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Pure Entertainment or Social Harmony? Understanding Private Returns to Social Spending on Household Ceremonies in China

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Pure Entertainment or Social Harmony? Understanding Private Returns to Social Spending on Household Ceremonies in China†

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Abstract

Recent social spending inflation in China has led to its growth rate far exceeding that of income and other consumption. In this paper, we estimate private returns to social spending, such as higher social status and larger social network that serve as certain functions. In almost all specifications we find that gift spending has significant private returns, but the returns are biased towards richer households. Upon comparing different measures of centrality, we also find that social connections are more accurately characterized when weighted by their intensities (values), capturing their role in mobilizing scarce resource in the network. Furthermore, social status and network may change long-term income trajectory and the resulted consumption. However, our findings do not suggest that they are vehicles through which they could facilitate smoother consumption against shocks. The result does not depend on how heterogeneous the shocks are.

Keywords: social network, social status, private return, social spending, consumption

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"*Every exchange as it embodies some coefficient of sociability cannot be understood in its material terms apart from its social terms.*" – Marshall Sahlins, 1972

1. Introduction

In recent years China has experienced drastic inflation of social spending (see a cross-country comparison in Figure 1 that includes China), and its growth rate far exceeds the growth rates of income and other consumption (see the case of rural Guizhou in Figure 2 as an example). Escalating social spending is regarded as *individually rational* but *collectively irrational*. While previous studies on social spending and relative concern generally focus on *collective irrationality*,[1] only a few studies try to understand *individual rationality*, i.e. the returns to social spending from household perspective. For instance, while Chwe (1998) provides insights into the mechanism through which social ceremonies solve coordination problems by generating common knowledge and conveying information, there is no microeconomic foundation of the social behavior. Further explanations are needed to understand why poor households devote more and more resources on such social events.

Sociologist Turner (1982) describes festivals as a way to improve social cohesion by reinforcing ties within a community. That not mentioned is that by signaling individual commitments and reciprocity to people around, the features of this public good might go beyond pure entertainment and social harmony. To understand the logic behind, a branch of relevant literature on social capital treat social spending in ceremonies as a crucial way to facilitate an extended social network and higher social status, which in turn contributes to higher economic productivity (Barr, 2000; Narayan and Pritchett, 1999). However, the social mechanism explaining how to get access to social capital is still in the black box.

[1] Evidence include designer-label goods consumption in Bolivia (Kempen, 2003), festivals' budget in India (Banerjee and Duflo, 2007), "splendid" funerals in Ghana (*Economist*, 2007), relative deprivation and migration in Mexico (Stark et al., 1991), bride-prices and dowries in south Asia and Africa (Rao, 1993; Dekker and Hoogeveen 2002), marriage payments in Bangladesh (Anderson, 2007), and community level consumption in Nepal (Fafchamps and Shilpi, 2008).

Rao (2001) uses both qualitative and quantitative data from a case study of three India villages to show that altruistic desire does not contribute to a public event. However, nearly all public events documented by Rao (2001) are festivals at sub-caste level or across caste groups that the village celebrates communally, while household celebrations are left untouched.

In household ceremonies, some local residents directly contribute their culinary skills, the elderly in village informal committees oversee the organization of the events, and people dress up to socialize with others. The special clothes guests wear and food they bring to the ceremonies are very costly. Gift offered by guests are primarily used to finance ceremonies in various social occasions, ranging from wedding to funeral, from house-building to house-moving, and from coming-of-age to child birth (Chen, 2010). Before household ceremonies (except funeral[2]), hosts invite people and estimate budget proportionally to try to make ends meet. However, ceremonies usually cost more than gift received, which is financed by their own savings.

From guests' side, gift and labor assistance provided by guests contributes to the organization of ceremonies, which might help strengthen social cohesion and offer entertainment. Why household ceremonies, embodying these features of public good, do not suffer from under-provision? The nature of gifts flow from guests to hosts in a private but publicly observable manner, rather than directly shared among the public, may well explain its social status motive as gift givers' welfare does not only depend on how much they send but how much more the others send.

The motive to enlarge social network also explains heavy investment in seemingly unproductive activities in terms of costly gifts and lavish ceremonies. However, unlike public ceremonies in India that people contribute in absolutely observable manner and no specific targeted recipient, whether household ceremonies still carry the function of widening social connections deserves our attention.

To summarize, private returns to social spending might be divided into five categories: return to social status, extended network, pure entertainment, a more

[2] In the Chinese custom, people need to attend funerals in their relatives' and friends' family even without any prior invitation from the hosts, while people attend wedding ceremonies conditional on invitation.

harmonious society, and nutritional improvement. Firstly, social status has its own value, which leads to high competition; secondly, the resulting extended networks serve as an informal insurance against risks and sources for information exchange; third, pure consumption purpose provides a way to entertain; further, household ceremonies might enhance social cohesion and protect social security; last but not least, frequent feast holding might alleviate people from malnutrition in the area without easy access to water and road. Concerning private investment in public goods, there is potentially a free rider problem at least for the third through fifth returns. However, participants voluntarily contribute to the realization of household ceremonies, which might be due to the quest for social status and strengthening informal networks to cope with credit shortage and asymmetric information. Whether these two potential private returns exist will be separately tested in this study. Meanwhile, whether nutritional conditions are significantly improved due to ceremonies will be addressed in our future research.

The initial empirical results show that in almost all specifications social spending has significant private returns, while the returns are unanimously biased towards richer household. We also find that social connections are more accurately characterized when weighted by their intensities (gift values), capturing their role in mobilizing scarce resource in the network, while both centrality based on existence of links or social capital measure based on memberships are biased or may not be identified. To explore the welfare effect of social status and network towards consumption, we test two consumption concepts: living expenses and food consumption. Our empirical findings do not suggest that social status and network are vehicles through which we could facilitate smoother consumption against shocks, though they may change long-term income trajectory and the resulted consumption.

The structure of the paper is as follows: section 2 documents diversified household ceremonies prevalent in rural Guizhou and China, to a large extent; section 3 describes our dataset; section 4 specifies the model, key variables and identification strategy; section 5 presents the empirical results; section 6 concludes.

2. Household Ceremonies in Rural Guizhou

I was deeply impressed with the scene when I was collecting social network data in an average village in Guizhou province, and there happened to be a wedding ceremony in a nearby village. Both the two villages are still listed as poor villages, where the average living standard is below the poverty line released by the provincial government. Many families still live in houses that leak water in the rainy season. Lots of elderly still need to share their living space with their livestock.

When our team arrived at the entrance to the village, it seemed to us that the whole village had been turned into a kindergarten in which kids were chasing and yelling without any adults following aside. I asked some elder kids and was told that their parents were assisting a wedding preparation in another village. At that moment, I did not believe a ceremony in another village could even stem me from collecting social network data from all households in this village. I was then proved to be too optimistic after going through households one by one, in front of which came out children telling us again that their parents were in another village.

Disappointment in our face, we accidentally ran into a man when we were about to give up. He was dressed in a brand new fur coat, wearing new Nike sport shoes. He told us that he was rushing to help the family organizing a wedding ceremony, as all other fellow residents have gone there. We were so curious and asked him why kids were left at home. He replied that naughty kids sometimes distract their parents from assisting ceremony preparation, so it is better to leave them at home finishing homework before the ceremony. Meanwhile, as a rule of thumb bringing kids to banquets usually means higher cash gift to the host, that is why a few really poor families do not bring kids with them. Before leaving, He also reminded us to come at least two days later. He warned us that day was the first day of a four-day wedding ceremony (called *Jing Jiu*), and it was scheduled to honor the bride's and groom's parents. The next day would be the formal ceremony (called *Zheng Jiu*). On the third day the host would hold ceremony to persuade guests to stay (called *Liu Ke Jiu*). Finally, on the fourth day the host would hold a banquet to thank all people who helped and see them off. In a regular wedding

ceremony, each guest usually offers gift for once but stays to eat for three days. People who assist organization usually stay to eat for four days.

