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Barr, Abigail; Stein, Mattea

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Social status and egalitarianism in non-lineage-based, agrarian communities in sub-Saharan Africa: An analysis of funeral attendance

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# Social status and egalitarianism in non-lineage-based, agrarian communities in sub-Saharan Africa: An analysis of funeral attendance

by

**Abigail Barr** 

**Mattea Stein** 

#### **Abstract:**

This paper explores the role of social status in relationships between rich and poor in non-lineage-based, agrarian communities by analysing who goes to whose funerals in six resettled Zimbabwean villages. Funerals allow social status to be observed because non-attendance is a sign of disrespect. We find that the richer a household hosting a funeral, the less likely heads of neighbouring households are to attend. This is consistent with the existence of an egalitarian norm that is being violated, to some degree, by the richer households. This norm is stronger among kin but also holds for non-kin. An analysis of assistance provision offers no evidence that some richer households comply with the norm and eschew punishment. While the egalitarian norm appears weak (punishment for norm violation is exerted but compliance does not follow), patron-client relationships appear not to have emerged in its place.

**JEL Classifications:** O15 Income Distribution; O17 Institutional Arrangements; Z19 Cultural Economics; I39 Welfare, Well-Being, and Poverty

**Keywords:** Social status; Egalitarian norms; Patronage; Sub-Saharan Africa; Funeral attendance

Centre for Research in Economic Development and International Trade, University of Nottingham



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#### The Authors

Abigail Barr, corresponding author, University of Nottingham, School of Economics, abigail.barr@nottingham.ac.uk

Mattea Stein, University of Naples Federico II and Center for Studies in Economics and Finance

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# 1 Introduction

Our objective in this paper is to investigate the relationship between social status and economic prosperity and the mechanisms driving that relationship in non-lineage-based, rural communities in sub-Saharan Africa.

Social status which, following Anderson, Hildreth, and Howland (2015), we define as "the respect, admiration, and voluntary deference an individual is afforded by others" (p.575) is often discussed in sociology and anthropology, but rarely in economics. However, economic and social behaviour do not happen independently of one another especially in small, agrarian communities in countries with weak formal institutions. If, as sociologists, anthropologists, and some economists have proposed (Benoit-Smullyan, 1944; Weiss and Fershtman, 1998; Henrich and Gil-White, 2001), social status is seen as a reward, it should enter individuals' cost-benefit analyses in the same way as economic rewards. Social status then becomes a good that can be exchanged for more material things and disrespect and social ostracism, both means of social status reduction, can be used as punishments since they are costly to the recipient.

With this in mind, the role of social status in the relationship between the poor and the rich in small, agrarian communities could be defined by two mechanisms. First, the rich could provide something the poor want in return for the poor bestowing status upon them in an asymmetric gift-exchange (Fafchamps, 1992; Platteau and Sekeris, 2010). Poorer households are more vulnerable to the effects of negative income shocks than their richer neighbours, so a patronage arrangement in which status is exchanged for assistance in times of need may be mutually attractive and would lead to a positive relationship between economic prosperity and social status. Second, if egalitarian norms with strong redistributive imperatives prevail (Platteau, 2000, 2006) and if assistance flowing from richer to poorer households is either absent or considered insufficient, the rich might be subject to punishment in the form of

social status reduction. This would lead to a negative relationship between economic prosperity and status.

Findings from lab-in-the-field experiments conducted in rural communities in sub-Saharan Africa are consistent with the existence of egalitarian norms and inconsistent with individuals expecting that, in return for redistributing income, they will receive something, possibly social status, of equal or greater value: Individuals often prefer equal shares even in the presence of differences in earned entitlement (Jakiela, 2015) but redistribute own income, earned or otherwise, less when it is hidden from others, and are prepared to incur considerable costs in order to either keep income hidden or render it inaccessible for redistribution (Beekman, Gatto, and Nillesen, 2015; Jakiela and Ozier, 2016; Goldberg, 2017; Grimm, Hartwig, and Lay, 2017; Boltz, Marazyan, and Villar, 2019). However, the role of social status in the enforcement of egalitarian norms and the possibility that the more prosperous can acquire social status by offering assistance to the less prosperous are never directly addressed in these experiments.

Where egalitarian norms exist, they are likely to be under pressure from various economic, social and cultural forces. These forces include the broadening of economic opportunities as a consequence of increased market integration, enhanced opportunities for household-level risk diversification through migration of some household members, and the individualization of land rights as a possible consequence of population growth pressures (all following Platteau (2006)). Egalitarian norms might also be being eroded by the breaking up and re-forming of communities following conflict and natural disaster, a phenomenon that is likely to become more common as global warming unfolds. Finally and most recently, the globalizing of entertainment culture, via the internet and social media, is exposing an ever-growing number of people to individualistic values and role models that equate conspicuous displays of wealth with social status.

If egalitarian norms in sub-Saharan Africa are being eroded, this raises questions about where things are heading. Are the various forces described above causing village elites to pursue individual wealth accumulation? And, at the same time, are those elites withdrawing from mutual assistance arrangements and/or seeking to establish patron-client relationships (Platteau, 2006)? Our setting offers a rare opportunity to investigate the existence and strength of egalitarian norms and patronage arrangements in broken up and re-formed but still small and agrarian communities. The household members in our sample grew up in communities based on lineage, the defining feature of the large majority of rural sub-Saharan communities in which most, if not all, households are kin-related; but now live in resettled villages where kinship networks are very sparse. These are one of the types of community that we should expect to see more of in the future and should, therefore, be seeking insights about.<sup>1</sup>

To investigate the relationship between social status and economic prosperity, we need a measure of social status that is not related to economic prosperity simply by construction. This immediately rules out any measure of socioeconomic status, which is both conceptually associated with and measured using education, income, wealth and occupation. In sociology, Adler, Epel, Castellazzo, and Ickovics (2000) sought to distinguish social from socioeconomic status by inviting subjects to indicate on the one hand their "standing within the community", and on the other hand their socioeconomic status, each on an eight-point scale. They found that the resulting measure of subjective social status was associated with education, income, wealth and occupation to a lesser degree than the similarly constructed measure of subjective socioeconomic status. However, this approach does not meet our requirements as the subjective social status measure was, nevertheless, significantly associated with these factors and this could have been owing to the factors being used in the construction of the measure of subjective social status within the minds of the research subjects.

<sup>&</sup>lt;sup>1</sup>While Goldberg's (2017) subjects were non-kin and Jakiela and Ozier (2016) observe willingness to pay to hide income from both kin and non-kin, albeit to a lesser degree in the case of the latter, to our knowledge, all of these experiments were conducted in lineage-based communities.

One possible approach to the measurement of social status that unequivocally rules out an association with economic prosperity simply by construction is to base the measure on a behavior that is both observable and an act of respect. This is the approach that we take here.

In Zimbabwe, as in many if not all countries, funeral attendance is an act of respect for the deceased and his or her household, and failure to attend is an act of disrespect. So, an investigation into whether people are more or less likely to attend richer households' funerals, and whether assistance provision moderates the relationship, can provide insights into the existence and relative strength of the status-for-assistance and egalitarianism mechanisms described above. Of course, the validity of such an analysis requires that funeral attendance is not associated with any other costs and benefits that might accrue to an attending household. The anthropological accounts of the traditions surrounding Zimbabwean funerals provide support for this assumption ex ante and, during our analysis, we test the assumption directly and find it to be valid.

Funeral attendance is relational in the sense that one household hosts a funeral and the members of other households decide whether to attend. For this reason, we derive our empirical strategy from the literature on dyadic regression analysis. Dyadic regression analysis has been used to investigate various development-related phenomena, including the structure of civil society, risk- and information-sharing, and marriage. However, it has not until now been applied to the study of social status conferral and acknowledgement through funeral attendance.

Investigating funeral attendance and how it relates to household income necessitates a reliance on observational data and this, in turn, leads to concerns about endogeneity. Unfortunately, it is very difficult to find valid instruments for income variables. However, via the inclusion of an extensive set of control variables in our main analysis, combined with supplementary analyses focusing on a critical iden-

tifying assumption, we believe that we have produced a series of findings that are well-founded and that complement those generated using experimental methods.

We find that the richer the household of the deceased, the less likely are heads of other households in the same village to attend the funeral. This finding suggests that egalitarian norms are present and, on average, richer households are not redistributing enough to avoid status withholding owing to norm violation. In line with the 'kinship tax' literature (Beekman et al., 2015; Jakiela and Ozier, 2016; Grimm et al., 2017; Boltz et al., 2019; Squires, 2021), we find that this norm-consistent negative relationship is stronger in the presence of kinship ties; however, it is present even among non-kin. We investigate assistance provision patterns and find that richer households rarely comply with the norm by providing assistance to those who need it. Finally, we find no evidence of patronage relationships co-existing alongside the egalitarian norm. Thus, while egalitarian norms appear to exist and non-compilers are being punished through status withdrawal, richer households appear neither to have internalized the norm nor to be motivated by the threat of status withdrawal to comply with the norm, and patronage arrangements have not emerged as an alternative.

These findings, as well as corroborating the results of the lab-in-the-fields studies cited above, provide an important external validity check on those results and offer new direct insights into the role that social status bestowing and withholding plays in enforcing egalitarian norms. They also indicate that our novel approach to the measurement of social status works and could be of value in other research contexts.

