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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:
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Abigail Barr Mattea Stein

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Abstract

This paper explores the role of social status in relationships between richer and poorer households 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 were to attend. This is consistent with the existence of an egalitarian norm that was 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 complied with the norm and eschewed punishment. While the egalitarian norm appears weak (punishment for norm violation was exerted but compliance did not follow), patron-client relationships appear not to have emerged in its place.

JEL Classification: 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



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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 poorer and richer households in small, agrarian communities could be defined by one or both of two mechanisms. First, richer households 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. Below, we refer to this as the “patronage mechanism”. Second, if an egalitarian norm with strong redistributive imperatives prevails ([Platteau, 2000, 2006](#)) and if assistance flowing from richer to poorer households is either absent or considered insufficient, richer households might be subject

to punishment in the form of social status reduction. This would lead to a negative relationship between economic prosperity and social status. Below, we refer to this as the “egalitarian norm mechanism”.

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 giving assistance to the less prosperous are not investigated in these experimental studies. To undertake such an investigation one needs a measure of social status as distinct from socioeconomic status. We believe that we are the first to conduct such an investigation making use of such a measure (measure described below).

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 \(2006\)](#)).¹ 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

¹While not about norms, [Banerjee, Breza, Chandrasekhar, Duflo, Jackson, and Kinnan \(2022\)](#) provide recent empirical evidence that enhanced market integration, in their case the entry into communities of formal financial institutions, can induce persistent changes in informal social structures, specifically reductions in informal lending and risk-sharing netw.

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 meritocratic and individualistic values and role models that appear to have acquired status through conspicuous displays of wealth.

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 an egalitarian norm 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.²

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

²While 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 the experimental studies we cite were conducted in lineage-based communities.

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.

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 behaviour 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 patronage and egalitarian norm 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 affect the utility of relatively rich and relatively poor households to differing degrees. 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 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 owing to household prosperity being correlated with many other variables including the sex and education of the head and the size of the household. Unfortunately, it is very difficult to find valid instruments for prosperity variables. However, via the inclusion of an extensive set of control variables in our main analysis, combined with supplementary analyses focusing on a critical identifying 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 a household hosting a funeral, the less likely heads of neighbouring households were to attend. This is consistent with the existence of an egalitarian norm that was 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 complied with the norm and eschewed punishment. While the egalitarian norm appears weak (punishment for norm violation was exerted but compliance did not follow), patron-client relationships appear not to have emerged in its place. These findings, as well as corroborating the results of the lab-in-the-field studies cited above, provide an important external validity check on those results and, more importantly, offer new direct insights into the role that social status 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 social 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 one or both (or neither) of two possible mechanisms. Both mechanisms relate to the importance of mutual assistance arrangements within such communities. Poorer households are more vulnerable to income shocks than richer households 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, access to such schemes is patchy (there was none in the villages in our study during the period covered by our data) and 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 them additional benefits for staying in the arrangement or impose sufficiently high leaving costs. If people care about social status, the bestowing of social status upon richer households may be sufficient to retain them in the assistance arrangement. This is the patronage mechanism. Conversely, an egalitarian norm 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 redistribute to others. This is the egalitarian norm mechanism. In the remainder of this section we first examine each

of the mechanisms in a bit 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 self-insure 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 and via co-membership in informal insurance arrangements such as funeral and burial societies ([Udry, 1994](#); [Fafchamps and Lund, 2003](#); [Dekker, 2004a,b](#); [De Weerd, 2005](#); [De Weerd and Dercon, 2006](#); [Fafchamps and Gubert, 2007](#); [Ambrus, Mobius, and Szeidl, 2014](#); [Dercon, De Weerd, Bold, and Pankhurst, 2006](#)).³ In this context, 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](#)).

³Burial societies are informal savings and insurance mechanisms that pay out in the event of a member household hosting a funeral.

2.2 The egalitarian norm mechanism

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

Drawing on an extensive sociological and anthropological literature, Platteau (2000, 2006) proposes several reasons why egalitarian norms with redistributive imperatives should emerge in traditional, lineage-based sub-Saharan communities. First, if status were a positive function of prosperity, one individual's efforts to prosper would induce others to follow suit, stimulating competition and triggering a positional arms race that would endanger community cohesiveness. Second, in communities reliant on rain-fed agriculture, relative economic success is seen as attributable not to effort but to luck. Further, owing to the importance placed on the role of supernatural forces in determining outcomes, persistent good luck may be viewed with suspicion. Finally, given the importance of mutual assistance arrangements within these communities, "private wealth accumulation may be perceived as an attempt to become less dependent on and, hence, break away from traditional solidarity arrangements" (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 deviations from the norm through status withdrawal and social ostracism. Thus, if an egalitarian norm prevails, more prosperous households who fail to show sufficient solidarity and/or provide insufficient 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 and, if both are operational, their relative strengths.⁴ 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 showing sufficient solidarity with and/or providing sufficient assistance to others in the community to meet the redistributive imperative. Third, if both mechanisms are operating simultaneously, for example because some patrons have established themselves, while an egalitarian norm still prevails in general, the relationship will be indeterminate and its direction will depend on the mechanisms' relative strengths. 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.

From this synopsis we see that, assuming the two mechanisms are the only relevant ones, a negative relationship can exist only if the egalitarian norm mechanism is operational and a positive relationship can exist only if the patronage mechanism is operational. In either case, to determine whether the other mechanism is simultaneously operational we need to introduce flows of assistance into the analysis. 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

⁴The assumption that no other relevant mechanisms are in play is discussed in section 2.5.

present but there is no punishment because richer households are providing sufficient assistance.

2.4 Kinship

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. Further, primarily owing to marriages since resettlement, there are some inter-household ties of kinship within the communities we study and the presence of these ties allows us to investigate whether the egalitarian norm mechanism is moderated by kinship. Where ties of kinship exist between households within the communities we study, drawing on Platteau’s theory and the empirical work on ‘kinship tax’ (Beekman et al., 2015; Jakiela and Ozier, 2016; Grimm et al., 2017; Boltz et al., 2019; Squires, 2021), we expect the egalitarian norm mechanism to be stronger among kin, i.e., for relatively richer households to be subject to greater status withdrawal by their kin if they violate the egalitarian norm. Indeed, conceptually, we cannot rule out the possibility that the egalitarian norm mechanism, and the negative relationship between prosperity and status that it generates, exists only where ties of kinship exist.

