

Positional Spending and Status Seeking in Rural China

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Abstract: Focusing on a remote area in rural China, we use a panel census of households in 26 villages to show that socially observable spending has risen sharply in recent years. We demonstrate that such spending by households is highly sensitive to social spending by other villagers. This suggests that social spending is either positional in nature (i.e. motivated by status concerns) or subject to herding behavior. We also document systematic relations between social spending and changes in higher order terms of the income distribution. In particular, and consistent with theories of rank-based status seeking, we find the poor increase spending on gifts as the income distribution tightens so that local competition for status intensifies. In addition families of unmarried men (who face grim marriage prospects given China's high sex ratios, especially in poor areas) intensify their competition for status by increasing their spending on weddings. The welfare implications of spending in order to "keep up with the Joneses" are potentially large, particularly for poor households.

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1. Introduction

While standard economic theory assumes that individuals derive utility from absolute levels of consumption, it is well understood that people also care about how their consumption compares to that of others. One reason is that relative consumption is closely linked to social status. Concern about one's status might be based on "hard-wiring" of preferences shaped by some historically-distant evolutionary process, or it may simply follow because it has instrumental value today (e.g., Postlewaite 1998).¹ Regardless of its origin, sensitivity to relative income and consumption implies that issues like labor supply, savings, and consumption choices are not invariant with respect to the behavior of others. The pursuit of status leaves a behavioral trail.

In the race for social status, an inherent conflict emerges between individual and social welfare because negative externalities caused by "positional spending" imply inefficient equilibrium outcomes (Frank 2005, 2008). In addition to such efficiency costs, Frank (2008) has noted that in U.S. counties with high income inequality, intense competition for social status leads to higher median housing prices, higher personal bankruptcy rates, and a higher incidence of divorce.²

¹ Relative consumption effects can originate if status has instrumental value, for example because it determines access to valuable resources, such as potential mates (e.g. Cole et al. 1992). Alternatively, preferences for relative consumption may be a side-effect or relic from an ancient evolutionary process, such as the processing of imperfect information in a fluctuating environment. In this context, consumption by peers contains information about the "state of the environment," helping us to behave optimally ourselves (e.g., Samuelson 2004).

² Moreover, there is considerable empirical evidence to suggest that relative income and consumption matter for well-being. For example, according to Stutzer (2004), income aspirations rise with average community income in Switzerland, yet rising aspirations result in decreased subjective well-being. Luttmer (2005) finds that self-reported happiness of people is negatively affected by higher earnings of neighbors. Similarly, Shilpi and Fafchamps (2005) find that poor households' subjective assessment of the adequacy of their consumption of housing, food, clothing, health-care, and schooling is strongly correlated with the average consumption level of community members in Nepal. Easterlin (1995) reports a positive correlation between individual income and self-reported happiness (see also Diener et al. 1993), but finds that average happiness is not highly correlated with national income and does not respond strongly to changes in income over time (see also Frank 1985a; Oswald 1997). Easterlin thus concludes that relative income is more important than absolute income as a determinant of subjective well being, i.e., that income comparisons matter² (see Clark et al. 2008 for a treatment of micro and macro evidence and an overview of theoretical approaches to explain "Easterlin's paradox").

Interestingly, status may not necessarily be a luxury good in the sense that it is especially sought by the rich. While findings by Heffetz (2007) suggest that status-seeking through conspicuous spending is only relevant for the richest half of the US population, there is also anecdotal evidence to corroborate Veblen's argument that "no class of society, not even the abjectly poor, foregoes all customary conspicuous consumption" (1899, p.85). For instance, van Kempen (2003) demonstrates that the poor in Bolivia are willing to trade off the consumption of non-positional goods for extra consumption of designer-label goods in an effort to "keep up with the Joneses." Similarly, Banerjee and Duflo (2007) find that the median household in Udaipur, India – where 86% of the population lives below the \$2 per day poverty line – spends 10% of its annual budget on festivals and 5% on tobacco and alcohol, which are typically consumed in social settings. This is a striking outcome for a region in which 65% of the men and 40% of the women have body mass indices below 18.5, a figure that the World Health Organization considers to be a long-term indicator of long-term malnutrition (WHO 1995).

Other forms of conspicuous spending by the poor include spending on gifts, marriages, and funerals. For example, Yan (1996) finds that gift-giving practices in China include elements intended to manipulate social relations and challenge social status, and that competitive gift giving frequently ensues. In the context of marital transfers, Anderson (2007) provides evidence that high bride-prices and dowries are used to attract socially desirable marital partners for one's children. The amounts involved are often substantial, with marital transfers amounting to six times the annual household income in South Asia (Rao 1993) and four times the annual household income in Africa (Dekker and Hoogeveen 2002). Moreover, Anderson (2007) shows that marriage payments rise in periods of increasing income inequality in settings such as Bangladesh. In a similar fashion, Case et al. (2008) observe that South African households

spend the equivalent of one year's income to bury deceased household members while Economist (2007) reports on "splendid" funerals in Ghana, where the typical burial costs between \$2,000 and \$3,500 despite 79% of the population living on less than \$2 per day; in each case, such lavish spending is intended to indicate the social status of the deceased and the "quality" of the mourning family.

However, it is not evident that escalating marital transfers or expenses related to gift giving and funerals necessarily measure more intense status seeking. For example, it could be that people respond to behavior of their peers because of a desire to conform. Such "herding behavior" may be triggered by sanctions on deviants who violate social rules or norms, positive payoff externalities, a preference for conformity, or by informational cascades (Banerjee 1992, Bikhchandani et al. 1992). It is important to distinguish between the underlying mechanisms when analyzing relations between consumption of individuals and the aggregate community within which the individual resides.

For this reason, it is critical to distinguish between "social spending" and "positional spending." The former is a broad category of expenditures at least partly motivated by spending decisions of others. This category encompasses positional spending as a special case. Positional spending, then, focuses on status seeking as the deeper motivation for a concern about relative consumption. Distinguishing between status seeking and evolving social norms to explain observed spending patterns is far from straightforward, and analyzing and explaining expenditure data requires specific theories.

In this paper, we aim to make some progress toward both documenting patterns of social spending in rural China and unraveling the underlying mechanisms. In order to do so, we first describe recent trends in various forms of social spending, including household expenditures on

gifts, weddings, and funerals. We then assess the determinants of such spending, focusing on the average level of spending in the community as an important potential contributing factor.

Moreover, since we have collected spending data on several goods, we can assess whether the motives behind social spending are consistent across goods. Third, we explore whether changes in the income distribution prompt certain groups to disproportionately change their social spending, evidence of which would suggest that status concerns may underlie these patterns. Finally, we describe some of the welfare implications of races for status on poor households.

The analysis is undertaken via a new panel survey of households in three administrative villages in Guizhou province. The survey was administered to every household in the three administrative villages, implying that we have a complete picture of relative status without having to rely on sampling. Moreover, employing panel data eliminates concerns about simultaneity and omitted variable bias that may arise in a cross-section.

We demonstrate that social spending has increased much faster than income in our surveyed villages, and find a positive and significant association between changes in household spending on gifts from 2004 to 2006 and changes in aggregate gift spending in the village. In addition, we find strong correlations between both wedding expenses for grooms' families and funerals on the one hand and lagged levels of aggregate spending in these same areas on the other, a result that holds even when we control for income and household demographics. These patterns of social spending are consistent with the theoretical predictions of several status models, but do not exclude, say, herding behavior as an alternative explanation. To distinguish between status seeking and other motives, we test a hypothesis based on the class of rank-based status models (see below), and link social spending to higher moments of the income distribution within the reference population. We find evidence of status seeking, with the poor being

especially sensitive to status concerns. Moreover, status appears to be derived from gift giving and spending associated with weddings on the part of grooms' families, while expenditures on funerals are better explained by evolving social norms. Finally, spending on weddings by the bride's family follows none of these patterns, demonstrating that some forms of socially observable spending are neither subject to herding nor to status concerns.

The paper is organized as follows. In section 2, we discuss the literature on exogenous changes in the distribution of income and status seeking. In section 3, we describe positional spending as well as the incidence of income transfers from migrant family members in China, outline our empirical strategy, and describe our data. In section 4, we present the empirical results and relate them to our model. The conclusions and discussion ensue.