The paper is structured as follows. We discuss the relationship between status and economic prosperity in our conceptual framework in Section 2. Our empirical model of funeral attendance is introduced in Section 3. We estimate this model using data on funeral attendance in six Zimbabwean villages that was collected specifically for this purpose. Section 4 describes the data and Section 5 presents the results of the analysis. Section 6 concludes.

# 2 Conceptual framework

We conceptualize the role of social status in the relationship between poorer and richer households in small, agrarian communities as being governed by either one or two opposing mechanisms. Both mechanisms can be understood in relation to the importance of mutual assistance arrangements within such communities. The poor are more vulnerable to income shocks than the rich because, in bad years, they risk falling below the level of subsistence. To them, while insurance is highly valued, self-insurance in the form of savings is likely to be out of reach. And, while the availability of micro-insurance is growing, most schemes are index-based and the resulting basis risk renders the schemes inappropriate for the poorest and most vulnerable (Clarke, 2016). The theoretical literature shows that mutual insurance can be sustained as an equilibrium in a repeated game with self-interested agents (Coate and Ravallion, 1993). However, this equilibrium depends on there being no outside option, i.e., on self-insurance being out of everyone's reach. If individuals are able to accumulate wealth to a point where they can self-insure, they may be tempted to leave a mutual insurance pool because self-insurance, unlike mutual insurance, can cover both idiosyncratic and covariate risks (Fafchamps, 1992).

Thus, if a community wants to retain richer members as providers of assistance to less fortunate members, it must either offer the rich additional benefits for staying in the arrangement or impose high leaving costs. If people care about social status, the bestowing of social status upon the rich may be sufficient to retain them in the assistance arrangement. Below, we refer to this as the "patronage mechanism". Conversely, egalitarian norms with strong redistributive imperatives may prevail in such communities and social sanctions involving status withdrawal may be imposed upon richer households who are unwilling to provide assistance to others. Below, we refer to this as the "egalitarian norms mechanism". In the remainder of this section we first examine each of the mechanisms in more detail and then describe how the mechanisms map onto the relationship between economic prosperity and status.

### 2.1 The patronage mechanism

A mutual insurance arrangement among community members who are too poor to self-insure can only provide insurance against idiosyncratic risk. As potential providers of assistance in the event of covariate shocks, richer households are highly valued members of such an arrangement. Thus, according to Fafchamps (1992), "it is in the interest of the solidarity group to allow - and possibly encourage - wealth accumulation" (p.160). However, at the same time, richer households' ability to selfinsure against both types of risk means that the mutual insurance arrangement is of limited value to them and they may be tempted to leave. To allow and encourage individual accumulation while ensuring that the community continues to benefit, communities need to offer the rich something, such as higher social status as patrons, in exchange for their continuing solidarity (Fafchamps, 1992). The empirical literature indicates that, in practice, mutual assistance does not happen at the level of entire communities but through risk-sharing networks between interconnected individuals or households.<sup>2</sup> In this network view, while richer households are attractive partners for the poor to form insurance links with, the reverse is not true and the rich need to be compensated in other ways. Thus, patron-client relationships may emerge, in which the richer patrons receive respect in exchange for assistance in times of need (Fafchamps, 1992).<sup>3</sup>

# 2.2 The egalitarian norm mechanism

In contrast to the mechanism outlined above, Platteau (2000: Chapter 5, 2006) argues that in lineage-based societies the prevalence of egalitarian norms proscribes a positive association between economic prosperity and social status. Further, failure to comply with the redistributive obligations inherent in these norms is punishable

<sup>&</sup>lt;sup>2</sup>See Udry (1994), Fafchamps and Lund (2003), Dekker (2004a,b), De Weerdt (2005), De Weerdt and Dercon (2006), Fafchamps and Gubert (2007) and Ambrus, Mobius, and Szeidl (2014).

<sup>&</sup>lt;sup>3</sup>Platteau and Sekeris (2010) show that, if bestowing social status on a patron comes at the cost of social shame to the client, a necessary condition for such patron-client relationships to emerge is that the rich care more about gaining status than the poor care about loosing it.

through social ostracism and status reduction and this may lead to a *negative* association between social status and economic prosperity.

Drawing on extensive sociological and anthropological literatures, Platteau (2000, 2006) proposes several reasons why egalitarian norms with redistributive imperatives should emerge in traditional, lineage-based societies. First, community cohesiveness, which is highly valued in these societies, would be threatened were social status permitted to be a positive function of economic prosperity. In the literature on subjective well-being, it has been shown that people care about their relative economic status (Easterlin (1995), Stutzer (2004), Kingdon and Knight (2007)). Village life is characterized by frequent interactions between a limited number of people with highly personalized relationships; therefore, in small village societies, the enhancement of one's relative position can be a particularly strong motivation for individual actions. If status were a positive function of prosperity, one individual's accumulation efforts would induce others to follow suit, stimulating competition and triggering a positional arms race that endangers village cohesiveness.<sup>4</sup>

Another contributor to the emergence of egalitarian norms, in particular in communities reliant on rain-fed agriculture, is a common worldview in which the fate of humans depends on supernatural forces and economic prosperity is a zero-sum game. So, economic success is seen as attributable not to effort but to luck, and good luck for one person implies bad luck for someone else. According to this view, it is unfair for a successful individual to keep the fruits of that success to him- or herself, and accumulation without redistribution is perceived as enriching oneself at the expense of others in the community (Platteau, 2000, 2006).

Finally, the importance to small agrarian communities of mutual assistance arrangements (as discussed at the beginning of Section 2) contributes to the persistence of egalitarian norms; as such "private wealth accumulation is perceived as an anti-

<sup>&</sup>lt;sup>4</sup>Although this means that economic differentiation must stay low, greater prosperity - within strict limits - will be acceptable for some (Platteau, 2006: 827), presumably those in positions of leadership.

social behavior because it is an attempt to break away from traditional solidarity networks" (Platteau, 2000: 197).

The egalitarian norm may be internalized such that community members comply with their redistributive obligations to avoid feelings of guilt or out of a desire to conform. However, in the absence of internalization, community members may attempt to enforce the norm, by punishing deviation from the norm through status withdrawal and social ostracism. Thus, if egalitarian norms prevail, more prosperous households who fail to provide sufficient assistance to the less fortunate may be subjected to social status reduction.

# 2.3 The relationship between economic prosperity and social status

Assuming that the patronage and social norm mechanisms are the only relevant mechanisms, the sign of the relationship between economic prosperity and social status depends on whether none, one or both are operational.<sup>5</sup> First, if there is no egalitarian norm or, at least, no punishment of violators of such a norm and the patronage mechanism is at work, there will be a positive relationship between economic prosperity and social status. Second, if only the egalitarian norm mechanism is operational, there will be either no or a negative relationship between the same two variables, depending on whether richer households are providing sufficient assistance to others in the community to meet the redistributive imperative or not. Third, if both mechanisms are operating simultaneously, for example because some patrons have established themselves, but egalitarian norms still prevail in general, the relationship will be indeterminate and its direction will depend on the mechanisms' relative strength. Fourth, if neither mechanism is in operation, i.e., there is no egalitarian norm or no enforcement of such a norm, and social status cannot be exchanged for assistance, economic prosperity and social status will be unrelated.

 $<sup>^{5}</sup>$ The assumption that no other relevant mechnaisms are in play will be discussed at various points below.

From this synopsis we see that, assuming the two mechanisms are the only relevant ones, a negative relationship will exist only if the egalitarian norm mechanism is operational and a positive relationship will exist only if the patronage mechanism is operational. In either case, to determine whether the other mechanism is simultaneously operational we need to investigate flows of assistance. We discuss this in detail below in Section 3. If no relationship is observed, investigating assistance flows will also allow us to distinguish between three scenarios - both mechanisms are operational, neither mechanism is operational, or an egalitarian norm is present but there is no punishment because richer households are providing sufficient assistance.

Finally, recall that Platteau's theory was derived specifically for lineage-based communities. Our focus is communities that are not based on lineage, although until resettlement their members lived in communities that were. This raises the possibility that the egalitarian norm mechanism and the negative relationship between prosperity and status that it can generate could be observed only where ties of kinship exist. We investigate this as well as the possibility that when kinship ties are rare co-memberships in funeral societies and religious congregations serve as substitute bases for solidarity.

# 3 Analytical framework

# 3.1 Funeral attendance as a proxy measure for social status

The principle innovation that enables us to investigate the mechanisms described above is to use funeral attendance as a proxy for the acknowledgement or conferral of social status. In Zimbabwe, the rituals following death are of great cultural importance due to the central role occupied by the spirits of the dead in the traditional system of beliefs. As Bourdillon (1987) notes: "the spirits of the dead are so much part of Shona life that they can aptly be called spirit elders, the senior members of the community who now act as spirits" (p.199). To mark the passing of an individual

into this state, the Shona perform two ceremonies. The first is the funeral, during which the body is buried. This traditionally takes place within twenty-four hours of the death. Relatives and neighbours are expected to attend and pay their last respects to the deceased, although funeral attendance is mandatory for close family only. Because the funeral is expected to take place soon after death, non-attendance due to absence from the village is excusable. However, non-attendance by individuals who are present in the village is taken as a sign of disrespect. A funeral consists of a procession to the grave, graveside rituals, and a simple meal back at the home of the deceased that is shared with all those who attended the funeral. The second, much more elaborate ceremony, is the "kurova guva", the settling of the spirit. This takes place a year after the funeral. It is a feast requiring the preparation of large quantities of beer and food, to which all attendants - kin, friends, and fellow villagers - are expected to contribute (Bourdillon, 1987: 199-223).