2.5 Other potential mechanisms

There are several other mechanisms that could drive a relationship between funeral attendance and prosperity. First, social status is acquired with education and age, and education and, until the onset of infirmity, age are positively associated with income. Household size is likely to be correlated with income and may or may not be independently associated with status and/or funeral attendance and, traditionally, women are of lesser status and tend to head smaller and lower income households. Fortunately, age, education and sex are easy to control for in our analysis.

Second, if prosperity homophily exists, i.e., if households tend to socialise with others that are similarly prosperous, and if the costs and benefits of attending funerals vary with prosperity, we would observe a relationship between funeral attendance and hosting household-prosperity notwithstanding any social-status-related considerations. One variant of this possibility requires particular attention; burial society membership may be both more beneficial to poorer households and associated with obligations to attend co-members' funerals. Fortunately, we have data on both co-membership in burial societies and attending household prosperity that we can use to control for these homophily-related mechanisms in our analyses.

Third, there is the already mentioned possible effects of globalisation on meritocratic values and the notion that status can be acquired through conspicuous consumption. We cannot control for these, so their potential effects on the relationships we might observe need careful consideration. In the absence of patronage and an egalitarian norm, both meritocratic values and status-generating conspicuous consumption would manifest as a positive relationship between prosperity and status that is not moderated by assistance giving. If patronage were also operational, we would see a positive relationship between income and status that is stronger for those providing assistance. If an egalitarian norm prevails, the holding of meritocratic values and the notion that status can be acquired through conspicuous consumption by some would constitute an erosion of that norm and a weakening of the corresponding negative relationship between income and status. Data that we do not have would be required to establish that incoming meritocracy or status-enhancing conspicuous consumption were the cause of such an erosion, so we must leave this for future investigation.

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 burial site, outside but close to the boundary of the village, 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 especially 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 exclude 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 zero otherwise.⁵ The variable g_{ijvt} is dyadic, i.e., it indicates whether the head of one household attended a funeral hosted by another household, and directional.

⁵We focus on the attendance of household *heads* because their behaviour is likely to have provided 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 (available from the authors on request).

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

$$g_{ijvt} = \alpha + \beta inc_{ivt-1} + \mathbf{x}_{ivt}\boldsymbol{\gamma} + \mathbf{d}_{ivt}\boldsymbol{\delta} + \mathbf{p}_{ijvt}\boldsymbol{\zeta} + \boldsymbol{\eta}_j + \boldsymbol{\tau}_t + \boldsymbol{\vartheta}_v + \epsilon_{ijvt}, \quad (1)$$

where inc_{ivt-1} is the regressor of principle interest, the economic prosperity of the hosting household of funeral i in the year before the funeral, $t-1$. \mathbf{x}_{ivt} is a vector of characteristics of the funeral-hosting household at the time of the funeral and \mathbf{d}_{ivt} is a vector of characteristics of the deceased individual. \mathbf{p}_{ijvt} is a vector of dyad characteristics, including kinship ties, that could be associated with obligations to attend funerals, even in the absence of respect. $\boldsymbol{\tau}_t$ is a vector of year fixed effects capturing any common, year-on-year differences in attendance behaviour, and $\boldsymbol{\vartheta}_v$ 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 $\boldsymbol{\eta}_j$. In a robustness check, we also control for (potentially time-varying) attendee income inc_{jvt-1} and other attendee characteristics \mathbf{x}_{jvt} .

To investigate whether the egalitarian norm mechanism was stronger among kin (see section 2.4 above), in a variation of model (1) we include an interaction term between the kinship tie variable and funeral host income:

$$g_{ijvt} = \alpha + \phi inc_{ivt-1} + \mathbf{x}_{ivt}\boldsymbol{\gamma} + \mathbf{d}_{ivt}\boldsymbol{\delta} + \mathbf{p}_{ijvt}\boldsymbol{\zeta} + \lambda(inc_{ivt-1} \times kin_{ijvt}) + \boldsymbol{\eta}_j + \boldsymbol{\tau}_t + \boldsymbol{\vartheta}_v + \epsilon_{ijvt}, \quad (2)$$

Estimating equation (1) and (2) allows us to establish whether there was a relationship between a household's income and neighbours' attendance at funerals that it hosts, the sign of that relationship, and whether it was moderated by the existence of a kinship tie. 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 was showing solidarity with and/or provided assistance to others in the

village.⁶ For this purpose, we estimate the model

$$g_{ijvt} = \alpha + \pi inc_{ivt-1} + \psi bsoc_{ivt-2} + \omega (inc_{ivt-1} \times bsoc_{ivt-2}) + \xi ast_{ivt-1} + \sigma (inc_{ivt-1} \times ast_{ivt-1}) \\ + \mathbf{x}_{ivt} \boldsymbol{\gamma} + \mathbf{d}_{ivt} \boldsymbol{\delta} + \mathbf{p}_{ijvt} \boldsymbol{\zeta} + \lambda (inc_{ivt-1} \times kin_{ijvt}) + \boldsymbol{\eta}_j + \boldsymbol{\tau}_t + \boldsymbol{\vartheta}_v + \epsilon_{ijvt}, \quad (3)$$

where $bsoc_{ivt-2}$ equals one if the funeral host was a member of a burial society in the village at $t-2$ and serves as a proxy for solidarity with the village, and ast_{ivt-1} equals one if the funeral host provided assistance to one or more in-crisis households in the village during the year preceding the funeral.⁷ All other elements are defined as for equation (1).⁸

We estimate models (1), (2) and (3) using linear probability models and weighted least squares.⁹ We adjust standard errors for the possible dyadic non-independence between funeral attendance observations relating to any given household, whether in the role of host of a funeral or potential attendee (Cameron and Miller, 2014).

Our empirical strategy consists of two steps. First, we estimate models (1) and (2) to determine the sign of the correlation between economic prosperity and funeral attendance (β), and whether it varied depending on the presence of absence of kinship ties. Second, we estimate model (3) to investigate whether and how the correlation was moderated by hosting households' involvement in mutual assistance arrangements (burial societies) and/or the provision of assistance to others in need (π , $\pi + \omega$ and $\pi + \sigma$).

