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**IFPRI Discussion Paper 02386**

December 2025

**Perceived Need and Measured Well-Being**  
**How Well Do Subjective Rankings Capture Relative Poverty?**

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## INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

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## **Abstract**

Subjective well-being rankings are increasingly used to target social protection programs, yet their ability to capture relative welfare and wealth remains debated. This study benchmarks self-, peer-, and elite-based poverty rankings against consumption- and wealth-based measures using Ethiopian household survey data, where about 20 households per village were ranked from neediest to least needy by themselves, peers, and community leaders. We assess concordance between subjective and conventional welfare rankings and explore sources of divergence. Subjective rankings align more with relative wealth than consumption and with total rather than per capita welfare, suggesting they overlook household composition. Elite-based rankings best capture conventional measures, followed by peers' and self-rankings. Subjective rankings also better reflect relative deprivation among households exposed to covariate shocks. A composite index combining all three improves agreement with standard metrics. Information asymmetries, favoritism, and welfare dynamics partly explain discrepancies, offering insights for enhancing targeting in data-scarce settings.

**Keywords:** Subjective poverty rankings, household welfare, community-based targeting, Ethiopia

## **Acknowledgments**

We thank participants at the 2nd Welfare & Policy Conference (held in Bordeaux), the ECINEQ conference (held in Washington, DC), the SITES Young Economists Workshop (held in Prato), and the SITES X Annual Conference (held in Rome) for their insightful comments. We also thank Abdelkrim Araar for providing us with the Stata codes to run additional statistical tests (on the difference between Spearman rank correlation measures). We thank Carly Trachtman and Caitlin Brown for their feedback on an earlier version of this paper. This work benefited from funding by the CGIAR Science Programs on Policy Innovations and Food Frontiers and Security. We would like to thank all funders who supported this research through their contributions to the CGIAR Trust Fund. The Community Based Experiment (CBT) used in this study was registered at the American Economics Association's RCT registry (AEARCTR-0012677). Details on the CBT experiment can be found in Abay et al. (2024). The study received IRB approval from the IFPRI IRB (#00007490).

# 1 Introduction

There is a growing consensus that people care not only about their absolute deprivation, but also about their relative income and social position within their communities and reference groups (Ravallion and Lokshin, 2010; Alkire and Foster, 2011; Ravallion and Chen, 2011, 2019; Ravallion, 2020; Bottan and Perez-Truglia, 2022; Hvidberg et al., 2023). Conventional survey-based welfare measures typically fail to capture non-monetary dimensions of poverty and deprivation, such as social exclusion and vulnerability (Decerf, 2023; Ligon and Schechter, 2003). To address these limitations, these measures can be complemented by subjective and self-assessed measures (Ravallion and Lokshin, 2002, 2010; Beegle et al., 2012; Ravallion et al., 2016; Ravallion, 2020). For this purpose, subjective poverty ranking based on (i) self-ranking, (ii) peers' ranking and (iii) community leaders' (elites') ranking are frequently used in targeting welfare and social protection programs due to their ability to leverage local information, otherwise unavailable to program implementers (Rai, 2002; Alderman, 2002b; Coady et al., 2004; Alatas et al., 2016b; Trachtman et al., 2025).<sup>1</sup> In many cases, these methods are widely used to complement additional targeting methods such as geographic targeting or proxy means tests (PMT),<sup>2</sup> although subjective rankings are sometimes used as substitutes when conventional survey-based measures of welfare are not available. Community members and local leaders are also used for targeting of credit (Vera-Cossio, 2022) and agricultural subsidy programs (Basurto et al., 2020). Beyond their use in screening and targeting of welfare and subsidy programs, understanding the concordance of subjective rankings with conventional welfare and wealth metrics is crucial since they shape respondents' life satisfaction and happiness (Ferrer-i Carbonell, 2005; Luttmer, 2005),<sup>3</sup> preferences for redistribution (Cruces et al., 2013; Karadja et al., 2017; Hvidberg

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<sup>1</sup>Subjective rankings are usually positively correlated with survey-based poverty indicators, such as assets, income, or expenditure (Alatas et al., 2016a; Alix-Garcia et al., 2021; Hussam et al., 2022; Trachtman et al., 2025) and should ideally contribute to reducing the exclusion error, thanks to the more comprehensive knowledge of households' conditions held by the household itself, peers or community leaders (Alderman, 2002a).

<sup>2</sup>For example, in Ethiopia, the national Productive Safety Net Program (PSNP) combines geographic targeting and community-based targeting, which involves ranking of households through community leaders and community members (Gilligan et al., 2009; Berhane et al., 2014). Similarly, Alatas et al. (2016b) show that self-targeting enhances the overall efficiency of social protection targeting in Indonesia.

<sup>3</sup>For example, Ferrer-i Carbonell (2005) note that "the income of the reference group is about as important as the own income for individual happiness". Another strand of literature argues that positional concerns may be more pronounced in high-income countries and households while such concerns get weaker in poor societies (Kingdon and Knight, 2007; Akay and Martinsson, 2011; Akay et al., 2012).

et al., 2023), and support for political leaders and institutions (Kosec and Mo, 2024).

Building on this widespread use, policymakers and program implementers often rely on local information to target poverty reduction programs, typically measured through conventional indicators of consumption and assets. In practice, this is operationalized by eliciting relative rankings of potential beneficiaries—through self-assessment, peer evaluations, or community leaders’ judgments. Understanding how well, and under what conditions, these subjective rankings capture standard welfare indicators is therefore crucial. However, the existing literature remains inconclusive about the extent to which subjective measures capture survey-based measures of welfare and wealth (Ravallion and Chen, 2011; Ravallion, 2012; Ravallion et al., 2016; Hvidberg et al., 2023; Dupas et al., 2024; Aiken et al., 2025). Similarly, which subjective rankings are more concordant with conventional welfare and wealth measures under various socioeconomic conditions and circumstances remains an important empirical question, especially in contexts characterized by data scarcity and shocks such as conflict or drought. Studies characterizing self-ranking and peer-ranking are especially limited (Cruces et al., 2013; Alatas et al., 2016b; Hvidberg et al., 2023; Dupas et al., 2024), and whether these rankings capture long-term or transient welfare and economic conditions (Trachtman et al., 2025), and how best these subjective measures respond to covariate and idiosyncratic shocks remains poorly understood (Hvidberg et al., 2023). For example, identifying whether and which of these subjective ranking methods can serve in data-scarce environments or amid dynamically evolving shocks such as conflict and drought can inform effective targeting and response to these shocks. Finally, whether the different subjective rankings complement or substitute each other remains underexplored. If these ranking methods provide complementary information, aggregating these ranking methods can improve their performance.<sup>4</sup> To the best of our knowledge, there is no comprehensive systematic comparative assessment of self-, peers’, and elites’ rankings aimed at assessing their potential to capture conventional welfare and wealth outcomes, and the factors affecting their discordance with these conventional measures of economic well-being.

To address these gaps, we administered these subjective ranking methods in a large household survey in Ethiopia, where subjective rankings of approximately 20 households

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<sup>4</sup>On the other hand, if these ranking methods are substitutes to each other, administering one of them should suffice and conserve resources.

per village were elicited (from neediest/poorest to richest/least needy) through self-, peers', and elites' assessments. Following previous practices, we asked respondents to rank their own household as well as their peers while also embedding a similar exercise in a comprehensive community survey targeting community leaders (elites), assuming various responsibilities in each village. In contrast to most previous work, which either focuses on one type of ranking or lacks benchmark comparisons, we directly compare the concordance between these three methods and conventional expenditure- and asset-based welfare measures. Beyond comparing the relative accuracy of the three subjective rankings, we offer alternative ways to aggregate these three rankings into a single composite measure that can significantly reduce the discordance with welfare and wealth metrics.

We document a series of empirical patterns worth noting. First, although the overall concordance between the three subjective ranking methods and conventional welfare and wealth measures appears not to be strong, these subjective rankings better reflect wealth-based rankings than consumption-based rankings, and they are more concordant with total household welfare than per capita welfare. Second, among the three subjective measures, elite-based ranking is slightly more accurate than the rest. Third, the performance of the three ranking measures varies across contexts (rural and urban areas as well as across highlands and pastoralist communities) and in the presence and absence of covariate shocks. Interestingly, these subjective ranking methods are better at identifying households affected by covariate shocks such as conflict and drought. We also find that these subjective ranking methods are quite inaccurate in capturing relative welfare and wealth in pastoral communities, where ranking and targeting practices face major challenges arising from social and cultural norms (Sabates-Wheeler et al., 2013; Lind et al., 2022). We also offer plausible explanations about the drivers of the discordance between subjective and benchmark rankings, including favoritism (in peers' and elites' rankings), information asymmetry, relative welfare of the observer, and dynamic evolution of economic conditions of households, as well as measurement error in conventional welfare measures. In particular, we notice that peers more accurately rank households richer than themselves, while observers more accurately rank their own household when their consumption level deteriorates over time. Finally, we demonstrate that aggregating multiple subjective rankings results in a composite measure that better reflects welfare-based assessments than individual rankings, offering a potential improvement for targeting methods.

Our findings offer important and practical lessons about the potential and pitfalls of alternative measures of subjective and relative well-being. For example, the evidence that these subjective rankings are better correlated with conventional relative measures during shocks (conflict and drought) is encouraging and confirms their potential and rationale for deploying them to identify those affected by covariate shocks. This is particularly important in contexts where detailed data on households' welfare are not available, as well as in contexts where conventional data-driven approaches such as Proxy-Means Tests (PMT) perform poorly, such as the case in Africa (Brown et al., 2018). Compared to those approaches that require detailed consumption and asset measures, these subjective methods can be implemented cost-effectively (Hillebrecht et al., 2023, 2020)<sup>5</sup>. The slightly better accuracy of elite-based ranking compared to the other methods implies that some type of information may not be freely available to all community members. On the other hand, the generally weak concordance between the subjective measures and conventional welfare-based ranking suggests that targeting based on these subjective measures would be prone to the typical inclusion and exclusion errors.

This study makes several distinct contributions to the literature on subjective welfare assessments. First, we contribute to the empirical literature comparing self-, peer-, and elite-based subjective rankings, benchmarked against conventional welfare and wealth indicators. The weak concordance observed across these three subjective measures confirms earlier findings by Trachtman et al. (2025) and Aiken et al. (2025), who report limited agreement between community-based rankings and survey-based measures of well-being. We further show that aggregating information from multiple subjective sources reduces the gap with benchmarks more than relying on any single measure. The composite indicators we construct by combining self-, peer-, and elite-based rankings—are consistently more accurate than single rankings in capturing welfare and wealth status. Second, we add to the literature documenting contextual variation in the concordance between subjective rankings and conventional relative welfare and wealth measures – for example, in the presence and absence of covariate shocks and across rural and urban areas, as well as the role of asymmetric information and network structures in shaping the subjective ranking outcomes (Alatas et al., 2016a; Trachtman et al., 2025; Bloch and Olckers, 2021). Third, we contribute to

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<sup>5</sup>However, Aiken et al. (2025) find that both PMT and phone-based targeting are more cost-effective than community-based targeting in Bangladesh. But these types of unconventional sources of data are not widely available to support targeting.

the discussion on sources of discordance between subjective rankings and conventional welfare measures. We find evidence of systematic discordance consistent with both strategic bias in rankings and misperceptions. These include favoritism in the context of peer and elite-ranking (Galasso and Ravallion, 2005; Ravallion, 2008; Alatas et al., 2012a; Bloch and Olckers, 2021), and a “race to the middle” effect in the case of self-ranking, whereby poorer individuals overstate their status while wealthier ones understate theirs (Dupas et al., 2024; Ghiglini and Goyal, 2010; Hvidberg et al., 2021). Building on this literature, we explicitly assess the vulnerability of subjective rankings to favoritism (Bardhan and Mookherjee, 2005; Alatas et al., 2019a; Basurto et al., 2020; Conning and Kevane, 2002; Vera-Cossio, 2022). Finally, our study contributes to the debate on the veracity of relative social and economic positions of households as well as potential (mis)perceptions that may shape respondents’ well-being, preferences and decisions (Ferrer-i Carbonell, 2005; Luttmer, 2005; Cruces et al., 2013; Karadja et al., 2017; Hvidberg et al., 2023; Kosec and Mo, 2024). As demonstrated by Karadja et al. (2017), correcting these misperceptions can generate meaningful changes in respondents’ preferences and decisions.

The remainder of this paper is structured as follows. Section 2 describes the data we used, defines the main ranking measures we used, and shows some descriptive statistics. Section 3 analyzes the concordance between subjective poverty rankings and welfare-based rankings and their dynamics and heterogeneous accuracy within different groups. Section 4 analyses the sources of discrepancies by different community and household level characteristics. Finally, Section 5 concludes the study.

## 2 Data, Ranking Methods and Descriptive Statistics

### 2.1 Context and Data Sources

This study uses a unique Ethiopian dataset that covers most of the country’s regions. The subjective poverty ranking experiments were only embedded in a follow-up survey (conducted in 2023) of baseline data collected in 2019. The 2019 household survey focuses on regions and districts included in USAID’s Feed the Future (FTF) Ethiopia Zone of Influence

(ZOI). The FTF-ZOI in Ethiopia covered 132 *woredas* (districts) spread in six regions of Ethiopia: Afar, Amhara, Oromia, Southern Nations, Nationalities and Peoples (SNNP), Somali, and Tigray.<sup>6</sup> The 2019 survey was designed to represent the population in these districts. The survey adopted a multi-stage cluster sampling design. From the stratification of districts and all *woredas* in the ZOI, 132 stratas *woredas* were identified. Then two Enumeration Areas (EAs) were selected in each *woreda* using probability proportional to size methodology. EAs correspond to villages within a *Kebele*, the lowest administrative unit in Ethiopia, and typically comprise 150-200 households. From each of the 264 Enumeration Areas, 20 households were randomly selected for interview.<sup>7</sup>

The 2019 survey was then used as a baseline for an incentivized Community-Based targeting (CBT) experiment and follow-up surveys in 2023, both at the household and community level. Out of the 264 EAs included in the 2019 baseline survey, only 180 EAs were identified to be accessible and hence followed up in the 2023 survey.<sup>8</sup> Both the 2019 and 2023 household-level surveys included detailed food and non-food expenditure modules that have been used to construct a within-village ranking of households according to their consumption levels. Total expenditure is obtained as the sum of food and non-food expenditure. Temporally deflated expenditures from 2019 and 2023 are expressed in 2016 prices. As an additional survey-based measure of relative poverty, we also use an asset index based on ownership of assets. Survey data include information about household demographic composition and sources of livelihood, which we use to explore whether they affect the difference between welfare-based and subjective rankings (Table A1).

The CBT was implemented as a randomized experiment. This happened during the community survey, a few weeks before the household survey. Following targeting practices in Ethiopia, including for the Productive Safety Net Program (PSNP), six community leaders were selected from each community, representing diverse roles: (i) a *kebele* leader or member

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<sup>6</sup>Following recent referendums, the Southern Nations, Nationalities, and Peoples' Region (SNNPR) was dissolved and split into four regions: Sidama Region, Southwest Ethiopia Region, South Ethiopia Regional State, and Central Ethiopia Regional State. This split was triggered by protests and local demand, which ultimately led to successive referendums occurring between 2020 and 2023.

<sup>7</sup>The selection of households considered quotas for four different types of household composition, proportional to their incidence in the population: male and female adults, female adults only, male adults only, and children only. Cohabiting households found in the dwelling where selected households lived were interviewed together.

<sup>8</sup>Remaining EAs were inaccessible because of insecurity and ongoing conflicts in Amhara and Oromia regions.

of the *kebele* leadership, (ii) an elder man/woman, (iii) a religious leader, (iv) a women’s representative, (v) a teacher, development agent, or extension worker, and (vi) a youth representative. Most of the elite members had previous targeting experience, and most had previously participated in targeting activities for the PSNP.<sup>9</sup> As described in [Abay et al. \(2024\)](#), villages were randomly assigned to four treatment groups, each with varying levels of budget and discretion. The budget was either hypothetical or actually provided in cash, with a relaxed (20,000 Ethiopian Birr, about 360 USD at the time of the survey) or constrained (10,000 Ethiopian Birr) amount. The level of discretion depended on the criteria to follow in order to assess neediness, either rule-based, meaning the community representatives were provided with a pre-determined list of criteria (including food security and assets), or discretionary, meaning they could freely choose their criteria and eventually disclose them. The four randomly assigned treatment groups were organized as follows: (i) a group that conducts a rule-based ranking for a hypothetical social assistance amounting 20,000 Ethiopian Birr, (ii) a group asked to rank households using similar criteria for an actual transfer of 20,000 Ethiopian Birr, (iii) a group tasked to rank households using similar criteria for an actual transfer of half the amount, and (iv) a final group that ranked households discretionarily and was given 20,000 Ethiopian Birr to be allocated to needy households. In each group, community members could decide how many households to allocate the funds to, and how to divide the amount among them.

**Ranking and network data** During the follow-up survey in 2023, households were asked to do a peer-ranking exercise: respondents ranked the participating households within their village (usually 20 per village, but in some cases fewer than that), including themselves, from the poorest (the neediest for social assistance) to the richest (least needy). In addition, before they start ranking their peers, households were asked to provide information about their relationship with each of the listed households. Moreover, the availability of the GPS coordinates for the surveyed households allows us to calculate the pairwise distance between peers. On average, peers are about 1 km distant from each other.<sup>10</sup>

In the CBT exercise, community leaders were asked to rank the same list of households

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<sup>9</sup>For example, more than half of the community leaders and elites included in this process had prior experience in the targeting of the PSNP ([Abay et al., 2024](#)).

<sup>10</sup>A graphical visualization of the correlation between physical distance and discrepancies between subjective and benchmark rankings is provided in [Figure A3](#).

in the village from the neediest (poorest) to the least needy (richest), after revealing the relationship of the household with the elite member who has the closest social ties to them. In all four treatment groups, community leaders were instructed to follow a two-step process. First, the elite group is required to produce a single ranking of all households – according to their need for social assistance, following an internal discussion aimed at reaching consensus. Second, they allocate the total budget assigned to the community among the “eligible” and most needy (ranked lower) households in our sample. The community survey also includes the GPS location for a central facility within the village. We consider the physical distance between the household’s location and this point as a proxy for the distance between the household and the elites, assuming that the community representatives mainly conduct their activities in the center of the village.