We focus on attendance at funerals and not "kurova guva" for three reasons. First, the "kurova guva" is not performed for children or for adults who die childless, and is not always performed for women (Bourdillon, 1987: 47, 53). Second, following so quickly after the shock of death, the funeral cannot be planned and the decision about whether to attend has to be made quickly. Third and most importantly, the "kurova guva" is associated with a larger and more complex set of material costs and benefits. The feast may benefit poor attendants, while the need to make contributions may not. The poor may be excused from contributing and the rich may be expected to contribute more, but this may then reflect on the social status of the attendants rather than the hosts. An analysis of "kurova guva" attendance and involvement would be fascinating but it would require a great deal of data to isolate the relationship that we are interested in here. The funeral, involving the witnessing of the burial and only a simple meal made out of whatever is to hand, provides a much more focused and readily interpretable signal of status conferral or acknowledgement directed towards the hosting household. In our analysis, we take

several steps to eliminate the possibility that the social status of potential funeral attendants and any material benefits or costs of attending are driving our results. Further details about these are given in section 3.3.

## 3.2 The empirical model

For six villages in Zimbabwe we use data on who attended each of the funerals that occurred between the start of 1994 and the end of 2000. We analyze this data using a dyadic model in which each observation corresponds to one individual and one event. The individual is the head of a household and the event is a funeral hosted by a different household. The dependent variable  $g_{ijvt}$  takes the value 1 if household head j went to funeral i in village v in year t and is zero otherwise. The variable  $g_{ijvt}$  is relational (it indicates whether the head of one household attended a funeral hosted by another household) and directional (one household head attending another household's funeral does not imply that the head of the second household also attended a funeral hosted by the first).

Taking  $g_{ijvt}$  as our dependent variable, we estimate a model of the following form:

$$q_{iivt} = \alpha + \beta inc_{ivt-1} + x_{ivt}\gamma + d_{ivt}\delta + p_{iivt}\zeta + j_i + t_t + v_v + \epsilon_{iivt},$$
(1)

where  $inc_{ivt-1}$  is the main regressor of interest, the economic prosperity of the hosting household of funeral i in the year before the funeral, t-1.  $x_{ivt}$  is a vector of characteristics of the funeral-hosting household at the time of the funeral and  $d_{ivt}$  is a vector of characteristics of the deceased individual. Importantly, these include the sex, age and level of education of the hosting-household head and the sex and age of the deceased, all of which could be co-determinants of social status and household income.  $p_{ijvt}$  is a vector of dyad characteristics, including kinship ties between the

<sup>&</sup>lt;sup>6</sup>We focus on the attendance of household *heads* because their behaviour is likely to provide the strongest status-related signal. Further, given the way the funeral attendance data was collected, we can isolate individual attendance for household heads but not for other household-member types. If, instead of household head attendance, we focus on attendance by *anyone* in the household, we get similar results.

hosting and potential attendee households and co-memberships in funeral societies or religious congregations, at the time of the funeral. Such ties could be associated with obligations to attend funerals, even in the absence of respect.  $t_t$  is a vector of year fixed effects capturing any common, year-on-year differences in attendance behaviour and  $v_v$  is a vector of village fixed effects capturing time invariant, village-level unobservables. Any time-invariant characteristics that affect a household's propensity to attend funerals are captured by attending household fixed effects  $j_j$ . In a robustness check, we also control for (potentially time-varying) attendee income  $inc_{jvt-1}$  and other characteristics  $x_{jvt}$ .

Mutual assistance motives and obligations may vary depending on the nature of the relationship between the two households involved. Therefore, in a variation of model (1), we include interaction terms between dyad characteristics and the hosting household's lagged income:

$$g_{ijvt} = \alpha + \phi inc_{ivt-1} + \boldsymbol{x_{ivt}}\gamma + \boldsymbol{d_{ivt}}\delta + \boldsymbol{p_{ijvt}}\mu + (inc_{ivt-1} \times \boldsymbol{p_{ijvt}})\boldsymbol{\xi} + \boldsymbol{j_i} + \boldsymbol{t_t} + \boldsymbol{v_v} + \epsilon_{ijvt}, \quad (2)$$

Estimating equations (1) and (2) allows us to establish whether there is a relationship between a household's income and attendance at funerals that it hosts, the sign of that relationship, and whether it is dependent on the existence of a kinship tie or a co-membership in a funeral society or religious congregation. However, to fully distinguish between the possible scenarios listed in section 2.3 above, we also need to investigate whether the marginal effect of the main regressor of interest,  $inc_{ivt-1}$ , varies depending on whether the funeral hosting household has provided assistance to others in the village in the year preceding the funeral.<sup>7</sup> For this purpose, we

<sup>&</sup>lt;sup>7</sup>Dekker (2004a,b) shows that at least some households with higher incomes help households with lower incomes in these villages.

estimate the model

$$g_{ijvt} = \alpha + \theta inc_{ivt-1} + \lambda assist_{ivt-1} + \pi (inc_{ivt-1} \times assist_{ivt-1})$$
$$+ x_{ivt} \gamma + d_{ivt} \delta + p_{ijvt} \zeta + j_i + t_t + v_v + \epsilon_{ijvt}, \quad (3)$$

where  $assist_{ivt-1}$  is a dummy equal to one if the funeral host provided assistance to an in-crisis household in the village during the year preceding the funeral and all other elements are defined as for equation (1).<sup>8</sup>

We estimate equations (1), (2) and (3) using linear probability models. We account for likely heteroscedasticity and the possible non-independence between funeral attendance observations relating to any given hosting or attending household, household pair or village, by employing a village-level wild cluster bootstrap.<sup>9</sup>

Our empirical strategy consists of two steps. First, we estimate equations (1) and (2) to determine the sign of the correlation between economic prosperity and funeral attendance ( $\beta$ ), and whether it varies depending on the relationship between the two households involved (kinship ties, or co-memberships in a funeral society or religious congregation). Second, we estimate equation (3) and the corresponding model including the interaction terms, to obtain the conditional correlations depending on whether a hosting household provided assistance to others ( $\theta$ ,  $\theta + \pi$ ).

Assume that (beyond the possible co-determination of social status and income by education, age, and sex all of which have been controlled for) the egalitarian norm and patronage mechanisms are the only mechanisms driving the relationship between income and social status. Then, a positive  $\beta$  coefficient from estimating equation (1) would be consistent with richer households holding higher social status as reward for their role as providers of assistance as village-level patrons or through

<sup>&</sup>lt;sup>8</sup>As a robustness check, we also estimate a version of this model in which we replace  $assist_{ivt-1}$  with  $assist_{ijvt-1}$ , which equals one if household j experienced a crisis in period t-1 and the host of funeral i provided assistance to household j.

<sup>&</sup>lt;sup>9</sup>Arcand and Fafchamps (2008) propose village-level clustering to account for within-village dyadic non-independence and correlated errors; as our analysis includes only six villages we opt for a wild cluster bootstrap approach (Cameron and Miller, 2015).

dyad-specific patron-client relationships. Then, in equation (3),  $\theta + \pi$  would be positive: those who provide assistance are rewarded. A  $\theta$  smaller than zero would indicate that an egalitarian norm co-exists alongside the patronage arrangements - overall, rich households are redistributing more than enough of their prosperity to avoid punishment through social status withdrawal, but those who fail to are punished;  $\theta = 0$  would instead indicate the absence of an egalitarian norm.

In contrast, a negative  $\beta$  coefficient from estimating equation (1) would indicate the presence of an egalitarian norm and that, on average, rich households are not redistributing enough to avoid punishment for norm violation. Then, if in estimated equation (3) the negative relationship between income and status does not vary with assistance provision ( $\theta < 0$ ,  $\pi = 0$ ) this would indicate that richer households are uniformly failing to comply with the norm. However, if  $\theta < 0$  and  $\theta + \pi = 0$ , it would indicate that some of the rich households are sufficiently compliant with the norm: they provide sufficient assistance to others and avoid punishment. Finally, if for those who provide assistance to others the relationship between income and status is positive ( $\theta + \pi > 0$ ), this would indicate that the patronage mechanism is operating alongside the egalitarian norm mechanism.

Finally, no identifiable relationship between income and funeral attendance ( $\beta$ =0) would indicate one of the following three scenarios. First, no egalitarian norm exists (or is enforced) and neither do patronage arrangements. In this case, we would observe no differential conditional correlation by assistance provision ( $\theta$  = 0,  $\theta$  +  $\pi$  = 0). Second, egalitarian norms exist and richer households provide just enough assistance to avoid punishment. Then, once again, we would observe no differential conditional correlation by assistance provision ( $\theta$  = 0,  $\theta$  +  $\pi$  = 0). Third, egalitarian norms exist and the punishment through status withdrawal of those who do not provide assistance is balanced out by the conferring of status upon those who assist enough to be valued as patrons. In this last case, the correlation would be negative for those who do not assist and positive for those who do ( $\theta$  < 0,  $\theta$  +  $\pi$  > 0).