⁶Dekker (2004a,b) shows that at least some households with higher incomes helped households with lower incomes in these villages.

⁷The justifications for lags will be explained in section 3.3 below.

⁸To further investigate possible patron-client relationships, we also estimate a version of model (3) in which we replace ast_{ivt-1} with ast_{ijvt-1} , which equals 1 if the host of funeral i assisted potentially attending household j in the year preceding the funeral, and replace $bsoc_{ivt-2}$ with $bsoc_{ijvt-2}$, which equals 1 if j and the host of funeral i were co-members in a burial society two years prior to the funeral.

⁹We adjust for the dyadic nature of our data by weighting each observation by the inverse of the number of funerals in the village, i.e. the inverse of the number of times a household appears in the dyadic data as a potential funeral attendee. This approach ensures that attendance choices by households in larger villages with many funerals do not obtain a larger weight in the analysis. We are grateful to one of our journal referees for proposing this adjustment.

In these models, a *positive* β coefficient in equation (1) would be consistent with richer households holding higher social status as a reward for being village-level patrons or maintaining sufficient dyad-specific patron-client relationships. Then, in equation (3), $\pi + \omega$ and/or $\pi + \sigma$ would be positive, indicating that those who engaged in mutual assistance arrangements and/or provided direct assistance were being rewarded with higher status. Alongside this, a π smaller than zero would indicate that an egalitarian norm existed and, while on average richer households were redistributing more than enough of their prosperity to avoid punishment through social status withdrawal, there were some who were not. Correspondingly, a $\pi \leq 0$ would indicate the absence of an egalitarian norm.

In contrast, a *negative* β coefficient in equation (1) would indicate the presence of an egalitarian norm and that, on average, richer households were not redistributing enough to avoid punishment for norm violation. Then, if in equation (3) the negative relationship between income and status does not vary with demonstrated solidarity and/or assistance provision ($\pi < 0$, $\omega = 0$, $\sigma = 0$), this would indicate that richer households were uniformly failing to comply with the norm. However, if $\pi < 0$ and either $\pi + \omega = 0$ or $\pi + \sigma = 0$ or both, it would indicate that some richer households were sufficiently compliant with the norm, while others were not. Alternatively, if for those who engaged in mutual assistance and/or provided assistance to others the relationship between income and status is positive ($\pi + \omega > 0$ and/or $\pi + \sigma > 0$), this would indicate that the patronage mechanism was operating alongside the egalitarian norm mechanism.

Finally, *no identifiable relationship* between income and funeral attendance ($\beta=0$) in equation (1) would indicate one of the following three scenarios. First, no egalitarian norm existed (or was enforced) and neither did patronage arrangements. Second, an egalitarian norm existed and richer households provided just enough assistance to avoid punishment. Third, an egalitarian norm existed and the punishment through status withdrawal of those who did not provide assistance was balanced out by the

conferring of status upon those who assisted enough to be acknowledged as patrons. Here, once again, the estimation of equation (3) would allow us to establish which of the scenarios applied.

3.3 Economic prosperity and key controls

Our proxy for economic prosperity of a funeral hosting household is household crop income, transformed using the inverse hyperbolic sine function,¹⁰ from the year preceding the one in which the funeral took place. The key feature of this aspect 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.¹¹ The lagging reduces the likelihood that our analysis of the relationship between funeral attendance and host income is distorted by the negative effects of an illness that precedes a death on the income of a household.

To control for other mechanisms that could drive a relationship between social status and prosperity (see section 2.5), vector \mathbf{x}_{ivt} includes the age, level of education, and sex of the hosting household head and the size of the hosting household, and

¹⁰We choose the inverse hyperbolic sine transformation over the natural logarithm to address crop income skewness because there is a small number of zeros in this variable (see Attending household characteristics in Table 1).

¹¹It 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.

the vector \mathbf{d}_{ivt} includes the age and sex of the deceased and whether they were a household head at the time of their death. In addition, \mathbf{d}_{ivt} includes indicators of whether the deceased was a resident in or a visitor to the village, whether they were buried in the village, and whether their death was considered unnatural.

The vector of dyadic characteristics that may imply obligations that the head of household j attend funeral i , \mathbf{p}_{ijvt} , includes kinship ties between the funeral-hosting household and the potential attendee, co-membership in the same burial society and co-membership in the same religious congregation. The vector also includes a dummy that indicates whether the head of household j was in the village at the time funeral i took place ((this is a dyadic characteristic as it depends on both the potential attendee and the timing of the funeral)).

The norm requiring funeral attendance is strongest for members of the extended family of the deceased (Bourdillon, 1987). 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 (in the absence of incest) is 0.5. It takes this value in our data when a daughter of one household has married into the other household. It is included in model (1) as a control, while in model (2) its interaction with host lagged income is also included to investigate whether kinship moderates the relationship between economic prosperity and social status.

We use burial society co-membership lagged two years to avoid issues arising from households strategically joining in anticipation of a death. Co-membership in the same religious group is not lagged. Both co-memberships are included in all models as dummies that take the value one when the hosting household of the funeral and the potential attendee were in the same society or congregation and zero otherwise.

The attending-household income, inc_{jvt-1} , and the vector of characteristics, \mathbf{x}_{jvt} , are defined in the same way as their hosting-household analogues. These are included in a robustness-check model aimed at fully ruling out the homophily-related mechanisms that could drive a relationship between funeral attendance and hosting-

household income and at testing the assumption that funeral attendance is not especially materially beneficial or costly to poorer households.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. Every household in each of these villages was resettled in the early 1980s. Each resettled household was allocated a plot of land within a quite tightly packed village (maximum distance between any two homesteads in a village was less than 1 kilometre) and land to be used for cash-crop farming and the growing of food for own consumption. The resettled households were expected to farm their land. 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. Some household members, from time to time, earned a wage from labouring on larger farms some 10 to 20 kilometres from the villages but this was rare. Small amounts of additional income were generated from activities such as raising chickens and growing garden vegetables to sell. The six villages were included in the Zimbabwe Rural Household Dynamics Study (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

¹²We 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).

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 their 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.