**Conflict data** Households’ geolocalization is used to merge survey data with conflict data from the Armed Conflict Location and Event Data (ACLED) Project ([Raleigh et al., 2010](#)). We measure exposure to conflict as the occurrence of at least one battle event within a three-year period preceding the 2023 survey, mainly to capture exposure to the armed conflict that started in 2020. We consider battles that happened within 5 km of every urban household, and within 10 km of rural households. With such a definition, 34% of our sample has been exposed to conflict prior to the survey (Table 2). Figure A2 illustrates the share of urban and rural households exposed to battles by the number of battles that occurred in the three-year window.

**Weather data** Data on precipitation anomalies from the Climate Hazards Group InfraRed Precipitation with Station (CHIRPS), provided with a 0.05 degrees resolution, is geographically merged with other variables. The Standard Precipitation Index (SPI) is the most used indicator for the identification of meteorological droughts. It measures precipitation anomalies as the deviation of precipitation accumulation in a given time period from the historical average rainfall in a given location. Figure A1 illustrates the distribution of the SPI for both rural and urban samples, showing that the indicator is particularly skewed to the left in rural areas. We define households affected by droughts as those living in areas where the SPI was below  $-0.5$ , which corresponds to 46% of our sample (Table 2).

## 2.2 Welfare- and Wealth-Based Rankings (WBR)

To assess the relative accuracy of Subjective Poverty Rankings (SPR) coming from self-, peers and elites, we compare them with rankings based on conventional measures of welfare and wealth. Specifically, we construct expenditure-based rankings using household daily food, non-food, and total expenditures, both in aggregate and per capita. Additionally, we consider three asset-based wealth measures. The first is a general asset score, based on the first principal component of ownership of all assets recorded in the survey, along with improved housing conditions. Second, since subjective rankings may be influenced by more visible wealth indicators, we also compute a *visible assets* score, using a subset of visibly observable assets and housing characteristics. The first component for both assets and visible assets is calculated separately for rural and urban areas. Then, household rankings are calculated based on both assets and visible assets scores within each village. Third, we consider livestock in Tropical Livestock Units (TLU) as an additional indicator of wealth and rank households within the village according to the quantity of livestock owned. Welfare and Wealth-Based Rankings (WBR) are obtained using a ranking function that assigns ordinal values from 1 to the total number of ranked households within the village:

$$WBR_{jv}^w = \text{Rank}(w_{jv}) \quad (1)$$

where  $w$  is, in turn, each of the benchmark welfare or wealth-based measures for household  $j$  in village  $v$ .

## 2.3 Subjective Poverty Rankings (SPR)

Each respondent  $i$  is asked to rank all participating households in the village, including itself, according to their needs for potential social assistance, from the neediest (first) to the least needy (last). The majority of the participating households provided a full and exactly progressive ranking of other households in the village. About 10% of the respondents provided the same rank position to more than two of the listed households. Only 49 respondents did not provide a rank position for all the listed peers, while 2.19% of the respondents did not provide any ranking. Whenever a respondent did not assign a rank to

household  $j$  (or did not provide any rankings at all), that value is treated as missing. This is because it may reflect the observer's lack of knowledge about household  $j$ 's condition, and we lack any anchoring information to impute how the observer might have ranked that household.

Let  $M_v$  be the total number of households being ranked in the village  $v$ , and  $N_v$  be the number of ranking respondents in the village  $v$ , with  $N_v \leq M_v$ . Let  $S_v = \{1, 2, \dots, M_v\}$  be the set of possible values for  $j$  in village  $v$  so that  $i \in \{1, 2, \dots, N_v\} \subseteq S$ . We denote the rank assigned to household  $j$  in village  $v$ , as given by respondent  $i$ , as  $g_{ijv}$ , which represents the relative position of household  $j$  as ranked by respondent  $i$ . We also define  $J_i$  as the number of households in village  $v$  for which respondent  $i$  provided a ranking and for which expenditure and asset data are available, such that  $J_i \leq M_v$ .

We exclude rankings from observers who assigned the same rank too frequently to different households. Specifically, we calculate, for each ranking household  $i$ , a rank-progressivity measure  $\alpha_{iv}$ , which corresponds to the share of unique rank positions assigned by household  $i$ . We define  $\mathcal{J}_i$  as the set of households actually ranked by household  $i$ . The set of rank positions that respondent  $i$  in village  $v$  assigned to one and only one household  $j$  is:

$$U_{iv} = \{r \in S_v : \exists! j \in \mathcal{J}_i \mid g_{ijv} = r\}.$$

Therefore the rank progressivity measure is calculated as:

$$\alpha_{iv} = \frac{n(U_{iv})}{J_i}.$$

where  $n(U_{iv})$  represents the cardinality of the set  $U_{iv}$ . We drop all rankings falling in the first percentile of the progressivity measure ( $\alpha_{iv}^{q1}$ ). For the remaining rankings, the average rank-progressivity measure is 0.97, meaning that, on average, observers assigned a unique rank to 97% of the listed households. It is worth noting that the elimination of inaccurate rankings according to the rank-progressivity measure  $\alpha$  does not affect the sample selection (where the sample is composed of total number of ranked households  $j$ , as discussed later) but it only removes pairwise rank positions  $g_{ijv}$  provided by certain observers  $i$ . For consistency of notation, we define the post-trimming pairwise ranking as  $p_{ijv}$  where  $p_{ijv} = g_{ijv}$  if  $\alpha_{iv} > \alpha_{iv}^{q1}$ .

**Self-ranking** The Self-Rank (SR) of household  $j$  in village  $v$  is defined as:

$$SR_{jv} = p_{ijv} \quad \forall i = j.$$

**Peers' ranking** The mean position of household  $j$  in village  $v$  is given by:

$$\bar{p}_{jv} = \frac{1}{K_{jv}} \sum_{i=1}^{K_{jv}} p_{ijv} \quad \forall i \neq j.$$

where  $K_{jv}$  is the number of peers providing the rank for household  $j$ , excluding  $j$  itself.<sup>11</sup> The Peers' Rank (PR) is then defined by applying a ranking function to  $\bar{p}_{jv}$ :

$$PR_{jv} = \text{Rank}(\bar{p}_{jv}) \tag{2}$$

where  $\text{Rank}(\cdot)$  is a ranking function that assigns discrete ordinal positions from 1 to  $J_i$  to all  $j$  households ranked by peers. The ranking function is the same as that applied in Equation 1. In the rest of the paper, the expression *peers' ranking* will be used to indicate  $PR_{jv}$ , while *pairwise ranking* will be used as the equivalent of  $p_{ijv}$ .

**Elites' ranking** The third ranking is provided by community representatives. We denote this ranking as  $ER_{jv}$ . Unlike the peer ranking, no aggregation is required here, since the six community representatives are asked to come to an agreement and provide a unique ranking of the households in their village.

Two features of the elite-based ranking are worth noting. First, unlike the peer ranking, the elites were exposed to a hypothetical as well as an incentivized ranking and targeting process. Second, although the actual transfers are not large enough to change poverty ranking, the fact that some households have received some actual transfer may mean that the survey-based welfare measures for these households could change. To understand the impact of the different treatments and households' access to cash transfer, we control for the random assignment of the villages into the above four groups when assessing the sources

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<sup>11</sup>Calculating the peers' rank as the average of the ranks provided by peers is one of the possible solutions. We alternatively tried considering the median rank among the ranks provided by peers (excluding self-rank) and we found that the mean produces a Peers' Rank that more accurately captures welfare and wealth-based rankings.

of discordance between subjective and benchmark rankings (results are discussed in Section 4.2).

**Sample selection** The 2023 survey covered 2910 households. The sample used in the analysis is selected through a five-step process, as illustrated in Table 1. First, we retain only households with complete data on both consumption and wealth measures for 2023. To reduce the influence of extreme values on the expenditure-based ranking, we further exclude households in the bottom and top 1% of the distribution of food, non-food, and total expenditure. Then, we remove households for which any of the subjective rankings (self, peer, or elite) is not available. The final sample used in the analysis is therefore composed of 2614 households.

Table 1: Sample selection

Step	Applied criteria	Number of observations left
0	Original sample 2023	2910
1	Available expenditure information <sup>a</sup>	2746
2	Available asset information	2699
3	Available peers' ranking (any)	2664
4	Available self-rank	2627
5	Available elite's rank	2614

Authors' calculations.

<sup>a</sup> Step 1 is calculated after the trimming of the 1<sup>st</sup> and 99<sup>th</sup> percentiles of expenditures.

To ensure comparability, we reapply the within-village ranking procedure to all survey-based and subjective measures, restricting it to the final sample of households retained for analysis. Table 2 reports summary statistics for the selected sample. After the sample selection process, and the drop of rankings according to the rank progressivity parameter  $\alpha$ , the average number of peers providing a ranking for household  $j$  is 16.3, leading to an average peers' rank ( $PR$ ) of 8.7. Because in some villages the number of households listed was less than 20 (minimum 14), and because we re-apply the ranking function on the final selected sample, also the average elites' rank ( $ER$ ) is 8.7. Most households live in rural areas (88%), and 86% of them are involved in crop farming or livestock business (mixed farming households).

Table 2: Summary statistics

	count	mean	sd	min	max
Number of households listed in the village-group	2614	19.94	0.67	14.00	21.00
Number of peers providing a rank for the household, excluding self-rank	2614	16.29	2.38	5.00	19.00
Self rank	2614	6.05	4.65	1.00	20.00
Peers' rank	2614	8.66	4.96	1.00	20.00
Elites' rank	2614	8.66	4.97	1.00	20.00
Urban	2614	0.12	0.33	0.00	1.00
Household size	2614	5.04	2.16	1.00	13.00
Mixed farming household	2614	0.86	0.35	0.00	1.00
Pastoralists (lowlands)	2614	0.11	0.32	0.00	1.00
Exposed to conflict in 2020-2023	2614	0.35	0.48	0.00	1.00
Exposed to drought	2599	0.48	0.50	0.00	1.00
<b>Daily expenditure (ETB)<sup>a</sup></b>					
Household Total expenditure	2614	139.88	96.50	8.66	550.49
Per capita Total expenditure	2614	31.02	21.79	1.49	151.96
Household Food expenditure	2614	99.20	73.05	3.76	414.53
Per-capita Food expenditure	2614	22.11	16.76	0.73	113.99
Household Non-food expenditure	2614	33.97	36.21	1.12	257.42
Per capita Non-food expenditure	2614	7.40	7.94	0.33	60.29
Household poorer than in 2019	2614	0.56	0.50	0.00	1.00

Authors' calculation.

<sup>a</sup> Expenditure measured in 2023 survey, expressed in 2016 prices in Ethiopian Birr (ETB).

### 3 To What Extent Do Subjective Rankings Capture Relative Poverty

The concordance between subjective ranking and conventional welfare-based rankings is assessed through the estimation of Spearman's rank correlation between the subjective and the wealth- and welfare-based rankings. The Spearman's correlation coefficient ( $\rho$ ) is calculated as:

$$\rho = 1 - \frac{6 \sum_{j=1}^n d_j^2}{n(n^2 - 1)}.$$

where  $n$  is the number of ranked observations. The squared difference ( $d^2$ ) between the positions assigned to unit  $j$  in two ranking vectors implies that larger discrepancies are penalized more heavily than smaller ones.<sup>12</sup> Two identical rankings will have  $\rho = 1$  and two

<sup>12</sup>In the calculation of Spearman's coefficient, tied observations receive the same average rank position.

opposite rankings will have  $\rho = -1$ .

Before moving to the correlation between subjective rankings with expenditures and assets, we look at the rank correlation between our benchmark measures (Table A2). The Spearman's  $\rho$  between food and non-food consumption is 42% considering household-level and 33% for per capita expenditures. At the same time, asset-based rankings very poorly correlate with per capita expenditure-based ranks. The rank correlation between assets and household-level non-food expenditure is 47%, while it is lower if we consider food expenditure or per capita transformation.

The first panel of Table 3 presents rank correlation coefficients between subjective and welfare-based measures. All subjective rankings are more able to capture differences in household-level expenditure rather than per-capita expenditure.<sup>13</sup> This gap is persistent across all combinations of subjective and types of expenditure-based rankings (food, non-food, and total). The last columns of Table 3 report Spearman's  $\rho$  for the correlation with wealth-based rankings. Both self, peers', and elite's rankings are able to predict relative wealth better than relative consumption. As expected, subjective rankings better correlate with visible asset rankings, while they similarly capture relative wealth in terms of all assets and livestock ownership. Our findings are in line with results obtained by [Trachtman et al. \(2025\)](#), who show a higher correlation of subjective rankings with assets rather than consumption, and that the targeting decision is mostly driven by participants' ownership of assets.

We applied a clustered bootstrap method to test the statistical significance of differences between two Spearman rank correlation coefficients. After computing Spearman correlation coefficients for two distinct pairs of variables within villages (clusters) and taking their difference, we resampled the clusters (with replacement) to maintain the dependence structure within the clusters. For each bootstrap replicate, we recomputed Spearman correlation coefficients for each resampled dataset and then calculated the difference between these correlation coefficients for each replicate (we ran 500 repetitions). Finally, we generated an empirical distribution of correlation differences from the bootstrap replicates and cal-

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<sup>13</sup>We also checked whether subjective rankings already consider some equalized economies of scale, applying the OECD adult equivalence scale to the three types of consumption measures: food, non-food, and total. However, the correlation between subjective rankings and equalized expenditure-based rankings is even lower than the correlation with per capita expenditure.

culated the p-value by comparing the observed difference to this bootstrap distribution. This methodology effectively handles clustered data, preserving intra-cluster correlations and providing robust statistical inference. These tests are reported in the second panel of Table 3. We find that elites’ and peers’ ranking significantly outperform self-rank in capturing both welfare and wealth. However, while elites’ ranking is more accurate than peers’ in capturing consumption, we do not find a statistically significant difference in their accuracy with respect to benchmark wealth indicators.

### 3.1 Ranking aggregation

The low correlation between self-, peers’, and elites’ rankings suggests that these measures capture different aspects of households’ welfare. These differences might be due to the various sets of information available to the observer and the different biases affecting the three subjective rankings. Therefore, we investigate whether an aggregate ranking, combining information from self, peers, and elites’ ranking, can better predict welfare—and wealth-based ranking than the three subjective rankings alone. We propose and compare different aggregation methods.

The first method consists of interacting the three rankings:

$$AR_{jv}^{int} = Rank(SR_{jv} \times PR_{jv} \times ER_{jv}) \quad (3)$$

We then perform the Principal Component Analysis (PCA) on  $SR_{jv}$ ,  $PR_{jv}$ , and  $ER_{jv}$  to produce aggregate rankings. First, we generate weights for the three ranks based on their first component loadings ( $\alpha$ ). These weights are applied to the ranks using a multiplicative method:

$$AR_{jv}^{pca1} = Rank(SR_{jv}^{\alpha_S} \times PR_{jv}^{\alpha_P} \times ER_{jv}^{\alpha_E}) \quad (4)$$

Then, we generate weights based on the loadings of all three components ( $\alpha$ ,  $\beta$ , and  $\gamma$ ), adjusted by the proportion of variance explained by each component ( $\lambda$ ,  $\delta$ , and  $\eta$ ):

$$AR_{jv}^{pca3} = Rank(SR_{jv}^{\alpha_S \lambda + \beta_S \delta + \gamma_S \eta} \times PR_{jv}^{\alpha_P \lambda + \beta_P \delta + \gamma_P \eta} \times ER_{jv}^{\alpha_E \lambda + \beta_E \delta + \gamma_E \eta}) \quad (5)$$

The third method for aggregation assigns to each subjective poverty ranking (SPR) a weight based on its distance to welfare- and wealth-based ranks (WBR). This approach mimics the weighting using a “reliability” factor or precision of rankers proposed by [Follett and Henderson \(2023\)](#) and [Li et al. \(2022\)](#). We calculate the household-specific *reliability* parameter  $\omega_j^{SPR-WBR}$  as the inverse of the difference between each SPR and welfare- or wealth-based ranking (WBR) for each household  $j$ :  $\omega_j^{SR-WBR}$  for  $SR$ ;  $\omega_j^{PR-WBR}$  for  $PR$ , and  $\omega_j^{ER-WBR}$  for  $ER$ .<sup>14</sup> We consider three different WBR: (i) household-level expenditure ( $\omega_j^{SPR-exphh}$ ); (ii) per capita expenditure ( $\omega_j^{SPR-exppc}$ ); (iii) asset-wealth ( $\omega_j^{SPR-asset}$ ). For what concerns expenditure-based parameters, we consider the average between the distance of SPR to food, non-food, and total expenditure. We also provide a population-level reliability parameter  $\omega_{pop}^{SPR-WBR}$ , which is the sample average of all  $\omega_j^{SPR-WBR}$ . Then we use  $\omega_j^{SPR-WBR}$  and  $\omega_{pop}^{SPR-WBR}$  as weights for the SPR in the calculation of the Aggregate Ranking with the interaction approach:

$$AR_{jv}^{\omega_j^{WBR}} = Rank((SR_{jv})^{\omega_j^{SR-WBR}} \times (PR_{jv})^{\omega_j^{PR-WBR}} \times (ER_{jv})^{\omega_j^{ER-WBR}}), \quad (6)$$

and

$$AR_{jv}^{\omega_{pop}^{WBR}} = Rank((SR_{jv})^{\omega_{pop}^{SR-WBR}} \times (PR_{jv})^{\omega_{pop}^{PR-WBR}} \times (ER_{jv})^{\omega_{pop}^{ER-wbr}}). \quad (7)$$

**Performance of aggregate ranking** The bottom panels of [Table 3](#) present the estimates of Spearman’s correlation between aggregated subjective ranking and welfare- or wealth-based rankings. Even though the self-ranking is the least accurate, its inclusion in the aggregate ranking (AR) improves the overall accuracy of the composite ranking. In general, the three proposed methods perform similarly. Between the aggregate rankings based on the principal component analysis, the one that only relies on the first components is slightly more accurate than the other one that calculates weights based on a combination of all three components. Interestingly, performing the PCA separately for rural and urban areas does not produce significant improvements. In the best scenarios, aggregate ranking is able to improve accuracy by 2 percentage points with respect to household-level expenditure-based ranking, 3 percentage points with respect to per-capita expenditure-based ranking, and by 6

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<sup>14</sup>Previously, [Follett and Henderson \(2023\)](#) proposed an aggregation of subjective rankings based on their accuracy in capturing survey-based measures. However, they calculate the *reliability* parameter with a Bayesian approach based on priors.

percentage points for asset-based ranking, considering as a benchmark the correlation with elites' ranking that is the most accurate between the three subjective measures. Unfortunately, we cannot assess the cost of collecting the different types of subjective ranking used in the aggregation process, as the necessary data are not available.