2. Social spending and the distribution of income

We begin with a general specification that captures the idea that people care about their own behavior and payoffs relative to those of others, and initially focus on status seeking as the deeper motivation for a concern about relative consumption (returning to herding behavior below). Define x_i as own consumption of a "visible" good that may confer status when consumed by individual i , and define y as that individual's consumption of a good that is not visible (and hence cannot confer status). Also define \hat{x} as a measure of spending on good x by others in the reference population (see below), Z_i as a vector of socio-economic and demographic variables, and p as the relative price of good x . Assume agent i 's utility as follows:

$$(1) \quad U_i = U(x_i, \hat{x}; Z_i; p, I),$$

where we have used the budget constraint $I_i = px_i + y_i$ to eliminate y so that I denotes income. If the individual's utility is influenced by relative spending, e.g., by differences between x_i and \hat{x} , then one possible specification of (1) is as follows:

$$(2) \quad U_i = \alpha S(x_i - \hat{x}) + (1 - \alpha)V(x, I - px_i).$$

In (2), S is a sub-utility function capturing the benefits of status, V is a sub-utility function capturing utility from own consumption, and $0 \leq \alpha \leq 1$ is a parameter measuring the strength of concerns about status. For $\alpha \rightarrow 0$, the problem reduces to a conventional utility-maximization exercise in which social spending plays no role. For $\alpha > 0$, the specification in (2) implies that people derive utility (disutility) from spending more (less) than others on visible goods. It is easy to show that introducing a concern about the relative consumption of visible goods implies that spending on the social good is increased, relative to spending in conventional models (where $\alpha=0$). However, the comparative statics indicating whether people spend more or less on social goods in response to changes in the expenditures of their peers are less clear. Solving for

$\partial U_i / \partial x_i = 0$ and then differentiating yields:

$$(3) \quad \frac{\partial x_i}{\partial \hat{x}} = \frac{\alpha S_{xx}}{\alpha S_{xx} + (1 - \alpha)V_{xx} - 2p(1 - \alpha)V_{xy} + (1 - \alpha)p^2V_{yy}},$$

where variable subscripts denote (partial) derivatives. The denominator of the RHS of (3) is negative by the requirement that the maximization problem is concave, but the sign of the numerator may be negative or positive, depending on whether $S(\cdot)$ is concave or convex. Thus, the sign of $\partial x_i / \partial \hat{x}$ is ambiguous, and both “follower” ($\partial x_i / \partial \hat{x} > 0$) and “deviant” behavior ($\partial x_i / \partial \hat{x} < 0$) may ensue. Concave utility from status, $S_{xx} < 0$, implies that an increase in positional spending by others triggers a “keeping up with the Joneses” response by agent i .

Concave utility implies the marginal value of status falls as one has more of it, and status seeking

generates social spending decisions as strategic complements. In contrast, convex utility from status implies that the marginal utility of status increases as one acquires more of it, akin to risk-loving preferences in conventional models. Such preferences imply behavior opposite the tendencies observed in the reference group, an outcome that perhaps describes behavior of fashion leaders and individuals in counter-culture groups. Hence, a fundamental result is that a concern for social status yields ambiguous predictions for the behavior of individuals in response to changes in status-seeking behavior of others.³ However, the most likely case (and the one corroborating the conventional perspective on status seeking) is the case of concave utility potentially resulting in spending races.

Herein lies a problem. The standard status seeking specification predicts $\partial x_i / \partial \hat{x} > 0$, but this is exactly what a simple herding model based on an (exogenously) evolving norm would predict. For example, re-label $\hat{x}_j(t)$ as a spending norm on visible goods in community j at time t . If we redefine utility as follows:

$$(2') \quad U_i = \beta S |x_i - \hat{x}| + V(x, I - px_i),$$

where β is a coefficient measuring the disutility associated with deviations from the spending norm, then we would also obtain $\partial x_i / \partial \hat{x} > 0$ as a rational equilibrium response.

To distinguish between herding induced by an evolving norm and status seeking, we add structure to the model. Following Frank (1985b), Robson (1992), Hopkins and Kornienko (2004), and Haagsma and van Mouche (2007), one might augment utility functions with a term

³ The ambiguity of $\partial x_i / \partial \hat{x}$ is not conditional on the assumption that status utility is specified as $S = S(x_i - \hat{x})$. For example, qualitatively similar results are obtained when $S = S(x_i / \hat{x})$ instead (e.g., Clark and Oswald 1998).

that captures the ordinal “rank” of the agent in a reference population.⁴ This may be captured by the following specification where $F(\cdot)$ denotes a cumulative density function:

$$(4) \quad U_i = U(x_i, F(x_i), Z_i; p, I).$$

The social rank of agents varies positively with the number of other agents that it dominates in terms of status spending, hence, $U(\cdot)$ must be increasing in $F(\cdot)$. The advantage of this specification is that status is not only determined by own spending behavior relative to average behavior in the population, but that higher order terms of the spending distribution also matter. The distribution of income determines the intensity of the local contest for higher rank.

To illustrate, suppose that some households within the reference population receive an exogenous increase in income.⁵ The impact of a change in the income distribution on positional spending is analyzed by Hopkins and Kornienko (2004, hereafter HK), where status is modeled as the agent’s rank in terms of consumption of the positional good.⁶ Specifically, building on Frank (1985b) and Robson (1992), status is defined as follows:

$$(5) \quad S(x, F(x)) = aF(x) + (1-a)F^-(x) + s$$

where $F(x)$ measures the mass of individuals with lower or equal consumption of the status-conferring good, $F^-(x)$ is the mass of individuals with strictly lower consumption of the status-conferring good (to avoid non-uniqueness of the equilibria), and s is a parameter that captures the

⁴ Alternatively, in the tradition of Duesenberry (1949), Pollak (1976), Oxoby (2004), and others, utility functions may be augmented with a term that captures *average* consumption within the reference population (\bar{x}), such that the utility function is specified: $U_i = U(x_i, (x_i / \bar{x}), Z_i; p, I)$. Depending on what we are willing to assume with respect to the specification of U , positional spending might again emerge as strategic complements or substitutes, but the most likely specification again produces $\partial x_i / \partial \bar{x} > 0$. Unfortunately, not much else can be teased out of this model that allows us to distinguish between status seeking and norm-induced herding.

⁵ The income distribution may change due to many factors, but in the context of Chinese villages (discussed below), the most relevant factor is the inflow of money via remittances for some villagers, and not others.

⁶ HK model the case of a continuum of individuals. Especially in the context of rural communities, however, a model based on a discrete number of agents such as that of Haagsma and van Mouche (2007) may be more appropriate. While the continuity assumption is not innocent in general, both the continuous and discrete model yield the ambiguous comparative statics with respect to exogenous changes in the income distribution.

“basic” or minimum level of status that accrues to all community members – including the one with lowest social rank – and therefore measures the intensity of competition for status. HK consider the following specification of utility:

$$(6) \quad U(\cdot) = V(x,y)S(x,F(x)),$$

and introduce a budget constraint so that the model may be solved. In the presence of a positive exogenous shock to income for some households in the reference population (due to remittances from family members in urban areas, for example), the Nash equilibrium response of (most) other households is to increase spending on status-conferring goods as well in an effort to preserve their rank and status.⁷ A new equilibrium status ranking (corresponding with the *ex-post* distribution of income) ensues. Households *not* receiving the income shock may find themselves surpassed on the social ladder, and if so, experience a fall in status and utility. Of course, such households also suffer because increased positional spending lowers utility from own consumption by reducing V^* .

Depending on assumptions with respect to s (i.e., the residual status for the lowest-ranked individual in society), social spending of the poorest within society may intensify or relax in response to changes in the income distribution. Whenever $s > 0$, so that the lowest-ranked individual has some status, HK find that a subset of the poorest *not* receiving remittances may *decrease* positional spending in equilibrium because changing the distribution of income implies changing the intensity of (local) competition for status at the bottom. Suppose that a changed income distribution implies “upgrading” some poor people to the middle income echelon of the reference population such that the density mass of the income distribution shifts away from the

⁷ Hence, outcomes may emerge where “everyone increases conspicuous consumption in order to improve status, but any gain in status is cancelled out by the similarly increased expenditures of others. Such an economy can be described as a Lewis Carroll ‘Red Queen’ economy, in which ‘it takes all the running you can do to keep in the same place’” (HK, p.1086).

low income tail toward the center. As a result, competition for status becomes less intense at the bottom, and the incentive to engage in strategic status seeking is mitigated, enabling the poorest to relax their spending on positional goods and to move towards the “conventional” (i.e. non-status seeking) efficient allocation of income. That is, they may buy more y and less x .⁸

In contrast, when $s=0$, implying pariah-like status for the lowest-ranked individual, the comparative statics are unambiguous. The case of $s=0$ might be a realistic scenario when, for example, competition for mates depends on status and when the lowest-ranked individual cannot attract a spouse. In such a context, raising average income triggers a scramble for status that extends all the way down to the bottom echelons of the income distribution: $\partial x_i / \partial \hat{x} > 0$ for all community members. Even the poorest of the poor then raise their conspicuous consumption in response to an increase in income of some of their fellow villagers (see HK for details).