Our objective when designing the group interview method described above was to maximise the precision of the data. Nevertheless, we need to consider the possibility that recollection of attendance at a funeral varied depending on the income of the hosting household, which would lead to bias in our estimates of β , σ and π . If richer households' funerals were more elaborate, recollection of attendance might be positively correlated with hosting household income. Alternatively, if the funerals

of richer households attracted significantly greater attendance by people who reside outside the village, corroboration of attendance recall in the group interviews might have been compromised. However, note that Shona funerals take place within 24 hours of the death, during the period covered by our data communication over distance was very difficult, and Shona funerals are simple both by tradition and in practice. It is the “kurova guva”, upon which we deliberately do not focus, that provides the opportunity for elaboration and the bringing in of attendees from further afield. These ethnographic observations support the assumption that any recall bias in the funeral attendance data is unlikely to be related to hosting-household income. We cannot rule out the possibility that recollection of attendance at a funeral varied depending on the status of either the hosting household or the deceased, e.g., attendance at the funerals of high status individuals might be more recollectable. However, this on its own, could not cause bias in the estimation of β , σ and π .

We merge 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. The first ZRHDS was in 1983. However, it was conducted annually only starting in 1993. From then onward, best practices for income measurement as defined by [Deaton \(2005\)](#) were used and income measures became year-on-year consistent. Because of this and the lagging of income, we restrict 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 data, 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 2000.¹³ This sample includes as potential attendees all the household heads in the village in which the funeral-hosting household was 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 attendee-level controls. There are 232 distinct potential attendee household heads in this sample.¹⁴

In a 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 a given funeral year.¹⁵ There are 101 distinct potential attendee household heads in this sample.

For the estimation of model (3) (see Section 3.2), we use data on assistance provision from the 2000 ZRHDS which included a module on crisis management, covering retrospectively the period since 1992.¹⁶ The module asked about assistance *provided*

¹³Over the 1994 to 2000 period, a total of 102 funerals were recorded for households that were 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 which the funeral took place.

¹⁴For each funeral, we exclude the hosting household head from the pool of potential attendees.

¹⁵1,958 main sample observations are lost from the robustness check because they relate to potentially attending heads of non-ZRHDS households and 104 observations are lost because they relate to potentially attending heads of ZRHDS households for whom one or more of the covariates are missing for the year in which a funeral occurred.

¹⁶This module was included in the ZRHDS by Dekker (2004b) who used it to compare crisis coping in communal and resettled villages.

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 or received in the form of gifts (in kind, cash or free labour/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).¹⁷

Table 1, Panel A summarizes funeral attendance and the characteristics of the funeral hosting households, the deceased and the dyad comprising of a funeral and a potentially attending head of household in the main dyadic sample. Household heads usually attended 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). Lagged yearly income varied between \$100 and \$12,000 Zimbabwean Dollars. In 1992 prices, this corresponded to between approximately \$17 and \$2,000 US dollars. So, the highest crop income earned by a household in a year in our sample was still very low and the lowest was extremely low. The latter households would have been producing food for own consumption, but a cash crop income this low is a sign that they were in crisis. The mean transformed (inverse hyperbolic sine transformation) lagged income was 7.96. In the robustness-check sample, these averages were very similar with the mean lagged yearly income of the potentially attending heads' households being \$2,322 Zimbabwean Dollars and the mean transformed lagged income being 7.88 (see Appendix, Table A1). A t-test indicates no significant difference in income between the hosting and attending households, suggesting that deaths were not associated with income in this sample over this period.

Table 1 further shows that hosting heads were, on average, 61 years old, and had 4.2 years of education; 31% were female. Average hosting household size was 8.7 individuals and 13.5% of hosting households provided assistance to another household

¹⁷We note that the resulting assistance provision indicator used in our analysis is downward biased as assistance provided to non-ZRHDS households would only be taken into account if it was reported by the provider.

in the village during the previous year (self- or recipient-reported); the large majority of assistance provision was self-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 were in the same burial society in 29% of dyads, and in the same religious congregation in 21% of dyads; their average genetic relatedness (Hamilton’s ratio) was 0.009, indicating that kinship networks in these villages were extremely sparse, only 3.8% of household dyads shared a kinship tie. 89% of potential attendees were in the village at the time of a funeral. Attending household characteristics (only available for the robustness check sample) are shown in Panel B.

Finally, it is worth noting that, with the exception of burial society membership, neither Table 1 nor the analysis that follows includes data on access to or use of credit or insurance other than that associated with burial society membership. This is because, during the period covered by our analysis, micro-insurance had yet to reach Sengezi and the only source of credit available to the households, other than informal inter-personal loans, was the marketing boards to whom the households sold their cash-crops and from whom they sourced most of their agricultural inputs. All the households in our sample had access to this credit source but we do not have reliable data on its use.

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 coefficients on hosting household head’s education and age, as well as the deceased person’s age

and sex, in all models. That funerals hosted by households with more educated and older heads, and those for people who were older when they died, were better attended validates the notion that funeral attendance proxies for social status. The weakly significant coefficient indicating that females' funerals were better attended is not in line with expectations and would be worthy of further investigation. Burial society co-membership was positively related to funeral attendance in all models, consistent with an implicit obligation for society co-members to attend.

We turn now to the results of principle interest. We find a negative and significant relationship between funeral attendance and the lagged income of the funeral-hosting household (p-value=0.024, Column 1). This finding indicates the presence of an egalitarian norm and that, on average, richer households did not share enough with others to escape punishment through status withdrawal. On average, a one percent increase in the hosting household's income was associated with an approximate 0.051 percentage point decline in the probability of another household head attending the funeral (Column 1). At the mean, a one standard deviation increase in income (which roughly corresponds to a doubling of income) was associated with an approximate 3.7 percentage point decline in the probability of another household head attending.

Funeral attendance was positively related to kinship (Column 1), and the negative relationship between funeral attendance and hosting-household income was significantly stronger when the hosting household and the household of the potentially attending head were 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 funeral attendance and hosting-household income remained negative and significant (p-value=0.025) when the host and potentially attending household were genetically unrelated, i.e., when the kinship variable equals 0.