### 3.3 Economic prosperity and key controls

Our proxy for economic prosperity is household crop income (transformed using the inverse hyperbolic sine function) from the year preceding the one in which the funeral took place. The key feature of this element of economic prosperity is that it is fully observable to others in the community (Fafchamps, 1992: 152-3); observability is required for community members to be able to form a judgement about others' income realizations and assisting behavior. <sup>10</sup> The lagging reduces the likelihood that our analysis of the relationship between funeral attendance and host income is not distorted by the negative effects of an illness that precedes a death on the income of a household.

To isolate the effect of the hosting household's prosperity on funeral attendance, it is important to control for any other characteristics of the hosting household that may be correlated with income and status. Thus, we include the sex, age and level of education of the household head and the size of the household as control variables. Status is acquired with age and education. And education is positively associated with income and can also be used to the benefit of less educated neighbours, possibly, within the context of a help-for-status gift exchange. Household size is likely to be correlated with income and may or may not be independently associated with status

 $<sup>^{10}</sup>$ It would be interesting to also incorporate wealth in the analysis. However, while data on livestock holdings are available, they present a number of complications that we cannot solve. First, cattle do not belong to households, but to individuals within households - women receive cattle when they bear children and from new son-in-laws as part of bride wealth and young men accumulate cattle in anticipation of bride wealth payment - and we do not have data on individual owners. Second, livestock are inherited and, in the villages in which our data was collected, at the time it was collected, inheritance rules were in a state of flux. Traditionally, when a Shona man dies, his wife and, indirectly, her cattle, are acquired by the man's brother and the man's land rights and cattle pass to his eldest son. However, in resettled villages, widows are inheriting land rights and, in some cases, cattle. And third, we know that trained oxen represent a considerable proportion of livestock wealth holdings, that a large proportion of households do not have trained oxen of their own, and that there are strong norms requiring owners of trained oxen to lend them to others once their own ploughing is done. The lending and borrowing of trained oxen are likely to have implications for status bestowal that would need to be accounted for along with the effects of expectations concerning inheritance and the identity of individual cattle owners, before a pure wealth effect could be identified. Crop income and livestock wealth are significantly positively correlated at the household level. So, any effect of hosting household income on funeral attendance may, in part, be a wealth effect.

and/or funeral attendance. And traditionally women are of lesser status and tend to head lower income households.

The role of vector  $d_{ivt}$  is to increase the power of our hypothesis tests by controlling for the effects of the status and situation of the deceased individual. As status proxies for the deceased it includes sex, age, and whether they were household heads. In addition it includes indicators of whether they were residents in or visitors to the village, whether they were buried in the village, and whether their death was considered unnatural.

 $p_{ijvt}$  is a vector of key relational characteristics that may influence the likelihood that the head of household j attends funeral i. This includes kinship ties between the funeral hosting household and the potential attender, and whether they are members of the same burial society or religious group.

Kinship is of interest because the norms requiring funeral attendance are strongest for members of the extended family of the deceased (Bourdillon, 1987) and, at the same time, expectations of assistance in times of crisis are also likely to be strongest among kin. Our kinship variable is genetic relatedness, which is equal to the maximum Hamilton's ratio between any cross-household pair of individuals. Its largest possible value is 0.5 which is the case, for example, for the relatedness between a household whose daughter has married into another and that other household. It is included in model (1) as a control, while in model (2) its interaction with host lagged income is also included, the latter to test whether in the non-lineage based communities in our sample the relationship between economic prosperity and status holds only or more strongly among kin.

Burial societies are joint savings mechanisms that pay out in the event of a member household hosting a funeral.<sup>11</sup> As such, membership may be more attractive to poorer households, while funeral attendance may depend on joint membership due either to obligation or simply the existence of the tie; controlling for co-

<sup>&</sup>lt;sup>11</sup>Burial or funeral societies have been observed in a number of African countries, including Ethiopia and Tanzania (Dercon, Weerdt, Bold, and Pankhurst, 2006).

membership then avoids a potential negative bias in the main coefficient of interest. Co-membership in the same religious group is included for similar reasons. Both co-memberships are included in model (1) as dummies that take value one when the hosting household and potential attendee are in the same society or congregation and zero otherwise, and model (2) also includes their interactions with host lagged income. This model accounts for the possibility that funeral attendance expectations and mutual assistance motives and obligations vary depending on co-membership.

The attending household income,  $inc_{jvt-1}$ , and the vector of characteristics,  $x_{jvt}$ , are defined in the same way as their hosting-household analogues. These are included in a robustness-check model aimed, in part, at testing the assumption that funeral attendance is not especially materially beneficial or costly to poorer households owing to the meal and/or the possibility of being expected to contribute to it. In addition, including this vector obviates endogeneity concerns relating to income homophily, most importantly the concern that poorer households attend each others' funerals, as do the rich, and either the rich or the poor attend fewer funerals because they face higher opportunity or other costs.  $^{12}$ 

## 4 Data

Our data originates from six villages that were created during the Zimbabwean land reform programme of the early 1980s. The villages are located in the Sengezi resettlement scheme, south-east of Harare near the small town of Wedza in Mashonaland East. At the time of the data gathering, this region was classified as having moderate agricultural potential (Kinsey, Burger, and Gunning, 1998: 91) and the households in our sample earned the large majority of their income through rain-fed farming. The six villages were included in the Zimbabwe Rural Household Dynamics Study

<sup>&</sup>lt;sup>12</sup>We do not include  $inc_{jvt-1}$  and  $x_{jvt}$  in the main model because they have a marked effect on the size of the sample that we can work with (more on this below).

(ZRHDS), a long-running panel study discussed in detail in Kinsey et al. (1998), Gunning, Hoddinott, Kinsey, and Owens (2000) and Hoogeveen and Kinsey (2001).

Our second key data source is a funeral attendance survey that we designed specifically to provide a proxy for social status conferral and acknowledgement. It was implemented separately from the ZRHDS and applied a specially designed group interview method. First, a grid containing one row for every funeral and one column for every household was created for each village using data from the panel survey corroborated during brief interviews with the senior members of every household. Each row was labeled with the first and household name of the deceased as well as the year and cause of their death, their age and sex, and whether they were household head at the time of death, were village residents or visitors, and were buried in the village. Second, the cells in the grid were filled in with codes indicating whether the head and/or other members of each household attended each funeral (and if not whether they were in the village at the time), using responses supplied by senior, usually female, members of the potentially attending households and corroborated by a number of senior, usually female, neighbours. And third, in the few instances where a respondent for a potentially attending household could not be found, we relied on the corroborated recall of neighbours.

We knew that this task would take some time, so we scheduled it for a period when the womenfolk in the villages would be shelling groundnuts and preparing beans for storage. Because these manual tasks are dull and time consuming, women tend to undertake them in groups, so they can chat and keep one another amused at the same time. Within this context the funeral attendance survey was seen as a new source of entertainment and an opportunity to recall and reminisce about past times.

In this way, over a period of several weeks in 2001, our sole field researcher, Nyaradzo Dzobo, was able to construct a complete dataset relating to all of the funerals that had taken place in each of the villages between 1983 and mid 2001.

We merged the data from this specialized funerals survey with three separate data sources, the ZRHDS, a kinship panel, and a co-membership panel. First, we obtain household income and size, status-related household head characteristics (age, sex, education) and information on inter-household assistance in response to crises from the ZRHDS. Although started in 1983, the ZRHDS was conducted annually only starting in 1993; from then onwards, best practices for income measurement as defined by Deaton (2005) were used and income measures became year-on-year consistent. Therefore, and because income is lagged, we restricted the analysis to funerals occurring between 1994 and 2000. Although in the first, 1983, round of the ZRHDS, all households were included in the survey sample, by the mid 1990s it had less than complete coverage, due to late arrivals to the villages and survey drop-outs.

Second, we use a kinship panel dataset that was constructed by Dekker (2004a) based on a social mapping exercise undertaken by village focus groups, and using roster and marriage information from the ZRHDS, the funerals dataset, and follow-up field visits to obtain complete data.

Third we merge in a panel dataset recording co-memberships in burial societies and religious groups constructed by Barr, Dekker, and Fafchamps (2015) using data collected by Barr (2004). The kinship and co-membership panels cover all the households in the six villages in our study.

Thus, we obtain a main sample of 3,458 dyadic funeral attendance observations for a total of 87 funerals hosted by 51 distinct households between 1994 and 2000.<sup>13</sup> This sample includes as potential attendees all the household heads in the village in which the funeral hosting household is located, regardless of whether they were interviewed in the ZRHDS ("ZRHDS households") or not ("non-ZRHDS households"); this is possible because to maximize power, in the main analysis, we do not use

 $<sup>^{13}</sup>$ Over the 1994 to 2000 period, a total of 102 funerals were recorded for households that are part of the ZRHDS. However, 15 of these cannot be used in the analysis as income, household size or household head characteristics are missing for the year in question.

attendee-level controls. There are 232 distinct potential attendee households across the 87 funerals.<sup>14</sup>

In the robustness-check model (see Section 3.3), we control for attendee household income and size and household head characteristics. The *robustness-check sample* includes 1,396 dyadic funeral attendance observations for the same 87 funerals hosted by 51 ZRHDS households studied in the main analysis sample. The reduction in sample size is due to the inevitable dropping from the analysis sample of heads of non-ZRHDS households, and of ZRHDS households missing covariates for the given funeral year;<sup>15</sup> the number of distinct potential attendee households in this sample is 101.