Showing our sincere interest in experiencing local culture, the man kindly invited us to go with him and assured us other guests would feel very happy upon our arrival. In that evening, we witnessed a sumptuous feast and a three-session *Zheng Jiu* with 70 tables of guests. Remember, that feast was only one among several in four days, which in total would account for 160 tables. In the ten following days, our data collection schedule was altered by another two ceremonies, one come-of-age ceremony and another wedding ceremony.

This is only an epitome among thousands of ceremonies in Guizhou and all over China. Guizhou province is populated with more than 20 ethnic minorities, each of which has its unique social occasions. In our surveyed region, for example, Han and Miao groups celebrate come-of-age, and they invite a Taoist to the ceremony. It also reflects their beliefs in Taoism, which is embedded in their culture. In the Buyi village, people celebrate Halloween and Christmas, and ceremonies are often held in catholic churches near the county seat. Besides their unique social occasions, common celebrations are more frequently held across those villages of different ethnic identities, such as male members' wedding, female members' wedding, house-building, funeral, child birth, and house-moving.

To celebrate those occasions, kitchen ware and tables are borrowed from the collective with cash rent. Ceremonies are often located in the backyards of the hosts, and formal ceremonies are held in several repeated sessions due to space limitation. Relatives, friends, and neighbors usually come to help two days before the start of formal ceremonies, which is especially seen in funeral, wedding ceremonies and house-moving. The arrival of relatives, friends, and neighbors to assist hosts in preparation marks the start of ceremonies and abundant food offerings. This is why a funeral is usually held for at least five days and a wedding is celebrated for four days.

Besides reciprocal assistance, cash is the most common gift people send to each other as the local custom evolves. The relative share of rural incomes allocated to gift-

giving has increased steadily since de-collectivization (Yan, 1996). This comes out of more expensive gifts and more frequent ceremonies. However, people still send in-kind gift to each other, especially in remote villages and some special social occasions. In wedding ceremonies, besides the usual large expenses on cash gift, people send dumplings, pork, wool, woolen blankets, bed sheets, quilts, kitchen supplies, candles, wine, basins and pillows to the new couple to symbolize a sweet life or to help purchase necessities. During funeral ceremonies, people send less cash but more in-kind gift and non-cash help. The in-kind gift includes corn, lamb, pork, woolen blankets, quilts, edible oil, wine as well as other sacrificial offerings. In celebrating come-of-age occasion, people send rice and children's wear, while in child birth ceremonies people additionally give wool, eggs and fruits. When friends and relatives move their houses, furniture, stoves and curtain are usually sent as gift.

The various social ceremonies facilitate social networks, which may be relied upon for mutual assistance and financing. The highly-ritualized gift-giving during ceremonies compels villagers to follow, which otherwise would undermine the long-term reciprocate relationships and bear the risk of shame. Meanwhile, higher price of gift than the publicly adopted level would further strengthen relationship and help achieve better social status among fellow residents.

In addition, Local social networks might play a role in improving investments in child and adult nutrition. Marginal increases in childhood nutritional investments from a low level might provide huge gains through health, cognitive function and productivity. Social ceremonies reduce the cost of health production through economies of scale. Meanwhile, the benefits from nutritional improvement are uncertain and reflected in the future, the network and resulted ceremonies might overcome the time-inconsistent preference in childhood nutritional investment.

However, the impact of ceremonies on academic performance through health, cognitive function and productivity is likely to be mitigated by children’s distraction from learning amid frequent ceremonies. We observed in the field that more and larger sizes of ceremonies called for substantial help from parents, whose children were left

unattended. With all children left at home, only a few could study but others played all day.

3. Data

To improve upon the prior research, this study is mainly based on three waves of household level census panel data of 18 villages between 2004 and 2009 in rural Guizhou, China. In the first wave in 2005, all 805 households in three administrative villages were administered. The survey collects detailed information on household demographics, income, consumption, transfers, expenditures and incomes related to gift-giving and different social occasions. Most information is collected for each household member. The second wave survey of the same households was administered in early 2007 and 833 households were included. In early 2010, the third wave survey was conducted. In this latest wave, besides different measures of social capital and cohesion, ceremony expenditures and social status from the 18-village census survey, we collected data on individual level health and nutritional intake from 9 villages as well as household level gift exchange data for all major social occasions from 3 villages. Math and Chinese language grades in the recent semester for all children in primary school in 18 villages were also collected in order to study the impact of social occasion participation on learning. These data sources complement each other in exploring private returns to social spending.

Some villages interviewed are only 3 miles away from the county seat, while others are more than 10 miles away. The local Karst land form makes geographic conditions complex among local villages even if their distances to the county seat are similar. Among the 18 villages, 11 villages are populated with Han group, 6 are Miao villages, and one is Buyi villages. The Han villages hold a few households from Buyi, Miao, Yi, and Dong background. The local Han villages believe in Taoism, and the Buyi village believes in Catholicism, while the Miao villages are less salient in beliefs comparing the former two groups. The organizations of different types of social occasions in these communities provide us with an in-depth view of ceremony behavior. It allows a

comparison of this social behavior in communities of diversified ethnic group compositions and Religions.

In the 18 villages (equivalent to three administrative villages, Table 1) ceremonies are financed based on gift received. Though gifts usually are able to cover organizing costs of one's own ceremony, they fail to pay back when other households host ceremonies in a longer term. We try to understand what is missing when we treat social spending in household ceremonies solely as a provision of public goods to the impoverished households, which helps answer the question why these poor households devote so much resource to the celebration.

4. Model

4.1 Variables and Model Specification

To understand private returns to social spending, we first set up a household utility maximization problem,

$$\max_{s_i, x_i} \; U_i = U_i(x_i, s_i, S_{-i} + s_i, r_i)$$

$$\text{s.t. } x_i + p \cdot s_i = Y_i$$

$$r_i = r(s_i, X_i)$$

$$\sum_{i=1}^{N} s_i = S = S_{-i} + s_i$$

where x_i denotes household consumption of socially non-sensitive good, while s_i denotes individual *i*'s spending on socially sensitive good. S_{-i} is the others' total social spending, which is exogenous. That is, s_i is *i*'s contribution to the public good (social occasions).

The above problem is equivalent to

$$\max_{s_i, x_i} \; U_i = U_i(x_i, s_i, r_i(s_i, X_i))$$

$$\text{s.t. } x_i + p \cdot s_i = Y_i$$

$$\sum_{i=1}^{N} s_i = S = S_{-i} + s_i$$

where the first order condition leads to a reduced form of social spending in the first stage estimation.

$$s_i = s_i(S_{-i}, X_i)$$

X_i denotes a vector of covariates that independently influence household i's social spending and private returns. In the model, the following variables are included.

(1) *Household head age*. Household head of older age tends to show more power and prestige and is more likely to be respected in the community, which might lead to higher level social spending (contribution to the ceremonies) and higher private return. However, household head of older age may also be inactive in household ceremonies, since they have expectation that their gift expenditure have little chance to be paid back.

(2) *Share of the elderly in a family*. If household head age only captures respect received in a community, share of the elderly in a family is included to indicate inactiveness of a household in ceremonies.

(3) *Household head education*. The educated are more likely to be informed and make more efficient use of public services and social network. Therefore, they might take more advantage of ceremony by investing more.