Our main robustness check involves controlling for attending household characteristics, most importantly income, that are time-varying. (Recall that attending

household fixed effects are always included.) The results are presented in Columns 3 and 4 of Table 2.¹⁸ Here, most importantly, we see that attending household income had no effect on funeral attendance, while the effect of hosting household income remained 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 that were dependent on household income.

Our analysis of the relationship between hosting household income and funeral attendance leads us to conclude that an egalitarian norm was present in the villages studied, and that, on average, richer households were not demonstrating enough solidarity and/or providing enough assistance to avoid punishment through status withdrawal for violating the norm.

Now we investigate whether some households complied with the norm and thereby eschewed punishment and/or some households had established themselves as village patrons or established specific patron-client relationships. The results of estimating equation (3) are reported in Table 3, Columns 2-4. Column 1 is a repetition of Table 2, Column 2, included to aid comparison. Columns 2-4 all include our solidarity-with-the-village proxy, twice-lagged membership in a burial society, and its interaction with host income, as well as an indicator of assistance provision to in-crisis households in the village in the previous year, and its interaction with host income. In Column 2 we use an indicator of either self- or recipient-reported instances of assistance provision, in Column 3 we use an indicator of self-reported instances and in Column 4 we use an indicator of recipient-reported instances.¹⁹

We find no evidence that the relationship between hosting-household income and funeral attendance was moderated by the hosting household demonstrating solidarity with the village through burial society membership - ω is not significantly different from zero. However, the coefficient on the interaction term between hosting-

¹⁸Appendix 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 and significance.

¹⁹Robustness checks including attending household controls are presented in Appendix Table A3, Columns 1 to 4; results are similar.

household income and assistance provision, σ , is statistically significant and negative in Column 2, and Columns 3 and 4 indicate that this relationship is entirely driven by self-reported assistance to in-crisis households.²⁰ Transformed funeral-hosting household income took a minimum value of 5.5 (see Table 1). So, the estimation in Column 3 indicates that funeral attendance was lower if the hosting household self-reported the giving of assistance in the year prior to the funeral year and that this negative effect increased with the income of the hosting household. Further and because of this, the negative relationship between hosting-household income and funeral attendance was stronger for households that provided assistance compared to those that did not ($\pi + \sigma < \pi < 0$). Thus, we find no evidence that some households complied with the egalitarian norm and were exempt from punishment as a consequence (this would require $\pi < 0$, $\pi + \sigma = 0$, see Section 3) and no evidence of the patronage mechanism also being operational (this would require $\pi + \sigma > 0$).^{21 22}

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 emphasised three possibilities. First, a positive relationship between economic prosperity and social status would be consistent with the relatively poor bestowing status upon the relatively rich in exchange for help in times of need (“patronage mechanism”). Second, a negative relationship between economic prosperity and social sta-

²⁰There were very few instances of recipient-reported assistance, see Table 1.

²¹Focusing on π and σ in this discussion implies that we are referring to non-kin, non-burial society members. The described effects of assistance provision also hold for kin and burial society members.

²²As the patronage mechanism may have operated 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) and solidarity is defined as burial society *co*-membership, see footnote 8. The results, presented in Column 5 of Table A3, again provide no evidence in support of the patronage mechanism.

tus would be consistent with the relatively rich being subjected to status withdrawal as a punishment for violating an egalitarian norm (“egalitarian norm mechanism”). Third, the coexistence of a positive relationship when solidarity with the community was demonstrated and/or assistance provided to those in need and a negative relationship otherwise would be consistent with both mechanisms being in operation.

Our principle innovation was to use data on funeral attendance by fellow villagers as a proxy for the social status of funeral-hosting households within their village communities. We analyzed this data in conjunction with data on household income, assistance provision, kinship, burial society membership, and an extensive list of additional variables that served as controls for various other confounding mechanisms.

Our analysis revealed that the richer a funeral-hosting household, the less likely were heads of other households in the same village to attend the funeral. This finding indicates that an egalitarian norm was present in the villages and that, on average, richer households were not redistributing enough to avoid punishment in the form of status withholding for violating the norm. In line with the ‘kinship tax’ literature, we found that this norm-consistent negative relationship was stronger in the presence of kinship ties. However, it was also present among non-kin.

Incorporating assistance provision in the analysis yielded no evidence that some richer households were complying with the norm and thereby eschewing punishment, and no evidence that some richer households were serving as patrons.

The significant *negative* relationship we found between self-reports of assistance provision and social status, proxied by funeral attendance, is worthy of note. It is consistent with the few self-reporters of assistance provision being punished through status withholding either for being boastful or for exaggerating. However, it needs to be born in mind that the self-reports were made retrospectively and during one-on-one survey interviews that would not have been observed by neighbours. This being the case, it seems likely that this finding is driven by the self-reporting of

assistance provision being associated with a characteristic that does not command the respect of others. This is worthy of further investigation because it relates to the often-mentioned concern that self-reports of assistance provision may be biased upwards for strategic reasons, while at the same time indicating that this bias may vary depending on the characteristics of the individuals doing the reporting. This introduces some doubt as to precisely what we can infer from the analysis including the assistance provision data, but leaves our principle finding and conclusion intact; an egalitarian norm existed in the non-lineage-based villages that we studied but was insufficiently strong to ensure compliance by the richer households within the villages.