The rank-based status model allows distinguishing between status seeking and norm-induced herding as causal mechanisms of social spending as it relates social spending to a measure of income inequality. Assume there are two communities that are identical in all respects but one. Specifically, when comparing the density functions of the income distributions, community 1 has more probability mass in the “tails” of the distribution than community 2. The HK model predicts that status seeking will be more intense for the poor and the rich in community 1, and more intense for households with an income closer to the mean in community 2. More intense competition for status translates into greater social spending (an exception exists for the poorest whenever $s=0$, who may increase positional spending in response to a decrease in local density in a desperate effort to keep up. However, in the empirical analysis below their response may be swamped by that of their peers, as we lump together all households with

⁸ However, the net effect on welfare considering both the re-allocation of consumption and the fall in status is necessarily negative, even for the poorest households; see HK.

incomes less than half the median income.) While changing the distribution of income has ambiguous effects on *overall* status seeking within the community, the model produces predictions for social spending conditional on own income and the overall distribution of income within the community. In contrast, there is no reason to suspect that norm-induced herding is guided by the distribution of income. We exploit these insights to identify status seeking in our data and to distinguish status seeking from herding behavior.

3. Data and descriptive statistics

The economic and structural transformations occurring in China in recent decades have generated one of the most dramatic migration dynamics in human history. Migration has transformed the economic and social landscape of rural China as remittances became the fastest-growing component of non-agricultural rural income during the 1990s (Rozelle et al. 1999).⁹ By 2001, remittances from migrants reached 9% of total rural income (Deininger et al. 2003), a figure that will likely continue to rise as more people leave the countryside (de Brauw and Rozelle 2008). Moreover, there is evidence that asset-poor households have a greater likelihood of migration (Du et al. 2005), suggesting that remittances from migration may challenge the existing social order in rural communities. This allows us to relate the events in rural China to the rank-based status model outlined above.

In non-poor villages, labor migration is associated with significant increases in conspicuous consumptive investment, but only modest increases in productive investment that would secure durable increases in welfare.¹⁰ There is also some evidence suggesting that the

⁹ Between 1999 and 2003, for example, the number of migrants increased from 52 million to 98 million people (Du et al. 2005). Indeed, Zhang et al. (2004) find that approximately 75% of young people migrate from rural areas.

¹⁰ De Brauw and Rozelle (2008) demonstrate that conspicuous consumption is especially evident in the form of housing.

relative share of rural Chinese incomes allocated to gift-giving has increased steadily since de-collectivization, both because gifts have become more expensive and because new occasions for gift-giving have arisen. For example, Yan (1996) points to abortion and sterilization as two occasions that now call for gift-giving. These behavioral patterns could be indicative of both status seeking and norm-induced herding.¹¹

The data for this study come from a detailed new panel survey of households in Guizhou Province, China.¹² With a poverty rate double the national average, Guizhou is the poorest province in China, an ideal setting for studying the implications of social spending on poor households. The survey site is Puding County, which consists of 11 townships, 317 administrative villages,¹³ and a total population of 402,000. Per capita income in Puding County is above the provincial median but below the provincial mean, suggesting that its income profile is representative of Guizhou as a whole. At the end of 2002, approximately 120,000 (31%) people in Puding population were officially designated as poor (PAO 2003). About 94% of the population resides in rural areas, and agricultural labor accounts for approximately two-thirds of the total labor force. More than 20 ethnic groups are represented in Puding, including Han (the ethnic majority on China), Miao, Buyi, Gelao, and Yi; in total, ethnic minorities comprise about 20% of the population.

Three administrative villages that represent the broad range of economic development in Puding were chosen by survey enumerators, including one of the authors. A census-type survey of all 805 households in the 26 natural villages comprising the three administrative villages was

¹¹ In the Chinese context, one specific norm may be relevant. Social spending may facilitate the building of *guanxi*, or social networks, which may be relied upon for mutual assistance, personal financing, or other forms of help.

¹² Data collection efforts were supported by the International Food Policy Research Institute, the Chinese Academy of Agricultural Science, and Guizhou University.

¹³ An “administrative village” is a bureaucratic entity comprised of several “natural” or “typical” villages.

administered in late 2004.¹⁴ A follow-up survey administered in early 2007 (reflecting the year 2006) included 833 households. The surveys collected detailed information on demographics, income, consumption, and transfers. Information was collected for each household member, including members that were working outside the county at the time of the surveys.

Table 1 presents summary statistics for each of the three administrative villages in 2004 and 2006. The first administrative village is comprised of 11 natural villages totaling 257 households. It is located 10 km from the county seat over rough roads, limiting marketing opportunities for people in this village. In addition, water shortage is severe during dry times of the year. The second administrative village comprises 151 households in five natural villages and is located 8 km from the county seat. Although the distance from markets is similar to the first administrative village, a new road to the county seat has greatly improved access, which has boosted fruit and vegetable production in recent years. The third administrative village is comprised of ten natural villages with 393 households in total. It is a short walk to the county seat. All of the villages are land-poor, averaging just one *mu* of cultivated land per person.¹⁵ However, while 80% of the land in the third administrative village is flat (and therefore ideally suited to rice production), only 40% and 20% of the land in the first and second administrative villages, respectively, is flat. Thus, not only do residents in the third administrative village enjoy more non-farm employment opportunities than people in either of the other villages, but they also have the best farming conditions.

Although the demographic profile of the three administrative villages is similar in terms of the share of households headed by men (93%) and the share of household members who

¹⁴ Officially, the three administrative villages have 987 households, but no one was home during any of three separate visits to 183 households. According to neighbors, most of these households had migrated out of the county and were unlikely to return. After data cleaning, 801 households remained in the analysis. In the 2007 survey, 833 households were surveyed. During the intervening time, some young people had formed new households, explaining the 28-household gain.

¹⁵ One *mu* is equal to $666 \frac{2}{3}$ m², slightly smaller than 1/6 acre.

migrate (12%), there are also some very striking differences. Foremost, ethnic minorities comprise 76% of the household members in the first administrative village. By contrast, minorities in the second and third villages comprise only 13% and less than 7% of the population, respectively. Second, although the education level of household heads averages just 3.4 years, household heads in the third administrative village have a full year more education than household heads in the first administrative village, on average. Third, households in the second administrative village average 26-43% more elderly people than households in either of the other two administrative villages.

Table 2 describes the various components of household income. Per capita income in 2004 ranged from 1,381 RMB¹⁶ in the first administrative village to 2,089 RMB in the third village. Per capita net incomes rose by 5% between 2004 and 2006 in the first administrative village, but this figure was dwarfed by the 27% income growth in the second administrative village and the 36% income growth seen in the third administrative village. Indeed, by 2006, per capita income in the third administrative village was nearly double that in the first administrative village. The average of all three administrative villages was 1,779 RMB in 2004 and 2,232 RMB in 2006. The Gini index ranges from 29.6 in the first administrative village to 45.3 in the third.

Over 40% of households include at least one family member who migrated outside the county for work for at least six months in both 2004 and 2006.¹⁷ In the first village, the proportion of households with migrants rose from 31% to 50% during the study period. By contrast, migration fell sharply in the second administrative village as new on-farm opportunities

¹⁶ In 2006, RMB 1 = \$0.12 at official exchange rates.

¹⁷ In this context, “household members” are identified by the individual responding to the survey, typically the household head. This group is generally comprised of family members who reside in the home for at least part of the year, who share responsibility for paying expenses with other members of the household, and who have not established their own independent households.

such as peach cultivation developed concurrently with the new road. A smaller share of households in the third administrative villages includes migrants, likely because this village enjoys excellent access to off-farm work in the nearby county seat; indeed, over 60% of the households in the third administrative village have members employed in local off-farm jobs, whereas less than half of the households in the other villages do. The third administrative village also sees much greater participation in self-employment, with 17% of households reporting at least one member being self-employed in 2006. Access to markets and to off-farm employment appear to be very important in combating poverty as 34% and 28% of the households in the first and second administrative villages earned less than the national poverty line of 680 RMB while only 13% of the households in the third village did. In 2004, agricultural income accounted for 49% of total income while off-farm work accounted for 42%. Local nonfarm jobs represented 71% of non-agricultural income while self-employment income accounted for only 11% of non-agricultural income. Remittances from migrants outside the county accounted for the remaining 28% of non-agricultural income. Among households with migrants, remittances represent a substantial portion of total income, averaging 20%. Remaining sources of income include government subsidies (which vary between 2% of income in the third administrative village and 5% in the first) and gift income (which varies between 3% in the first administrative village and 12% in the second).