(4) *Share of youth in the family*. This indicator shows activeness of a family in ceremonies. The higher share of youth in the family, the more chance that a family will be organizing ceremonies, such as wedding, house moving, child birth. This expectation usually leads a family to actively participate in the others' ceremonies.

(5) *Share of children in a family*. This indicates household burden in raising children up. The higher share of children in a family is expected to be less active in ceremonies.

(6) *Household income*. A richer household may spend more in ceremonies simply because they afford it. A richer household may also be valued because he/she can provide financial resource to the fellow residents in need.

(7) *Minority identities.* Minority status may define different culture in celebrations. In the field, we observed that ethnic minorities are inactive in participating ceremonies in the major Han group as well as their own groups.

(8) *Village dummy*. Private returns may also vary by village, which is not able to be captured by factors other than village identities.

However, since both private returns r_i and household social spending s_i are arguments in the utility function, they may be simultaneously determined. We utilize instrument Z to mitigate simultaneity in the first stage. The first stage of the estimation becomes

$$s_i = s_i(S_{-i}, X_i, Z)$$

where Z is used to instrument household i's social spending and / or its interaction with income. In different scenarios, I will use the following instruments: (1) *Frequency of family member deaths, livestock deaths and natural disasters in each village in the past two years*; (2) *Median level of gift spending in the villages* in 2004, 2006 and 2009 (only in some scenarios); (3) *Share of the elderly in the family*.

In the second stage estimation, we estimate the private return equation and emphasize the coefficient and significance of s_i.

$$r_i = r(s_i, X_i)$$

where r_i denotes returns to social spending, such as social status, size of network, pure entertainment purpose, nutritional improvement and so on. To measure these private returns, some key indicators will be considered.

(1) *How to deal with cash shortage?* It can reflect a household's social status and network, since cash is a scarce resource in the local context. In the questionnaire we asked respondents in which month of a year they feel short of cash the most. In the multiple choice question options include selling household properties, doing odd jobs, borrowing from relatives, friends or neighbors, relying on usury, selling blood, living frugally and drawing bank deposits. Most households in 18 villages do not have much banking deposits that could smooth their consumption and production in that month. If respondents choose the option *borrowing from relatives or neighbors* as one answer, there is a dummy variable valued 1. Otherwise, it is valued 0. In this context, the richest people may still have the potential to not choose that option but *drawing bank deposit*.

However, suppose we find that richer households are no less relying on borrowing from relatives or neighbors, the bias should not affect our result.

(2) *Frequency of get-together with relatives, friends and neighbors*. This indicator is defined to include dinner party, drinking, and other entertaining activities. Though these activities are usually of smaller scale, it facilitates mutual exchange of needed resource (especially in the local dry season every year), strengthens local cohesion, and reflects the closeness a household possesses with other fellow residents.

(3) *Subjective evaluation of social status in the village.* In the questionnaire we included a measure of social status by categorizing their subjective evaluation into five: very high, high, moderate, low and very low. Only 2.5% of respondents answered *don't know*. Under the assumption that this variable is an indicator of a latent measure of social status, an ordered probit estimation of the determinants of social status will be presented.

4.2 Identification

A problem in specifying a model of social influence on behavior has to do with proper identification of the specified relationships, meaning that the parameters of the model are uniquely determined by a dataset. The identification problem in social influence arises since behavior is determined by behavior, which brings a circularity of cause and effect (Manski, 1993; Manski, 2000).

In our first stage estimation of returns to social spending, social spending is indicated by total gifts (including in-kind goods and cash) send to hosts in ceremonies. Gift-giving behavior of a household is a linear function of the average level of gift-giving by other households in the cohort. Suppose that a household i has relevant characteristics x_i , and other households in the cohort have similar attributes. The gift-giving behavior of household i is determined by what the peers do. The econometric specification is the following,

$$y_i = a + b_1 E[y_i \mid x_i] + b_2 x_i + \varepsilon_i$$

Taking expectations, if $b_1 \neq 1$, then we have

$$E[y_i \mid x_i] = a + b_1 E[y_i \mid x_i] + b_2 x_i \Rightarrow E[y_i \mid x_i] = \frac{a}{1-b_1} + \frac{b_2}{1-b_1} x_i$$

Plug into the econometric specification, we can estimate $a/(1-b_1)$ and $b_2/(1-b_1)$, but we cannot separately identify parameters a, b_1 and b_2. Adding in more variables does not help, since more variables bring more parameters to identify. As Manski (1993, 2000) points out, instrumental variables might be able to resolve the problem, since part of the difficulty arises from endogeneity of the behavior that enters into both sides of the econometric equation.

$$y_i = \frac{a}{1-b_1} + \frac{b_2}{1-b_1} x_i + \varepsilon_i$$

The reflection problem stems from the fact that household i's peers are not identified directly but assumed to be similar to i. However, unique to social network studies, information on social structure can help identify those parameters. Specifically, if we explicitly track i's peers, then that information can be used to identify a model (Anselin, Florax and Rey, 2004). Jackson (2008) formulates the following linear interaction of behaviors and ignores constant terms and node-specific characteristics.

$$y_i = \alpha\sigma \sum_j g_{ij} y_j + \varepsilon_i$$

where each individual's behavior is a weighted average of peers' behavior. g_{ij} is a entry in the adjacency matrix G denoting whether there is a link between household i and j. If $(I - \alpha\sigma G)$ is invertible, then

$$Y = (I - \alpha\sigma G)^{-1} \varepsilon$$

where y and ε are the corresponding vectors. We can identify $\alpha\sigma$ if we have knowledge of the adjacency matrix and the covariance matrix of the error term $E[\varepsilon\varepsilon^T]$. Here the critical precondition for identification is that the adjacency matrix is asymmetric, i.e. a link from i to j does not necessarily mean a link from j to i.

In the empirical tests, Bonacich Centrality (1987) is used to compare the results with IV estimation, and its vector is defined as

$$C = [I - \alpha\sigma G]^{-1} J$$

where I is a NxN identity matrix, and J is a Nx1 column vector of ones. An adjacent NxN matrix of 1 and 0 denotes direct connections between each pair of agents. Meanwhile, the matrix is asymmetric that a link from i to j has different meaning than the link from j to i. The terms in the diagonal are all assumed to be zero.

The classical centrality index includes information on connections but not intensity of those connections.[3] However, intensity weighted centrality can be calculated based on a modification of the algorithm. In the results, two centrality measures and their impacts on private returns will be compared. Meanwhile, household maximization problem with socially sensitive goods together with market clearance of those goods lead to their allocation based on relative location in the network (Chen, 2010). Therefore, in the empirical tests followed by, relative centrality measures will be adopted. Since we only have extensive social link data for three out of eighteen villages surveyed, we have to narrow down our dataset when replacing the predictor variable per capita gift spending by relative centrality.

4.3 Intermediate Private Returns, Shocks and Consumption Smoothing

Private returns to social spending, such as enlarged social network (measured by frequency of get-together and capability to borrow from others), should be intermediate resources through which households cope with shocks. We are curious about whether these resources really serve as an informal insurance against shocks. I suspect that better market access might lead to lower reliance on intermediate resources through the following channels: access to formal financial sector, more job opportunities and diversified income sources, and massive labor flow which reduces local social interactions. However, the surveyed villages in Guizhou vary widely in market access amid uneven economic growth, which makes it theoretically undetermined but empirically testable. The following model is specified, where PC_{ij}

[3] Put another way, the major difference between household centrality and social spending is that the former measure contains partial information on investing in household ceremonies.

denotes per capita living expenses or per capital food consumption. Shocks are first measured by (more or less homogeneous) natural disasters and then are extended to more idiosyncratic events, such as family member death and livestock death, to compare results.[4]

$$\Delta(LnPC_{i,v}) = \beta_0 + \beta_1 Shock_{i,v} + \beta_2 IR_{i,v} + \beta_3 Shock_{i,v} * IR_{i,v} + \beta_4 X_{i,v} + \beta_5 W_v + \varepsilon_{i,v}$$

$IR_{i,v}$ denotes intermediate returns we tested before, such as frequency of get-together and capability to borrow from friends, relatives and neighbors. These intermediate returns reflect trust, involvement and mutual assistance among local residents, and they also enable us to test different roles in mitigating shocks. We focus on the interactive term between shocks and intermediate returns, i.e. $Shock_{i,v} * IR_{i,v}$. If intermediate returns help household cope with shocks, we expect a positive sign for β_3, otherwise β_3 should not be significantly different from 0.