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Tables

Table 1: Summary statistics

	Mean	StD	Median	Min	Max
Panel A: Main sample					
FUNERAL ATTENDANCE	0.761	0.427	1.00	0.0	1.0
HOSTING HOUSEHOLD CHARACTERISTICS					
Lagged yearly income (in 1,000 Zim \$, 1992 prices)	2.360	2.528	1.50	0.1	12.4
Lagged yearly income (transformed)	7.961	1.036	8.01	5.5	10.1
Age of the head	60.732	11.216	61.00	39.0	91.0
Education of the head	4.170	2.738	4.00	0.0	9.0
Household head female	0.309	0.462	0.00	0.0	1.0
Household size	8.670	4.733	7.00	2.0	24.0
Burial society member (lagged)	0.280	0.449	0.00	0.0	1.0
Assistance (lagged)	0.135	0.342	0.00	0.0	1.0
Assistance, self-reported (lagged)	0.121	0.326	0.00	0.0	1.0
Assistance, recipient-reported (lagged)	0.014	0.118	0.00	0.0	1.0
DECEASED PERSON CHARACTERISTICS					
Age at death	34.998	24.397	31.00	0.0	87.0
Female	0.461	0.499	0.00	0.0	1.0
Household head at time of death	0.209	0.407	0.00	0.0	1.0
Cause of death unnatural	0.178	0.382	0.00	0.0	1.0
Village resident not visitor	0.847	0.360	1.00	0.0	1.0
Buried in village	0.931	0.253	1.00	0.0	1.0
DYADIC CHARACTERISTICS					
Attending hhh in village at time	0.891	0.312	1.00	0.0	1.0
In same religious group	0.212	0.409	0.00	0.0	1.0
In same burial society (lagged)	0.288	0.453	0.00	0.0	1.0
Relatedness (Hamilton's ratio)	0.009	0.055	0.00	0.0	0.5
Related (dummy)	0.038	0.190	0.00	0.0	1.0
OBSERVATIONS	3458				
Panel B: Robustness check sample					
ATTENDING HOUSEHOLD CHARACTERISTICS					
Lagged yearly income (in 1,000 Zim \$, 1992 prices)	2.322	2.242	1.60	0.0	16.7
Lagged yearly income (transformed)	7.884	1.481	8.07	0.0	10.4
Age of the head	57.062	11.947	55.00	28.0	92.0
Education of the head	4.993	2.658	6.00	0.0	10.0
Household head female	0.231	0.422	0.00	0.0	1.0
Household size	8.349	3.776	8.00	1.0	27.0
OBSERVATIONS	1396				

Notes: Panel A: Summary statistics for the main sample (3,458 observations); Panel B: Summary statistics for the robustness check sample (1,396 observations). Each observation is a funeral-attending household dyad. Income (transformed) is crop 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. Dyadic assistance is a dummy equal to one if the host provided assistance to the attendee in the previous year.

Table 2: Analysis of funeral attendance

	(1)	(2)	(3)	(4)
HOSTING HOUSEHOLD				
Income (transformed; β, ϕ)	-0.051** (0.024)	-0.050** (0.026)	-0.053** (0.049)	-0.053* (0.053)
Age of the head	0.005** (0.029)	0.005** (0.031)	0.005** (0.039)	0.005** (0.046)
Education of the head	0.020** (0.024)	0.020** (0.022)	0.020** (0.028)	0.020** (0.026)
Household head female	0.011 (0.883)	0.010 (0.889)	0.014 (0.845)	0.014 (0.840)
Household size	0.000 (0.928)	0.000 (0.935)	0.002 (0.620)	0.002 (0.622)
DECEASED PERSON				
Age at death	0.002* (0.061)	0.002* (0.054)	0.002** (0.048)	0.002** (0.046)
Female	0.095* (0.053)	0.095* (0.053)	0.092* (0.058)	0.092* (0.060)
Household head at time of death	-0.038 (0.511)	-0.038 (0.510)	-0.027 (0.605)	-0.027 (0.604)
Cause of death unnatural	0.006 (0.916)	0.006 (0.915)	0.000 (0.995)	0.001 (0.990)
Village resident not visitor	-0.010 (0.823)	-0.009 (0.843)	-0.012 (0.829)	-0.011 (0.845)
Buried in village	0.416*** (0.000)	0.417*** (0.000)	0.397*** (0.000)	0.397*** (0.000)
DYADIC CHARACTERISTICS				
Attending hhh in village at time	0.767*** (0.000)	0.767*** (0.000)	0.819*** (0.000)	0.819*** (0.000)
In same religious group	0.004 (0.866)	0.004 (0.871)	-0.016 (0.622)	-0.016 (0.625)
In same burial society	0.100* (0.057)	0.100* (0.056)	0.085* (0.074)	0.084* (0.077)
Relatedness (Hamilton's ratio)	0.195** (0.033)	1.313** (0.026)	0.053 (0.589)	0.954*** (0.008)
Relatedness X Host income (λ)		-0.147* (0.051)		-0.120** (0.030)
ATTENDING HOUSEHOLD				
Income (transformed)			0.009 (0.282)	0.009 (0.292)
Age of the head			-0.010*** (0.005)	-0.010*** (0.006)
Education of the head			0.011 (0.588)	0.011 (0.587)
Household head female			0.131 (0.369)	0.131 (0.370)
Household size			0.004 (0.317)	0.004 (0.340)
Observations	3458	3458	1396	1396

Notes: The dependent variable is a dummy indicating whether the attending household attended a given funeral of the hosting household. Its mean is 0.761 in the main sample (Columns (1) and (2), 3,458 dyadic observations), and 0.814 in the robustness check sample (Columns (3) and (4), 1,396 dyadic observations). Income is lagged income transformed using the inverse hyperbolic sine transformation. hhh stands for household head. The first row displays coefficient β from equation 1 in Columns (1) and (3) and ϕ from equation 2 in Columns (2) and (4). All models are estimated using weighted least squares and include year, village and attending household fixed effects. P-values obtained using dyadic standard errors (Cameron and Miller, 2014) shown in parentheses.