As noted above, agricultural activity increased considerably between 2004 and 2006 in the second administrative village, thus the share of income derived from agriculture rose from 48% to 53%. At the same time, agriculture contributed a smaller share of income in 2006 in the third administrative village as more people shifted to off-farm opportunities. Local economic development also caused a reduction in the share of households with migrants in the second and

third administrative villages, although this figure rose from 31% to 50% in the first village.

Overall, the share of remittances in total income increased from 8% to 15%. Finally, gift income as a share of total income rose by 41% in the first administrative village, was flat in the second, and rose by an astounding 127% in the third.

Per-capita consumption in the first administrative village was a very low 818 RMB in 2004, just over half the level in the third village (Table 3). Despite such heterogeneity in per-capita consumption levels, consumption grew steadily across all three administrative villages between 2004 and 2006, averaging 52%. Over half of consumption was allocated to food in 2004. The second largest expenditure item is medical care, accounting for about 18% of total living expenditures. Fuel and education each represent about 8% of total expenditure, followed closely by spending on gifts at 7%. By 2006, the share of expenditures allocated to food dropped slightly to 48% while medical care accounted for 15% of expenditures. The share of spending on gifts and festivals soared, increasing nearly 80% from 7% to 12%, surpassing education expenditure. Figure 1 shows the dramatic extent to which growth in gift expenditures outstripped growth in per capita income over the survey period.

As shown in the bottom of Table 3, the median level of spending on gifts also increased dramatically, rising from 16 RMB to 63 RMB in the first administrative village, from 20 RMB to 150 RMB in the second village, and from 80 RMB to 250 RMB in the third village. The 2007 survey further asked the value of gifts given to direct relatives, friends, and neighbors during weddings and other major events in 2006 and 2001. The median value of gifts given at each occasion climbed from 40 RMB to 60 RMB for direct relatives while the value of gifts given to friends and neighbors also increased by 50%, from 20 RMB to 30 RMB. The results indicate not

only that the frequency of gift giving has increased during this decade, but also that the value of gifts has increased substantially.

As in many parts of the world, weddings in China are occasions that call for significant cash outlays. Typically, the groom and/or his family are responsible for paying the brideprice, a market-clearing mechanism that compensates a bride's family for rearing her and investing in her human capital (Zhang and Chan 1999; Brown 2009). The brideprice is often accompanied by gifts to the bride herself (which may include major durables and even housing), and the groom is further left to pay for most of the wedding ceremony (Yan 1996). Because most marriages in rural China are arranged, many of these expenses are negotiated and incurred prior to the actual wedding ceremony. Dowry, by contrast, is an intergenerational transfer from the bride's parents to the bride, typically funded out of the brideprice.¹⁸ The bride's family may share the cost of the wedding ceremony, often when large numbers of unexpected guests attend the ceremony (Yan 1996).

Table 4 lists each of the above expenditures for weddings taking place between 1996 and 2006. Because there are relatively few weddings in any given year in a village, the table reports the median for each category across all three administrative villages. Wedding expenditures for the groom and his family have increased over the period, with a median nominal year-on-year increase of 17%. In 2006, for example, the median wedding cost the groom's family 18,150 RMB, over eight times the per capita income in the three administrative villages.¹⁹ The expenditure pattern for the bride's side is more erratic, with a median year-on-year increase of

¹⁸ Scholars have explained the relatively large dowries in rural China as vehicles for prestige building (Liu 2000), insurance against mistreatment of daughters by their in-laws (Brown 2009), and efficient pre-mortem inferences in contexts where women leave their natal families at marriage (Botticini and Siow 2003).

¹⁹ In addition, the groom is responsible for building a house for the newly married couple in the sampled areas, an expense that far exceeds even the cost of the wedding.

0%. The groom and his family clearly bear most of the financial burden for weddings in the surveyed area.

Funerals present another opportunity for conspicuous social spending on part of the decedent's family. Funerals typically last three days and attract friends, relatives, and well-wishers. The funeral is generally followed by a simple meal with most of the village in attendance (Whyte 1988), although more recent anthropological evidence suggests that these meals have evolved into elaborate (if unhappy) banquets. Indeed, between 2004 and 2006, the average funeral expenditure exceeded 5,800 RMB, some 58% higher (in nominal terms) than the average funeral expense between 1996 and 2003. For both weddings and funerals, households keep detailed records of expenditures as well as gifts received,²⁰ suggesting that recall error on such spending is likely to be minimal, even over long periods.

4. Empirical results

The theoretical model outlined in Section 2 predicts that a household's level of social spending may depend on how much others in the reference group spend on similar goods, particularly if status concerns underlie consumption patterns. However, at least two difficulties arise when using typical cross-sectional data to explore these relationships empirically. First, because virtually all surveys rely on sampling, they may not capture the full picture of relative status within groups. Second, simultaneity concerns may be present given that each household's consumption will influence distribution of spending within the village. We circumvent these problems by using data from a panel of virtually every household in 26 natural villages: the census-type data provides a full understanding of relative status and the panel allows us to

²⁰ Yan (2006) writes, "Ritualized gift giving is also associated with the custom of making and preserving gift lists. Gift lists are homemade books on red paper (funeral gift lists are made on yellow paper) inscribed with a traditional Chinese calligraphy brush. They serve as a formal record of all gifts received by the host of a family ceremony."

calculate changes over time, skirting the simultaneity problem. Another strong feature of our dataset is that the villages are located in remote mountain areas, making easily identifiable reference groups. We are thus able to test whether each household's positional spending is influenced by the observed status-conferring consumption level of its reference group during the previous period. We further distinguish between status seeking and herd behavior by looking for evidence that spending by the reference group has disproportionate effects for some income groups.

Table 5 presents OLS regression results for the determinants of changes in gift expenditure in logarithmic form.²¹ The median rate of change in gift giving in each natural village captures social spending in the reference group.²² Per capita income (in log RMB) is included as a regressor to control for household resources. Given the heterogeneity of villages described in Section 3, we also include a series of demographic variables that capture the sex, education, ethnicity, and marital status of the household head; the age distribution of household members (measured by the share of unmarried household members aged 11-29 and the share who are over age 60) in 2006; and changes in the share of household members who migrate out of the county for work between 2004 and 2006. To control for unobserved heterogeneity, we also include fixed effects at the level of the administrative village. The first regression includes only these variables. However, in the subsequent five regressions, we add income distribution variables and their interactions with low and high quintiles to gauge the status-seeking behavior.

In the first regression, per capita income has a strong and positive influence on the change in gift giving, significant at the 99% confidence level across all regressions. Poor

²¹ Zero values have been replaced with ones to preserve the sample size. The major findings remain the same if replacing zeros with fives or tens.

²² We also estimated each model substituting the mean per capita gift expenditure for median per capita gift expenditure; the results are similar.

households are less likely to give gifts, *ceteris paribus*. However, after controlling for distributional factors in the other regressions, this result disappears. Minority-headed households are less active in gift giving than ethnic Han households (significant at the 95% confidence level) while male-headed household are more active (significant at the 90% confidence level or better). Finally, and importantly, the change in median per capita gift giving at the natural village level is highly significant across all six regressions.

To help discern whether such behavior implies status seeking or herding, we distinguish income groups at the natural village level via dummies for low (lowest quintile), middle (second and third quintiles) and high (top quintile) income groups. In addition, we control for variation in the distribution of income across natural villages by including the Gini index, the share of households who earn less than half the median village income, the skewness statistic, the kurtosis statistic, and an interaction between skewness and kurtosis as additional regressors. Statistically significant interactions between the low income group dummy and higher moments of the income distribution within the reference population across all specifications suggest that status concerns (as opposed to herding behavior) underlie the observed consumption patterns.

The Gini index measures inequality over the whole distribution of incomes. The interaction term between the Gini index and both low and high income dummies is negative and significant, suggesting that both the poor and rich increase their spending on gifts when the income distribution grows more equal. In other words, when more people move toward middle income, those who remain poor or rich intensify gift-giving competition. However, a lower Gini does not discern which end of the income distribution moves closer to the center (or, indeed, whether both might). Therefore, it cannot help to distinguish between the intensity of competition in the left and right tails.

The third column (denoted SL) therefore controls for the share of households earning less than half of the median household income in the natural village. The negative coefficient on the interaction term with low income indicates that as the left tail is shortened and the income distribution becomes tighter in the low end of income, the poor intensify their gift giving competition. That is, competition for status is most intense among those who can least afford to compete. The finding that the income distribution matters for social spending is consistent with the rank-based status model.

