Index of Participation in Decision Making					-0.0984	(-0.22)
Household Size	-0.0097	(-0.4)	-0.0053	(-0.23)	-0.0042	(-0.18)
Education Level Index	0.2108	(-2.27)*	0.2528	(2.79)*	0.2120	(2.16)*
Female Headed Household Dummy	0.2181	(1.13)	0.2798	(1.51)	0.2593	(1.37)
Age of Household Head	0.0878	(-3.13)*	0.0179	(2.64)*	0.0700	(2.51)*
Age of Household Head Squared	-0.0008	(-2.88)*	-0.0006	(-2.24)*	-0.0006	(-2.12)*
Ln (Value of Cattle Owned)	0.1895	(-3.12)*	0.1724	(2.94)*	0.1712	(2.85)*
Farmer Household Dummy	-0.3227	(-1.38)	-0.2419	(-1.08)	-0.241	(-1.06)
Village Dummy	-0.3657	(-2.4)*	-0.3287	(-2.26)*	-0.3643	(-1.08)
Catholic Household Dummy	0.0779	(0.49)	0.1161	(0.77)	0.0845	(0.54)
Number of Observations	256		256		256	
Adjusted R-squared	0.16		0.19		0.2	
F-statistics	7.35		7.06		4.39	
Notes:						
(1) Dependent variable = ln (household expenditure per capita)						
(2) t-statistics are in parentheses and are based on robust standard errors (Hubert-White estimator for non-identically distributed residuals)						
* denote significance at the 5 percent level.						

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