5. Empirical Results

5.1 Determinants of Household Level Social Spending

Table 6 estimates determinants of social spending in 2006. Villages which have richer culture / atmosphere in spending lavishly on gifts and ceremonies tend to push their members to significantly spend more. Richer households significantly spend more on social occasions, while households with higher share of the elderly and ethnic minority families are less active in social spending. The insignificant impact of share of youth within a family is out of our expectation. Households in Village 3, which is much closer to the county seat, saliently spend more on social occasions. The exogenous shock, frequency of family member deaths, livestock deaths and natural disasters in the past two years, positively influences household social spending. Table 7 is another first stage estimation for 2009. The differences between 2006 and 2009 include the insignificant impact of share of the elderly and minority identity and the significance of share of youth in 2009.

[4] Kernel Densities for shocks of different degrees of homogeneity are compared (Figure 3). Among them, natural disaster is the most homogeneous shock.

5.2 Return to Social Status

In the third wave we include subjective evaluation of social status for each household, and it is categorized into three levels (1=below average, 2=on average, 3=above average). Table 8 estimates the impact of social spending on this subjective social ranking. Evidence shows the more educated tend to rank themselves higher, while per capita income does not show any significance. In more unequal natural villages people are less self-confident and rank themselves lower. Most importantly, social spending has positively significant impact on subjective ranking, and the impact is especially biased towards the rich households. The results support our expectation that social spending brings return to social status. On the median level of income a 100 yuan increase in per capita social spending brings 0.5 standard deviation rise in subjective ranking.

5.3 Return to Social Networks

Table 9 presents evidence on the effect of social spending on capability to borrow from relatives, friends and neighbors using 2006 survey data. Household social spending is first instrumented by frequency of shocks in the village in the recent two years. We find significant impact of social spending on credit assistance from others when faced with cash shortage. A family with higher share of the elderly is usually less likely to rely on others to ease cash shortage.

In the second scenario, we instrument social spending and its interaction with per capita income by share of elderly and frequency of shocks. It is found that richer people tend not to ask for credit from relatives, friends and neighbors. Social spending still significantly contributes to credit assistance at all income level. Most importantly, social spending takes more salient effect with families of higher income. Put another way, poor households do not benefit as much as rich households from socializing.

Scenarios 3 and 4 further presents parallel evidence from 2009 survey data. Major results follow. Once again, we find significant impact of social spending towards getting

credit from relatives, friends and neighbors. However, rich households seem to benefit more from this channel.

Table 10 shows significant evidence of the impact of social spending on frequency of get-together with fellow residents. Households with educated household head join get-together significantly more frequently than others. Across all specifications higher social spending leads to significantly more frequent get-together participation, while the benefit once again seems to be higher for rich households.

5.4 Strength of Social Connections and Private Returns

In Table 11 we restrict our analysis to three villages and compare the impact of network centrality on frequency of get-together with fellow residents, capability to borrow from others and subjective ranking. Two measures of centrality are utilized, one is based on existence of links and the other is based on values of gifts. Results show that relative centrality based on existence of links does not significantly predict higher social status and extended network. Instead, relative centrality incorporating the strength of links saliently leads to higher status and larger social network. Thus, social connections without high intensity may not be effective in obtaining scarce resource from others.

This result conveys a message that classical measure of centrality needs to be revised to embody information on the strength of the relationships. Membership-based social capital measures probably have even worse bias, as they contain even less and more inaccurate information on social interactions. Meanwhile, the models in Table 12 further confirm that households with better educated household head and higher share of youth are more likely to have higher status and larger social network.

5.5 Intermediate Private Returns and Consumption Smoothing

All above measures of social status and network are intermediate, which facilitate smoother consumption and (agricultural and non-agricultural) investment. In the last estimations, we explore whether social network and social status could help local residents smooth consumption amid shocks. Table 12 shows intermediate private

returns to enlarged social network do not help smooth living expenses or food consumption in shocks. However, social network has independent positive effect on living expenses or food consumption growth. The result suggests that social capital may change long-term income trajectory and the resulted consumption, but it may not insure households against shocks and smooth consumption.

6 Conclusions and Discussion

In this paper, we estimate private returns to gift spending, such as higher social status and larger social network that serves as certain functions. In almost all specifications we find that gift spending has significant private returns, but the returns are unanimously biased towards richer households. This may be explained by increasing returns to social network, since the richer households might have connections with more rich households which also know more households. To the contrary, this effect is limited for poor households.

Meanwhile, the impacts of network centrality on social network and social status differ for two measures of centrality. Relative centrality based on existence of links does not significantly predict higher social status and extended network. Instead, relative centrality incorporating the strength of links saliently leads to higher status and larger social network. Therefore, social connections are more accurately characterized when weighted by their intensity, without which we may not be able to effectively capture their role in mobilizing scarce resource in the network.

Social status and network are intermediate and supposed to facilitate smoother consumption. However, our findings suggest that they do not significantly help smooth living expenses or food consumption after shocks other than their *independent* positive effects on consumption. Social capital may change long-term income trajectory and the resulted consumption, but it may not serve as an informal insurance against shocks.

The next step might be to further our analysis from the perspective of hosting ceremonies and study ceremonies of different functions. Meanwhile, whether social network alleviates poor households from malnutrition or worsens their nutrition

conditions through drawing too much resource deserves our attention after the nutritional data becomes available.

References

Anderson, S., 2007. “The Economics of Dowry and Bride Price.” *Journal of Economic Perspectives* 21(4): 151-74.

Anselin, L., R. Florax and S. Rey. 2004. “Advances in Spatial Econometrics. Methodology, Tools and Applications.” Berlin: Springer-Verlag.

Barr, Abigail. 2000. “Social Capital and Technical Information Flows in the Ghanian Manufacturing Sector,” *Oxford Economic Papers*, pp. 539-559.

Banerjee, A. V. and E. Duflo. 2007. “The Economic Lives of the Poor,” *Journal of Economic Perspectives* 21(1):141-167.

Bonacich, P. 1987. “Power and Centrality: A Family of Measures.” *The American Journal of Sociology*, Vol. 92, No. 5. pp. 1170-1182.

Brown, P., E. Bulte, and X. Zhang. 2010. “Positional Spending and Status Seeking in Rural China,” unpublished working paper.

Chen, X. 2010 “How Does Social Network Structure Influence Behavior? Ceremony Frenzy and Gift Exchange Inflation in Rural China” working paper.

Chwe, Michael Suk-Young. 1998. “Culture, Circles and Commercials: Publicity, Common Knowledge and Social Coordination,” *Rationality and Society*, Vol.10, pp.47–75.

Dekker, M. and H. Hoogeveen. 2002. “Bridewealth and Household Security in Rural Zimbabwe,” *Journal of African Economies* 11(1): 114-145.