The two bottom panels of Table 3 show the rank correlation of aggregate rankings weighted by the reliability parameters. The use of population-level reliability parameters ( $\omega_{pop}^{SPR-WBR}$ ) produced aggregate rankings that perform similarly to those obtained with the interaction and principal component methods. As expected, significant improvements are achieved by applying household-specific reliability parameters ( $\omega_j^{SR-WBR}$ ). The highest rank correlation reached with aggregation (63%) is the one between visible assets-based ranking and aggregate ranking obtained with household-specific weights for the relative wealth measure. The use of consumption-based household-specific weights remarkably improves the correlation with survey-based welfare rankings since the discordance between these two measures was the highest. However, we acknowledge that the availability of household-level information on consumption can be challenging.

Table 3: Performance of Subjective Poverty Rankings

	Ranking based on:								
	Household level expenditure			Per capita expenditure			Assets		
	Total	Food	Non-Food	Total	Food	Non-Food	All	Visible	Livestock
Self rank	0.17	0.14	0.18	0.07	0.04	0.12	0.25	0.27	0.25
Peers' rank	0.24	0.21	0.28	0.15	0.11	0.22	0.33	0.35	0.32
Elites' rank	0.32	0.28	0.32	0.20	0.16	0.25	0.36	0.38	0.35
<b>Test for coefficient differences:<sup>a</sup></b>									
Peers' – Self Rank	0.07***	0.07***	0.10***	0.08***	0.08***	0.10***	0.08***	0.08***	0.07***
Elite's – Peers' Rank	0.08**	0.08***	0.04*	0.05**	0.05**	0.03	0.03	0.04	0.03
Elite's – Self Rank	0.14***	0.15***	0.14***	0.14***	0.13***	0.13***	0.11***	0.11***	0.10***
<b>Aggregate rank (AR) from peers and elite ranks only:</b>									
AR from interaction	0.30	0.26	0.32	0.19	0.15	0.25	0.38	0.39	0.36
AR from first component	0.30	0.26	0.32	0.19	0.15	0.25	0.38	0.39	0.36
AR from all components	0.28	0.24	0.31	0.17	0.13	0.24	0.36	0.38	0.35
<b>Aggregate rank (AR) from self, peers, and elite ranks:</b>									
AR from interaction	0.32	0.28	0.35	0.20	0.16	0.27	0.42	0.44	0.40
AR from first component	0.32	0.28	0.35	0.20	0.16	0.27	0.41	0.44	0.40
AR from all components	0.32	0.29	0.34	0.20	0.17	0.26	0.42	0.44	0.40
AR from first component for rural/urban	0.32	0.28	0.35	0.19	0.15	0.27	0.41	0.43	0.40
AR from all components for rural/urban	0.33	0.29	0.34	0.20	0.17	0.26	0.42	0.44	0.40
<b>Aggregate rank (AR) with reliability parameter (<math>\omega</math>):</b>									
AR with $\omega$ based on household-level exp.	0.32	0.28	0.35	0.20	0.16	0.27	0.41	0.44	0.40
AR with $\omega$ based on per capita exp.	0.32	0.28	0.35	0.20	0.16	0.27	0.42	0.44	0.40
AR with $\omega$ based on assets	0.32	0.28	0.35	0.20	0.16	0.27	0.42	0.44	0.40
AR with $\omega$ based on visible assets	0.32	0.28	0.35	0.20	0.16	0.27	0.42	0.44	0.40
<b>Aggregate rank (AR) with household-specific reliability parameter (<math>\omega</math>):</b>									
AR with $\omega$ based on household-level exp.	0.54	0.48	0.50	0.34	0.28	0.37	0.48	0.49	0.44
AR with $\omega$ based on per capita exp.	0.46	0.41	0.43	0.43	0.37	0.42	0.43	0.42	0.38
AR with $\omega$ based on assets	0.37	0.32	0.40	0.21	0.16	0.30	0.62	0.56	0.45
AR with $\omega$ based on visible assets	0.37	0.32	0.39	0.20	0.15	0.29	0.54	0.63	0.51

Authors' calculation. Spearman's correlation coefficients. Number of observations = 2614.

<sup>a</sup> Difference between the Spearman's rank correlation coefficients reported in the first panel of the table. Bootstrap standard errors with 500 repetitions, clustered at the village level. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## 3.2 Comparison across different contexts and groups

Previous studies highlight the importance of context in shaping the performance of subjective rankings (Hillebrecht et al., 2020; Trachtman et al., 2025; Dupas et al., 2024). In this analysis, we focus on three key contextual factors: rural-urban differences, varying exposure to covariate shocks (conflict and drought), and local norms. Figure 1 presents the Spearman’s rank correlations between subjective rankings and benchmark measures of welfare and wealth across the different contexts and comparative scenarios.

**Rural-Urban differences** We find that subjective rankings perform differently in rural and urban areas (full set of correlations available in Table A4). Self- and peers’ rankings are better at capturing asset wealth in rural than urban households, while they better correlate with per capita consumption-based rankings in urban areas. The elite’s ranking performs better in urban areas compared to all benchmark measures. Moreover, the elites’ ranking is more accurate than the other two subjective rankings in both rural and urban areas, but with a larger gap in the latter. These results are intuitive and complement recent findings. Some types and levels of information may not be readily available in urban areas to all community members. Consistent with this, Dupas et al. (2024) reconstruct peers’ rankings from incomplete ranks of pairs from two different settings: (i) a field experiment in rural Indonesia (Alatas et al., 2012a), and (ii) urban and peri-urban neighborhoods in Abidjan, Côte d’Ivoire. They conclude that subjective peer rankings perform better in rural areas because of the closer social network structure. Similarly, Aiken et al. (2025) find that community-based targeting in Bangladesh more accurately captures per capita consumption in rural areas. Conversely, Hillebrecht et al. (2020) find that subjective rankings in rural areas of Burkina Faso are as accurate as random targeting, while in semi-urban areas, they perform comparatively better. The authors suggest that, in urban contexts, the community poverty concepts are more closely aligned with consumption-based poverty than in rural areas, where other dimensions seem to be more relevant. This could help explain why, despite the stronger social ties typically found in rural areas—which should improve the information available to peers and elites—subjective rankings in our Ethiopian sample generally more accurately reflect relative welfare in urban settings. Moreover, the larger average household size in rural areas (Table A3) may make it more difficult for observers to assess economies of

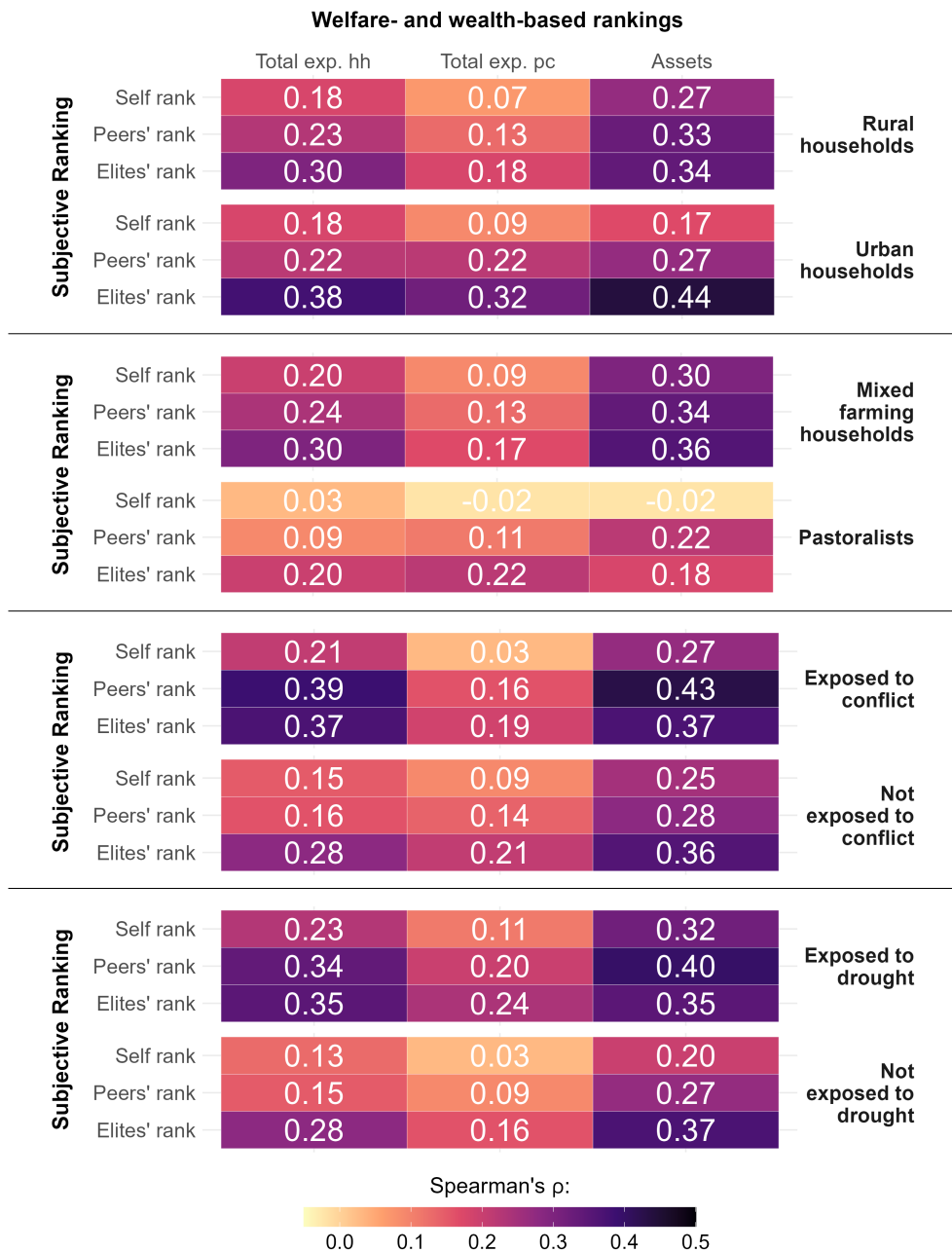


Figure 1: Heterogeneity of Subjective Poverty Rankings' accuracy

scale accurately, which could explain the weaker correlation with per capita expenditures. Our findings confirm the comparative advantage of subjective rankings in urban areas, where they might provide a more relevant contribution to targeting.

**Mixed farming households and pastoral communities** Pastoral communities in Ethiopia primarily reside in the Afar and Somali regions. Previous studies from Ethiopia have highlighted the challenges associated with the targeting of social protection and safety

net programs in pastoralist and agro-pastoralist communities (Sabates-Wheeler et al., 2013; Lind et al., 2022). For example, while the targeting of the national Productive Safety Net Program (PSNP) was successful (progressive) in the highland regions, targeting was poor in the lowland and pastoral regions (Coll-Black et al., 2012; Sabates-Wheeler et al., 2013). Lind et al. (2022) argue that traditional norms regarding fairness and sharing of external resources within horizontal networks are important factors challenging targeting in these settings. We compare subjective rankings from households residing in pastoralist regions with those from mixed-farming households living in other regions. Table A5 shows that, overall, subjective rankings badly capture the relative welfare and wealth of pastoralists compared to mixed farming households living in non-pastoral regions. In the pastoralist regions, elites' rankings more accurately reflect total and food expenditure and livestock holdings, while peers' rankings better capture non-food consumption and general wealth rankings. In pastoralist communities, the aggregation of subjective rankings based on the unweighted interaction or adjusted by PCA-based weights improves accuracy in capturing relative livestock holdings, while the very low correlation of self-rank with the other benchmark measures makes the aggregate ranking no more informative than the single peers' and elites' rankings in capturing any other dimension.

**Exposure to shocks** About one-third of the households in our sample have been exposed to violent conflict in the three years before the survey, while 46% have been affected by drought. The accuracy of subjective rankings can be affected by the occurrence of shocks and the social dynamics arising as a consequence of them. Table A6 shows that peers and elites more accurately rank households that have been exposed to conflict. Similarly, subjective rankings more accurately predict welfare- and wealth-based rankings for households exposed to droughts (Table A7). As shown in Table A8, this result can be attributed to a closer relationship between peers, which is more prevalent in cases of drought. Similarly, drought is associated with a reduced variation of expenditure (both total and food) within the village. Covariate shocks such as conflict and drought might not only affect individual households' well-being but also social dynamics, resource and information sharing within the village network. In the context of Ethiopia, covariate shocks such as conflict and drought are likely to trigger collective action and encourage intra-community support through a number of village associations such as *iddir* and *equib* (Dercon et al., 2006; Caeyers and Dercon,

2012; Abay et al., 2018).<sup>15</sup> Our results point to a greater alignment between subjective and objective poverty rankings in contexts affected by widespread shocks, possibly because such events make relative deprivation more visible and socially salient within communities. Interestingly, we find that inter-temporal social mobility is higher among conflict-affected households rather than non-exposed ones. In contrast, it is lower among drought-exposed households than non-affected ones (Table A9). While conflict might have a more equalizing impact on communities in terms of well-being and opportunities, the effects of weather shocks on households' welfare largely depend on their livelihoods and opportunities, potentially exacerbating inequalities. However, in both cases, the experience of shocks seems to make households' relative conditions more visible. This implies that the subjective ranking methods can perform relatively better when communities are exposed to covariate shocks, indicating their relevance and potential to support targeting in data-scarce regions and times.

**Comparison across the welfare distributions** We also examine whether the subjective rankings are more effective at identifying relatively poorer or richer households within the village. As shown in Table 4, subjective rankings better identify the top and bottom terciles of the relative welfare and wealth distributions than those in the middle.

### 3.3 Do subjective rankings capture dynamics in household welfare?

By exploiting the panel structure of the survey data, we are able to assess the accuracy of subjective rankings also in relation with respect to expenditure- and asset-based rankings collected at baseline in 2019. First, we explore the correlation between welfare outcomes across the two rounds (2019 and 2023). The intertemporal correlations between welfare measures, reported in Table 5, appear to be weak. This is not surprising given the stochastic environment households face in the four-year gap between the two rounds. In between the two rounds, Ethiopia experienced one of the deadliest armed conflicts in its history, which has affected households and communities (Abay et al., 2023). The low correlation between

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<sup>15</sup>For example, in the case of Ethiopia, Nigus and Abay (2024) show that covariate shocks such as battles encourage cooperation.

Table 4: Tercile correlation between subjective and welfare-based ranking

		Corresponding tercile of ranking based on:				
		Household-level expenditure			Assets	
		Food	Non-Food	Total	All	Visible
First tercile	Self rank	0.14	0.12	0.14	0.20	0.20
	Peers' rank	0.16	0.13	0.18	0.23	0.24
	Elites' rank	0.21	0.19	0.20	0.26	0.27
	Aggregate rank <sup>a</sup>	0.23	0.21	0.21	0.30	0.30
Second tercile	Self rank	0.03	0.02	0.05	0.04	0.03
	Peers' rank	0.03	0.02	0.01	0.05	0.08
	Elites' rank	0.04	0.03	0.05	0.07	0.04
	Aggregate rank <sup>a</sup>	0.05	0.05	0.03	0.10	0.09
Third tercile	Self rank	0.07	0.03	0.10	0.13	0.14
	Peers' rank	0.17	0.16	0.18	0.24	0.24
	Elites' rank	0.24	0.21	0.24	0.28	0.27
	Aggregate rank <sup>a</sup>	0.22	0.20	0.25	0.31	0.33

Authors' calculation. Correlation between dummy variables identifying the terciles of the rankings.

<sup>a</sup> Aggregate rank with interaction method.

welfare and wealth rankings between 2019 and 2023 (Table A9) suggests significant changes in the distribution of resources or living conditions over the period, plausibly driven by the experience of multiple shocks (i.e., conflict) by a significant share of the sample (Aragie and Thurlow, 2022; Abay et al., 2023). This implies that predicting welfare outcomes in such stochastic environments can be challenging. Whether the subjective ranking measures respond and capture these dynamics is an important empirical question.

Table 5 shows that subjective rankings better correlate with contemporaneous (2023) rankings of welfare and wealth than with those from 2019, suggesting that observers update (at least partially) their information and beliefs over time. Trachtman et al. (2025) found that subjective assessments tend to reflect longer-term wealth indicators (i.e., assets) rather than welfare metrics that are more sensitive to shocks (i.e. expenditure). While our results are consistent with this finding, we further show that, despite a stronger reliance on asset indicators, observers do adapt their perception to reflect more recent conditions in both wealth and consumption.

Moreover, we document an asymmetry in how information is updated, which appears to depend on the direction of households' intertemporal welfare changes (see Table 6). Specifically, self-rankings more accurately reflect relative consumption for households that

Table 5: Comparison of 2019 and 2023 welfare and wealth correlation with subjective rankings

	Intertemporal correlation	Subjective ranking:			
		Self rank	Peers' rank	Elites' rank	Aggregate rank
<b>Benchmark ranking:</b>					
Total expenditure 2023	0.31	0.16	0.24	0.31	0.31
Total expenditure 2019		0.11	0.20	0.25	0.26
Total expenditure per capita 2023	0.22	0.07	0.15	0.20	0.20
Total expenditure per capita 2019		0.01	0.11	0.13	0.14
Asset wealth 2023	0.46	0.24	0.33	0.35	0.41
Assets wealth 2019		0.15	0.27	0.31	0.33

Authors' calculation. Spearman's rank correlation coefficients. Intertemporal correlation refers to the correlation coefficient between  $BWR_{2019}$  and  $BWR_{2023}$

became poorer between 2019 and 2023 than for those whose conditions improved. Peers also rank households more accurately with respect to their total household expenditure when their welfare deteriorates. These results suggests that information about deterioration in well-being is observed and integrated by others, especially in the context of systemic shocks (conflict) where data is typically scarce. Interestingly, we find no asymmetry for elites' ranking.

## 4 Discordance across subjective and welfare measures

The generally weak correlations between subjective rankings and welfare or wealth rankings reported in Table 3 suggest substantial and pervasive discordance between the conventional measures of welfare and wealth and the different subjective rankings methods. This discordance can have various interpretations, and arise from a number of factors.