We use empirical model (3) (see Section 3.2) to test whether the relationship between funeral attendance and host income varies depending on whether hosts provided assistance to other households in times of need. The data on assistance provision comes from the 2000 ZRHDS which included a module on crisis management, covering retrospectively the period since 1992.<sup>16</sup> The survey asked about assistance provided to others in the village and received from others in the village following various types of crisis. For each crisis, the year and the identity of the assistance recipient or provider were recorded. In line with our research question, we focus on assistance provided in the form of gifts (in kind, cash or free labor/services), as opposed to loans, reciprocal gifts, or paid services. From this data, we construct a panel of within-village assistance provision (self- or recipient-reported).<sup>17</sup>

Table 1 summarizes funeral attendance and the characteristics of the funeral hosting households, the deceased and the hosting-attending household pair in the

<sup>&</sup>lt;sup>14</sup>For each funeral, we exclude the hosting household head from the pool of potential attendees.

<sup>&</sup>lt;sup>15</sup>The main sample includes 3,458 dyadic observations. The robustness-check sample includes 1,396 dyadic observations. 1,958 main sample observations are dropped in the robustness check because they relate to potential attending heads of non-ZRHDS households. 104 observations are lost because they relate to potential attending heads of ZRHDS households for whom information on one of the covariates is missing for the year in question.

<sup>&</sup>lt;sup>16</sup>This module was included in the ZRHDS by Dekker (2004b) who used it to compare crisis coping in communal and resettled villages.

<sup>&</sup>lt;sup>17</sup>We note that the resulting assistance provision indicator used in our analysis is downward biased as assistance provided to non-ZRHDS households will only be taken into account if it is reported by the provider.

main dyadic sample. Household heads usually attend the funerals in their villages: the overall attendance rate was 76%. The mean lagged yearly income of the hosting households was \$2,360 Zimbabwean Dollars (evaluated at 1992 prices) and the mean transformed lagged income (inverse hyperbolic sine transformation) was 7.96. In the robustness-check sample, these averages remain near identical, while the mean lagged yearly income of the potentially attending heads' households was \$2,322 Zimbabwean Dollars, and the mean transformed lagged income was 7.88 (see Appendix, Table A1). A t-test indicates no significant difference in incomes between the hosting and attending households, suggesting that deaths are not associated with income in this sample over this period.

Table 1 further shows that hosting heads are, on average, 61 years old, and have 4.2 years of education; 31% are female. Average hosting household size is 8.7 individuals and 13.5% of hosting households provided assistance to another household in the village during the previous year (own- or recipient-reported). The deceased individual was, on average, 35 years old and was typically a village resident (85%), who died of natural causes (82%) and was buried in the village (93%); 46% were female and 21% were household heads at the time of death. Hosting and potentially attending households are in the same burial society for 29% of dyads, and in the same religious group for 21% of dyads; their average genetic relatedness (Hamilton's ratio) is 0.009, indicating that kinship networks in these villages are extremely sparse, only 3.8% of household dyads share a kinship tie.

# 5 Results

Column 1 of Table 2 presents the estimated coefficients and corresponding p-values relating to model (1), while Column 2 presents those relating to model (2). Columns 3 and 4 present the corresponding robustness-check models that include attending household characteristics.

Before discussing the main results, we note the positive and significant relationship between hosting household head's education and age (the latter significant at conventional levels only in the robustness-check models, Columns 3 and 4, discussed further below). That funerals hosted by households with more educated and older heads are better attended is consistent with the idea that funeral attendance proxies for the status of the hosting household. The characteristics of the deceased person (age, sex, household head position) seem not to affect attendance.

We turn now to the result of principle interest. We find a negative and significant relationship between funeral attendance and the lagged income of the funeral-hosting household (p-value=0.030, p-value=0.001 in Columns 1 and 2 respectively). This finding suggests the presence of egalitarian norms and that, on average, richer households do not share enough with others to escape punishment through status withdrawal. On average, i.e., in Column 1, a one percent increase in the hosting household's income is associated with an approximate 4.5 percentage point decline in the probability of another household head attending the funeral.

As expected, funeral society co-membership and kinship are positively related to funeral attendance (Table 2, Columns 1 & 3) the latter significant at conventional levels only in the robustness check (Column 3). However, only kinship shows a significant interaction with hosting-household income: The negative relationship between host income and funeral attendance becomes significantly stronger when the hosting household and the household of the potentially attending head are genetically related (Column 2). This is in line with the 'kinship tax' literature that finds that redistributive norms are particularly binding among kin (see section 1). Nevertheless, the relationship between hosting household income and funeral attendance remains negative and significant (p-value=0.001) when the host and potential attender household are unrelated genetically (recall that in this case the genetic relationship variable takes value 0). This finding indicates the presence of an egalitarian norm that extends beyond family solidarity obligations.

Our main robustness check involves controlling for attending household characteristics that may be time-varying, in particular income. (Recall that attending household fixed effects are always included). The results are presented in Columns 3 and 4 of Table 2.<sup>18</sup> Here, most importantly, we see that attending household income has no effect on funeral attendance, while the effect of hosting household income remains negative and significant. This finding rules out a potential bias owing to some form of income homophily combined with differential material costs and benefits of attending for rich versus poor households.

Our analysis of the relationship between hosting household income and funeral attendance leads us to conclude that egalitarian norms are present in the villages studied, and that, on average, richer households are not providing enough assistance to avoid punishment for norm violation through status withdrawal.

Now we investigate whether there is evidence that some households nevertheless comply with the norm and thereby eschew punishment, and/or that some households have established patron-client relationships. The results of estimating equation (3) are reported in Table 3, Column 3. Column 1 is a repetition of Table 2, Column 1, included for the sake of comparison. Column 2 builds up to Column 3 by including assistance provision as a simple control rather than interacted with host income. In Columns 4 and 5, interactions between hosting-household income and kinship as well as burial society and religious group co-membership are included (comparable to Column 2 of Table 2).<sup>19</sup>

We do not find evidence that the relationship between hosting-household income and funeral attendance depends on whether the host has provided assistance to incrisis households in the village in the year preceding the funeral:  $\pi$  is not significantly different from zero and  $\theta + \pi$  is negative and imprecisely estimated (Columns 3 and 5, Table 3). In other words, we find no evidence that some households comply with

<sup>&</sup>lt;sup>18</sup>Appendix Table A2, repeats the four columns of Table 2, and in Columns 5 and 6 shows results of estimating model (1) using the robustness check sample but without including attending household controls; coefficient estimates are very similar in size but less precisely defined.

<sup>&</sup>lt;sup>19</sup>Robustness checks including attending household controls are presented in Appendix Table A3; results are similar.

the egalitarian norm and are exempt from punishment as a consequence (this would require  $\theta < 0$ ,  $\theta + \pi = 0$ , see Section 3) and no evidence of the patronage mechanism also being operational (this would require  $\theta + \pi > 0$ ).<sup>20</sup> As the patronage mechanism may operate through a dyad-level patron-client relationship rather than at the village level, we also estimate a version of equation (3) where assistance provision is defined at the dyad level (a dummy that is equal to one only if the host provided assistance to the potential attender in the year preceding the funeral, see footnote 8). The results, presented in Table 4, confirm the conclusions reached using village-level assistance provision.<sup>21</sup>

To summarize, our results indicate the presence of an egalitarian norm and that, on average, richer households do not redistribute enough to avoid punishment through social status withdrawal. The egalitarian norm is stronger among kin, but also applies among unrelated households. We find no evidence that there are some richer households who either comply with the norm and avoid punishment or have established patron-client relationships. Our empirical models include a set of control variables to purge our estimates of the effects of potential confounders of the relationship between income and funeral attendance at the levels of the hosting-household, the deceased and the dyad, and employ attending-household fixed effects to control for time-invariant attending-household characteristics, as well as village and year fixed effects. Our data do not allow for the inclusion of hosting-household fixed effects, as 55% of funeral hosts had only one funeral in the time-frame studied. Our main robustness check controls for attending-household time-varying characteristics.

It shows that funeral attendance is not significantly related to attending-household

<sup>&</sup>lt;sup>20</sup>We note that when we introduce the assistance provision dummy as a control without interacting it with host income (see Table 3, Columns 2 & 4) its coefficient, although insignificant (p-value 0.2), is negative. This could either be an indication of insufficient data quality (note that we are missing information on assistance received and reported by non-ZRHDS households), or of punishment for boastfulness (as most assistance transfers recorded in the data are reported by the providers).

<sup>&</sup>lt;sup>21</sup>We conduct this analysis using the robustness-check sample because in this sample both potential patron and potential client are ZRHDS households and were thus interviewed about having provided and/or received assistance from others in the village.

income, obviating endogeneity concerns relating to income homophily combined with income-dependant direct costs and benefits of attending a funeral.

In setting out our conceptual framework, we made the simplifying assumption that the egalitarian norm and patronage mechanisms are the only mechanisms through which status is assigned. Then, in our analysis, we controlled for the possibility that age, sex, and education might be co-determinants of income and social status. The most plausible remaining alternative mechanisms linking income and social status are a meritocratic perception that the successful deserve respect, regardless of whether they redistribute, and the possibility that conspicuous consumers gain social status. However, each of these would imply a positive relationship between status and economic prosperity. Thus, while we cannot rule out that meritocratic and other notions exist in the minds of some, our finding of a negative relationship strongly supports the conclusion that such notions are overruled by egalitarian norms.