Table 3: Analysis of funeral attendance including assistance provision

	(1)	(2)	(3)	(4)
HOSTING HOUSEHOLD				
Income (transformed; ϕ , π)	-0.050** (0.034)	-0.034 (0.194)	-0.039* (0.099)	-0.057** (0.036)
Age of the head	0.005** (0.030)	0.003 (0.168)	0.004* (0.078)	0.005** (0.035)
Education of the head	0.020** (0.021)	0.020* (0.052)	0.021** (0.034)	0.020** (0.022)
Household head female	0.010 (0.890)	-0.018 (0.778)	-0.029 (0.650)	0.009 (0.898)
Household size	0.000 (0.936)	0.001 (0.839)	0.000 (0.959)	0.001 (0.846)
Burial society member		0.009 (0.980)	-0.058 (0.846)	-0.067 (0.846)
Burial society member X Host income (σ_1)		0.006 (0.884)	0.015 (0.653)	0.019 (0.638)
Assistance		0.955 (0.125)		
Assistance X Host income (σ_2)		-0.135* (0.077)		
Assistance self-reported (S)			2.101*** (0.008)	
Assistance S X Host income (σ_2)			-0.294*** (0.005)	
Assistance recipient-reported (R)				0.000 (1.000)
Assistance R X Host income (σ_2)				-0.010 (0.359)
DECEASED PERSON				
Age at death	0.002* (0.061)	0.002** (0.020)	0.001 (0.118)	0.002** (0.049)
Female	0.095* (0.064)	0.074 (0.107)	0.076* (0.074)	0.095* (0.061)
Household head at time of death	-0.038 (0.524)	-0.058 (0.363)	-0.026 (0.659)	-0.046 (0.445)
Cause of death unnatural	0.006 (0.919)	0.016 (0.806)	0.030 (0.602)	0.007 (0.906)
Village resident not visitor	-0.009 (0.843)	-0.073* (0.097)	-0.033 (0.339)	-0.032 (0.493)
Buried in village	0.417*** (0.000)	0.416*** (0.000)	0.380*** (0.000)	0.420*** (0.000)
DYADIC CHARACTERISTICS				
Attending hhh in village at time	0.767*** (0.000)	0.769*** (0.000)	0.771*** (0.000)	0.765*** (0.000)
In same religious group	0.004 (0.874)	0.003 (0.898)	0.013 (0.516)	0.005 (0.852)
In same burial society	0.100* (0.056)	0.019 (0.644)	0.026 (0.502)	0.019 (0.624)
Relatedness (Hamilton's ratio)	1.313** (0.027)	1.304** (0.017)	0.802 (0.121)	1.457** (0.018)
Relatedness X Host income (λ)	-0.147* (0.053)	-0.140** (0.040)	-0.069 (0.310)	-0.164** (0.033)
Observations	3458	3458	3458	3458

Notes: The dependent variable is a dummy indicating whether the attending household attended a given funeral of the hosting household; its mean is 0.761. 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. The first row displays coefficient ϕ from equation 2 in Column (1) and π from equation 3 in Columns (2) to (4). Column (1) repeats Columns (2) from Table 2. All models are estimated using weighted least squares and include year, village and attending household fixed effects. P-values obtained using dyadic standard errors (Cameron and Miller, 2014) shown in parentheses.

Appendix

Table A1: Summary statistics, robustness check sample

	Mean	StD	Median	Min	Max
FUNERAL ATTENDANCE	0.814	0.389	1.00	0.0	1.0
HOSTING HOUSEHOLD CHARACTERISTICS					
Lagged yearly income (in 1,000 Zim \$, 1992 prices)	2.361	2.472	1.50	0.1	12.4
Lagged yearly income (transformed)	7.973	1.034	8.01	5.5	10.1
Age of the head	60.451	11.232	61.00	39.0	91.0
Education of the head	4.344	2.732	5.00	0.0	9.0
Household head female	0.283	0.451	0.00	0.0	1.0
Household size	8.678	4.688	7.00	2.0	24.0
Burial society member (lagged)	0.321	0.467	0.00	0.0	1.0
Assistance (lagged)	0.127	0.333	0.00	0.0	1.0
Assistance, self-reported (lagged)	0.112	0.315	0.00	0.0	1.0
Assistance, recipient-reported (lagged)	0.015	0.122	0.00	0.0	1.0
DECEASED PERSON CHARACTERISTICS					
Age at death	35.093	24.667	32.00	0.0	87.0
Female	0.450	0.498	0.00	0.0	1.0
Household head at time of death	0.213	0.409	0.00	0.0	1.0
Cause of death unnatural	0.195	0.396	0.00	0.0	1.0
Village resident not visitor	0.840	0.366	1.00	0.0	1.0
Buried in village	0.929	0.257	1.00	0.0	1.0
Attending hhh in village at time	0.916	0.277	1.00	0.0	1.0
In same religious group	0.231	0.422	0.00	0.0	1.0
In same burial society (lagged)	0.314	0.464	0.00	0.0	1.0
DYADIC CHARACTERISTICS					
Relatedness (Hamilton's ratio)	0.009	0.052	0.00	0.0	0.5
Related (dummy)	0.042	0.200	0.00	0.0	1.0
Dyadic assistance (lagged)	0.004	0.065	0.00	0.0	1.0
ATTENDING HOUSEHOLD CHARACTERISTICS					
Lagged yearly income (in 1,000 Zim \$, 1992 prices)	2.322	2.242	1.60	0.0	16.7
Lagged yearly income (transformed)	7.884	1.481	8.07	0.0	10.4
Age of the head	57.062	11.947	55.00	28.0	92.0
Education of the head	4.993	2.658	6.00	0.0	10.0
Household head female	0.231	0.422	0.00	0.0	1.0
Household size	8.349	3.776	8.00	1.0	27.0
OBSERVATIONS	1396				

Notes: Summary statistics for the robustness check sample (1,396 observations); each observation is a funeral-potential host dyad. Income (transformed) is crop 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.

Table A2: Analysis of funeral attendance: Robustness check including attending household controls