First, subjective assessments may capture different aspects and dimensions of poverty than those reflected in conventional metrics of welfare and wealth (Alatas et al., 2012b; Basurto et al., 2020). In our case, the subjective rankings aim to identify households' perceived need for social assistance. Local communities and individuals may define "neediness"

Table 6: Asymmetry of pairwise peers' ranking by relative poverty status

	Absolute difference between subjective ranking and rank based on		
	Household-level Total expenditure	Per capita Total expenditure	Asset wealth
<b>Panel A: Self-rank</b>			
Poorer than in 2019	-1.119*** (0.187)	-1.103*** (0.189)	-0.131 (0.160)
Constant	6.308*** (0.140)	6.625*** (0.130)	5.504*** (0.133)
N obs.	2567	2567	2567
$R^2$	0.016	0.015	0.000
<b>Panel B: Peers' rank</b>			
Poorer than in 2019	-0.342** (0.147)	0.039 (0.139)	-0.053 (0.155)
Constant	5.014*** (0.145)	5.141*** (0.116)	4.435*** (0.138)
N obs.	2567	2567	2567
$R^2$	0.002	0.000	0.000
<b>Panel C: Elites' rank</b>			
Poorer than in 2019	-0.024 (0.140)	0.030 (0.149)	-0.003 (0.143)
Constant	4.553*** (0.115)	4.947*** (0.128)	4.344*** (0.129)
N obs.	2567	2567	2567
$R^2$	0.000	0.000	0.000

Authors' calculation. Standard errors in parentheses, clustered at the village level. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The dependent variable is the subjective ranking (different in each panel) and the column-specific benchmark ranking. No other controls are included.

in broader or alternative ways compared to the economic indicators typically used in surveys. These perceptions may incorporate social vulnerability, illness, or marginalization – dimensions not always visible through consumption, asset, or income data.

Second, it is important to acknowledge that the relatively low correlation between benchmark rankings themselves may reflect measurement error, especially in consumption data. In this context, part of the discordance between subjective and benchmark rankings could arise from limitations in accurately capturing households' actual expenditure levels or asset holdings through survey instruments. As such, the observed discrepancies should not be taken as evidence against the relevance of subjective rankings. Instead, they highlight that our benchmark indicators represent conventional proxies for welfare and wealth rather than an objective truth.

Third, the divergence between subjective assessments and benchmark measures may also

result from unintentional misclassification driven by factors orthogonal to the characteristics of either the observing or observed households (misreporting). For instance, ranking 20 peers, and positioning oneself among them, can impose a significant cognitive burden, introducing random noise into the rankings. While such errors may not produce systematic bias, they can reduce the overall concordance between ranking systems.

Finally, subjective assessments may reflect beliefs, intentions, or misperceptions on the part of the respondents. Even when individuals attempt to rank others (or themselves) based on conventional notions of welfare or wealth, their views may be shaped by limited information, social dynamics, or personal biases, ultimately leading to systematic discrepancies.

In this section, we aim to explain and attribute the nature of these discrepancies as well as potential implications. Before attributing and associating these discordances, we aim to examine whether they are systematic or random noise.

## 4.1 Characterizing Discordance

Understanding and attributing the discordance between subjective and benchmark rankings is crucial for interpreting these differences as well as appraising the potential and value of subjective ranking methods. If discrepancies are mostly driven by misreporting during the ranking process and survey, perhaps because of the cognitive burden and limited capacity to process a large set of information, it is unlikely to predict respondents' perception of relative economic condition and subjective well-being. However, if discrepancies mostly arise from misperceptions, they are inherent to the observer's characteristics or point of view ([Abay et al., 2021](#); [Wossen et al., 2022](#)), implying that it is possible to inform about the use of subjective rankings and the corrections of these distortions.

**How systematic are such discordances?** Previous studies have shown how individuals and groups may have systematic misperceptions driven by some underlying attributes. For example, [Hvidberg et al. \(2023\)](#) find that lower-ranked (poorer) individuals tend to overestimate their own position among others because they underestimate other people's

income, while wealthier households underestimate their positions because they overestimate their peers. This is the so-called “center-bias”, also documented in Dupas et al. (2024) and Cruces et al. (2013). The presence of center-bias in our subjective rankings is clearly shown in the graphical representation of the correlations in Figure 2, especially for richer households that systematically rank themselves lower than what the benchmark measure would require.

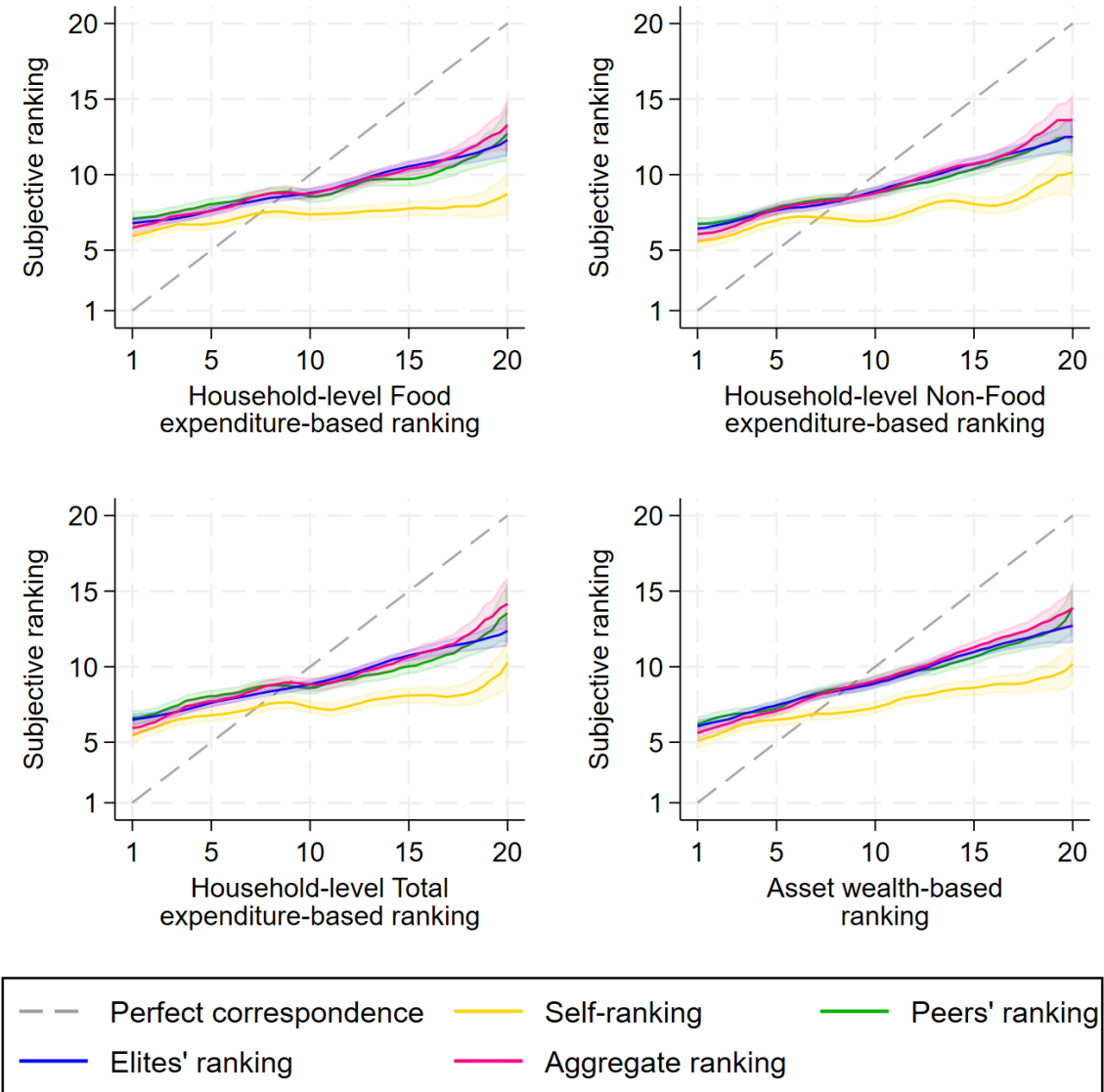


Figure 2: Subjective vs welfare and wealth-based ranking

Source: authors’ elaboration. Local polynomial smooth plots with 95% confidence intervals. The aggregate ranking used in the plot is the one based on the interaction of the three subjective rankings.

**Are discrepancies correlated across subjective ranking methods?** The discrepancies of each subjective ranking with benchmark rankings are strongly correlated with

each other, both when we assess them against expenditure and asset-based rankings. In the case of expenditures, we can see that the deviations of subjective rankings from per capita expenditure rankings are more strongly correlated than deviations from household-level expenditures (Table A10). Deviations from the asset-based ranking are still highly correlated but slightly less than deviations from expenditure rankings (Table A11). In general, the distances between self and peers' rankings from benchmarks are correlated between 56 and 61%, peers' and elites' between 58 and 68%, while distances between self and elites' rankings from benchmarks have a lower correlation, between 34 and 54%. These patterns suggest that the underlying factors driving the discordance are similar across methods, which generally reinforces the challenges associated with characterizing the whole welfare distribution of community members using subjective ranking methods.

## 4.2 Sources of Discordance

The existence of systematic discordance in subjective rankings with respect to welfare and wealth rankings requires further investigation into the nature of these discrepancies. This section aims to elucidate the factors that explain the observed discordance between subjective poverty rankings (SPR) and expenditure and wealth-based rankings. We model discordance with the following specification:

$$Y_{jv} = \beta_0 + \Gamma \mathbf{X}_{jv} + \Lambda \mathbf{V}_v + \varepsilon_{jv} \quad (8)$$

where  $Y_{jv} = SPR_{jv} - WBR_{jv}$ . The subjective poverty ranking,  $SPR_{jv}$ , refers to rankings provided by the household itself ( $SR_{jv}$ ), its peers ( $PR_{jv}$ ), or community elites ( $ER_{jv}$ ). The welfare or wealth-based ranking,  $WBR_{jv}$ , is, in turn, the ranking based on household expenditure, per capita expenditure, or asset-wealth.  $\mathbf{X}_{jv}$  denotes a vector of household-level characteristics of the ranked household, while  $\mathbf{V}_v$  represents village-level characteristics. Regressions are estimated using ordinary least squares, with standard errors clustered at the village level. The analysis is conducted separately for rural and urban areas, given their significant differences (Table A3). Results are reported in Tables A12–A17. The discussion in the following is organized by groups of factors and determinants that can explain these misclassifications: (i) relationship and information asymmetry within groups;

(ii) demographic factors; and (iii) survey design.

In particular, we identify two main sources of information asymmetry that can contribute to generating discrepancies between subjective rankings and survey-based measures of welfare and wealth, namely (i) socio-economic distance – social ties and geographical distance, both between peers and with elite members, and (ii) economic distance, measured as within-group inequality and relative poverty between peers. We control for whether the household belongs to the major ethnicity within the village-group and for the ethnic fragmentation of the group itself, under the hypothesis that ethnic ties could further contribute to information asymmetry and favouritism. We also control for households' livelihoods to control for eventual over- and under-perception of households' welfare depending on their participation in specific economic activities. Understanding how subjective ranking methods are correlated with  $WBR_{jv}$  in the presence of some level of information asymmetry is crucial to improving the effectiveness and relevance of these methods.

Far what concerns demographic factors, we investigate whether specific household composition characteristics have a role in generating discordance between subjective and benchmark rankings. Our results already show that subjective rankings hardly capture within-household economies of scale. This finding may suggest that community members would not know well the socio-demographic characteristics of their own village's households (apart, probably, from those that are particularly familiar with); or that community-level perceptions of household composition and needs are discordant with conventional equivalence scales.

Finally, we control for several survey design characteristics, such as treatment group and order of the household in the list provided to the respondent. For the analysis of the discordance between elite's ranking and benchmark measures, we further control for the characteristics of the elite group, namely the share of females, average number of years spent in the village, relative economic status (self-reported by the elite members with respect to the village conditions), and number of members with experience in targeting and members of the Food Security Task Force. Furthermore, we control for elites' capture, namely the share of the budget (actual or hypothetical) that elites decided to keep for themselves to cover the costs of implementing the CBT exercise.

Given the large number of variables included in the specification reported in Equation 8, and the many combinations of subjective and benchmark rankings analysed, we focus the discussion on a selected number of relevant elements. The following paragraphs are aimed at summarizing the main findings of the regression-based results, further supported by additional analysis when needed.

**Relationship with Peers** Before starting to perform the ranking exercise, the survey elicited relationships between ranking households and those being ranked, as well as between elites and households. We coded these relationships between ranking households (or elites) and those being ranked as follows (in a range from 0 to 6): (i) 0 if completely *unknown*, (ii) 1 if *known* (heard of) *but not familiar with*; (iii) 2 if peers or elites can *recognize someone in the family but have never interacted*; (iv) 3 if peers or elites have *talked to a member of the family before infrequently*; (v) 4 if peers or elites *have talked to a member of the family before frequently*; (vi) 5 if *close friend of the family* of peers or elites; and (vii) 6 for *family member*. The distribution of responses across these categories in our data, as reported in Table A18, is reasonably intuitive: while a small share of households are unknown to peers and elites, most households are known, and a few are closely related to peers and elites.

Besides information asymmetry arising from the level of knowledge of the household to be ranked, these relationships may trigger some level of favouritism and nepotism (Alatas et al., 2019a) given that we elicited and motivated the ranking exercise based on households' need for potential social assistance. For example, Alatas et al. (2019a) show that the families and relatives of those assuming local leadership are more likely to receive benefits in a social assistance program in Indonesia. Similarly, Vera-Cossio (2022) finds that Thai households with direct connection to the village council were disproportionately favored in credit allocation through the community-based lending program. Figure 3 illustrates how the relationship between observers and ranked households relates to misclassifications associated with peer- and elite-based rankings. We construct such relationships for rural and urban areas separately.

The top panel of Figure 3 shows that the relationship between observing peers and ranked households influences the rankings. The graph clearly shows that discrepancies are highest for those households that are not known to the observers (20.6% of the listed households),

highlighting the role of information asymmetry in the ranking process. *Unknown* households are more likely to be ranked unfavorably for the potential social assistance, and more so in rural areas. The evidence that unknown households face more severe “punishment” both in rural and urban areas makes subjective poverty rankings vulnerable to the presence of information asymmetry about community members’ economic conditions. The discordance seems to be the least for close households. In rural areas, especially, households that are related to the observer (family members) seem to be generally ranked lower than they should be according to conventional welfare and wealth measures. Regression results confirm results. The smaller size of the urban sample produces scattered non-parametric estimation – and less significant estimates – of the discordance between peers’ and benchmark rankings for higher levels of relationship.

We further investigate whether the pairwise relationship between peers is correlated with systematic discordance between pairwise ranking ( $p_{ijv}$ ) and benchmark measures. Table A19 shows that, with respect to the highest-frequency category (4 – *have talked to a member of the family before frequently*, see A18 for frequency of relationship categories), households with weaker social ties present higher discordance, while family members present are ranked more accurately. These results confirm the non-parametric results, as well as the estimates based on average peers’ ranking.

**Relationship with Village Elites** The relationship between households and elites is coded similarly to peers’ and reported in Table A18. However, the six elite members are asked to jointly report only one degree of relationship for each listed household – i.e., the closest relationship that any of them has with a member of the household. Elite members are less likely to report a household as completely unknown (only 2.83% of the cases versus 20.6% for peers), suggesting that elite members have at least a better general knowledge of the community members. At the same time, elites are closely related (family members or friends) to the ranked households as frequently as peers are. However, the fact that the six community representatives were asked to report only the tightest relationship degree implies a potentially higher social distance between households and each elite member than between households and their peers.

The implications of the relationships between elites and households on misclassifica-

tions associated with community-based ranking show some similarity with those from peer-ranking. In particular, the highest level of discordance is observed for households that are not known to elites. On average, unknown households are “punished” by elites more than they are by peers, as shown in the bottom panel of Figure 3. Non-parametric estimates suggest that, in rural areas, elites do not show favoritism toward households to which they are closely related. In contrast, urban elites seem to favour family members, ranking them two positions lower than their consumption levels would suggest, indicating stronger favoritism than the one observed in peers’ rankings.

The regression results obtained by controlling for the full set of households and village characteristics confirm some degree of favoritism by elites. Furthermore, the elites’ favoritism seems to be much stronger in urban than rural settings once we control for other characteristics.

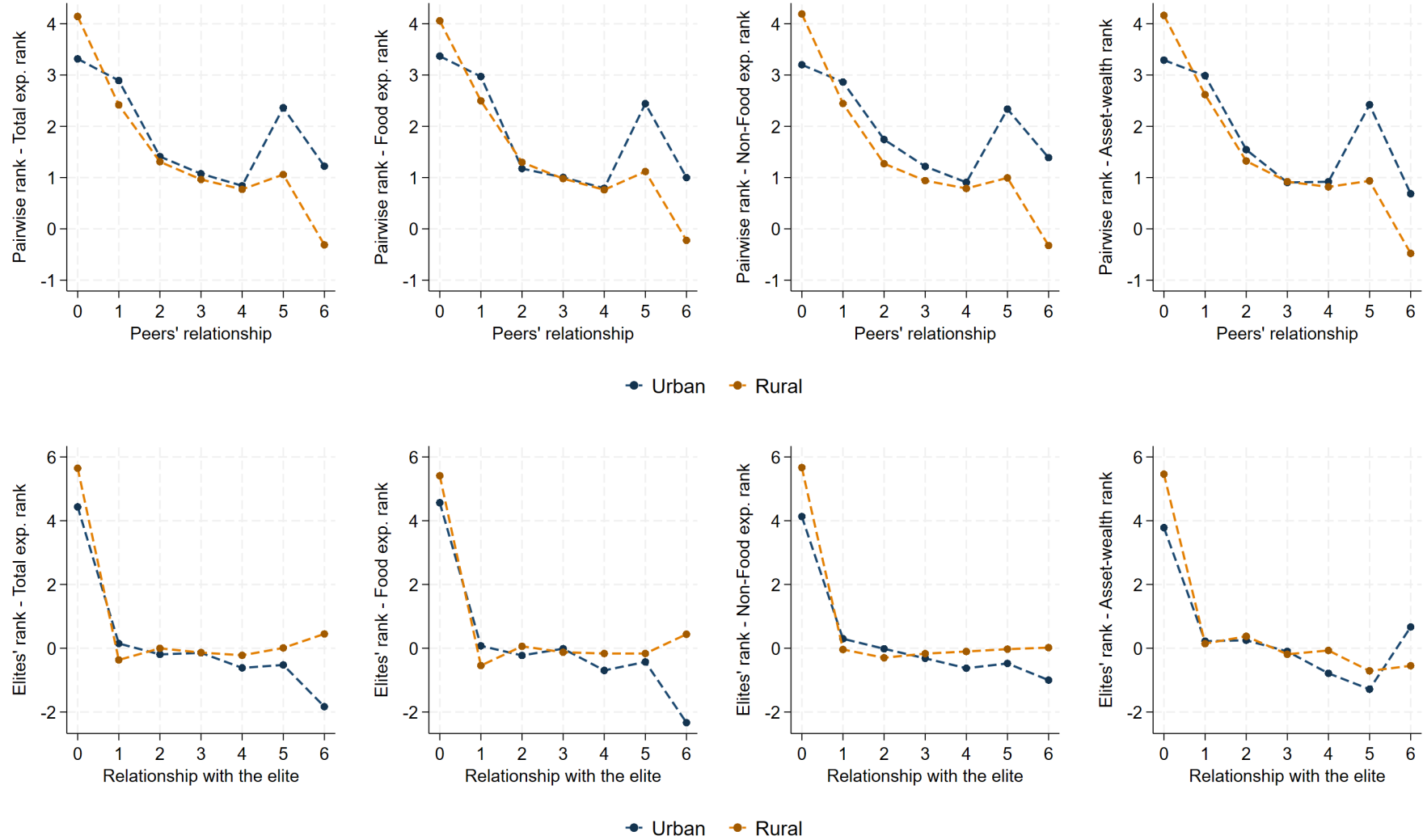


Figure 3: Welfare-based ranking and relationships

Source: authors' elaboration. Relationship: 0 = Unknown household; 1 = Not familiar at all; 2 = Know of/can recognize someone in the family but have never interacted; 3 = Have talked to a member of the family before infrequently; 4 = Have talked with a member of the family before frequently; 5 = Close friend of family member; 6 = Family member/related.