Importantly, while the SL measure describes the share of people living in poverty, it fails to capture variability in the income distribution among the poor. The skewness statistic (SK, column 4) measures income distribution in both tails by describing the asymmetries in the observed patterns: a positive (negative) skewness statistic implies a longer right (left) tail. Its interaction with the high income dummy is positive, indicating that as the mass of the distribution shifts toward lower incomes, the poor group spends more on gifts. The same result holds for kurtosis (KT, column 5), which describes the “peakedness” of a distribution; higher kurtosis is associated with a higher peak, and hence thicker, shorter tails. The interaction between kurtosis and the low income dummy is positive, suggesting that the density of household incomes in the lower tails of the distribution leads to increased gift spending. That is, the poor spend more on gifts when there is more local competition. Finally, because these variables do not describe asymmetry in the income distribution, we also interact kurtosis with the skewness statistic to capture both peakedness and relative tail density. These results show that as the mean and density of income shift to the left, increased competition among the poor leads to greater spending on gifts by the poor (and to lower spending on gifts by the rich). Again, these results are consistent with the theoretical predictions of the rank-based status model.

The above findings demonstrate the different intensity with which the poor and rich engage in gift spending relative to middle-income households in the same village. For the poor in particular, a higher concentration of households with similar incomes triggers higher spending on gifts. Such conspicuous spending suggests that the poor are indeed concerned about status, and outcome that is inconsistent with herding behavior in which all villagers follow group norms in gift spending.

To further explore how change in the income distribution affects the gift giving patterns of different income groups, we run three separate sets of regressions for low, middle and high income groups in Tables 6A-6C. Several findings stand out. First, none of the per capita income variables is significant in the three tables after stratifying the sample by income group. Second, the coefficient for the change in median per capita gift expenditure in the natural village is significant in all the regressions for the low income group (Table 6A) and middle income group (Table 6B), but insignificant for the high income (Table 6C). Third, gift spending by the poor is especially sensitive to changes in the distribution. In Table 6A, the coefficients for the change in income distribution are significant in all the regressions except that which controls for Gini, suggesting that the Gini index may not be a good measure of left tail weight. The significant coefficients for SL, SK, KT, and SK*KT suggest that as the population mass clusters below the average income in a narrow range, competition among the poor for gift spending intensifies, confirming the earlier results.

For the middle income group, only the coefficient for change in Gini and change in the share of middle income group are significant. The HK model predicts that as the size of middle class shrinks, status competition falls. However, the positive coefficient for Gini contradicts the prediction by the HK model, and the negative coefficient for the share of households in the range

of 0.5 and 1.5 times of median income (SL) tells the same story. When the number of people in the middle income range declines, those in the second and third quintiles increase their gift giving. In the regressions for the high income group (Table 6C), only the coefficient for SK*KT variable is significant and negative, indicating that a more peaked and rightward-leaning distribution forces the rich to compete more to stand out.

Overall, these results provide mixed evidence for the rank-based status model. The data suggest that the model is particularly suitable to describe behavior of the poorest segment of society, and that behavior of middle and high income groups may be guided by other motives. In addition, it may be the case that gift giving may be interpreted as strategic behavior, i.e., that households make large gifts in the expectation of receiving large gifts in the future. To explore this issue in more detail, we also consider expenditures on other forms of socially observable spending.

Specifically, dowry, brideprice, and funerals are other forms of social spending that have also escalated rapidly in recent decades (Liu 2000); unlike gifts, such spending is unlikely to be subject to strategic behavior. Table 7 presents the OLS regression for the determinants of wedding expenditures. As part of marital negotiations in rural China, the groom's family bears most of the responsibility for expenses related to marriage and captures most of the status associated with a grandiose wedding, thus, separate regressions are estimated for the groom's family (Table 7a) and the bride's family (Table 7b). The specifications are identical to those employed above except that the median wedding or funeral expenditure (per event) in the previous year in the natural villages replaces the change in the median value of gifts as a regressor. In the few cases in which there were no weddings in the previous year, we substitute data from two years prior.

As shown in Table 7A, the coefficient on median expenditures on weddings in the previous year is positive and significant level at the 95% confidence level across specifications while lagged per capita income does not affect such spending. These results suggest that community norms are an important determinant of wedding expenses. Income distribution also affects the pattern of wedding spending, particularly for the poor. Both higher kurtosis and higher skewness spur greater spending on weddings for the groom's family. As sex ratios at birth have climbed from 107 in 1981 to about 120 in 2000,²³ the marriage market has increasingly squeezed grooms' families, particularly among the rural poor (Wei and Zhang, 2009).

As opposed to the mounting pressure for grooms, marriage markets have become more favorable for brides, and their families thus less likely to face less pressure to compete. Such results are evident in Table 7B, which shows that the median wedding expenditure in a natural village has no measurable effect on a bride's family's expenditures. After all, women formally join the husband's family at the time of marriage in most of rural China (Wolf and Huang 1980), so it is likely that the status value of wedding expenses for a bride's family is limited. In contrast to wedding spending on the part of the groom's family, none of the variables describing income distribution is significant, either. These results suggest that while wedding spending for the groom's family is indeed positional in nature, wedding spending for the bride's family is not subject to such concerns.

Finally, Table 8 presents the determinants of spending on funerals using OLS, restricting the sample to households in which a household member died. Per capita income and median past funeral expenditures are highly significant and positive, indicating not only that the rich spends more on funerals than the poor, but also that community norms are important in

²³ High sex ratios are a result of a cultural preference for male children and social policies that restricts fertility (Bulte et al. 2009).

establishing those levels regardless of income. The fact that the income distribution variables and their interactions are not significant suggests that herding behavior or social norms – rather than status races – underlie spending decisions for funerals. These outcomes are not consistent with rank-based status models.

Thus, while community norms clearly impact spending on gifts, wedding expenses for grooms' families, and funerals, income distributions also influence spending on gifts and the grooms' wedding expenses. That is, spending on gifts and weddings display evidence that positional concerns matter. Moreover, although it may be argued that spending on gifts may reflect strategic behavior in that gift givers may expect to receive similar gifts in the future, spending on weddings is not subject to such reciprocity. As such, spending on weddings by the groom's family is arguably positional, a result that is consistent with higher competition for wives associated with increasingly high sex ratios in the presence of the One Child Policy. By contrast, spending on weddings by brides' families – although equally visible – is better described by other motives.

5. Discussion and conclusions

Many empirical studies of status-conferring consumption have focused on developed countries. However, rural parts of developing countries provide an ideal setting for studying this phenomenon because close social interactions and tight social bonds imply readily identifiable reference groups. Moreover, status seeking through socially observable consumption is a particularly salient phenomenon in the context of extensive rural poverty. The patterns, mechanisms, and welfare consequences of status consumption in developing countries thus deserve additional attention from scholars. China affords a unique opportunity for studying

status-conferring spending, in part because rapid changes in income and its distribution within rural communities provides a context in which status races may be triggered.

Using a unique census-type household panel in 26 natural villages in a remote mountainous area in China, we show that social spending has escalated, rising faster than income. Our empirical evidence shows that household spending on gifts and funerals is positively and significantly correlated with lagged median levels of spending in the village, as is spending by the groom's family for weddings. Thus, households follow the pattern of spending by the reference group, potentially lowering the welfare of all villagers. By contrast, wedding expenses paid by the bride's family are not affected by such spending in the reference group.

Both status concerns and herding behavior are consistent with increased levels of social spending. To distinguish between these phenomena, we consider the effects of interactions between income distribution and income groups on social spending. Changing the "density" of households with similar incomes changes the intensity of status competition among individuals within that income group. In other words, if social spending is correlated with the number of households in the comparison group, it is consistent with rank-based status seeking and inconsistent with norm-induced herding.

While we cannot rule out herding behavior in the case of funeral spending, the fact that the poor spend more on gifts and wedding expenses (for the grooms' families) when there are more of them suggests that such spending patterns are indeed positional. Participating in gift exchange and paying high brideprices may be particularly acute among the families of young men, some of whom are likely to be rationed out of the marriage market in the presence of growing sex ratios associated with China's One Child Policy (Wei and Zhang 2009). While gift spending is arguably based on reciprocity, reciprocity is certainly unlikely in the case of wedding expenses

for the groom's family since the largest component of such marital payments is brideprice and since the groom's parents are unlikely to receive brideprice themselves.