	(1)	(2)	(3)	(4)	(5)	(6)
HOSTING HOUSEHOLD						
Income (transformed; β , ϕ)	-0.051** (0.025)	-0.050** (0.034)	-0.053** (0.049)	-0.053* (0.053)	-0.055** (0.033)	-0.054** (0.038)
Age of the head	0.005** (0.028)	0.005** (0.030)	0.005** (0.039)	0.005** (0.046)	0.005** (0.042)	0.005** (0.049)
Education of the head	0.020** (0.023)	0.020** (0.021)	0.020** (0.028)	0.020** (0.026)	0.019** (0.030)	0.019** (0.028)
Household head female	0.011 (0.883)	0.010 (0.890)	0.014 (0.845)	0.014 (0.840)	0.013 (0.844)	0.014 (0.840)
Household size	0.000 (0.928)	0.000 (0.936)	0.002 (0.620)	0.002 (0.622)	0.002 (0.625)	0.002 (0.632)
DECEASED PERSON						
Age at death	0.002* (0.061)	0.002* (0.061)	0.002** (0.048)	0.002** (0.046)	0.002** (0.042)	0.002** (0.039)
Female	0.095* (0.052)	0.095* (0.064)	0.092* (0.058)	0.092* (0.060)	0.089* (0.083)	0.089* (0.091)
Household head at time of death	-0.038 (0.510)	-0.038 (0.524)	-0.027 (0.605)	-0.027 (0.604)	-0.019 (0.716)	-0.019 (0.717)
Cause of death unnatural	0.006 (0.917)	0.006 (0.919)	0.000 (0.995)	0.001 (0.990)	-0.002 (0.971)	-0.002 (0.975)
Village resident not visitor	-0.010 (0.824)	-0.009 (0.843)	-0.012 (0.829)	-0.011 (0.845)	-0.011 (0.832)	-0.010 (0.848)
Buried in village	0.416*** (0.000)	0.417*** (0.000)	0.397*** (0.000)	0.397*** (0.000)	0.415*** (0.000)	0.415*** (0.000)
DYADIC CHARACTERISTICS						
Attending hhh in village at time	0.767*** (0.000)	0.767*** (0.000)	0.819*** (0.000)	0.819*** (0.000)	0.808*** (0.000)	0.808*** (0.000)
In same religious group	0.004 (0.867)	0.004 (0.874)	-0.016 (0.622)	-0.016 (0.625)	-0.018 (0.578)	-0.018 (0.587)
In same burial society	0.100* (0.057)	0.100* (0.056)	0.085* (0.074)	0.084* (0.077)	0.087* (0.065)	0.086* (0.066)
Relatedness (Hamilton's ratio)	0.195** (0.034)	1.313** (0.027)	0.053 (0.589)	0.954*** (0.008)	0.058 (0.575)	0.902** (0.012)
Relatedness X Host income (λ)		-0.147* (0.053)		-0.120** (0.030)		-0.113** (0.043)
ATTENDING HOUSEHOLD						
Income (transformed)			0.009 (0.282)	0.009 (0.292)		
Age of the head			-0.010*** (0.005)	-0.010*** (0.006)		
Education of the head			0.011 (0.588)	0.011 (0.587)		
Household head female			0.131 (0.369)	0.131 (0.370)		
Household size			0.004 (0.317)	0.004 (0.340)		
Observations	3458	3458	1396	1396	1396	1396

Notes: The dependent variable is a dummy indicating whether the attending household attended a given funeral of the hosting household. Its mean is 0.761 in the main sample (Columns (1) and (2), 3,458 dyadic observations), and 0.814 in the robustness check sample (Columns (3) to (6), 1,396 dyadic observations). Income is lagged income transformed using the inverse hyperbolic sine transformation. hhh stands for household head. The first row displays coefficient β from equation 1 in Columns (1), (3) and (5) and ϕ from equation 2 in Columns (2), (4) and (6). All models are estimated using weighted least squares and include year, village and attending household fixed effects. P-values obtained using dyadic standard errors (Cameron and Miller, 2014) shown in parentheses.

Table A3: Analysis of funeral attendance: Robustness checks and further analysis

	(1)	(2)	(3)	(4)	(5)
HOSTING HOUSEHOLD					
Income (transformed)	-0.053*	-0.020	-0.027	-0.051*	-0.047*
	(0.053)	(0.465)	(0.279)	(0.093)	(0.088)
Age of the head	0.005**	0.003	0.004	0.005*	0.005*
	(0.046)	(0.250)	(0.109)	(0.073)	(0.053)
Education of the head	0.020**	0.021**	0.022**	0.021**	0.020**
	(0.026)	(0.033)	(0.021)	(0.021)	(0.026)
Household head female	0.014	-0.017	-0.030	0.015	0.016
	(0.840)	(0.786)	(0.611)	(0.831)	(0.815)
Household size	0.002	0.003	0.002	0.003	0.002
	(0.622)	(0.510)	(0.590)	(0.542)	(0.663)
Burial society member		0.355	0.258	0.255	
		(0.290)	(0.340)	(0.425)	
Burial society member X Host income (σ_1)		-0.034	-0.021	-0.018	
		(0.382)	(0.497)	(0.622)	
Assistance		1.133			
		(0.106)			
Assistance X Host income (σ_2)		-0.158*			
		(0.075)			
Assistance self-reported (S)			2.318***		
			(0.004)		
Assistance S X Host income (σ_2)			-0.321***		
			(0.003)		
Assistance recipient-reported (R)				0.000	
				(1.000)	
Assistance R X Host income (σ_2)				-0.011	
				(0.337)	
DYADIC CHARACTERISTICS					
Attending hhh in village at time	0.819***	0.832***	0.841***	0.819***	0.817***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
In same religious group	-0.016	-0.018	-0.002	-0.017	-0.015
	(0.625)	(0.486)	(0.932)	(0.601)	(0.638)
In same burial society	0.084*	-0.008	-0.002	-0.008	0.259
	(0.077)	(0.850)	(0.967)	(0.856)	(0.402)
Relatedness (Hamilton's ratio)	0.954***	0.663	0.183	0.863***	0.824***
	(0.008)	(0.147)	(0.746)	(0.001)	(0.002)
Relatedness X Host income (λ)	-0.120**	-0.076	-0.009	-0.109**	-0.103**
	(0.030)	(0.262)	(0.911)	(0.013)	(0.016)
Dyadic assistance					0.314
					(0.728)
Dyadic assistance X Host income					-0.065
					(0.554)
In same burial society X Host income					-0.021
					(0.557)
Deceased person and Attending household characteristics included	yes	yes	yes	yes	yes
Observations	1396	1396	1396	1396	1396

Notes: The dependent variable is a dummy indicating whether the attending household attended a given funeral of the hosting household. Columns (1) to (4) show the models of Table 3 when attending household controls are included and thus use the robustness check sample (1,396 dyadic observations; dependant variable mean 0.814). Column (5) uses the same sample to estimate a dyad-level assistance and solidarity version of the model of Column (2) (see Footnote 6). Income is lagged income transformed using the inverse hyperbolic sine transformation. Assistance and Dyadic assistance respectively are dummies equal to one if the host provided assistance to another household in the village in the previous year or respectively provided assistance to the attending household. hhh stands for household head. Deceased person and attending household characteristics are included but omitted from the table for space. All models are estimated using weighted least squares and include year, village and attending household fixed effects. P-values obtained using dyadic standard errors (Cameron and Miller, 2014) shown in parentheses.