**Within-group inequality** Economic distance can determine a difficulty in observing (for example, if correlated with physical distance) and accurately understanding the economic conditions of others. Dupas et al. (2024) investigate the accuracy of peers’ ranking in urban and peri-urban Côte d’Ivoire and suggest that the low correlation with traditional measures could depend on the high income variation in these areas. However, large economic differences within the group of peers could have the opposite effect of making relative conditions more visible and therefore more easily incorporated into subjective rankings. We calculate within-group inequality as the village-level Gini Index based on households’ per capita total expenditure. In our sample, the within-village Gini Index ranges from 0.18 to 0.69, with an average of 0.33 (Table A1). Rural villages exhibit significantly higher within-group inequality than urban communities (Table A3). We first compare the accuracy of subjective rankings between villages with a Gini Index above the median (0.31) and those below it. Table A20 shows that subjective rankings more accurately predict expenditure- and wealth-based rankings in more equal groups. Second, we examine regression estimates where the within-village Gini Index is included as an explanatory variable for the distance between subjective and benchmark rankings. The coefficient for within-village inequality is generally not statistically significant in explaining the discordance. However, greater group inequality is associated with elites’ underestimation of relative wealth in rural areas, and of total expenditure in urban areas. These results suggest that within-group inequality has a limited influence on the accuracy of subjective poverty rankings, indicating that other factors may play a more important role in shaping perceptions and misperceptions.

**Peers’ relative poverty** Economic distance may have a different effect on how poorer and richer households observe and elaborate information about each others’ economic conditions. This asymmetry might depend on endogenous characteristics of the household, such as how “loudly” they decide to signal their own status, but also on exogenous factors, such as the presence of formal and informal institutions providing assistance to those in need. We find that, in general, peers more accurately classify households that are richer than themselves (Table 7), both in relative and absolute terms. An explanation for this pattern may relate to asymmetric information. Indeed, households likely have better and more accurate information about wealthier peers due to observable assets and behaviours that clearly indicate wealth status (e.g., visible consumer durables, housing conditions, lifestyle), whereas

poverty indicators might be more subtle or less visible externally. In addition, wealthier households may occupy more prominent or influential positions within community social networks, enhancing their visibility and the ease with which poorer households can assess their relative position. In contrast, accurately ranking poorer households may require more nuanced, less observable information that is difficult to interpret from external observation alone. Finally, suppose ranking is perceived to affect eligibility for social assistance programs. In that case, poorer households may strategically misrank peers who are close in socio-economic status to improve their own relative chances of receiving benefits. Such incentives are weaker when ranking wealthier households whose eligibility for social programs is clearly limited or nonexistent.

Table 7: Asymmetry of pairwise peers' ranking by relative poverty status

	Rank ( $WBR_{j,v}$ ) based on						
	Household-level			Per capita			Asset wealth
	Total exp.	Food exp.	Non-Food exp.	Total exp.	Food exp.	Non-Food exp.	
<b>Panel A:</b>							
	$Y_{j,i,v} = p_{j,i,v} - WBR_{j,v}$						
<i>Poorer</i> <sub><i>i,v</i></sub>	-5.285*** (0.119)	-5.419*** (0.120)	-5.140*** (0.111)	-5.634*** (0.105)	-5.758*** (0.105)	-5.324*** (0.103)	-4.959*** (0.132)
Constant	5.026*** (0.113)	5.066*** (0.111)	4.901*** (0.111)	4.842*** (0.095)	4.857*** (0.096)	4.816*** (0.100)	4.997*** (0.111)
Self-rank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N obs.	40029	40029	40029	40029	40029	40029	40029
$R^2$	0.134	0.138	0.130	0.145	0.149	0.135	0.124
<b>Panel B:</b>							
	$Y_{j,i,v} =  p_{j,i,v} - WBR_{j,v} $						
<i>Poorer</i> <sub><i>i,v</i></sub>	-0.705*** (0.057)	-0.723*** (0.060)	-0.766*** (0.062)	-0.803*** (0.063)	-0.822*** (0.059)	-0.782*** (0.067)	-0.707*** (0.060)
Constant	6.215*** (0.071)	6.256*** (0.075)	6.212*** (0.078)	6.462*** (0.064)	6.525*** (0.065)	6.331*** (0.070)	6.011*** (0.089)
Self-rank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N obs.	40029	40029	40029	40029	40029	40029	40029
$R^2$	0.007	0.008	0.008	0.009	0.009	0.008	0.007

Authors' calculation. Standard errors in parentheses, clustered at the village level. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . *Poorer*<sub>*i,v*</sub> indicates whether the ranking household *i* (the observer) is poorer than the ranked household *j* according to welfare or wealth (*Poorer*<sub>*i,v*</sub> = 1 if  $WBR_{i,v} < WBR_{j,v}$ ). All regressions include fixed effects for the self-rank of the ranking (observer) households *SelfRank*<sub>*i*</sub>. No other controls are included. Panel B takes the absolute value of the discordance as the dependent variable.

**Household Composition** The correlation between household size and subjective poverty rankings reveals differentiated implications when compared with expenditure-based assessments. Larger households typically show an underestimation of SPR against household-level expenditures. This may reflect higher aggregate consumption demands that aren't adjusted for the number of household members, portraying these households as economically worse off due to the dispersion of per capita resources. Conversely, when assessed against per capita expenditures, the same households often report inflated SPR. Economies of scale are a likely factor here, leading to a seemingly enhanced economic status. Furthermore, when examining the relationship between household composition—both of the observed and observing households—and pairwise rankings (Table A21), we find that in rural areas, larger households tend systematically to receive higher rank positions. This may reflect a perception that larger households benefit from resource pooling, which could be seen as an advantage. However, observers from larger households themselves tend to assign lower rankings. This suggests that similarly sized households may better understand the challenges associated with larger household size and take these into account when evaluating others. The comparative assessment of estimated coefficients for household size in the various regressions (rural sample) clearly shows that larger household size is correlated with a systemic underestimation of households' aggregate expenditure and an overestimation of households' per capita expenditure, irrespective of the subjective ranking considered (Figure A4). With respect to demographic composition, households with more children receive lower rankings, and this perception does not vary with the demographic characteristics of the observers' own households. Interestingly, such patterns are not evident in urban areas (Table A22), where household composition appears to play a more limited role in pairwise rankings. In rural areas, households without adult males receive lower rank positions, and even more so if ranked by households sharing the same characteristic (Table A21). We also find that rural households without adult males tend to rank themselves with a higher discordance with respect to benchmark measures (Table A12). These patterns may relate to the criteria that households may be considering when ranking peers and themselves. If ranking considers households' productive capacity, then the presence or absence of adult males can affect households' relative ranking. For example, [Abay et al. \(2024\)](#) show that when community leaders and elites are given the discretion to define targeting criteria for distributing social assistance, they are more likely to consider the presence and absence of productive labor in

the household.

**Experience with poverty targeting** In urban areas, the elite group composition plays a more important role than in rural areas in determining the discordance between subjective and benchmark rankings. Interestingly, the estimates (Tables A17) point to an opposite effect of elite members' previous involvement in poverty targeting operations and current membership in the Food Security tank force, with the former increasing discordance and the latter being correlated with lower distance between elite and benchmark rankings. This suggests that assessment of needs in community-based targeting might consider dimensions other than expenditure levels and assets.

**Community-based targeting and treatment assignment** We described the community-based targeting treatment groups in Section 2.3. Theoretically, elites may behave and perform differently in the hypothetical and the incentivized targeting involving cash transfer for the simple reason that the former did not allocate a real budget to the ranked households. Similarly, households receiving the cash transfer could adjust their perception of relative welfare accordingly, or be observed by peers as beneficiaries of social assistance. Interestingly, there appears to be no association between the treatment assignment and discordance in self-rankings to benchmark measures, as shown in Table A23. Peers' and elites' rankings seem to be more accurate under the constrained treatment, but the correlation is not statistically significant once we control for additional household and village characteristics.

## 5 Conclusions

This study provides a comprehensive comparative analysis of alternative subjective poverty ranking methods and conventional welfare and wealth measures. We administered three commonly used subjective ranking methods as part of a large household survey in Ethiopia: (i) self-ranking, (ii) peers' ranking, and (iii) elites' ranking. While these methods are widely applied in targeting social protection and welfare programs, a systematic comparison of their accuracy and concordance with conventional welfare outcomes remains limited. We

evaluate the concordance as well as the potential sources of discordance between the three subjective poverty rankings and conventional measures of consumption and wealth. We also offer alternative weighting and aggregation methods to improve the correlation with these subjective poverty ranking methods.

Subjective rankings generally exhibit weak concordance with conventional welfare and wealth measures, but they are more effective at identifying the extremes of the distribution than its middle part. This suggests that these methods are effective in identifying the extremely poor, but less capable of capturing the full welfare distribution. Among the three approaches, elite-based rankings best capture conventional measures of relative poverty, whereas self-rankings show the greatest discordance and a strong tendency to underestimate respondents' own positions. However, combining self-, peer-, and elite-based rankings into aggregate ranks improves accuracy, particularly in urban areas.

Subjective rankings, whether based on self-, peers', or elites' assessments, are generally more concordant with wealth-based indicators than consumption-based measures (Trachtman et al., 2025). In our context, these rankings correlate more strongly with asset-based measures than with expenditure-based measures, likely reflecting the greater temporal stability of assets such as housing, land, and durable goods. In contrast, consumption expenditures fluctuate due to seasonal income, temporary shocks, or short-term financial variability, making them less observable to respondents. Consistent with this, subjective rankings correlate better with current welfare and wealth measures than with past measures, and they align more closely with conventional poverty indicators when deprivation is assessed after covariate shocks. Peer rankings perform particularly well under violent conflict or drought, suggesting that peers may have informational advantages regarding their neighbors' exposure to shocks and their consequences. Similarly, self-rankings capture relative consumption-based poverty more accurately when respondents report a deterioration in expenditure relative to four years prior. These patterns suggest that information updates over time: changes in material conditions can influence both the observation process and the observers' perceptions underlying relative poverty rankings, albeit in asymmetric and heterogeneous ways. Covariate shocks appear to contribute to this dynamic, as we find evidence of reduced socio-economic distance among peers in their aftermath, which may help lower information asymmetry.

The concordance between subjective rankings and welfare-based rankings varies across contexts, including rural versus urban areas, and pastoral versus non-pastoral communities. Elite-based rankings align better with conventional measures in urban areas, whereas self- and peer-based rankings better capture relative asset wealth in rural areas and consumption in urban households. As noted by [Hillebrecht et al. \(2020\)](#), poverty in urban areas tends to be more closely tied to consumption, while rural poverty encompasses additional dimensions that are less consistently reflected in subjective rankings. One factor contributing to these differences is the demographic composition of households – a characteristic that may not be easily observable, which is generally larger in rural areas. In fact, subjective rankings hardly account for economies of scale across households and only weakly capture relative poverty as measured by per capita expenditure. The evidence that these methods correlate better with overall consumption than per capita consumption can imply that they should only be used for household- and not individual-level targeting. Moreover, subjective ranking methods are less accurate among pastoral communities, which is consistent with previous evidence associated with the challenges of targeting in these communities ([Sabates-Wheeler et al., 2013](#)). In pastoral regions, the notion of neediness appears to be grounded in dimensions quite different from conventional economic measures of deprivation.

The strong correlation between deviations of subjective rankings from conventional measures suggests the existence of common underlying factors influencing the discordance. These include information asymmetry and misperception, but also cognitive burden, personal biases, beliefs, or the intention to influence social assistance targeting. Both peers and elites tend to punish unknown households by assigning them a higher rank. Consistent with previous criticisms related to elite capture and favoritism in elite-based targeting ([Bardhan and Mookherjee, 2005](#); [Alatas et al., 2019b](#); [Basurto et al., 2020](#); [Vera-Cossio, 2022](#)), we find evidence of elites' favoritism towards family members, especially in urban areas.

Overall, our results provide important insights into the potential and limitations of subjective poverty rankings in capturing conventional welfare-based ranking measures. The unique comparison of self-, peer-, and elite rankings, along with the analysis of the sources of discrepancy in these rankings, offers important lessons that can inform the targeting of welfare and social protection programs, especially in data-scarce contexts. Although the concordance between these subjective poverty rankings and conventional survey-based

measures of welfare remains weak, the relative accuracy of each method can guide the targeting of programs using these methods.

Finally, future research may investigate what subjective ranking methods actually capture. Similarly, there is a need for more evidence on the stability of subjective rankings over time and their responsiveness to economic shocks and policy interventions. Longitudinal data on subjective poverty rankings are needed to provide valuable insights into the dynamics of poverty perceptions, the effectiveness of interventions, and the psychological and community-level impacts of alternative interventions. These insights are pivotal for designing responsive social protection programs.

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# Appendix

Table A1: Summary statistics

	count	mean	sd	min	max
Primary respondents' characteristics:					
Female	2614	0.27	0.44	0.00	1.00
Married	2614	0.70	0.46	0.00	1.00
No education	2614	0.58	0.49	0.00	1.00
Incomplete or informal education	2614	0.29	0.45	0.00	1.00
Completed primary education	2614	0.05	0.22	0.00	1.00
Secondary or higher education	2614	0.07	0.26	0.00	1.00
Households' characteristics and livelihoods:					
Dependency ratio	2614	0.53	0.25	0.00	1.00
No adult males	2614	0.17	0.38	0.00	1.00
Household from major ethnicity	2614	0.92	0.28	0.00	1.00
Crop farming (1=Yes)	2614	0.80	0.40	0.00	1.00
Own agr. business (1=Yes)	2614	0.08	0.27	0.00	1.00
Agr. waged work (1=Yes)	2614	0.24	0.43	0.00	1.00
Non-agr. waged work (1=Yes)	2614	0.19	0.39	0.00	1.00
Petty trade (1=Yes)	2614	0.09	0.29	0.00	1.00
Salaried work (1=Yes)	2614	0.10	0.30	0.00	1.00
Rent (1=Yes)	2614	0.07	0.26	0.00	1.00
Government assistance(1=Yes)	2614	0.16	0.37	0.00	1.00
Non-governement assistance (1=Yes)	2614	0.02	0.13	0.00	1.00
Remittances (1=Yes)	2614	0.06	0.23	0.00	1.00
Cattle (TLU)	2614	0.28	0.62	0.00	9.50
Other large animals (TLU)	2614	0.53	1.26	0.00	18.75
Sheeps and goats (TLU)	2614	0.43	1.02	0.00	14.30
Poultry (TLU)	2614	0.03	0.05	0.00	0.49
Network characteristics:					
Within-village Gini Index	2614	30.55	6.38	14.31	48.58
Average relationship with peers	2614	2.83	0.93	0.00	4.92
Average distance from peers (km)	2588	1.24	1.55	0.09	15.17
Average relationship with elite	2614	3.36	1.26	0.00	6.00
Distance from the center of the village (km)	2588	2.03	2.46	0.00	24.72
Ethnic Fragmentation index	2614	8.04	16.18	0.00	70.50
Community-Based Targeting Experiment:					
T: Control	2614	0.28	0.45	0.00	1.00
T: Rule-based 20K	2614	0.23	0.42	0.00	1.00
T: Rule-based 10K	2614	0.24	0.43	0.00	1.00
T: Discretionary	2614	0.25	0.43	0.00	1.00
Elite capture (% of budget)	2614	8.22	3.36	0.00	10.00

Authors' calculation.

<sup>a</sup> Within-village Gini Index calculated on per capita total expenditure of households in the village group.

Table A2: Correlation between welfare and wealth-based rankings (WBR)

Rank based on:	HH Total exp.	HH Food exp.	HH Non-food exp.	PC Total exp.	PC Food exp.	PC Non-food exp.	Asset-wealth
Total exp. based rank	1.00						
Food exp. based rank	0.93	1.00					
Non-food exp. based rank	0.62	0.42	1.00				
Total exp. PC based rank	0.66	0.64	0.37	1.00			
Food exp. PC based rank	0.61	0.69	0.18	0.92	1.00		
Non-food exp. PC based rank	0.44	0.25	0.83	0.55	0.33	1.00	
Asset-based rank 2023	0.44	0.37	0.47	0.23	0.17	0.36	1.00

Authors' calculation. Spearman's correlation coefficients.