Fafchamps, M. and F. Shilpi. 2008. "Subjective welfare, isolation, and relative consumption," *Journal of Development Economics*, Elsevier, vol. 86(1), pages 43-60, April.

Jackson, M. 2007. “The Study of Social Networks in Economics.” In James E. Rauch, eds. *The Missing Links: Formation and Decay of Economic Networks*. Baker & Taylor Books.

Jackson, M. 2008. “Social and Economic Networks,” Princeton University Press.

Kempen L. 2003. “Status consumption and ethnicity in Bolivia: evidence from durables ownership,” *International Journal of Consumer Studies*, vol. 31, Issue 1, 76-89.

Manski, C.F. 1993. “Identification of Endogenous Social Effects: The Reflection Problem.” *Review of Economic Studies* 531-542.

Manski, C.F. 2000. “Economic Analysis of Social Interactions.” Journal of Economic

Perspectives 14: 115-136.

Narayan, Deepa and Lant Pritchett. 1999. 'Cents and Sociability: Household Income and Social Capital in Rural Tanzania', *Economic Development and Cultural Change*, Vol.47, No.4, pp.871–97.

Rao, V. 1993. "The Rising Price of Husbands: a Hedonic Analysis of Dowry Increases in Rural India," *Journal of Political Economy,* 101: 666-677.

Rao, V. 2001. "Celebrations as Social Investments: Festival Expenditures, Unit Price Variation and Social Status in Rural India," *Journal of Development Studies*, 38: 71-97.

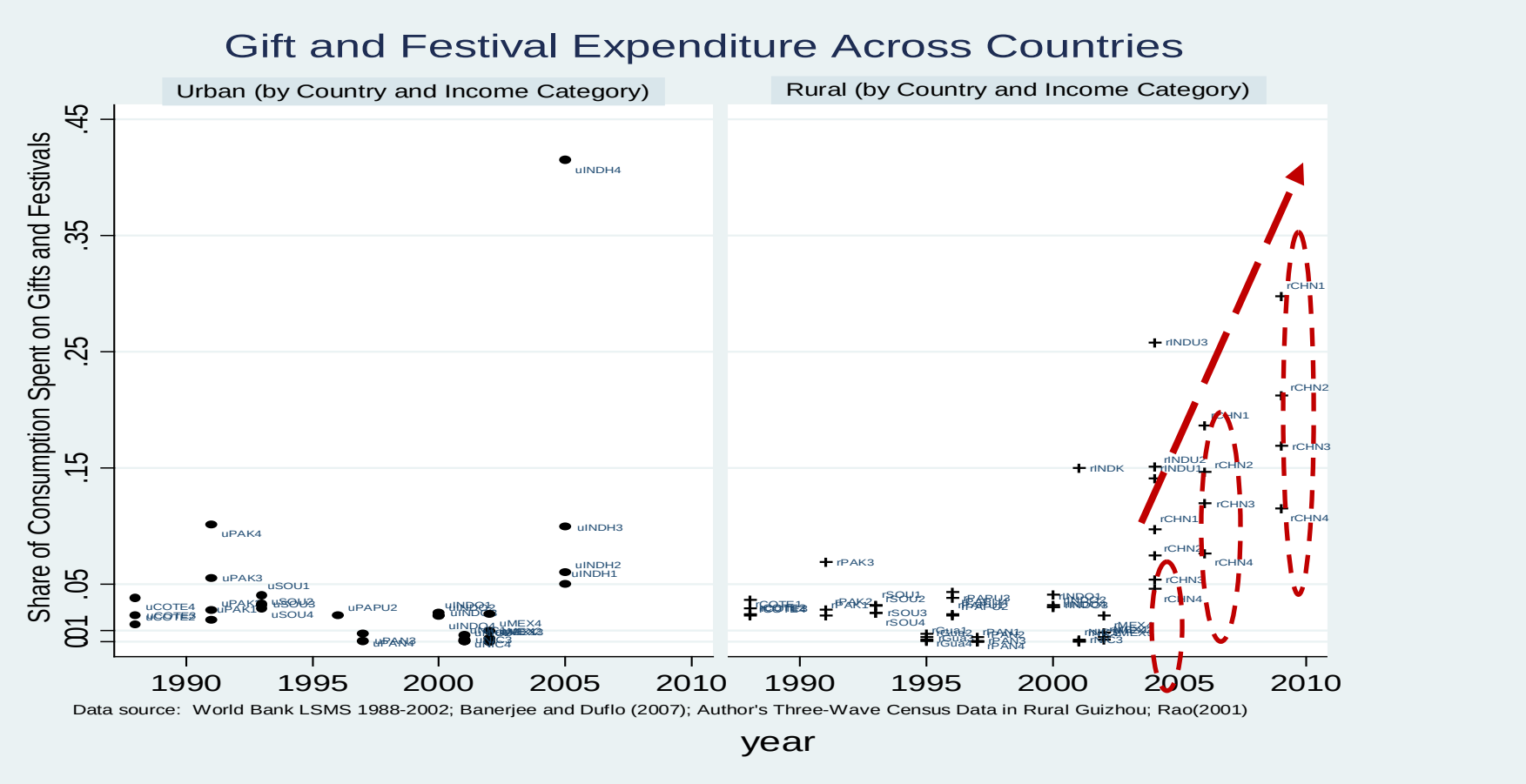
Stark, O. and J.E. Taylor. 1991. "Migration incentives, Migration Types: The Role of Relative Deorivation," *Economic Journal,* 101: 1163-11178.

The Economist. 2007. "Can Ghanaians afford such splendid funerals?" May 24.

Turner, Victor. 1982. "Introduction", in Victor Turner (ed.), *Celebration: Studies in Festivity and Ritual*, Smithsonian Institution Press, Washington, DC.

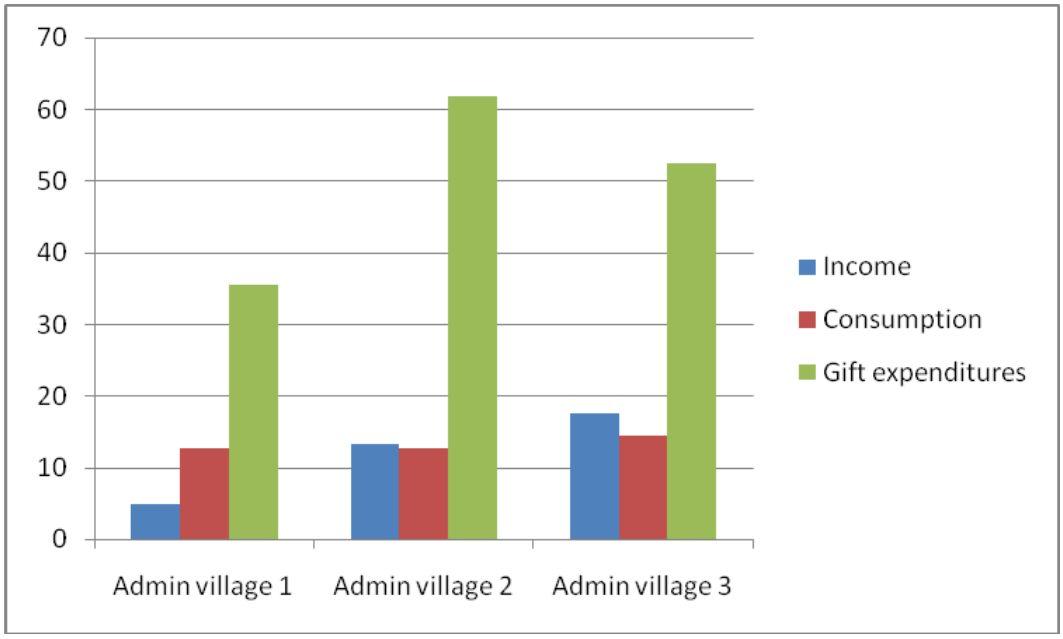
Yan, Y. 1996. The Flow of Gifts: Reciprocity and Social Networks in a Chinese Village. Stanford: Stanford University Press.