Our main finding is thus that status seeking matters in rural China, and that some socially observable goods (but not others) are used as vehicles in the race for status. Moreover, our results suggest that the poor are especially sensitive to status seeking. The welfare consequences of "positional externalities" associated with such status seeking may be severe for Chinese households living close to subsistence. First and foremost, money spent on gifts and weddings is not available for consumption or productive investments. Other consequences are eventuating: during field work, we found evidence that inflows of remittances to some households, but not others, have set in motion status contests with potentially adverse health consequences. For example, 41% of the households in the first administrative village, 29% in the second village, and 20% in the third village sold blood to supplement their incomes in 2004; blood sales brought in 9% of the annual income to the mean household that year. Although blood donation stations in the county were shut down due to contamination in the late 2006, 9% of households continued to rely on blood sales for income, often traveling outside the county to make sales. Qualitative evidence gathered at the time of the survey revealed that many villagers felt compelled to sell blood so they could afford to participate in gift giving with their fellow villagers. Families with unmarried sons, moreover, relied on cash income from frequent blood donations to build houses for their children as part of the marital contract. Frequent blood sales have been associated with high local rates of HIV/AIDS (Rosenthal 2000) and Hepatitis C (LaFraniar 2009) in China, suggesting that the long-term consequences of blood sales may be severe. These findings indicate that it is especially important to keep an eye on positional spending and its welfare consequences in the context of poverty traps.

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Figure 1. Annualized Growth in Income, Total Consumption, and Gift Spending by Natural Village

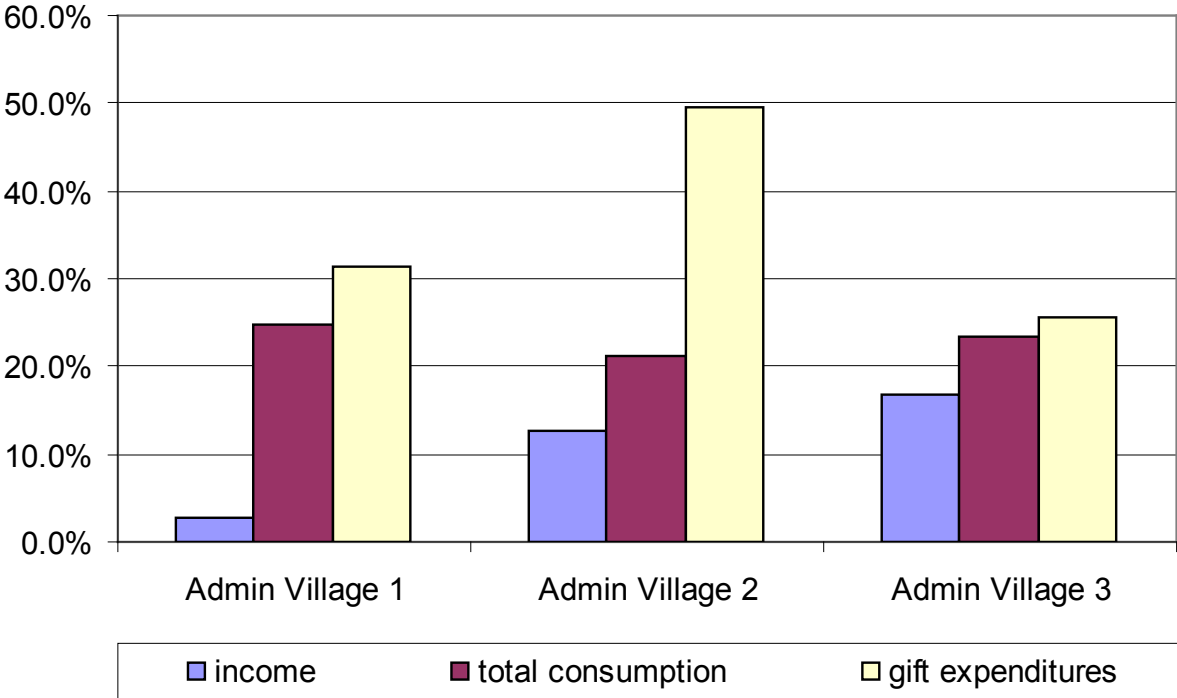


Table 1. Summary Statistics by Administrative Village (2004)

	Admin Village 1	Admin Village 2	Admin Village 3	Total
Number of natural villages	11	5	10	26
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
Share of household members who migrate (%)	12.3	13.5	12.0	12.4

Source: Authors' survey data

Table 2. Income by Administrative Village in 2004 and 2006

	Admin Village1		Admin Village2		Admin Village3		Total	
	2004	2006	2004	2006	2004	2006	2004	2006
Per capita annual income (RMB)	1,381	1,455	1,648	2,094	2,089	2,848	1,779	2,232
Share of households with local non-farm jobs (%)	49.5	37.9	43.7	36.8	66.5	61.7	56.6	48.7
Share of households with self-employment (%)	7.4	6.4	3.3	5.7	7.4	17.0	6.6	11.1
Share of households with migrants (%)	30.7	49.8	55.0	40.6	43.4	38.1	41.4	42.7
Income inequality (Gini)		40.8		45.3		39.6		41.1
Income below poverty line of 633 RMB (dummy)		33.6		28.3		12.9		22.6
Main Sources of Income (Percent)								
Agriculture	51.4	51.2	48.4	52.7	49.3	37.9	49.8	45.0
<i>Farming</i>	37.5	30.2	37.5	38.4	42.9	31.0	40.3	32.0
<i>Livestock</i>	13.9	21.1	10.8	14.4	6.4	6.9	9.5	13.0
Non-agriculture	40.2	41.5	37.6	28.7	44.0	50.6	41.7	43.5
<i>Local non-farm jobs</i>	29.6	14.9	21.4	12.0	32.1	30.0	29.4	21.6
<i>Self employment</i>	2.6	3.7	5.7	6.5	4.9	10.0	4.4	7.3
<i>Remittance from migrants outside the county</i>	8.1	22.7	10.5	10.3	6.9	10.5	7.9	14.5
Disaster relief, anti-poverty programs, and deforestation subsidies	5.2	2.9	2.4	7.0	1.8	0.4	3.0	2.5
Gift income	3.2	4.5	11.7	11.6	4.9	11.1	5.6	9.1

Source: Authors' survey data

Table 3. Consumption by Administrative Village in 2004 and 2006 (Percent)

	Administrative Village1		Administrative Village2		Administrative Village3		Total	
	2004	2006	2004	2006	2004	2006	2004	2006
Per capita consumption (RMB) ¹	818	1,270	1,125	1,652	1,562	2,375	1,223	1,854
Main Expenditures (Percent)								
Food	61.0	54.4	50.6	46.8	48.0	42.9	52.6	47.5
Clothing	4.0	4.1	3.2	3.5	4.4	4.6	4.1	4.2
Fuel	6.6	5.9	6.3	6.4	10.6	8.8	8.5	7.4
Telephone	1.3	2.0	1.1	2.3	1.7	3.3	1.4	2.6
Medical care	14.5	15.7	24.5	16.9	17.4	14.4	17.8	15.3
Education	7.1	9.4	8.4	11.3	9.5	11.4	8.5	10.7
Gift and festival spending	5.5	8.6	5.9	12.9	8.4	14.7	7.0	12.3
Median per capita gift expenditure (RMB)	16.0	62.5	20.0	150.0	80.0	250.0	33.3	150.0
Median gift to direct relatives (RMB)	30.0	50.0	30.0	50.0	50.0	100.0	40.0	60.0
Median gift to friends/neighbors (RMB)	10.0	20.0	15.0	30.0	25.0	50.0	20.0	30.0

Source: Authors' survey data. Per-capita consumption excludes expenditures on housing, durable goods, and weddings/funerals of family members. The gift expenditure data in the last three rows are in 2001 and 2006, which are based on recall during the 2007 survey.

Table 4. Median Marriage and Funeral Expenditures (RMB) from 1996 to 2006¹

Year	Wedding: Groom's Expenditures				Wedding: Bride's Expenditures			Funerals
	Brideprice	Gift to bride	Ceremony	Total expenditure	Dowry	Ceremony	Total expenditure	Total expenditure
1996	2,500	2,000	2,000	6,500	0	1,000	1,000	1,750
1997	3,000	1,800	2,000	6,800	1,000	0	1,000	3,000
1998	3,500	2,000	2,250	7,750	1,100	500	1,600	3,000
1999	2,000	1,800	2,000	5,800	300	0	300	3,200
2000	3,000	2,000	2,500	7,500	2,000	150	2,150	3,000
2001	3,000	3,000	3,000	9,000	2,000	0	2,000	3,000
2002	4,800	4,250	2,400	11,450	400	0	400	2,850
2003	3,000	3,500	3,000	9,500	1,900	500	2,400	3,850
2004	8,000	2,500	3,500	14,000	N/A ²	N/A ²	N/A ²	6,000
2005	9,500	5,250	3,700	18,450	2,000	0	2,000	5,000
2006	8,800	5,600	3,750	18,150	2,250	3,500	5,750	5,000

Source: Authors' survey data

¹ Recalled during the 2007 survey

² No girls married in any of the surveyed villages in 2004.