Table A3: T-test for variable differences in rural and urban sample

	Rural mean	Urban mean	Urban - Rural t-test
Number of households in the village-group	19.95	19.86	0.09
Number of peers providing a rank for the household	16.61	13.95	2.66***
Household size	5.11	4.54	0.57***
Exposed to conflict in 2020-2023	0.34	0.46	-0.12***
Exposed to drought	0.51	0.23	0.28***
Household Total expenditure	135.58	171.34	-35.77***
Per capita Total expenditure	29.54	41.88	-12.35***
Household Food expenditure	97.01	115.26	-18.25***
Per-capita Food expenditure	21.27	28.28	-7.02***
Household Non-food expenditure	31.83	49.59	-17.76***
Per capita Non-food expenditure	6.77	11.99	-5.22***
Household poorer than in 2019	0.56	0.59	-0.02
Female respondent	0.26	0.34	-0.09**
Married respondent	0.71	0.62	0.09**
No education	0.60	0.46	0.14***
Incompleted or informal education	0.29	0.27	0.02
Completed primary education	0.05	0.07	-0.02
Secondary or higher education	0.06	0.20	-0.15***
Dependency ratio	0.52	0.59	-0.07***
No adult males	0.17	0.20	-0.04
Mixed farming household	0.90	0.55	0.35***
Crop farming (1=Yes)	0.86	0.38	0.48***
Own agr. business (1=Yes)	0.08	0.06	0.03
Agr. waged work (1=Yes)	0.26	0.11	0.15***
Non-agr. waged work (1=Yes)	0.17	0.35	-0.18***
Petty trade (1=Yes)	0.08	0.20	-0.12***
Salaried work (1=Yes)	0.08	0.26	-0.19***
Rent (1=Yes)	0.06	0.17	-0.11***
Government assistance(1=Yes)	0.16	0.14	0.03
Non-governement assistance (1=Yes)	0.02	0.01	0.01
Remittances (1=Yes)	0.05	0.09	-0.04*
Cattle (TLU)	0.30	0.20	0.10*
Other large animals (TLU)	0.55	0.35	0.20**
Sheeps and goats (TLU)	0.41	0.54	-0.13
Poultry (TLU)	0.03	0.02	0.01**
Within-village Gini Index	30.72	29.36	1.36***
Average relationship with peers	2.98	1.75	1.23***
Count of related peers	0.70	0.17	0.52***
Count of unknown peers	2.98	6.33	-3.35***
Average distance from peers (km)	1.31	0.73	0.58***
Average relationship with elite	3.42	2.92	0.50***
Distance from the center of the village (km)	2.22	0.63	1.59***
Household from major ethnicity	0.93	0.85	0.08***
Ethnic Fragmentation index	6.38	20.20	-13.82***
Elite capture (% of budget)	8.17	8.66	-0.49**
Observations	2300	314	2614

Authors' calculation. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A4: Rank correlation in urban and rural areas

	Ranking based on:								
	Household level			Per capita			Assets		
	Total exp.	Food exp.	Non-Food exp.	Total exp.	Food exp.	Non-Food exp.	All assets	Visible assets	Livestock (TLU)
<b>Urban sample (314 obs.)</b>									
Self rank	0.18	0.14	0.16	0.09	0.06	0.10	0.17	0.16	0.12
Peers' rank	0.22	0.19	0.22	0.22	0.22	0.24	0.27	0.25	0.20
Elites' rank	0.38	0.35	0.37	0.32	0.27	0.33	0.44	0.40	0.27
AR from interaction	0.37	0.33	0.36	0.30	0.27	0.31	0.43	0.40	0.26
AR from first component	0.37	0.33	0.36	0.30	0.27	0.31	0.43	0.40	0.25
AR from all components	0.42	0.37	0.38	0.33	0.30	0.31	0.45	0.38	0.27
AR from first component for rural/urban	0.37	0.32	0.36	0.29	0.26	0.31	0.43	0.39	0.25
AR from all components for rural/urban	0.42	0.37	0.38	0.33	0.30	0.31	0.43	0.37	0.29
AR with $\omega$ based on household-level exp.	0.38	0.33	0.36	0.31	0.28	0.31	0.44	0.40	0.26
AR with $\omega$ based on per capita exp.	0.38	0.34	0.36	0.31	0.28	0.31	0.44	0.40	0.27
AR with $\omega$ based on assets	0.37	0.33	0.37	0.30	0.27	0.31	0.44	0.40	0.26
<b>Rural sample (2300 obs.)</b>									
Self rank	0.18	0.15	0.19	0.07	0.04	0.13	0.27	0.29	0.27
Peers' rank	0.23	0.20	0.27	0.13	0.09	0.21	0.33	0.35	0.32
Elites' rank	0.30	0.27	0.31	0.18	0.14	0.23	0.34	0.37	0.35
AR from interaction	0.31	0.27	0.34	0.18	0.13	0.26	0.41	0.44	0.41
AR from first component	0.31	0.27	0.34	0.17	0.13	0.26	0.40	0.44	0.41
AR from all components	0.31	0.27	0.33	0.18	0.14	0.25	0.41	0.44	0.41
AR from first component for rural/urban	0.31	0.27	0.34	0.17	0.13	0.26	0.41	0.44	0.41
AR from all components for rural/urban	0.31	0.27	0.33	0.18	0.14	0.25	0.41	0.44	0.41
AR with $\omega$ based on household-level exp.	0.31	0.27	0.34	0.18	0.13	0.26	0.40	0.44	0.41
AR with $\omega$ based on per capita exp.	0.31	0.27	0.34	0.18	0.13	0.26	0.41	0.44	0.41
AR with $\omega$ based on assets	0.31	0.27	0.34	0.17	0.13	0.26	0.41	0.44	0.41

Authors' calculation. Spearman's correlation coefficients. Aggregate rankings are based on all three subjective rankings.

AR is the aggregation of the three subjective rankings: self, peers' and elites'.

$\omega$  is the reliability parameter based on the difference between subjective and welfare- or wealth-based rankings.

Table A5: Rank correlation: mixed farming households vs. pastoral communities

	Ranking based on:							
	Household level			Per capita			Assets-wealth	Livestock (TLU)
	Total exp.	Food exp.	Non-Food exp.	Total exp.	Food exp.	Non-Food exp.		
<b>Pastoral communities (lowlands) (292 obs.)</b>								
Self rank	0.03	0.02	-0.01	-0.02	-0.01	-0.05	-0.02	0.07
Peers' rank	0.09	0.07	0.22	0.11	0.08	0.23	0.22	0.14
Elites' rank	0.20	0.21	0.15	0.22	0.23	0.16	0.18	0.22
AR from interaction	0.22	0.21	0.22	0.17	0.18	0.17	0.19	0.24
AR from first component	0.21	0.20	0.22	0.17	0.16	0.18	0.20	0.23
AR from all components	0.23	0.23	0.20	0.18	0.20	0.15	0.18	0.26
AR from first component for rural/urban	0.21	0.20	0.22	0.17	0.17	0.18	0.20	0.24
AR from all components for rural/urban	0.23	0.22	0.20	0.19	0.20	0.15	0.17	0.27
AR with $\omega$ based on household-level exp.	0.46	0.42	0.39	0.33	0.32	0.31	0.24	0.26
AR with $\omega$ based on per capita exp.	0.38	0.36	0.34	0.42	0.39	0.36	0.24	0.24
AR with $\omega$ based on assets	0.19	0.16	0.26	0.15	0.11	0.22	0.46	0.24
<b>Mixed farming households in non-pastoral regions (highlands) (2073 obs.)</b>								
Self rank	0.20	0.16	0.22	0.09	0.06	0.16	0.30	0.29
Peers' rank	0.24	0.21	0.27	0.13	0.10	0.20	0.34	0.33
Elites' rank	0.30	0.26	0.32	0.17	0.13	0.24	0.36	0.35
AR from interaction	0.31	0.27	0.34	0.18	0.14	0.27	0.43	0.41
AR from first component	0.31	0.27	0.34	0.18	0.13	0.26	0.42	0.41
AR from all components	0.31	0.27	0.33	0.18	0.14	0.26	0.43	0.41
AR from first component for rural/urban	0.31	0.27	0.34	0.17	0.13	0.26	0.42	0.41
AR from all components for rural/urban	0.31	0.27	0.33	0.18	0.14	0.26	0.43	0.41
AR with $\omega$ based on household-level exp.	0.53	0.47	0.49	0.31	0.25	0.36	0.48	0.45
AR with $\omega$ based on per capita exp.	0.45	0.39	0.43	0.41	0.34	0.41	0.43	0.38
AR with $\omega$ based on assets	0.35	0.29	0.39	0.19	0.13	0.29	0.62	0.46

Authors' calculation. Spearmans' correlation coefficients.

AR is the aggregation of the three subjective rankings: self, peers' and elites'.

$\omega$  is the reliability parameter based on the difference between subjective and welfare- or wealth-based rankings.

Table A6: Performance of subjective rankings by exposure to conflict

	Ranking based on:						
	Household level			Per capita			Assets-wealth
	Total exp.	Food exp.	Non-Food exp.	Total exp.	Food exp.	Non-Food exp.	
<b>Exposed to conflict in the previous 3 years (918 obs.)</b>							
Self rank	0.21	0.19	0.19	0.03	0.02	0.09	0.27
Peers' rank	0.39	0.34	0.40	0.16	0.13	0.26	0.43
Elites' rank	0.37	0.34	0.37	0.19	0.17	0.24	0.37
AR from interaction	0.43	0.39	0.42	0.19	0.17	0.28	0.46
AR from first component	0.43	0.39	0.42	0.19	0.17	0.28	0.46
AR from all components	0.41	0.38	0.39	0.20	0.18	0.27	0.44
AR from first component for rural/urban	0.43	0.39	0.42	0.19	0.17	0.28	0.46
AR from all components for rural/urban	0.41	0.38	0.39	0.20	0.17	0.26	0.44
AR with $\omega$ based on household-level exp.	0.60	0.55	0.55	0.29	0.26	0.34	0.51
AR with $\omega$ based on per capita exp.	0.51	0.46	0.48	0.38	0.34	0.40	0.45
AR with $\omega$ based on assets	0.45	0.41	0.46	0.17	0.14	0.28	0.63
<b>Not exposed to conflict in the previous 3 years (1696 obs.)</b>							
Self rank	0.15	0.11	0.17	0.09	0.05	0.14	0.25
Peers' rank	0.16	0.13	0.21	0.14	0.10	0.20	0.28
Elites' rank	0.28	0.25	0.29	0.21	0.16	0.25	0.36
AR from interaction	0.27	0.22	0.31	0.20	0.15	0.27	0.40
AR from first component	0.26	0.22	0.30	0.20	0.15	0.26	0.39
AR from all components	0.28	0.24	0.31	0.20	0.16	0.26	0.40
AR from first component for rural/urban	0.26	0.22	0.30	0.19	0.15	0.26	0.39
AR from all components for rural/urban	0.28	0.24	0.31	0.21	0.16	0.26	0.40
AR with $\omega$ based on household-level exp.	0.51	0.45	0.47	0.36	0.29	0.38	0.46
AR with $\omega$ based on per capita exp.	0.43	0.38	0.41	0.46	0.39	0.43	0.41
AR with $\omega$ based on assets	0.32	0.27	0.37	0.23	0.17	0.32	0.61

Authors' calculation. Spearmans' correlation coefficients. Aggregate rankings are based on all three subjective rankings.

AR is the aggregation of the three subjective rankings: self, peers' and elites'.

$\omega$  is the reliability parameter based on the difference between subjective and welfare- or wealth-based rankings.

Table A7: Performance of subjective rankings by exposure to drought shock

	Ranking based on:						Assets-wealth
	Household level			Per capita			
	Total exp.	Food exp.	Non-Food exp.	Total exp.	Food exp.	Non-Food exp.	
<b>Exposed to drought (1243 obs.)</b>							
Self rank	0.23	0.19	0.22	0.11	0.08	0.16	0.32
Peers' rank	0.34	0.29	0.33	0.20	0.17	0.24	0.40
Elites' rank	0.35	0.31	0.33	0.24	0.20	0.26	0.35
AR from interaction	0.39	0.35	0.38	0.25	0.22	0.29	0.46
AR from first component	0.40	0.35	0.38	0.25	0.21	0.29	0.45
AR from all components	0.38	0.34	0.35	0.25	0.21	0.28	0.45
AR from first component for rural/urban	0.40	0.35	0.38	0.25	0.21	0.29	0.45
AR from all components for rural/urban	0.38	0.34	0.36	0.25	0.21	0.28	0.45
AR with $\omega$ based on household-level exp.	0.58	0.52	0.52	0.38	0.32	0.39	0.49
AR with $\omega$ based on per capita exp.	0.51	0.46	0.46	0.47	0.41	0.43	0.45
AR with $\omega$ based on assets	0.40	0.35	0.41	0.25	0.20	0.32	0.62
<b>Not exposed to drought (1356 obs.)</b>							
Self rank	0.13	0.10	0.15	0.03	0.00	0.09	0.20
Peers' rank	0.15	0.12	0.22	0.09	0.06	0.19	0.27
Elites' rank	0.28	0.25	0.30	0.16	0.12	0.24	0.37
AR from interaction	0.25	0.21	0.32	0.14	0.09	0.25	0.38
AR from first component	0.25	0.21	0.32	0.14	0.09	0.25	0.38
AR from all components	0.27	0.24	0.32	0.16	0.12	0.25	0.39
AR from first component for rural/urban	0.25	0.21	0.32	0.13	0.09	0.25	0.38
AR from all components for rural/urban	0.27	0.24	0.32	0.16	0.12	0.25	0.39
AR with $\omega$ based on household-level exp.	0.50	0.45	0.48	0.30	0.24	0.36	0.47
AR with $\omega$ based on per capita exp.	0.41	0.36	0.42	0.40	0.33	0.42	0.40
AR with $\omega$ based on assets	0.34	0.29	0.39	0.17	0.12	0.29	0.61

Authors' calculation. Spearman's correlation coefficients. Aggregate rankings are based on all three subjective rankings.

AR is the aggregation of the three subjective rankings: self, peers' and elites'.

$\omega$  is the reliability parameter based on the difference between subjective and welfare- or wealth-based rankings.

Table A8: Conditional correlation between shocks and peers' relationships, and within-village variation of welfare and wealth

	Relationship with:		Within-village standard deviation of:		
	Peers (average)	Elite	Total exp. per capita	Food exp. per capita	Asset score
<i>Conflict</i>	0.144 (0.127)	0.118 (0.190)	-1.007 (1.400)	-1.410 (1.185)	-0.234 (0.157)
<i>Drought</i>	0.277** (0.115)	0.053 (0.171)	-2.726** (1.363)	-2.472** (1.113)	0.052 (0.147)
<i>Conflict</i> × <i>Drought</i>	-0.258 (0.183)	-0.135 (0.241)	1.366 (1.867)	1.453 (1.578)	0.106 (0.230)
Urban	-1.186*** (0.153)	-0.511** (0.203)	5.614*** (1.434)	3.414*** (1.180)	0.316** (0.133)
Constant	2.831*** (0.085)	3.373*** (0.134)	19.373*** (1.027)	15.442*** (0.867)	1.388*** (0.107)
N obs.	2599	2599	2599	2599	2599
$R^2$	0.197	0.018	0.113	0.086	0.031

Authors' calculation. OLS estimates. Standard errors clustered at the village level. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . *Conflict* and *Drought* are dummies for the exposure to the shock.

Table A9: Correlation between 2019 and 2023 welfare and wealth-based rankings (WBR)

	Correlation between 2019 and 2023 ranks				
	Total sample	Exposed to conflict		Exposed to drought	
		No	Yes	No	Yes
<b>Ranking based on:</b>					
Household level total exp.	0.27	0.22	0.36	0.29	0.25
Household level food exp.	0.36	0.33	0.41	0.39	0.33
Household level non-food exp.	0.31	0.26	0.41	0.34	0.29
Per capita total exp.	0.18	0.14	0.25	0.21	0.15
Per capita food exp.	0.27	0.27	0.28	0.28	0.26
Per capita non-food exp.	0.22	0.18	0.29	0.25	0.18
Asset wealth	0.46	0.45	0.47	0.49	0.44

Authors' calculation. Spearman's correlation coefficients of variables measured in 2019 and 2023.

Table A10: Correlation of deviations from expenditure-based ranking

	$(SR - WBR^{hh})$	$(PR - WBR^{hh})$	$(ER - WBR^{hh})$	$(SR - WBR^{pc})$	$(PR - WBR^{pc})$	$(ER - WBR^{pc})$
<b>WBR = Total expenditure based-rank</b>						
$(SR - WBR^{hh})$	1.00					
$(PR - WBR^{hh})$	0.56	1.00				
$(ER - WBR^{hh})$	0.47	0.62	1.00			
$(SR - WBR^{pc})$	0.84	0.40	0.32	1.00		
$(PR - WBR^{pc})$	0.40	0.79	0.44	0.60	1.00	
$(ER - WBR^{pc})$	0.30	0.42	0.77	0.53	0.67	1.00
<b>WBR = Food expenditure based-rank</b>						
$(SR - WBR^{hh})$	1.00					
$(PR - WBR^{hh})$	0.58	1.00				
$(ER - WBR^{hh})$	0.49	0.64	1.00			
$(SR - WBR^{pc})$	0.86	0.44	0.36	1.00		
$(PR - WBR^{pc})$	0.43	0.82	0.48	0.61	1.00	
$(ER - WBR^{pc})$	0.34	0.46	0.80	0.54	0.68	1.00
<b>WBR = Non-Food expenditure based-rank</b>						
$(SR - WBR^{hh})$	1.00					
$(PR - WBR^{hh})$	0.54	1.00				
$(ER - WBR^{hh})$	0.46	0.61	1.00			
$(SR - WBR^{pc})$	0.91	0.46	0.39	1.00		
$(PR - WBR^{pc})$	0.46	0.89	0.51	0.57	1.00	
$(ER - WBR^{pc})$	0.37	0.50	0.88	0.50	0.64	1.00

Authors' calculation.  $SR$  = Self-rank;  $PR$  = Peers' rank;  $ER$  = Elites' rank.  $WBR^{hh}$  corresponds to ranking based on household-level expenditure, while  $WBR^{pc}$  is based on per capita expenditure.

Table A11: Correlation of deviations from asset wealth-based ranking

	$(SR - WBR)$	$(PR - WBR)$	$(ER - WBR)$
<b>WBR = Asset wealth-based rank</b>			
$(SR - WBR)$	1.00		
$(PR - WBR)$	0.51	1.00	
$(ER - WBR)$	0.42	0.58	1.00

Authors' calculation.  $SR$  = Self-rank;  $PR$  = Peers' rank;  $ER$  = Elites' rank.  $WBR$  corresponds to ranking based on asset-wealth.