Figure 1



Notes 1) The categorization for rural China (rCHN1, rCHN2, rCHN3, rCHN4) is based on the same criteria as other datasets, i.e. less than $1 per day, $1-$2 per day, $4-$6 per day and $6-$10 per day. The poverty lines are adjusted according to 2005 PPP rate from http://iresearch.worldbank.org/PovcalNet/jsp/index.jsp.
2) Notation: CHN: China, Gua: Guatemala, INDU: India-Udaipur, INDO: Indonesia, INDK: India-Karnataka, COTE: Cote d'Ivoire, MEX: Mexico, NIC: Nicaragua, PAK: Pakistan, PAN: Panama, PAPU: Papua New Guinea, SOU: South Africa, INDH: India-Hyderabad. r: rural; u: urban; 1: live with less than $1 per day; 2: live with less than $2 per day; 3: live with $2-$4 per day; 4: live with $6-$10 per day.
3) The dashed circle and the arrow show rapid increase in the share of gift and festival expenditure in total consumption.

Figure 2 Annualized Growth in Per Capita Income, Consumption, and Gift Spending by Administrative Village



Source: Brown, P., E. Bulte, and X. Zhang (2010).

Figure 3 Kernel Density Map for Shocks (1996-2009)

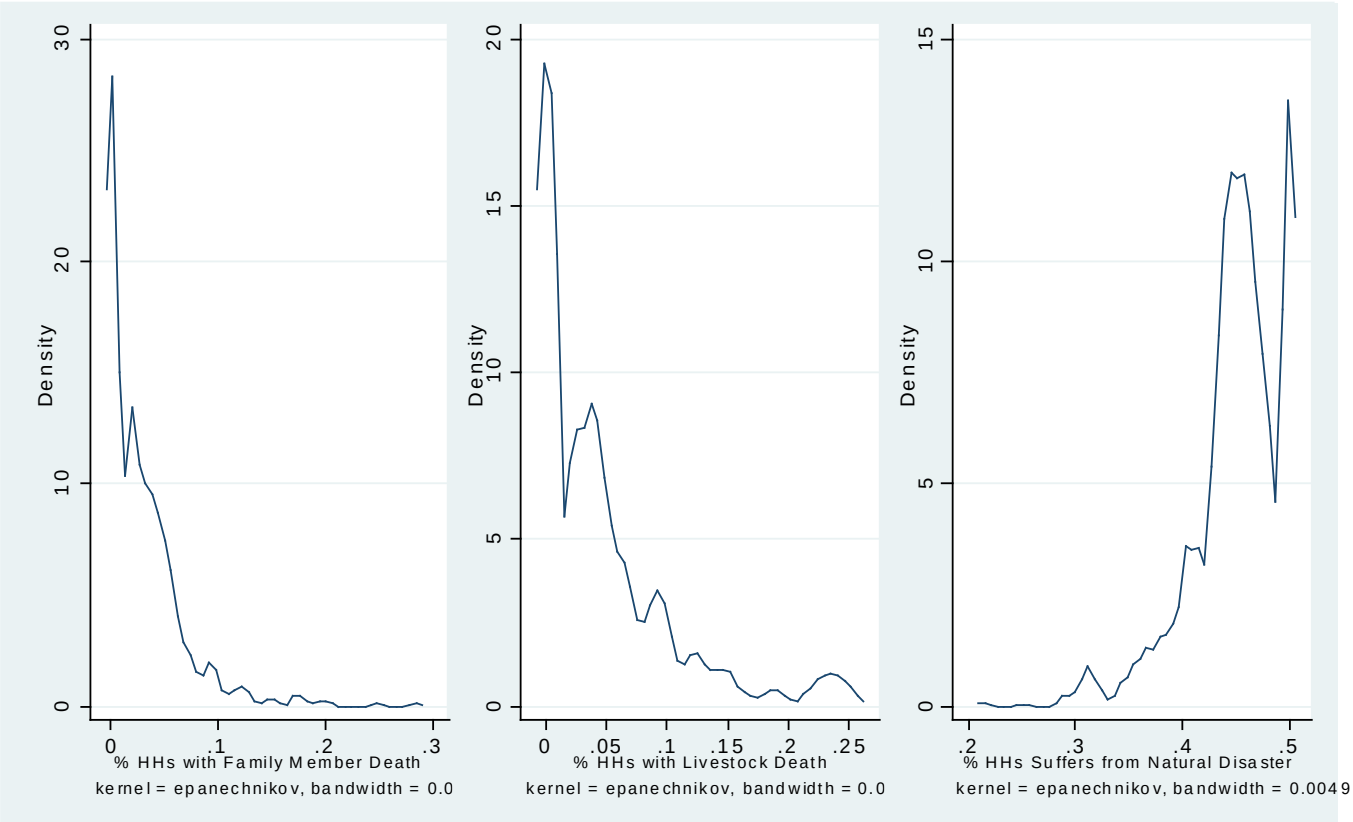


Table 1 Summary Statistics by Administrative Village

	Admin Village 1	Admin Village 2	Admin Village 3	Total
Number of natural villages	9	5	4	18
Total number of households	257	151	393	801
Total population	1,089	535	1,449	3,073
Distance to the county seat (km)	10.0	8.0	2.5	6.8
Per capita cultivated land (mu)	0.87	0.86	1.10	0.98
Share of flat land (%)	40.0	20.7	80.0	53.4
Male head of household (dummy)	93.5	94.8	91.6	92.8
Education of household head (years)	2.87	3.06	3.98	3.44
Minority head of household (dummy)	76.6	12.6	6.7	30.8
Share of household members aged 11-29, unmarried (%)	15.9	15.7	14.7	16.6
Share of household members aged 60 and above (%)	14.2	17.9	12.5	14.1

Source: Authors' survey data

Table 2 Income and Consumption by Administrative Village (2004-2009)

	Admin Village 1			Admin Village 2			Admin Village 3			Total		
	2004	2006	2009	2004	2006	2009	2004	2006	2009	2004	2006	2009
Main Sources of Income (Percent)												
Farming	26.3	26.7	23.7	31.0	37.4	29.5	37.0	31.5	26.1	33.3	31.4	33.1
Livestock	12.3	13.3	13.1	9.1	10.9	10.8	6.0	3.4	2.1	8.1	6.8	6.9
Local non-farm and self-employment	18.2	13.8	13.1	6.4	16.7	13.9	32.3	39.9	35.0	24.0	30.0	23.8
Remittance from migrants outside the county	7.8	22.4	11.6	10.9	10.2	9.4	7.3	10.7	6.6	8.0	13.1	8.8
Disaster relief, anti-poverty programs, deforestation subsidies	5.1	2.9	6.1	2.5	6.9	5.8	1.9	0.5	4.8	2.8	2.0	5.4
Gift income	3.2	4.5	4.7	11.7	11.6	8.4	4.9	11.1	10.7	5.6	9.1	8.2
Blood donation income	13	4.6	7.2	15.7	1.7	4.7	7.6	0.7	1.6	10.9	2.2	4.1
Main Expenditures (Percent)												
Food	53.8	51.1	48.1	47.1	42.9	36.5	45.4	38.5	34.3	47.8	42.2	35.5
Clothing	4.4	4.4	4.6	3.1	3.7	4.1	4.0	4.9	4.1	4.0	4.6	4.2
Fuel	5.9	6.4	6.7	5.4	6.9	7.3	10.2	9.5	8.0	8.4	8.3	7.5
Telephone	1.1	2.1	5.3	1.3	2.4	3.8	1.5	3.5	6.4	1.4	3.0	5.5
Medical care	14.1	16.7	15.1	24.7	16.8	16.9	15.2	15.2	11.2	16.4	15.8	13.5
Education	9.0	10.0	9.6	7.9	12.2	14.0	8.8	12.3	14.1	8.7	11.7	12.9
Gift and festival spending	6.4	9.2	10.1	6.8	13.9	16.1	8.9	15.9	17.5	7.9	13.9	15.2