# 6 Conclusion

Our objective in this paper was to investigate the relationship between social status and economic prosperity and the mechanisms driving that relationship in non-lineage-based, rural communities in sub-Saharan Africa. Our conceptual framework indicated that there would be a positive relationship between economic prosperity and social status if the poor bestow status upon the rich in exchange for help in times of need ("patronage mechanism"), and a negative relationship between economic prosperity and status, if the rich are subjected to status withdrawal as a punishment for violating an egalitarian norm ("egalitarian norm mechanism").

Our principle innovation was to use data on funeral attendance in six Zimbabwean villages as a proxy for the social status of funeral-hosting households within their village communities. We, then, analyzed this data in conjunction with data on household income, other household attributes, ties between households including those of kinship, and assistance provision in times of crisis using a dyadic approach.

The resulting estimates indicated that the richer a household hosting a funeral, the less likely heads of neighbouring households are to attend. Egalitarian norms prevail - even in non-lineage-based resettled communities. However, the associated sanctions, including the status withdrawal through funeral non-attendance, are insufficient to induce the rich to be more inclined than the poor to provide ex-post assistance to others experiencing crises. The negative relationship is stronger among kin, but holds also among non-kin, indicating the presence of a generalized egalitarian norm beyond family solidarity obligations. While the norm is weak, i.e., community members continue to apply the sanctions associated with norm violation, but these are insufficient to induce richer households to comply, we do not detect evidence of a shift towards an inverted relationship between economic prosperity and status for richer households who establish themselves as patrons engaging in a status-for-assistance asymmetric gift exchange.

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# **Tables**

Table 1: Summary statistics main sample

	Mean	$\operatorname{StD}$	Median	$\operatorname{Min}$	Max
Funeral attendance	0.761	0.43	1.00	0.0	1.0
HOSTING HOUSEHOLD CHARACTERISTICS					
Lagged yearly income (in 1,000 Zim \$, 1992 prices)	2.360	2.53	1.50	0.1	12.4
Lagged yearly income (IHST)	7.961	1.04	8.01	5.5	10.1
Age of the head	60.732	11.22	61.00	39.0	91.0
Education of the head	4.170	2.74	4.00	0.0	9.0
Household head female	0.309	0.46	0.00	0.0	1.0
Household size	8.670	4.73	7.00	2.0	24.0
Assistance	0.135	0.34	0.00	0.0	1.0
Deceased person characteristics					
Age at death	34.998	24.40	31.00	0.0	87.0
Female	0.461	0.50	0.00	0.0	1.0
Household head at time of death	0.209	0.41	0.00	0.0	1.0
Cause of death unnatural	0.178	0.38	0.00	0.0	1.0
Village resident not visitor	0.847	0.36	1.00	0.0	1.0
Buried in village	0.931	0.25	1.00	0.0	1.0
Pair characteristics					
Genetic relatedness (Hamilton's ratio)	0.009	0.06	0.00	0.0	0.5
Related (dummy)	0.038	0.19	0.00	0.0	1.0
In same religious group	0.212	0.41	0.00	0.0	1.0
In same burial society	0.288	0.45	0.00	0.0	1.0
Attending hhh in village at time	0.891	0.31	1.00	0.0	1.0
Observations	3458				

 $\underline{\text{Notes}}$ : Summary statistics for the main sample (3,458 observations); each observation is a funeral-potential host dyad. IHST of income is the inverse hyperbolic sine transformation of income. Assistance is a dummy equal to one if the host provided assistance to another household in the village in the previous year.

Table 2: Analysis of funeral attendance

	(1)	(2)	(3)	(4)
HOSTING HOUSEHOLD	• •	• •	* *	
Income $(\beta, \phi)$	-0.045**	-0.044***	-0.058**	-0.050***
	(0.030)	(0.001)	(0.044)	(0.001)
Age of the head	0.005	0.005	0.006***	0.006***
	(0.116)	(0.116)	(0.000)	(0.000)
Education of the head	0.019***	0.019***	0.019***	0.019***
	(0.000)	(0.000)	(0.000)	(0.000)
Household head female	0.035	0.035	0.024	0.026
	(0.510)	(0.551)	(0.769)	(0.703)
Household size	0.000	0.000	0.002	0.002
_	(0.914)	(0.926)	(0.606)	(0.606)
DECEASED PERSON				
Age at death	0.002	0.002	0.002	0.002
	(0.190)	(0.190)	(0.113)	(0.113)
Female	0.103	0.103	0.097	0.098
	(0.297)	(0.297)	(0.250)	(0.250)
Household head at time of death	-0.045	-0.045	-0.018	-0.016
	(0.385)	(0.442)	(0.776)	(0.776)
Cause of death unnatural	0.009	0.009	0.004	0.006
	(0.884)	(0.817)	(0.938)	(0.866)
Village resident not visitor	-0.001	-0.001	-0.012	-0.003
	(0.953)	(0.953)	(0.672)	(0.935)
Buried in village	0.406	0.406	0.423***	0.419***
	(0.296)	(0.265)	(0.000)	(0.000)
Pair characteristics				
Genetic relatedness (Hamilton's ratio)	0.212	1.324***	0.074*	0.815**
	(0.177)	(0.000)	(0.070)	(0.032)
In same religious group	0.009	0.023	-0.015	0.028
	(0.733)	(0.629)	(0.579)	(0.752)
In same burial society	0.099*	0.079	0.112***	0.255
	(0.060)	(0.738)	(0.000)	(0.459)
Relatedness X Host income $(\xi_1)$		-0.146***		-0.100**
		(0.001)		(0.033)
Same relig grp X Host income $(\xi_2)$		-0.002		-0.005
		(0.846)		(0.717)
Same burial soc X Host income $(\xi_3)$		0.002		-0.018
		(0.934)		(0.487)
Attending hhh in village at time	0.768***	0.767***	0.820***	0.821***
	(0.000)	(0.000)	(0.000)	(0.000)
ATTENDING HOUSEHOLD				
Income			0.012	0.013
			(0.166)	(0.166)
Age of the head			-0.010***	-0.010***
			(0.001)	(0.001)
Education of the head			0.027	0.027
			(0.268)	(0.268)
Household head female			0.251	0.250
			(0.506)	(0.506)
Household size			0.001	0.001
			(0.561)	(0.561)
Constant	-0.501	-0.504	0.542	0.498
	(0.507)	(0.507)	(0.351)	(0.390)
R-Squared	0.632	0.632	0.649	0.650
Observations	3458	3458	1396	1396

Notes: Income is lagged income transformed using the inverse hyperbolic sine transformation. hhh stands for household head, relig grp for religious group, and burial soc for burial society. The first row displays coefficient  $\beta$  from equation 1 in Columns (1) and (3) and  $\phi$  from equation 2 in Columns (2) and (4). Columns (1) and (2) use the main sample (3,458 dyadic observations), (3) and (4) use the robustness sample (1,396 dyadic observations). All models are estimated using OLS and include year, village and attending household fixed effects. P-values obtained using village-level wild bootstrap (Stata command cgmwildboot with 2,000 repetitions) shown in parentheses. Significance levels are denoted as follows: \*p<0.10, \*\*p<0.05, \*\*\*\*p<0.01.

Table 3: Analysis of funeral attendance with assistance provision (main sample)

	(1)	(2)	(3)	(4)	(5)
HOSTING HOUSEHOLD	. ,	. ,		. ,	
Income $(\beta, \phi, \theta)$	-0.045**	-0.042***	-0.027*	-0.040***	-0.023
	(0.030)	(0.001)	(0.058)	(0.001)	(0.247)
Age of the head	0.005	0.004	0.003	0.004	0.003
	(0.116)	(0.116)	(0.113)	(0.116)	(0.113)
Education of the head	0.019***	0.016***	0.017***	0.016***	0.018***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Household head female	0.035	0.021	0.005	0.021	0.006
	(0.510)	(0.769)	(0.885)	(0.769)	(0.924)
Household size	0.000	-0.001	0.000	-0.001	-0.000
	(0.914)	(0.900)	(0.934)	(0.900)	(0.996)
Assistance		-0.167	0.631	-0.167	0.638
		(0.197)	(0.631)	(0.197)	(0.631)
Assistance X Host income $(\pi)$			-0.101		-0.102
			(0.514)		(0.514)
Deceased Person			,		,
Age at death	0.002	0.002	0.003*	0.002	0.003*
	(0.190)	(0.190)	(0.059)	(0.190)	(0.059)
Female	0.103	0.080	0.074	0.080	0.074
	(0.297)	(0.384)	(0.313)	(0.384)	(0.313)
Household head at time of death	-0.045	-0.040	-0.058	-0.039	-0.057
	(0.385)	(0.394)	(0.249)	(0.427)	(0.279)
Cause of death unnatural	0.009	0.007	0.015	0.007	0.016
	(0.884)	(0.838)	(0.811)	(0.838)	(0.780)
Village resident not visitor	-0.001	-0.019	-0.055	-0.017	-0.051
	(0.953)	(0.634)	(0.642)	(0.682)	(0.712)
Buried in village	0.406	0.412	0.406	0.411	0.404
	(0.296)	(0.142)	(0.107)	(0.142)	(0.138)
Pair characteristics	, , ,		,		, ,
Genetic relatedness (Hamilton's ratio)	0.212	0.241*	0.254***	1.280***	1.243***
	(0.177)	(0.056)	(0.000)	(0.000)	(0.000)
In same religious group	0.009	-0.003	-0.000	-0.039	0.012
	(0.733)	(0.649)	(0.947)	(0.530)	(0.768)
In same burial society	0.099*	0.095***	0.076***	0.135	0.149
	(0.060)	(0.000)	(0.000)	(0.505)	(0.425)
Relatedness X Host income $(\xi_1)$				-0.137***	-0.130***
				(0.001)	(0.001)
Same relig grp X Host income $(\xi_2)$				0.004	-0.002
				(0.657)	(0.741)
Same burial soc X Host income $(\xi_3)$				-0.005	-0.009
				(0.780)	(0.783)
Attending hhh in village at time	0.768***	0.761***	0.768***	0.761***	0.768***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-0.501	-0.393	-0.402	-0.400	-0.431
	(0.507)	(0.479)	(0.378)	(0.259)	(0.259)
R-Squared	0.632	0.643	0.647	0.643	0.647
Observations	3458	3458	3458	3458	3458