Table A12: Sources of discordance between self and benchmark rankings in rural areas

	Difference between self rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
Respondent's age	0.013 (0.010)	0.005 (0.009)	0.012 (0.010)	0.004 (0.010)	0.013 (0.009)	0.013 (0.009)	0.011 (0.009)
Female respondent	-1.459** (0.691)	-0.517 (0.741)	-1.734** (0.710)	-0.820 (0.727)	-0.284 (0.703)	0.390 (0.727)	-1.759*** (0.644)
Married respondent	-0.674 (0.562)	0.130 (0.595)	-0.897 (0.570)	0.192 (0.587)	0.155 (0.644)	0.828 (0.635)	-1.233** (0.543)
No education	-0.579* (0.331)	-0.573* (0.339)	-0.761** (0.341)	-0.741** (0.348)	-0.205 (0.311)	-0.295 (0.320)	0.626* (0.325)
Household size	-0.445*** (0.084)	1.030*** (0.086)	-0.376*** (0.084)	1.002*** (0.084)	-0.390*** (0.091)	0.607*** (0.088)	-0.068 (0.080)
No adult males	2.430*** (0.651)	1.454** (0.671)	2.396*** (0.675)	1.410** (0.690)	2.172*** (0.618)	1.509** (0.632)	2.098*** (0.629)
Dependency ratio	0.703 (0.598)	0.509 (0.593)	0.952 (0.612)	0.723 (0.606)	0.018 (0.594)	-0.222 (0.601)	1.070* (0.574)
Crop farming	-0.389 (0.539)	-0.277 (0.576)	-0.481 (0.547)	-0.450 (0.568)	-0.111 (0.544)	-0.084 (0.564)	-0.542 (0.500)
Other ag. business	0.647 (0.560)	0.263 (0.554)	0.958* (0.572)	0.628 (0.537)	0.077 (0.566)	0.009 (0.575)	0.259 (0.547)
Agricultural wage	-0.743** (0.362)	-0.607 (0.381)	-0.752** (0.379)	-0.674* (0.381)	-0.998*** (0.374)	-0.867** (0.375)	-0.523 (0.336)
Non-agr. wage	-0.701* (0.397)	-0.502 (0.420)	-0.612 (0.422)	-0.404 (0.415)	-0.991*** (0.377)	-1.009*** (0.385)	-1.133*** (0.385)
Petty trade	0.283 (0.580)	0.497 (0.570)	0.495 (0.572)	0.677 (0.562)	0.027 (0.595)	0.304 (0.595)	-0.960* (0.547)
Salaried work	-0.112 (0.583)	-0.460 (0.590)	-0.018 (0.582)	-0.497 (0.601)	0.222 (0.528)	0.068 (0.526)	0.340 (0.526)
Rent	-0.334 (0.618)	-0.254 (0.633)	-0.355 (0.603)	-0.103 (0.622)	-0.484 (0.647)	-0.460 (0.684)	-0.475 (0.629)
Remittances	0.912 (0.718)	0.589 (0.753)	0.910 (0.779)	0.832 (0.790)	0.354 (0.677)	0.378 (0.679)	0.124 (0.692)
Government assistance	0.019 (0.425)	-0.006 (0.453)	-0.219 (0.426)	-0.295 (0.446)	0.292 (0.452)	0.317 (0.487)	0.129 (0.394)
NGO assistance	-0.076 (0.952)	-0.507 (0.911)	-0.538 (0.841)	-0.955 (0.903)	-0.635 (1.249)	-0.751 (1.266)	-0.595 (0.956)

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Table A12 continues from previous page

	Difference between self rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
Cattle (TLU)	0.322 (0.233)	0.451** (0.207)	0.410* (0.232)	0.548** (0.213)	0.380 (0.251)	0.314 (0.256)	0.055 (0.202)
Other large animals (TLU)	0.076 (0.129)	0.052 (0.131)	0.079 (0.137)	0.002 (0.139)	0.130 (0.135)	0.090 (0.132)	-0.086 (0.161)
Sheeps and goats (TLU)	0.445** (0.185)	0.306 (0.191)	0.505*** (0.184)	0.405** (0.197)	0.484*** (0.177)	0.372** (0.163)	0.562*** (0.181)
Poultry (TLU)	-2.252 (3.110)	-0.970 (3.296)	-1.972 (3.201)	-0.602 (3.311)	-0.578 (3.443)	-0.325 (3.452)	-10.398*** (3.130)
Average rel. with peers	-0.034 (0.216)	-0.090 (0.226)	0.038 (0.222)	-0.036 (0.226)	-0.166 (0.206)	-0.303 (0.205)	-0.160 (0.238)
Major ethnicity	0.620 (0.654)	1.173* (0.618)	0.805 (0.668)	1.386** (0.637)	0.450 (0.608)	0.680 (0.616)	0.933 (0.601)
Ethnic fragmentation	0.002 (0.010)	0.019* (0.011)	0.005 (0.010)	0.022** (0.011)	0.000 (0.010)	0.011 (0.010)	0.006 (0.010)
Dist. from village center	-0.006 (0.070)	-0.030 (0.080)	-0.024 (0.072)	-0.057 (0.083)	0.001 (0.056)	0.018 (0.059)	-0.028 (0.062)
Related to elite members	0.920 (0.695)	0.944 (0.735)	0.816 (0.703)	0.826 (0.738)	0.765 (0.724)	1.067 (0.708)	-0.236 (0.664)
Within-village Gini index	-0.023 (0.024)	-0.032 (0.027)	-0.021 (0.025)	-0.029 (0.027)	-0.028 (0.024)	-0.036 (0.025)	-0.036 (0.024)
Exposed to drought	-0.424 (0.331)	-0.276 (0.351)	-0.390 (0.336)	-0.273 (0.352)	-0.494 (0.319)	-0.406 (0.324)	-0.736** (0.317)
Exposed to conflict	-0.457 (0.500)	-0.475 (0.517)	-0.373 (0.486)	-0.461 (0.505)	-0.477 (0.532)	-0.468 (0.542)	-0.642 (0.482)
Order in list	0.071*** (0.025)	0.075*** (0.024)	0.072*** (0.027)	0.074*** (0.026)	0.074*** (0.023)	0.074*** (0.024)	0.085*** (0.024)
T: Discretionary	-0.103 (0.408)	-0.224 (0.411)	-0.150 (0.405)	-0.260 (0.412)	0.037 (0.407)	-0.047 (0.405)	0.051 (0.399)
T: Rule-based 10k	0.378 (0.452)	0.211 (0.447)	0.356 (0.448)	0.210 (0.447)	0.327 (0.450)	0.198 (0.438)	0.191 (0.438)
T: Rule-based 20k	-0.309 (0.444)	-0.538 (0.442)	-0.348 (0.443)	-0.587 (0.442)	-0.136 (0.445)	-0.289 (0.437)	-0.207 (0.436)
Constant	-0.894 (2.025)	-9.133*** (2.171)	-1.353 (2.034)	-8.483*** (2.183)	-2.799 (1.898)	-8.374*** (1.944)	-3.605* (1.854)
N obs.	2191	2191	2191	2191	2191	2191	2191
$R^2$	0.196	0.242	0.181	0.242	0.195	0.202	0.206

Authors' calculation. Standard errors clustered at the village level. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Additional controls: dummies for enumerators.

Table A13: Sources of discordance between self and benchmark rankings in urban areas

	Difference between self rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
Respondent's age	0.002 (0.045)	-0.006 (0.049)	-0.013 (0.046)	-0.012 (0.051)	-0.000 (0.046)	0.008 (0.047)	0.009 (0.048)
Female respondent	-0.428 (1.351)	-0.504 (1.386)	0.495 (1.365)	0.508 (1.519)	-2.706* (1.504)	-2.250 (1.440)	-0.982 (1.326)
Married respondent	-0.660 (1.226)	0.017 (1.375)	-0.848 (1.277)	-0.471 (1.353)	-0.294 (1.317)	0.877 (1.578)	0.907 (1.062)
No education	0.722 (1.557)	0.582 (1.481)	0.762 (1.539)	0.358 (1.461)	1.611 (1.575)	1.449 (1.621)	1.828 (1.612)
Household size	-0.349 (0.306)	0.993*** (0.333)	-0.323 (0.308)	0.960** (0.353)	-0.301 (0.339)	0.668** (0.320)	-0.182 (0.323)
No adult males	-0.267 (1.457)	-0.899 (1.731)	-1.038 (1.559)	-1.445 (1.667)	0.177 (1.588)	0.671 (1.726)	1.154 (1.390)
Dependency ratio	1.021 (2.011)	0.827 (2.647)	1.468 (1.958)	0.936 (2.376)	1.122 (2.156)	0.981 (2.567)	0.511 (1.901)
Crop farming	1.261 (1.239)	0.844 (1.251)	1.508 (1.271)	0.964 (1.335)	1.281 (0.838)	1.297 (0.942)	0.815 (0.809)
Other ag. business	-3.774* (2.004)	-4.206* (2.200)	-3.584 (2.390)	-4.163 (2.603)	-5.113** (1.901)	-5.677*** (1.825)	-2.096 (1.735)
Agricultural wage	-4.181** (1.965)	-3.490 (2.246)	-4.373** (2.115)	-4.053* (2.001)	-3.076 (1.902)	-2.050 (2.063)	-3.382* (1.825)
Non-agr. wage	-0.395 (0.937)	-0.349 (0.878)	0.055 (1.007)	0.305 (1.027)	-0.978 (0.762)	-0.859 (0.781)	-0.853 (0.923)
Petty trade	-2.356 (1.403)	-2.517 (1.569)	-2.843* (1.502)	-2.813* (1.554)	-1.332 (1.413)	-0.858 (1.511)	-2.776** (1.334)
Salaried work	-3.524*** (1.140)	-2.863** (1.090)	-3.388*** (1.209)	-2.842** (1.129)	-2.983*** (1.050)	-2.152* (1.099)	-2.710*** (0.883)
Rent	1.663 (1.346)	0.984 (1.437)	1.928 (1.435)	1.619 (1.545)	1.157 (1.366)	0.291 (1.464)	0.765 (1.034)
Remittances	-1.596 (2.329)	-0.386 (2.580)	-1.102 (2.482)	-1.248 (2.659)	0.085 (2.217)	0.695 (2.292)	-2.792 (2.106)
Government assistance	-0.929 (1.070)	-0.587 (1.008)	-1.240 (1.025)	-0.503 (1.057)	-0.372 (1.157)	0.012 (1.002)	-0.269 (1.210)
NGO assistance	-9.060 (5.351)	-5.878 (5.119)	-10.576* (5.279)	-5.622 (4.967)	-9.815 (5.922)	-8.134 (5.930)	-9.297*** (2.908)

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Table A13 continues from previous page

	Difference between self rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
Cattle (TLU)	0.381 (0.690)	0.356 (0.644)	0.164 (0.743)	0.412 (0.780)	0.235 (0.593)	0.187 (0.600)	-0.269 (0.535)
Other large animals (TLU)	0.019 (0.702)	0.184 (0.622)	0.086 (0.685)	0.318 (0.689)	-0.072 (0.696)	0.132 (0.655)	-0.059 (0.589)
Sheeps and goats (TLU)	0.053 (0.242)	0.114 (0.249)	0.115 (0.309)	0.102 (0.276)	0.105 (0.252)	0.128 (0.270)	0.245 (0.187)
Poultry (TLU)	-2.843 (6.079)	0.069 (5.487)	-0.269 (5.980)	3.344 (6.221)	-0.048 (6.666)	1.588 (6.662)	-1.350 (5.958)
Average rel. with peers	-0.563 (0.617)	-0.639 (0.722)	-0.686 (0.599)	-0.606 (0.677)	-0.546 (0.686)	-0.553 (0.733)	-0.681 (0.622)
Major ethnicity	1.788 (1.302)	2.152 (1.431)	1.592 (1.600)	1.089 (1.601)	2.597* (1.283)	3.002** (1.210)	1.364 (1.307)
Ethnic fragmentation	0.081* (0.042)	0.104** (0.049)	0.079* (0.042)	0.085 (0.050)	0.103** (0.037)	0.109** (0.043)	0.081* (0.040)
Dist. from village center	0.870* (0.439)	0.773* (0.398)	1.002** (0.399)	0.897** (0.414)	0.525 (0.486)	0.613 (0.458)	0.900* (0.466)
Related to elite members	-5.327*** (1.624)	-6.385*** (1.809)	-6.185*** (1.707)	-6.554*** (1.805)	-3.920* (2.125)	-3.496* (1.776)	-1.227 (1.153)
Within-village Gini index	-0.004 (0.098)	0.019 (0.108)	0.013 (0.104)	0.016 (0.113)	-0.031 (0.077)	-0.026 (0.085)	0.003 (0.089)
Exposed to drought	2.427 (1.647)	0.812 (2.019)	2.204 (1.641)	0.279 (1.981)	3.525** (1.463)	1.934 (1.775)	1.953 (1.549)
Exposed to conflict	-1.260 (1.015)	-1.283 (1.095)	-0.982 (1.088)	-1.300 (1.184)	-1.313 (0.897)	-1.287 (0.960)	-1.318 (0.954)
Order in list	0.159 (0.093)	0.158 (0.111)	0.170* (0.097)	0.147 (0.113)	0.159 (0.093)	0.174* (0.099)	0.142* (0.081)
T: Discretionary	1.183 (1.377)	0.252 (1.622)	0.900 (1.504)	0.163 (1.706)	1.237 (1.281)	0.494 (1.448)	0.806 (1.567)
T: Rule-based 10k	0.249 (1.615)	0.732 (2.091)	0.120 (1.680)	0.774 (2.126)	-0.186 (1.484)	0.393 (1.795)	0.361 (1.773)
T: Rule-based 20k	-2.587 (1.817)	-3.838** (1.761)	-2.379 (2.098)	-3.554* (1.844)	-3.329** (1.509)	-4.277** (1.543)	-2.043 (1.524)
Constant	6.654 (4.412)	-0.811 (4.789)	6.019 (4.407)	-0.012 (4.791)	8.614 (5.584)	1.686 (6.037)	5.999* (3.436)
N obs.	298	298	298	298	298	298	298
$R^2$	0.455	0.446	0.441	0.438	0.454	0.445	0.483

Authors' calculation. Standard errors clustered at the village level. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Additional controls: dummies for enumerators.

Table A14: Sources of discordance between peers' and benchmark rankings in rural areas

	Difference between peers' rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
Household size	-0.403*** (0.074)	1.055*** (0.076)	-0.335*** (0.076)	1.039*** (0.078)	-0.329*** (0.079)	0.655*** (0.078)	-0.058 (0.068)
Dependency ratio	-0.191 (0.612)	-0.274 (0.610)	-0.003 (0.621)	-0.069 (0.613)	-0.663 (0.564)	-0.919 (0.567)	0.318 (0.567)
No adult males	0.228 (0.420)	-0.515 (0.454)	-0.025 (0.441)	-0.781* (0.451)	0.629 (0.426)	0.110 (0.457)	0.347 (0.431)
Crop farming	-0.997** (0.415)	-0.639 (0.412)	-1.107*** (0.412)	-0.876** (0.416)	-0.444 (0.422)	-0.183 (0.431)	-1.243*** (0.440)
Other ag. business	0.262 (0.488)	-0.137 (0.479)	0.418 (0.476)	0.048 (0.490)	0.128 (0.471)	-0.006 (0.480)	0.031 (0.427)
Agricultural wage	-0.507* (0.290)	-0.395 (0.317)	-0.503 (0.307)	-0.408 (0.329)	-0.617** (0.287)	-0.518* (0.299)	-0.205 (0.259)
Non-agr. wage	0.120 (0.361)	0.359 (0.378)	0.168 (0.369)	0.397 (0.377)	-0.134 (0.371)	-0.171 (0.370)	-0.412 (0.343)
Petty trade	-0.414 (0.547)	-0.194 (0.487)	-0.165 (0.553)	0.000 (0.514)	-0.686 (0.542)	-0.381 (0.521)	-1.817*** (0.490)
Salaried work	-0.979** (0.470)	-1.214** (0.481)	-0.902* (0.481)	-1.278** (0.514)	-0.505 (0.528)	-0.633 (0.536)	-0.794* (0.478)
Rent	-1.184** (0.510)	-1.057* (0.558)	-1.119** (0.511)	-0.822 (0.553)	-1.508*** (0.492)	-1.416** (0.554)	-1.066** (0.519)
Remittances	-0.281 (0.650)	-0.523 (0.675)	-0.485 (0.675)	-0.574 (0.722)	-0.344 (0.525)	-0.485 (0.587)	-1.453** (0.592)
Government assistance	-0.582 (0.360)	-0.632 (0.397)	-0.738** (0.364)	-0.857** (0.398)	-0.513 (0.363)	-0.556 (0.393)	-0.463 (0.358)
NGO assistance	0.174 (0.686)	0.123 (0.958)	-0.109 (0.791)	-0.147 (1.028)	-0.285 (0.677)	-0.209 (0.731)	0.277 (0.831)
Cattle (TLU)	-0.030 (0.233)	0.143 (0.263)	0.055 (0.238)	0.261 (0.279)	0.044 (0.218)	0.033 (0.260)	-0.315* (0.167)
Other large animals (TLU)	0.012 (0.081)	-0.006 (0.080)	0.011 (0.086)	-0.053 (0.088)	0.056 (0.085)	0.040 (0.086)	-0.139 (0.117)
Sheeps and goats (TLU)	0.004 (0.172)	-0.171 (0.139)	0.022 (0.176)	-0.120 (0.143)	0.075 (0.179)	-0.051 (0.154)	0.108 (0.142)
Poultry (TLU)	-0.035 (2.749)	2.140 (3.126)	0.531 (2.892)	2.758 (3.144)	1.208 (2.749)	2.109 (3.031)	-8.120*** (2.453)

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	Difference between self rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
Average rel. with peers	-1.015*** (0.158)	-1.238*** (0.159)	-0.977*** (0.163)	-1.210*** (0.161)	-1.086*** (0.168)	-1.327*** (0.167)	-1.201*** (0.179)
Average dist. from peers	-0.021 (0.069)	-0.135* (0.069)	-0.046 (0.066)	-0.151** (0.068)	-0.026 (0.074)	-0.105 (0.072)	-0.086 (0.086)
Major ethnicity	0.117 (0.443)	-0.121 (0.440)	0.190 (0.425)	0.060 (0.449)	0.002 (0.495)	-0.234 (0.472)	0.200 (0.426)
Ethnic fragmentation	-0.006 (0.006)	0.007 (0.005)	-0.006 (0.005)	0.007 (0.006)	-0.005 (0.005)	0.004 (0.005)	-0.007 (0.005)
Within-village Gini index	0.012 (0.010)	-0.009 (0.013)	0.010 (0.010)	-0.008 (0.013)	0.013 (0.011)	-0.003 (0.011)	-0.005 (0.012)
Exposed to drought	0.202 (0.146)	0.387** (0.168)	0.232* (0.139)	0.404** (0.170)	0.197 (0.147)	0.340** (0.159)	0.131 (0.155)
Exposed to conflict	-0.217 (0.160)	0.370* (0.196)	-0.178 (0.158)	0.339* (0.199)	-0.121 (0.162)	0.314* (0.173)	-0.070 (0.168)
Order in list	0.152*** (0.026)	0.153*** (0.026)	0.152*** (0.028)	0.152*** (0.027)	0.158*** (0.023)	0.157*** (0.023)	0.163*** (0.024)
T: Discretionary	0.047 (0.188)	-0.216 (0.236)	0.031 (0.175)	-0.222 (0.234)	0.062 (0.192)	-0.127 (0.210)	0.016 (0.198)
T: Rule-based 10k	0.220 (0.176)	-0.148 (0.215)	0.206 (0.165)	-0.132 (0.215)	0.210 (0.178)	-0.052 (0.194)	0.105 (0.181)
T: Rule-based 20k	0.013 (0.194)	-0.269 (0.227)	-0.001 (0.185)	-0.264 (0.227)	0.031 (0.182)	-0.178 (0.196)	-0.007 (0.197)
Constant	4.272*** (0.907)	-1.892* (1.016)	3.786*** (0.885)	-1.943* (1.017)	3.742*** (0.977)	0.144 (1.028)	3.934*** (0.931)
N obs.	2267	2267	2267	2267	2267	2267	2267
$R^2$	0.081	0.157	0.066	0.153	0.083	0.101	0.096

Authors' calculation.