Source: Authors' survey data

Table 3 Gift Expenditure by Administrative Village (2004-2009)

	Admin Village 1			Admin Village 2			Admin Village 3			Total		
	2004	2006	2009	2004	2006	2009	2004	2006	2009	2004	2006	2009
Participation rate in gift giving (%)	59.1	85.1	95.0	57	91.8	94.8	66.7	95.4	97.0	62.4	91.2	96.0
Median per capita gift expenditure (RMB)	16	62.5	125	20	150	200	80	250	571.4	33.3	150	300
Median gift to direct relatives (RMB per occasion)	30	50		30	50		50	100		40	60	
Median gift to friends/neighbors (RMB per occasion)	10	20	40	15	30	50	25	50	80	20	30	50
Times of Sending out gift	-	13.6	11.0	-	8.4	13.8	-	11.1	23.1	-	11.4	17.6

Source: Authors' survey data

Table 4 Median Gift Received (RMB) in Different Social Occasions from 1994 to 2009 (per occasion)*

Year	Wedding: Groom's Family			Wedding: Bride's Family			Funeral	
	1st son	2nd son	3rd son	1st daughter	2nd daughter	3rd daughter	1st	2nd
1996	900	-	-	1000	-	-	500	-
1997	500	0	-	1000	-	-	1200	-
1998	0	0	-	0	-	-	1500	0
1999	0	0	0	0	-	-	1500	-
2000	0	-	-	0	-	-	2250	1600
2001	2500	1150	-	150	-	-	1200	-
2002	850	0	-	400	900	-	2000	1000
2003	2250	0	4050	240	-	-	2000	1200
2004	2100	2800	-	-	-	-	2200	2000
2005	1200	-	-	0	-	-	2000	-
2006	4800	-	-	3500	1250	-	1850	5000

** In other social occasions such as big diseases, natural disasters, and college entrances more and more local residents exchange gifts. The information is collected by the authors according to household gift-receiving records.*

Table 5 Median Marriage and funeral Expenditures (RMB) (1996-2009)

Year	Wedding: Groom's Family				Wedding: Bride's Family			Funeral
	Brideprice	Gift to bride	Ceremony	Total Expenditure	Dowry	Ceremony	Total Expenditure	Total Expenditure
1996	2500	2000	2000	6500	0	1000	1000	1750
1997	3000	1800	2000	6800	1000	0	1000	3000
1998	3500	2000	2250	7750	1100	500	1600	3000
1999	2000	1800	2000	5800	300	0	300	3200
2000	3000	2000	2500	7500	2000	150	2150	3000
2001	3000	3000	3000	9000	2000	0	2000	3000
2002	4800	4250	2400	11450	400	0	400	2850
2003	3000	3500	3000	9500	1900	500	2400	3850
2004	8000	2500	3500	14000	-**	-**	-**	6000
2005	9500	5250	3700	18450	2000	0	2000	5000
2006	8800	5600	3750	18150	2250	3500	5750	5000
2007	1000	10750	5500	17250	2000	4000	6000	7100
2008	1000	12000	6500	19500	2000	4000	6000	9180
2009	1000	12000	6200	19200	1600	4000	5600	7400

Source: Authors' survey data
** Using Recall data from the 2007 survey and 2009 survey.*
*** No wedding was held for that category during that year.*

Table 6 Determinants of Social Spending in 2006 (1st stage estimation)

	I(a)	I(b)	I(c)
	Gift expenditure per capita (2006)		
Share of Youth	96.484	99.748	107.341
	(77.76)	(77.89)	(78.20)
Education	3.925	4.026	5.955
	(4.34)	(4.37)	(4.32)
Per Capita Income (log)	58.119***	58.400***	66.951***
	(16.56)	(16.63)	(16.46)
Sex	-66.974	-72.264	-75.934
	(58.34)	(58.31)	(58.66)
Marriage Status	11.134	16.775	23.511
	(74.02)	(73.97)	(74.33)
Minority	-109.517***	-138.974***	-169.570***
	(38.66)	(31.12)	(28.94)
Gini Coefficient	419.097*	205.546	342.11
	(222.66)	(221.49)	(222.79)
Share of the Elderly	-131.731***	-132.383***	-129.190***
	(45.97)	(45.71)	(45.97)
Lagged Median Gift Expenditure in the Village		1.304***	
		(0.39)	
Frequency of Shocks in the Last Two Years			4.521***
			(1.49)
Observations	694	694	694
R-squared	0.15	0.15	0.14

1. Robust standard errors in parentheses.
2. * significant at 10%; ** significant at 5%; *** significant at 1%
3. Village dummies, migration share, household size and cadres are controlled but not reported here.
4. The exogenous shocks include family member deaths, livestock deaths and natural disasters in the past two years in the village.

Table 7 Determinant of Social Spending in 2009 (1st stage estimation)

	I(d)	I(e)
	Gift expenditure per capita (2009)	
Share of Youth	431.716***	457.671***
	(152.29)	(150.37)
Education	13.402	7.651
	(11.90)	(11.83)
Per Capita Income (log)	250.398***	224.332***
	(38.57)	(38.65)
Sex	-38.937	8.162
	(151.45)	(149.90)
Minority	272.501***	17.987
	(78.45)	(101.98)
Marriage Status	-135.7077	-129.7836
	(136.861)	(135.0214)
Gini Coefficient	-1,313.640*	-347.698
	(747.70)	(779.45)
Share of the Elderly	-43.233	-36.734
	(147.21)	(145.23)
Frequency of Shocks in the Last Two Years		2.956***
		(0.46)
Observations	502	502
R-squared	0.17	0.19

1. Robust standard errors in parentheses.
2. * significant at 10%; ** significant at 5%; *** significant at 1%
3. Village dummies, migration share, household size and cadres are controlled but not reported here.
4. The exogenous shocks include family member deaths, livestock deaths and natural disasters in the past two years in the village.

Table 8 Ordered Probit Estimation of Private Return to Social Spending (2009)
(Measuring Return to Social Status via Subjective Ranking)

	II(a)	II(b)
	Subjective Ranking (2009)	
Share of Youth	0.2	0.091
	(0.33)	(0.30)
Education	0.040**	0.039**
	(0.02)	(0.02)
Per Capita Income (log)	0.08	-0.240*
	(0.12)	(0.13)
Sex	-0.151	-0.084
	(0.25)	(0.21)
Marriage Status	-0.208	-0.244
	(0.26)	(0.26)
Minority	-0.035	0.084
	(0.31)	(0.20)
Gini Coefficient	-2.118**	-2.499***
	(0.90)	(0.84)
Gift expenditure per capita (predicted)	0.003**	-0.003
	(0.00)	(0.00)
Gift expenditure per capita (predicted)* per capita Income (log)		0.001***
		(0.00)
Observations	694	694

1. Robust standard errors in parentheses.
2. * significant at 10%; ** significant at 5%; *** significant at 1%
3. Village dummies, migration share, household size and cadres are controlled but not reported here.