Notes: Income is lagged income transformed using the inverse hyperbolic sine transformation. Assistance is a dummy equal to one if the host provided assistance to another household in the village in the previous year. hhh stands for household head, relig grp for religious group, and burial soc for burial society. The first row displays coefficient  $\beta$  from equation 1 in Columns (1) and (2),  $\phi$  from equation 2 in Column (4), and  $\theta$  from equation 3 in Columns (3) and (5). All models use the main sample (3,458 dyadic observations), are estimated using OLS and include year, village and attending household fixed effects. P-values obtained using village-level wild bootstrap (Stata command cgmwildboot with 2,000 repetitions) shown in parentheses. Significance levels are denoted as follows: \* p<0.10, \*\* p<0.05, \*\*\*\* p<0.01.

Table 4: Analysis of funeral attendance with dyadic assistance provision (robustness sample)

	(1)	(2)	(3)	(4)	(5)
HOSTING HOUSEHOLD	0.0	0.000	0.0	a a restatut	o o reduded
Income	-0.058**	-0.057**	-0.057**	-0.048***	-0.048***
	(0.044)	(0.044)	(0.044)	(0.001)	(0.001)
Age of the head	0.006***	0.006***	0.006***	0.005***	0.005***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education of the head	0.019***	0.019***	0.019***	0.019***	0.019***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Household head female	0.024	0.022	0.022	0.025	0.025
	(0.769)	(0.769)	(0.769)	(0.703)	(0.703)
Household size	0.002	0.002	0.002	0.002	0.002
	(0.606)	(0.606)	(0.606)	(0.606)	(0.606)
DECEASED PERSON					
Age at death	0.002	0.002*	0.002*	0.002	0.002*
	(0.113)	(0.088)	(0.059)	(0.113)	(0.088)
Female	0.097	0.097	0.097	0.098	0.097
	(0.250)	(0.250)	(0.250)	(0.250)	(0.250)
Household head at time of death	-0.018	-0.017	-0.018	-0.015	-0.016
	(0.776)	(0.802)	(0.776)	(0.802)	(0.776)
Cause of death unnatural	0.004	0.005	0.005	0.007	0.007
	(0.938)	(0.869)	(0.899)	(0.908)	(0.908)
Village resident not visitor	-0.012	-0.012	-0.013	-0.003	-0.004
	(0.672)	(0.672)	(0.672)	(0.935)	(0.935)
Buried in village	0.423***	0.424***	0.424***	0.420***	0.420***
_	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
PAIR CHARACTERISTICS					
Genetic relatedness (Hamilton's ratio)	0.074*	0.070***	0.071***	0.756**	0.760**
	(0.070)	(0.000)	(0.000)	(0.032)	(0.032)
In same religious group	-0.015	-0.014	-0.014	0.036	0.034
	(0.579)	(0.579)	(0.551)	(0.656)	(0.685)
In same burial society	0.112***	0.113***	0.113***	0.266	0.264
	(0.000)	(0.000)	(0.000)	(0.377)	(0.377)
Relatedness X Host income				-0.093*	-0.093*
				(0.065)	(0.065)
Same relig grp X Host income				-0.006	-0.006
				(0.657)	(0.688)
Same burial soc X Host income				-0.019	-0.019
				(0.487)	(0.487)
Dyadic assistance		-0.235	0.140	-0.238	0.112
		(0.507)	(0.739)	(0.507)	(0.839)
Dyadic assistance X Host income			-0.046		-0.043
A	0.000	0.040444	(0.321)	0.040444	(0.321)
Attending hhh in village at time	0.820***	0.818***	0.818***	0.819***	0.819***
A	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ATTENDING HOUSEHOLD	0.010	0.010	0.010	0.010	0.010
Income	0.012	0.012	0.012	0.012	0.012
A C 41 1 1	(0.166)	(0.197)	(0.197)	(0.166)	(0.166)
Age of the head	-0.010***	-0.011***	-0.011***	-0.011***	-0.011***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Education of the head	0.027	0.029	0.028	0.029	0.028
TT 1 111 1 C 1	(0.268)	(0.310)	(0.310)	(0.310)	(0.341)
Household head female	0.251	0.264	0.261	0.263	0.259
TT 1 11 :	(0.506)	(0.506)	(0.506)	(0.506)	(0.506)
Household size	0.001	0.001	0.001	0.001	0.001
	(0.561)	(0.594)	(0.594)	(0.594)	(0.634)
Constant	0.542	0.607	0.591	0.561	0.547
	(0.351)	(0.109)	(0.109)	(0.200)	(0.236)
R-Squared	0.649	0.651	0.651	0.652	0.652
Observations	1396	1396	1396	1396	1396

Notes: Income is lagged income transformed using the inverse hyperbolic sine transformation. Dyadic assistance is a dummy equal to one if the host provided assistance to the attendee in the previous year. hhh stands for household head, relig grp for religious group, and burial soc for burial society. All models use the robustness sample (1,396 dyadic observations), are estimated using OLS and include year, village and attending household fixed effects. P-values obtained using village-level wild bootstrap (Stata command cgmwildboot with 2,000 repetitions) shown in parentheses. Significance levels are denoted as follows: \*p<0.10, \*\*\*p<0.05, \*\*\*p<0.01.

# Appendix

Table A1: Summary statistics robustness sample

	Mean	StD	Median	Min	Max
FUNERAL ATTENDANCE	0.814	0.39	1.00	0.0	1.0
HOSTING HOUSEHOLD CHARACTERISTICS					
Lagged yearly income (in 1,000 Zim \$, 1992 prices)	2.361	2.47	1.50	0.1	12.4
Lagged yearly income (IHST)	7.973	1.03	8.01	5.5	10.1
Age of the head	60.451	11.23	61.00	39.0	91.0
Education of the head	4.344	2.73	5.00	0.0	9.0
Household head female	0.283	0.45	0.00	0.0	1.0
Household size	8.678	4.69	7.00	2.0	24.0
Assistance	0.127	0.33	0.00	0.0	1.0
Deceased person characteristics					
Age at death	35.093	24.67	32.00	0.0	87.0
Female	0.450	0.50	0.00	0.0	1.0
Household head at time of death	0.213	0.41	0.00	0.0	1.0
Cause of death unnatural	0.195	0.40	0.00	0.0	1.0
Village resident not visitor	0.840	0.37	1.00	0.0	1.0
Buried in village	0.929	0.26	1.00	0.0	1.0
Pair characteristics					
Genetic relatedness (Hamilton's ratio)	0.009	0.05	0.00	0.0	0.5
Related (dummy)	0.042	0.20	0.00	0.0	1.0
In same religious group	0.231	0.42	0.00	0.0	1.0
In same burial society	0.314	0.46	0.00	0.0	1.0
Dyadic assistance	0.004	0.07	0.00	0.0	1.0
Attending hhh in village at time	0.916	0.28	1.00	0.0	1.0
ATTENDING HOUSEHOLD CHARACTERISTICS					
Lagged yearly income (in 1,000 Zim \$, 1992 prices)	2.322	2.24	1.60	0.0	16.7
Lagged yearly income (IHST)	7.884	1.48	8.07	0.0	10.4
Age of the head	57.062	11.95	55.00	28.0	92.0
Education of the head	4.993	2.66	6.00	0.0	10.0
Household head female	0.231	0.42	0.00	0.0	1.0
Household size	8.349	3.78	8.00	1.0	27.0
Observations	1396	-			

 $\underline{\text{Notes}}$ : Summary statistics for the robustness sample (1,396 observations); each observation is a funeral-potential host dyad. IHST of income is the inverse hyperbolic sine transformation of income. Dyadic assistance is a dummy equal to one if the host provided assistance to the attendee in the previous year.