Table 5. Change in Gift Giving from 2004 to 2006

	No distribution variables	Gini	SL	SK	KT	SK*KT
Change in per capita income (log)	0.506*** (0.00)	0.297 (0.12)	0.265 (0.15)	0.283 (0.13)	0.287 (0.13)	0.280 (0.14)
Male head of household (dummy)	0.951** (0.04)	0.919* (0.06)	1.017** (0.04)	0.954** (0.05)	0.982** (0.04)	0.934* (0.05)
Education of household head (years)	0.005 (0.91)	0.001 (0.97)	-0.003 (0.94)	0 (1.00)	0.001 (0.98)	-0.004 (0.93)
Minority head of household (dummy)	-0.336* (0.05)	-0.361** (0.04)	-0.297 (0.12)	-0.351* (0.06)	-0.336* (0.07)	-0.347* (0.07)
Marital status of household head	0.218 (0.58)	0.192 (0.58)	0.125 (0.71)	0.111 (0.75)	0.096 (0.78)	0.119 (0.73)
Share of household members aged 11-29, unmarried (%)	-0.151 (0.66)	-0.23 (0.52)	-0.248 (0.48)	-0.218 (0.54)	-0.225 (0.52)	-0.194 (0.59)
Share of household members aged 60 and above (%)	-0.63 (0.19)	-0.594 (0.20)	-0.572 (0.23)	-0.556 (0.26)	-0.551 (0.26)	-0.551 (0.26)
Share of household members who migrate (%)	0.467 (0.26)	0.496 (0.23)	0.516 (0.20)	0.479 (0.24)	0.476 (0.24)	0.494 (0.23)
Change in median per capita gift expenditure in natural village	0.287*** (0.00)	0.301*** (0.00)	0.308*** (0.00)	0.309*** (0.00)	0.301*** (0.00)	0.308*** (0.00)
Low income quintile		-0.260 (0.29)	-0.379 (0.11)	-0.459** (0.02)	-0.428** (0.03)	-0.497** (0.02)
High income quintile		0.609** (0.02)	0.597** (0.04)	0.679*** (0.01)	0.627** (0.02)	0.743*** (0.00)
Change in distribution at the natural village level		0.040*** (0.00)	0.719 (0.57)	0.091 (0.29)	0.012 (0.33)	0.081 (0.29)
Change in distribution* low income households		-0.063* (0.06)	-6.053** (0.05)	0.264* (0.07)	0.051** (0.02)	0.227* (0.06)
Change in distribution*high income households		-0.052** (0.03)	2.07 (0.27)	(0.25) (0.12)	(0.03) (0.18)	-0.246* (0.09)
Adjusted R-squared	0.077	0.079	0.081	0.083	0.082	0.086
AIC	3144	3142	3140	3139	3140	3137
N	667	667	667	667	667	667

Note: SL stands for the share of households with per capita income falling below half of median income in natural village. SK and KT refer to skewness and kurtosis. P-values (shown in parentheses) reflect standard errors clustered by natural villages. The symbols *, **, and *** indicate confidence levels of 90%, 95%, and 99%, respectively. Administrative village fixed effects are included but not reported here.

Table 6A Change in Gift Giving from 2004 to 2006: Low Income Group

	Gini	SL	SK	KT	SK*KT
Change in per capita income (log)	0.446 (0.15)	0.34 (0.24)	0.435 (0.16)	0.446 (0.15)	0.434 (0.16)
Male head of household (dummy)	1.009 (0.21)	1.065 (0.18)	0.906 (0.27)	0.969 (0.25)	0.835 (0.30)
Education of household head (years)	-0.051 (0.63)	-0.046 (0.66)	-0.024 (0.82)	-0.021 (0.84)	-0.03 (0.76)
Minority head of household (dummy)	-0.874 (0.21)	-1.101 (0.11)	-1.177* (0.07)	-1.089 (0.10)	-1.219* (0.06)
Marital status of household head	1.488** (0.04)	1.421** (0.03)	1.334** (0.03)	1.329** (0.03)	1.354** (0.03)
Share of household members aged 11-29, unmarried (%)	0.128 (0.90)	0.04 (0.97)	-0.009 (0.99)	0.001 (1.00)	0.073 (0.94)
Share of household members aged 60 and above (%)	-0.784 (0.27)	-0.745 (0.28)	-0.745 (0.31)	-0.731 (0.33)	-0.740 (0.31)
Share of household members who migrate (%)	-0.539 (0.69)	-0.267 (0.84)	-0.382 (0.77)	-0.404 (0.76)	-0.363 (0.78)
Change in median per capita gift expenditure in natural village	0.440** (0.02)	0.425** (0.02)	0.463*** (0.00)	0.418** (0.01)	0.464*** (0.00)
Change in income distribution at the natural village level	-0.036 (0.30)	-6.365*** (0.00)	0.351*** (0.00)	0.058*** (0.00)	0.311*** (0.00)
R-squared	0.185	0.215	0.209	0.206	0.215
AIC	632	627	628	628	627
N	134	134	134	134	134

Note: P-values (shown in parentheses) reflect standard errors clustered by natural villages. The symbols *, **, and *** indicate confidence levels of 90%, 95%, and 99%, respectively. Administrative village fixed effects are included but not reported here.

Table 6B Change in Gift Giving from 2004 to 2006: Middle Income Group

	Gini	SM	SK	KT	SK*KT
Change in per capita income (log)	0.279 (0.26)	0.280 (0.25)	0.283 (0.25)	0.281 (0.25)	0.285 (0.25)
Male head of household (dummy)	0.461 (0.38)	0.549 (0.30)	0.597 (0.25)	0.605 (0.25)	0.593 (0.25)
Education of household head (years)	0.015 (0.82)	0.011 (0.87)	0.012 (0.85)	0.011 (0.87)	0.012 (0.85)
Minority head of household (dummy)	-0.069 (0.84)	0.176 (0.66)	-0.004 (0.99)	0.026 (0.95)	-0.014 (0.97)
Marital status of household head	-0.347 (0.55)	-0.413 (0.48)	-0.391 (0.50)	-0.408 (0.49)	-0.393 (0.50)
Share of household members aged 11-29, unmarried (%)	0.473 (0.57)	0.483 (0.57)	0.524 (0.54)	0.506 (0.55)	0.539 (0.53)
Share of household members aged 60 and above (%)	0.15 (0.81)	0.161 (0.79)	0.213 (0.73)	0.201 (0.75)	0.218 (0.73)
Share of household members who migrate (%)	1.37 (0.12)	1.318 (0.14)	1.261 (0.16)	1.289 (0.15)	1.238 (0.17)
Change in median per capita gift expenditure in natural village	0.437*** (0.00)	0.409*** (0.00)	0.437*** (0.00)	0.432*** (0.00)	0.434*** (0.00)
Change in income distribution at the natural village level	0.037*** (0.00)	-1.428** (0.04)	0.075 (0.31)	0.008 (0.44)	0.071 (0.31)
R-squared	0.092	0.087	0.085	0.084	0.086
AIC	1540	1542	1542	1543	1542
N	327	327	327	327	327

Note: SM stands for the share of households with per capita income falling between 0.5 and 1.5 times of median income in natural village. P-values (shown in parentheses) reflect standard errors clustered by natural villages. The symbols *, **, and *** indicate confidence levels of 90%, 95%, and 99%, respectively. Administrative village fixed effects are included but not reported here.