Table 9 Private Return to Social Spending
(Measuring Return to Social Network via Solving Cash Shortage)

	II(c)	II(d)	II(e)	II(f)
	Whether could borrow from relatives, friends and neighbors			
	(2006)		(2009)	
Share of Youth	-0.021	-0.393	0.204	0.259
	(0.38)	(0.34)	(0.32)	(0.32)
Education	0.011	-0.007	0.021	0.026
	(0.02)	(0.02)	(0.02)	(0.02)
Marriage Status	0.361	0.301	0.225	0.292
	(0.33)	(0.33)	(0.24)	(0.24)
Per Capita Income (log)	-0.007	-0.373***	-0.171	-0.342**
	(0.14)	(0.13)	(0.13)	(0.15)
Sex	-0.019	0.368	0.085	0.098
	(0.29)	(0.25)	(0.27)	(0.26)
Minority	-0.198	0.461**	0.359**	0.333*
	(0.35)	(0.22)	(0.18)	(0.18)
Gini Coefficient	0.985	-0.081	-1.525	-1.323
	(1.04)	(0.96)	(1.34)	(1.34)
Gift expenditure per capita (predicted)	0.003*	0.002	0.001	-0.002**
	(0.00)	(0.00)	(0.00)	(0.00)
Gift expenditure per capita (predicted)* per capita Income (log)		0.00***		0.00**
		(0.00)		(0.00)
Observations	694	694	510	510

1. Robust standard errors in parentheses.
2. * significant at 10%; ** significant at 5%; *** significant at 1%
3. Village dummies, migration share, household size and cadres are controlled but not reported here.

Table 10 Private Return to Social Spending (2009)
(Measuring Return to Social Network via Get-together Frequency)

	II(g)	II(h)	II(h')
	Frequency of Get-together (2009)		
Share of Youth	-0.446	-0.304	-0.304
	(0.92)	(0.91)	(0.91)
Sex	-0.956	-0.925	-0.925
	(0.80)	(0.78)	(0.78)
Minority	0.183	0.178	0.178
	(0.51)	(0.50)	(0.50)
Education	0.237***	0.245***	0.245***
	(0.07)	(0.07)	(0.07)
Per Capita Income (log)	-0.587	-1.029**	-1.029**
	(0.40)	(0.43)	(0.43)
Gini Coefficient	-3.93	-3.626	-3.626
	(2.93)	(2.99)	(2.99)
Gift expenditure per capita (predicted)	0.005***	-0.001	0.005***
	(0.00)	(0.00)	(0.00)
Gift expenditure per capita (predicted)* Per Capita Income(log)		0.001**	
		(0.00)	
Gift expenditure per capita (predicted)* (per capita inc – mean(per capita inc))			0.001**
			(0.00)
Observations	509	509	509
R-squared	0.16	0.17	0.17

1. Robust standard errors in parentheses.
2. * significant at 10%; ** significant at 5%; *** significant at 1%
3. Village dummies, migration share, household size and cadres are controlled but not reported here.

Table 11 Private Return to Network Connections (Centrality) (2009)

	II(i)	II(j)	II(k)	II(l)	II(m)	II(n)
	Frequency of Get-together (2009)		Capability to borrow from relatives, friends and neighbors		Subjective Ranking	
Share of Youth	3.527***	3.338***	0.728**	0.674**	5.629***	5.811***
	(1.24)	(1.22)	(0.34)	(0.34)	(1.42)	(1.46)
Education	0.393***	0.385***	-0.024	-0.027	0.221***	0.277***
	(0.13)	(0.13)	(0.03)	(0.03)	(0.07)	(0.09)
Marriage Status	-0.299	-0.498	0.319	0.277	-0.718	-1.002*
	(1.04)	(1.02)	(0.39)	(0.39)	(0.51)	(0.52)
Per Capita Income (log)	0.299	0.244	-0.082	-0.098	17.005***	17.948***
	(0.33)	(0.33)	(0.08)	(0.08)	(2.31)	(2.61)
Sex	1.031	0.956	-0.247	-0.28	2.417***	2.312***
	(0.89)	(0.88)	(0.31)	(0.32)	(0.48)	(0.48)
Minority	-1.260*	-1.421**	0.457**	0.400**	-0.478	0.033
	(0.67)	(0.67)	(0.20)	(0.20)	(0.48)	(0.56)
Age	-0.016	-0.02	-0.021***	-0.023***	0.02	0.03
	(0.03)	(0.03)	(0.01)	(0.01)	(0.03)	(0.03)
Gini Coefficient	-24.127**	-21.144*	0.174	1.101	-27.555***	-25.038**
	(11.38)	(11.12)	(3.33)	(3.38)	(9.81)	(9.99)
Relative centrality (existence of links)	0.499		0.138		0.559*	
	(0.70)		(0.16)		(0.32)	
Relative centrality (weighted by values of gifts)		0.383**		0.142**		0.477**
		(0.16)		(0.06)		(0.23)
Observations	336	336	336	336	284	284

1. Robust standard errors in parentheses
2. * significant at 10%; ** significant at 5%; *** significant at 1%
3. Village dummies, migration share, household size and cadres are controlled but not reported here.
4. Tobit model for the first two columns, probit model for the next two columns, and ordered probit models for the last two columns are estimated respectively.

Table 12 Intermediate Private Returns, Shocks and Consumption

	II(o)	II(p)	II(q)	II(r)	II(s)	II(t)	II(u)	II(v)	II(w)	II(x)	II(y)	II(z)
	Living expense (diff, log)	Food expense (diff, log)	Living expense (diff, log)	Food expense (diff, log)	Living expense (diff, log)	Food expense (diff, log)	Living expense (diff, log)	Food expense (diff, log)	Living expense (diff, log)	Food expense (diff, log)	Living expense (diff, log)	Food expense (diff, log)
Death	-0.059	-0.063					0.065	-0.036				
	(0.18)	(0.15)					(0.20)	(0.18)				
Natural Disaster			-0.148	-0.028					0.201	0.312***		
			(0.13)	(0.10)					(0.13)	(0.12)		
Livestock Death					-0.013	-0.023					0.1	0.071
					(0.16)	(0.13)					(0.21)	(0.19)
Death * Capability to Borrow	-0.236	-0.063										
	(0.28)	(0.27)										
Disaster * Capability to Borrow			-0.101	-0.035								
			(0.17)	(0.14)								
Livestock Death * Capability to Borrow					0.082	-0.007						
					(0.25)	(0.24)						
Death * Frequency of Get-together							-0.030*	-0.017				
							(0.02)	(0.02)				
Disaster * Frequency of Get-together									-0.053**	-0.06***		
									(0.02)	(0.02)		
Lvkdeath * Frequency of Get-together											0	-0.004
											(0.03)	(0.02)
Capability to Borrow	0.216***	0.153**	0.269***	0.158*	0.187**	0.147*						
	(0.08)	(0.08)	(0.09)	(0.10)	(0.08)	(0.08)						
Frequency of Get-together							0.025***	0.032***	0.029***	0.039***	0.019**	0.029***
							(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)

Obs	373	373	377	377	373	373	311	311	311	311	311	311
R2	0.21	0.22	0.21	0.21	0.21	0.21	0.21	0.25	0.22	0.27	0.2	0.25

1. Robust standard errors in parentheses
2. * significant at 10%; ** significant at 5%; *** significant at 1%
3. Village dummies, per capita income (log), share of youth, household head information (education, age, gender and minority status), migration share, and cadre are controlled but not reported here.
4. In the odd columns of estimations dependent variables are all defined as difference in logged living expenses between 2004 and 2006, while in the even columns of estimations dependent variables are all defined as difference in logged food consumption between 2004 and 2006.