Table A2: Analysis of funeral attendance: Robustness check on sample and controls

	(1)	(2)	(3)	(4)	(5)	(6)
HOSTING HOUSEHOLD	. /	, ,	. ,	, ,	. ,	, ,
Income $(\beta, \phi)$	-0.045**	-0.044***	-0.058**	-0.050***	-0.057	-0.051***
	(0.030)	(0.001)	(0.044)	(0.001)	(0.103)	(0.001)
Age of the head	0.005	0.005	0.006***	0.006***	0.006***	0.005***
	(0.116)	(0.116)	(0.000)	(0.000)	(0.000)	(0.000)
Education of the head	0.019***	0.019***	0.019***	0.019***	0.018***	0.019***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Household head female	0.035	0.035	0.024	0.026	0.025	0.027
TT 1 11 .	(0.510)	(0.551)	(0.769)	(0.703)	(0.703)	(0.703)
Household size	0.000	0.000	0.002	0.002	0.002	0.002
Deceased Dengon	(0.914)	(0.926)	(0.606)	(0.606)	(0.606)	(0.606)
DECEASED PERSON	0.002	0.002	0.002	0.002	0.002	0.002
Age at death	(0.190)	(0.190)	(0.113)	(0.113)	(0.183)	(0.183)
Female	0.190) $0.103$	0.190) $0.103$	0.097	0.098	0.103) $0.095$	0.185
remaie	(0.297)	(0.297)	(0.250)	(0.250)	(0.309)	(0.309)
Household head at time of death	-0.045	-0.045	-0.018	-0.016	-0.013	-0.011
Household head at time of death	(0.385)	(0.442)	(0.776)	(0.776)	(0.802)	(0.802)
Cause of death unnatural	0.009	0.009	0.004	0.006	0.002)	0.002
Cause of death unhavurar	(0.884)	(0.817)	(0.938)	(0.866)	(0.968)	(0.938)
Village resident not visitor	-0.001	-0.001	-0.012	-0.003	-0.009	-0.002
v mage resident not visitor	(0.953)	(0.953)	(0.672)	(0.935)	(0.737)	(0.936)
Buried in village	0.406	0.406	0.423***	0.419***	0.431***	0.428***
Barroa in vinage	(0.296)	(0.265)	(0.000)	(0.000)	(0.000)	(0.000)
Pair characteristics	(0.200)	(8.288)	(0.000)	(0.000)	(0.000)	(0.000)
Genetic relatedness (Hamilton's ratio)	0.212	1.324***	0.074*	0.815**	0.073	0.822**
(	(0.177)	(0.000)	(0.070)	(0.032)	(0.118)	(0.032)
In same religious group	0.009	0.023	-0.015	0.028	-0.016	-0.011
0 1	(0.733)	(0.629)	(0.579)	(0.752)	(0.454)	(0.949)
In same burial society	0.099 *	$0.079^{'}$	0.112***	$0.255^{'}$	0.113***	$0.241^{'}$
v	(0.060)	(0.738)	(0.000)	(0.459)	(0.000)	(0.468)
Relatedness X Host income $(\xi_1)$	, ,	-0.146***	,	-0.100**	, ,	-0.101**
,		(0.001)		(0.033)		(0.033)
Same relig grp X Host income $(\xi_2)$		-0.002		-0.005		-0.001
		(0.846)		(0.717)		(0.973)
Same burial soc X Host income $(\xi_3)$		0.002		-0.018		-0.016
		(0.934)		(0.487)		(0.487)
Attending hhh in village at time	0.768***	0.767***	0.820***	0.821***	0.816***	0.817***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Attending household						
Income			0.012	0.013		
			(0.166)	(0.166)		
Age of the head			-0.010***	-0.010***		
			(0.001)	(0.001)		
Education of the head			0.027	0.027		
			(0.268)	(0.268)		
Household head female			0.251	0.250		
			(0.506)	(0.506)		
Household size			0.001	0.001		
	0 701	0 704	(0.561)	(0.561)	0.450	0.010
Constant	-0.501	-0.504	0.542	0.498	-0.159	-0.212
D.C.	(0.507)	(0.507)	(0.351)	(0.390)	(0.713)	(0.532)
R-Squared	0.632	0.632	0.649	0.650	0.646	0.647
Observations	3458	3458	1396	1396	1396	1396

Notes: Income is lagged income transformed using the inverse hyperbolic sine transformation. hhh stands for household head, relig grp for religious group, and burial soc for burial society. The first row displays coefficient  $\beta$  from equation 1 in Columns (1), (3) and (5) and  $\phi$  from equation 2 in Columns (2), (4) and (6). Columns (1) and (2) use the main sample (3,458 dyadic observations), (3) to (6) use the robustness sample (1,396 dyadic observations). All models are estimated using OLS and include year, village and attending household fixed effects. P-values obtained using village-level wild bootstrap (Stata command cgmwildboot with 2,000 repetitions) shown in parentheses. Significance levels are denoted as follows: \* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

Table A3: Analysis of funeral attendance with assistance provision (robustness sample)

	(1)	(2)	(3)	(4)	(5)
HOSTING HOUSEHOLD	0.050**	0.051444	0.000	0.040***	0.001
Income $(\beta, \phi, \theta)$	-0.058**	-0.051***	-0.033	-0.043***	-0.021
A C (1 1 1 1	(0.044)	(0.001)	(0.101)	(0.001)	(0.402)
Age of the head	0.006***	0.004***	0.003	0.004***	0.003
	(0.000)	(0.000)	(0.116)	(0.000)	(0.202)
Education of the head	0.019***	0.016***	0.017***	0.017***	0.018***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Household head female	0.024	0.008	-0.010	0.010	-0.008
TT 1 11 :	(0.769)	(0.769)	(0.870)	(0.769)	(0.810)
Household size	0.002	0.001	0.002	0.001	0.002
A:-t	(0.606)	(0.678)	(0.729)	(0.732)	(0.643)
Assistance		-0.168	0.749	-0.168	0.786
A:-t V IIt : (-)		(0.127)	(0.457)	(0.127)	(0.486)
Assistance X Host income $(\pi)$			-0.116		-0.121
Deceased person			(0.518)		(0.518)
Age at death	0.002	0.002*	0.003*	0.002*	0.003*
Age at death	(0.113)	(0.059)	(0.059)	(0.059)	(0.059)
Female	0.097	0.039) $0.074$	0.068	0.074	0.068
remaie	(0.250)	(0.376)	(0.305)	(0.376)	(0.305)
Household head at time of death	-0.018	-0.015	-0.036	-0.013	-0.034
mouschold head at time of death	(0.776)	(0.827)	(0.644)	(0.853)	(0.644)
Cause of death unnatural	0.004	0.000	0.012	0.002	0.015
Cause of death unhatural	(0.938)	(0.921)	(0.795)	(0.921)	(0.675)
Village resident not visitor	-0.012	-0.030	-0.069	-0.021	-0.059
vinage resident net visitor	(0.672)	(0.535)	(0.535)	(0.592)	(0.606)
Buried in village	0.423***	0.426***	0.420***	0.422***	0.415***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Pair characteristics	()	()	()	()	( )
Genetic relatedness (Hamilton's ratio)	0.074*	0.096*	0.119***	0.588*	0.586
,	(0.070)	(0.069)	(0.000)	(0.061)	(0.244)
In same religious group	-0.015	-0.028	-0.024	-0.010	0.026
	(0.579)	(0.214)	(0.172)	(0.929)	(0.849)
In same burial society	0.112***	0.099***	0.078	0.262***	0.304***
	(0.000)	(0.000)	(0.102)	(0.000)	(0.000)
Relatedness X Host income $(\xi_1)$				-0.067*	-0.064
				(0.062)	(0.307)
Same relig grp X Host income $(\xi_2)$				-0.002	-0.006
				(0.816)	(0.658)
Same burial soc X Host income $(\xi_3)$				-0.020***	-0.028***
				(0.001)	(0.001)
Attending hhh in village at time	0.820***	0.820***	0.832***	0.821***	0.834***
•	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ATTENDING HOUSEHOLD	0.010	0.011	0.010	0.010	0.010
Income	0.012	0.011	0.010	0.012	0.010
A £ +1 1 1	(0.166) -0.010***	(0.166) -0.010**	(0.210) -0.009***	(0.166) -0.011**	(0.166) -0.010**
Age of the head		(0.030)		(0.030)	
Education of the head	$(0.001) \\ 0.027$	(0.030) $0.033$	$(0.001) \\ 0.034$	(0.030) $0.033$	$(0.030) \\ 0.035$
Education of the head	(0.268)	(0.370)	(0.506)	(0.370)	(0.506)
Household head female	0.258	0.268	0.261	(0.370) $0.267$	0.258
Troubenord nead remare	(0.506)	(0.506)	(0.506)	(0.506)	(0.506)
Household size	0.001	0.002	0.000	0.002	0.001
Troubolloid bize	(0.561)	(0.382)	(0.645)	(0.382)	(0.645)
Constant	0.542	0.675***	0.508	0.631***	0.439
	(0.351)	(0.000)	(0.205)	(0.000)	(0.241)
R-Squared	0.649	0.662	0.668	0.662	0.669
Observations	1396	1396	1396	1396	1396
	***		****	***	

Notes: Income is lagged income transformed using the inverse hyperbolic sine transformation. Assistance is a dummy equal to one if the host provided assistance to another household in the village in the previous year. hhh stands for household head, relig grp for religious group, and burial soc for burial society. The first row displays coefficient  $\beta$  from equation 1 in Columns (1) and (2),  $\phi$  from equation 2 in Column (4), and  $\theta$  from equation 3 in Columns (3) and (5). All models use the robustness sample (1,396 dyadic observations), are estimated using OLS and include year, village and attending household fixed effects. P-values obtained using village-level wild bootstrap (Stata command cgmwildboot with 2,000 repetitions) shown in parentheses. Significance levels are denoted as follows: \*p<0.10, \*\*\*p<0.05, \*\*\*p<0.01.