Table 6C Change in Gift Giving from 2004 to 2006: High Income Group

	Gini	SH	SK	KT	SK*KT
Change in per capita income (log)	0.332 (0.33)	0.332 (0.32)	0.297 (0.38)	0.307 (0.36)	0.287 (0.40)
Male head of household (dummy)	1.028 (0.22)	1.022 (0.21)	1.013 (0.20)	1.03 (0.20)	1.017 (0.20)
Education of household head (years)	0.027 (0.67)	0.026 (0.69)	0.012 (0.85)	0.018 (0.78)	0.007 (0.91)
Minority head of household (dummy)	-0.382 (0.33)	-0.421 (0.33)	-0.165 (0.69)	-0.284 (0.48)	-0.104 (0.80)
Marital status of household head	-0.186 (0.82)	-0.199 (0.81)	-0.148 (0.85)	-0.178 (0.82)	-0.104 (0.90)
Share of household members aged 11-29, unmarried (%)	-1.504* (0.06)	-1.496* (0.06)	-1.529* (0.06)	-1.523* (0.06)	-1.525* (0.06)
Share of household members aged 60 and above (%)	-2.805** (0.01)	-2.818** (0.01)	-2.856*** (0.01)	-2.821*** (0.01)	-2.841*** (0.01)
Share of household members who migrate (%)	0.225 (0.78)	0.237 (0.77)	0.210 (0.80)	0.197 (0.81)	0.245 (0.76)
Change in median per capita gift expenditure in natural village	-0.007 (0.96)	0.011 (0.94)	-0.018 (0.87)	-0.003 (0.98)	-0.012 (0.90)
Change in income distribution at the natural village level	-0.001 (0.96)	-0.733 (0.80)	-0.168 (0.11)	-0.019 (0.23)	-0.162** (0.03)
R-squared	0.090	0.090	0.097	0.093	0.100
AIC	981	981	980	981	979
N	206	206	206	206	206

Note: SH stands for the share of households with per capita income higher than or equal to 1.5 times of median income in natural village. P-values (shown in parentheses) reflect standard errors clustered by natural villages. The symbols *, **, and *** indicate confidence levels of 90%, 95%, and 99%, respectively. Administrative village fixed effects are included but not reported here.

Table 7A OLS Regressions on the Expenses of Weddings for Groom Family

	Gini	SL	SK	KT	SK*KT
Change in per capita income (log)	0.068 (0.57)	0.031 (0.76)	0.11 (0.25)	0.123 (0.19)	0.107 (0.21)
Male head of household (dummy)	-0.073 (0.70)	-0.062 (0.77)	-0.068 (0.74)	-0.077 (0.71)	-0.061 (0.77)
Education of household head (years)	0.241 (0.58)	0.261 (0.54)	0.321 (0.44)	0.32 (0.44)	0.321 (0.43)
Minority head of household (dummy)	0.025 (0.29)	0.021 (0.39)	0.025 (0.33)	0.025 (0.34)	0.026 (0.32)
Marital status of household head	-0.001 (1.00)	-0.068 (0.52)	-0.003 (0.99)	-0.019 (0.90)	-0.011 (0.95)
Share of household members aged 11-29, unmarried (%)	0.248 (0.54)	0.221 (0.58)	0.279 (0.50)	0.288 (0.48)	0.281 (0.49)
Share of household members aged 60 and above (%)	0.014 (0.94)	0.002 (0.99)	0.021 (0.91)	0.021 (0.91)	0.019 (0.92)
Share of household members who migrate (%)	0.328 (0.26)	0.373 (0.26)	0.340 (0.23)	0.332 (0.23)	0.33 (0.25)
Median expenditure per occasion in previous year (log RMB)	0.248** (0.02)	0.222** (0.03)	0.225** (0.03)	0.221** (0.03)	0.226** (0.03)
Income distribution in natural village in 2004	-0.012 (0.12)	0.191 (0.72)	-0.048 (0.27)	-0.011 (0.21)	-0.053* (0.10)
Income distribution * dummy for bottom 25% households in natural village	0.001 (0.90)	-0.867 (0.61)	0.109* (0.05)	0.023** (0.02)	0.106** (0.04)
Income distribution * dummy for bottom 75% households in natural village	0.005 (0.23)	1.004 (0.21)	0.079 (0.23)	0.014 (0.32)	0.072 (0.15)
R-squared	0.460	0.460	0.461	0.461	0.463
AIC	413	411	412	412	412
N	163	163	163	163	163

Note: Year dummies for wedding times and administrative village fixed effects are included but not reported here. P-values (shown in parentheses) reflect standard errors clustered by natural villages. The symbols *, **, and *** indicate confidence levels of 90%, 95%, and 99%, respectively.

Table 7B OLS Regressions on the Expenses of Weddings for Bride Family

	Gini	SL	SK	KT	SK*KT
Change in per capita income (log)	0.17 (0.36)	0.101 (0.51)	0.316* (0.09)	0.262* (0.10)	0.363* (0.05)
Male head of household (dummy)	1.038 (0.14)	0.849 (0.19)	0.893 (0.16)	0.9 (0.16)	0.899 (0.15)
Education of household head (years)	-1.925*** 0.00	-1.938*** 0.00	-1.926*** 0.00	-1.932*** 0.00	-1.940*** 0.00
Minority head of household (dummy)	0.098** (0.03)	0.099** (0.02)	0.095** (0.03)	0.094** (0.04)	0.096** (0.03)
Marital status of household head	-0.18 (0.34)	-0.303* (0.09)	-0.128 (0.39)	-0.169 (0.23)	-0.103 (0.52)
Share of household members aged 11-29, unmarried (%)	-0.348 (0.49)	-0.217 (0.64)	-0.54 (0.30)	-0.509 (0.31)	-0.57 (0.27)
Share of household members aged 60 and above (%)	-0.723 (0.16)	-0.592 (0.24)	-0.614 (0.24)	-0.639 (0.22)	-0.595 (0.25)
Share of household members who migrate (%)	1.12 (0.11)	0.908 (0.20)	1.142 (0.12)	1.119 (0.12)	1.158 (0.13)
Median expenditure per occasion in previous year (log RMB)	-0.189 (0.19)	-0.166 (0.22)	-0.185 (0.20)	-0.202 (0.17)	-0.177 (0.23)
Income distribution in natural village in 2004	-0.034 (0.21)	-0.042 (0.98)	0.052 (0.49)	0.007 (0.53)	0.043 (0.52)
Income distribution * dummy for bottom 25% households in natural village	-0.002 (0.82)	-1.154 (0.44)	0.183 (0.27)	0.028 (0.30)	0.198 (0.18)
Income distribution * dummy for bottom 75% households in natural village	0.009 (0.32)	2.546 (0.19)	0.088 (0.62)	0.031 (0.43)	0.042 (0.76)
R-squared	0.476	0.464	0.465	0.465	0.468
AIC	253	255	255	255	254
N	93	93	93	93	93

Note: Year dummies for wedding times and administrative village fixed effects are included but not reported here. P-values (shown in parentheses) reflect standard errors clustered by natural villages. The symbols *, **, and *** indicate confidence levels of 90%, 95%, and 99%, respectively.

Table 8. OLS Regressions on the Expenses of Funerals

	Gini	SL	SK	KT	SK*KT
Change in per capita income (log)	0.281*** (0.00)	0.290*** (0.00)	0.297*** (0.00)	0.296*** (0.00)	0.301*** (0.00)
Male head of household (dummy)	-0.601** (0.04)	-0.591* (0.05)	-0.565* (0.05)	-0.564* (0.05)	-0.575* (0.05)
Education of household head (years)	0.865*** (0.01)	0.929*** (0.00)	1.020*** (0.01)	1.048*** (0.01)	0.993*** (0.01)
Minority head of household (dummy)	-0.017 (0.52)	-0.017 (0.54)	-0.025 (0.37)	-0.023 (0.40)	-0.024 (0.38)
Marital status of household head	0.152 (0.43)	0.136 (0.42)	0.192 (0.29)	0.176 (0.34)	0.195 (0.28)
Share of household members aged 11-29, unmarried (%)	-0.785** (0.02)	-0.809*** (0.01)	-0.799*** (0.01)	-0.818*** (0.01)	-0.799*** (0.01)
Share of household members aged 60 and above (%)	-0.296 (0.32)	-0.247 (0.38)	-0.309 (0.26)	-0.295 (0.29)	-0.317 (0.24)
Share of household members who migrate (%)	0.022 (0.95)	0.001 (1.00)	-0.03 (0.93)	0.001 (1.00)	-0.058 (0.87)
Median expenditure per occasion in previous year (log RMB)	0.237*** (0.01)	0.242*** (0.01)	0.230*** (0.01)	0.245*** (0.00)	0.226*** (0.00)
Income distribution in natural village in 2004	-0.006 (0.66)	0.789 (0.43)	0.071 (0.31)	0.010 (0.46)	0.056 (0.34)
Income distribution * dummy for bottom 25% households in natural village	0.007 (0.22)	0.167 (0.91)	0.023 (0.80)	-0.001 (0.98)	0.034 (0.64)
Income distribution * dummy for bottom 75% households in natural village	0.003 (0.50)	-0.029 (0.97)	-0.001 (0.98)	-0.004 (0.72)	-0.008 (0.86)
R-squared	0.338	0.333	0.338	0.334	0.34
AIC	372	374	372	373	372
N	153	153	153	153	153

Note: Year dummies for wedding times and administrative village fixed effects are included but not reported here. P-values (shown in parentheses) reflect standard errors clustered by natural villages. The symbols *, **, and *** indicate confidence levels of 90%, 95%, and 99%, respectively.