Table A15: Sources of discordance between peers' and benchmark rankings in urban areas

	Difference between peers' rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
Household size	-0.576**	0.639***	-0.539**	0.586**	-0.529*	0.383	-0.504**
	(0.241)	(0.219)	(0.224)	(0.210)	(0.289)	(0.235)	(0.209)
Dependency ratio	0.617	-0.661	1.173	-0.136	0.166	-0.807	-0.327
	(1.037)	(1.316)	(1.131)	(1.105)	(1.189)	(1.619)	(1.298)
No adult males	1.495	0.745	1.367	0.467	1.102	0.804	0.444
	(0.874)	(0.898)	(0.975)	(0.916)	(0.889)	(0.977)	(0.888)
Crop farming	0.032	0.034	0.079	-0.012	-0.064	0.215	-0.369
	(0.892)	(0.886)	(0.948)	(0.939)	(0.639)	(0.674)	(0.733)
Other ag. business	-0.607	-0.645	-0.511	-0.959	-1.236	-1.745	0.256
	(0.950)	(1.111)	(1.124)	(1.321)	(1.005)	(1.063)	(1.236)
Agricultural wage	-0.693	-0.113	-0.702	-0.304	-0.200	0.505	-0.791
	(1.565)	(1.672)	(1.593)	(1.546)	(1.066)	(1.222)	(0.984)
Non-agr. wage	-0.938	-0.540	-0.556	0.005	-1.670*	-1.305	-1.283
	(0.657)	(0.631)	(0.621)	(0.584)	(0.820)	(0.829)	(0.912)
Petty trade	-0.913	-0.941	-1.189	-1.105	-0.171	0.380	-1.593
	(0.882)	(0.790)	(0.861)	(0.736)	(1.078)	(1.003)	(0.945)
Salaried work	-1.548**	-1.173*	-1.326*	-1.118	-1.498**	-0.944	-1.481**
	(0.621)	(0.661)	(0.698)	(0.767)	(0.545)	(0.666)	(0.651)
Rent	-0.382	-0.452	-0.053	0.220	-0.893	-1.302	-1.073
	(1.147)	(1.087)	(1.150)	(1.161)	(1.086)	(0.941)	(0.894)
Remittances	-1.336	-0.392	-0.985	-0.815	-1.071	-0.482	-2.800**
	(1.029)	(0.898)	(1.185)	(1.119)	(1.149)	(0.922)	(1.073)
Government assistance	-0.315	-0.089	-0.418	-0.026	0.400	0.626	0.569
	(0.728)	(0.659)	(0.828)	(0.672)	(0.907)	(0.859)	(0.736)
NGO assistance	-2.266**	-0.978	-4.067***	-1.581	-0.628	0.089	-1.106
	(1.024)	(1.121)	(1.128)	(1.174)	(1.097)	(1.042)	(1.259)
Cattle (TLU)	0.115	-0.119	-0.030	0.022	-0.213	-0.393	-0.550
	(0.568)	(0.486)	(0.413)	(0.375)	(0.731)	(0.756)	(0.733)
Other large animals (TLU)	0.061	0.409	0.037	0.399	0.141	0.502	0.095
	(0.294)	(0.295)	(0.296)	(0.281)	(0.380)	(0.343)	(0.359)
Sheeps and goats (TLU)	-0.216	-0.219	-0.143	-0.237	-0.181	-0.231	0.137
	(0.163)	(0.152)	(0.186)	(0.154)	(0.123)	(0.138)	(0.181)
Poultry (TLU)	-4.570	0.153	-2.985	1.842	-0.908	2.149	-2.381
	(5.258)	(5.055)	(4.569)	(4.098)	(6.225)	(5.589)	(5.638)

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Table A15 continues from previous page

	Difference between self rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
Average rel. with peers	-0.549 (0.322)	-0.713* (0.381)	-0.592 (0.369)	-0.605 (0.399)	-0.478 (0.288)	-0.615* (0.340)	-0.776** (0.351)
Average dist. from peers	0.290 (0.204)	0.021 (0.178)	0.297 (0.255)	0.105 (0.178)	0.127 (0.175)	0.019 (0.188)	-0.256 (0.206)
Major ethnicity	-0.365 (0.977)	-0.267 (0.906)	-0.666 (0.925)	-1.010 (0.708)	0.067 (1.216)	0.362 (1.050)	0.069 (1.057)
Ethnic fragmentation	-0.002 (0.010)	-0.004 (0.013)	-0.007 (0.011)	-0.009 (0.012)	0.005 (0.010)	0.002 (0.013)	0.014 (0.009)
Within-village Gini index	0.009 (0.030)	0.008 (0.032)	0.010 (0.033)	0.013 (0.032)	0.007 (0.026)	-0.003 (0.025)	0.000 (0.026)
Exposed to drought	0.995* (0.558)	-0.387 (0.455)	0.933* (0.530)	-0.400 (0.441)	1.235** (0.532)	0.069 (0.543)	1.209** (0.466)
Exposed to conflict	0.095 (0.364)	0.197 (0.414)	0.156 (0.385)	0.139 (0.409)	-0.020 (0.323)	0.076 (0.354)	0.078 (0.290)
Order in list	0.078 (0.081)	0.086 (0.083)	0.093 (0.086)	0.083 (0.086)	0.088 (0.075)	0.111 (0.081)	0.097 (0.075)
T: Discretionary	0.791 (0.563)	0.271 (0.558)	0.759 (0.586)	0.045 (0.588)	0.992* (0.568)	0.605 (0.609)	0.974* (0.515)
T: Rule-based 10k	0.362 (0.482)	0.703 (0.708)	0.406 (0.515)	0.567 (0.682)	0.299 (0.423)	0.590 (0.591)	0.133 (0.421)
T: Rule-based 20k	0.205 (0.448)	0.125 (0.649)	0.257 (0.497)	0.141 (0.581)	0.232 (0.486)	0.052 (0.661)	0.144 (0.466)
Constant	2.829 (1.724)	-1.657 (1.810)	2.334 (1.858)	-1.424 (1.604)	2.393 (2.035)	-1.348 (2.093)	3.797* (1.895)
N obs.	306	306	306	306	306	306	306
$R^2$	0.141	0.082	0.129	0.073	0.116	0.074	0.141

Authors' calculation. Standard errors clustered at the village level. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A16: Sources of discordance between elites' and benchmark rankings in rural areas

	Difference between elites' rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
Household size	-0.501*** (0.074)	1.059*** (0.068)	-0.426*** (0.076)	1.044*** (0.069)	-0.426*** (0.082)	0.624*** (0.080)	-0.111* (0.066)
No adult males	-0.194 (0.400)	-0.818* (0.452)	-0.453 (0.427)	-1.097** (0.468)	0.249 (0.439)	-0.186 (0.460)	-0.082 (0.445)
Dependency ratio	-0.720 (0.589)	-1.087* (0.634)	-0.504 (0.624)	-0.849 (0.663)	-1.345** (0.569)	-1.829*** (0.618)	-0.385 (0.585)
Crop farming	-0.698* (0.401)	-0.698* (0.383)	-0.857** (0.413)	-1.003** (0.415)	-0.094 (0.407)	-0.130 (0.408)	-1.206*** (0.416)
Other ag. business	0.012 (0.449)	-0.258 (0.459)	0.186 (0.463)	-0.080 (0.470)	-0.177 (0.428)	-0.220 (0.436)	-0.261 (0.513)
Agricultural wage	0.020 (0.307)	0.108 (0.328)	0.038 (0.325)	0.108 (0.348)	-0.124 (0.327)	-0.026 (0.343)	0.320 (0.301)
Non-agr. wage	-0.542 (0.366)	-0.330 (0.371)	-0.490 (0.397)	-0.294 (0.391)	-0.778** (0.361)	-0.869** (0.367)	-1.203*** (0.367)
Petty trade	0.015 (0.520)	0.175 (0.517)	0.264 (0.514)	0.353 (0.511)	-0.250 (0.540)	0.006 (0.521)	-1.491*** (0.413)
Salaried work	-0.495 (0.421)	-0.715 (0.464)	-0.407 (0.447)	-0.756 (0.493)	-0.056 (0.506)	-0.099 (0.520)	-0.202 (0.423)
Rent	-0.371 (0.494)	-0.338 (0.547)	-0.299 (0.499)	-0.095 (0.557)	-0.728 (0.478)	-0.717 (0.527)	-0.437 (0.508)
Remittances	0.449 (0.568)	0.135 (0.578)	0.234 (0.584)	0.091 (0.606)	0.249 (0.524)	0.174 (0.551)	-0.966* (0.529)
Government assistance	-1.166*** (0.315)	-1.233*** (0.349)	-1.344*** (0.336)	-1.492*** (0.367)	-1.021*** (0.302)	-1.108*** (0.316)	-1.089*** (0.307)
NGO assistance	-0.049 (0.683)	-0.138 (0.907)	-0.361 (0.825)	-0.433 (1.002)	-0.576 (0.569)	-0.500 (0.599)	-0.132 (1.053)
Cattle (TLU)	-0.142 (0.234)	-0.062 (0.248)	-0.058 (0.236)	0.063 (0.262)	-0.064 (0.198)	-0.146 (0.226)	-0.472** (0.190)
Other large animals (TLU)	0.109 (0.149)	0.072 (0.150)	0.115 (0.149)	0.030 (0.156)	0.153 (0.136)	0.116 (0.147)	-0.080 (0.117)
Sheeps and goats (TLU)	-0.008 (0.182)	-0.160 (0.145)	0.026 (0.186)	-0.086 (0.161)	0.099 (0.170)	-0.013 (0.161)	0.180 (0.148)
Poultry (TLU)	-2.336 (2.534)	-2.366 (2.884)	-1.893 (2.783)	-1.594 (2.943)	-1.288 (2.678)	-1.977 (2.796)	-12.284*** (2.944)

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Table A16 continues from previous page

	Difference between self rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
Major ethnicity	-0.241 (0.669)	-0.073 (0.730)	-0.107 (0.694)	0.168 (0.775)	-0.357 (0.673)	-0.406 (0.671)	0.203 (0.605)
Ethnic fragmentation	-0.002 (0.005)	0.001 (0.005)	-0.000 (0.005)	0.003 (0.006)	-0.003 (0.004)	-0.001 (0.004)	-0.002 (0.004)
Distance from village center	-0.025 (0.038)	-0.032 (0.043)	-0.051 (0.035)	-0.068 (0.045)	0.021 (0.035)	0.034 (0.038)	-0.000 (0.034)
Known vs unknown	-1.821*** (0.559)	-1.512*** (0.552)	-1.518*** (0.536)	-1.276** (0.560)	-2.347*** (0.677)	-2.257*** (0.693)	-2.261*** (0.562)
Friend vs unknown	-1.929*** (0.585)	-1.295** (0.563)	-1.691*** (0.548)	-1.205** (0.562)	-2.099*** (0.719)	-1.810** (0.728)	-2.458*** (0.581)
Family member vs unknown	-1.201* (0.676)	-0.898 (0.697)	-1.012 (0.652)	-0.858 (0.712)	-1.912** (0.800)	-1.657* (0.848)	-2.781*** (0.716)
N. of members with targeting experience	-0.012 (0.043)	-0.071 (0.067)	-0.010 (0.040)	-0.070 (0.069)	0.014 (0.044)	-0.028 (0.053)	-0.029 (0.045)
N. of members in Food Security task force	0.065** (0.031)	-0.017 (0.048)	0.053* (0.030)	-0.023 (0.048)	0.065** (0.029)	0.011 (0.037)	0.021 (0.033)
Share of females elite members	0.004 (0.008)	0.003 (0.014)	0.003 (0.007)	0.001 (0.014)	0.006 (0.006)	0.007 (0.011)	0.003 (0.007)
Average number of years spent in village by elite	-0.004 (0.006)	0.018* (0.011)	-0.001 (0.006)	0.019* (0.011)	-0.000 (0.007)	0.013 (0.008)	0.001 (0.007)
Elite richer than average	-0.177 (0.199)	0.109 (0.233)	-0.145 (0.203)	0.122 (0.250)	-0.151 (0.177)	0.033 (0.156)	0.034 (0.205)
Elite slightly poorer than average	-0.016 (0.134)	-0.018 (0.163)	0.013 (0.126)	0.029 (0.165)	-0.083 (0.120)	-0.113 (0.129)	-0.173 (0.137)
Elite much poorer than average	-0.054 (0.204)	0.246 (0.268)	-0.053 (0.185)	0.227 (0.270)	-0.083 (0.206)	0.139 (0.268)	-0.092 (0.237)
Within-village Gini index	-0.010 (0.007)	0.001 (0.012)	-0.012* (0.007)	-0.001 (0.012)	-0.005 (0.008)	0.003 (0.009)	-0.019** (0.008)
Exposed to drought	0.242 (0.176)	0.042 (0.179)	0.232 (0.178)	0.026 (0.184)	0.225 (0.178)	0.065 (0.170)	0.088 (0.208)
Exposed to conflict	0.005 (0.182)	0.100 (0.257)	0.061 (0.176)	0.089 (0.249)	-0.017 (0.161)	0.083 (0.205)	-0.019 (0.138)

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Table A16 continues from previous page

	Difference between self rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
Order in list	0.150*** (0.029)	0.152*** (0.029)	0.150*** (0.031)	0.151*** (0.030)	0.155*** (0.027)	0.155*** (0.027)	0.163*** (0.029)
Elite's capture (% of budget)	-0.023 (0.014)	0.038* (0.020)	-0.019 (0.014)	0.039* (0.020)	-0.028** (0.013)	0.014 (0.016)	-0.002 (0.013)
T: Discretionary	0.119 (0.122)	-0.107 (0.201)	0.071 (0.115)	-0.146 (0.208)	0.224* (0.128)	0.087 (0.160)	0.255* (0.134)
T: Rule-based 10k	0.106 (0.113)	-0.082 (0.177)	0.074 (0.105)	-0.096 (0.181)	0.124 (0.114)	0.002 (0.138)	0.102 (0.118)
T: Rule-based 20k	0.118 (0.132)	-0.303 (0.185)	0.070 (0.130)	-0.319 (0.194)	0.212 (0.131)	-0.081 (0.160)	0.186 (0.144)
Constant	4.456*** (1.109)	-3.864*** (1.213)	3.737*** (1.112)	-3.804*** (1.287)	3.648*** (1.130)	-1.488 (1.203)	3.947*** (1.125)
N obs.	2260	2260	2260	2260	2260	2260	2260
$R^2$	0.071	0.156	0.056	0.152	0.068	0.086	0.078

Authors' calculation. Additional controls: dummies for enumerators. Standard errors clustered at the village level. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A17: Sources of discordance between elites' and benchmark rankings in urban areas

	Difference between elites' rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
Household size	-0.482** (0.196)	0.920*** (0.211)	-0.451** (0.218)	0.837*** (0.242)	-0.408* (0.214)	0.617*** (0.167)	-0.324 (0.236)
No adult males	1.555* (0.853)	0.851 (0.778)	1.418 (0.966)	0.519 (0.862)	1.324* (0.658)	1.061 (0.757)	0.596 (0.753)
Dependency ratio	-0.859 (1.056)	-2.674* (1.368)	-0.356 (1.061)	-2.106* (1.172)	-1.419 (1.458)	-2.728 (1.839)	-2.074 (1.267)
Crop farming	0.300 (0.846)	0.019 (0.987)	0.302 (0.885)	0.033 (0.963)	0.216 (0.708)	0.432 (0.714)	-0.402 (0.629)
Other ag. business	-2.448* (1.230)	-2.544* (1.406)	-2.306* (1.319)	-2.769 (1.619)	-3.288** (1.391)	-3.939*** (1.297)	-1.943* (1.021)
Agricultural wage	0.475 (1.245)	0.752 (1.265)	0.444 (1.180)	0.466 (1.202)	1.134 (0.919)	1.673* (0.905)	0.652 (0.760)
Non-agr. wage	-0.328 (0.779)	0.039 (0.904)	0.210 (0.910)	0.780 (0.931)	-1.174 (0.786)	-0.900 (0.906)	-0.962* (0.493)
Petty trade	-1.859** (0.822)	-1.983* (0.997)	-2.190** (0.894)	-2.175** (1.045)	-1.062 (0.706)	-0.463 (0.752)	-2.502*** (0.585)
Salaried work	0.471 (0.713)	0.477 (0.714)	0.671 (0.826)	0.536 (0.825)	0.550 (0.733)	0.839 (0.767)	0.467 (0.662)
Rent	-0.212 (0.836)	-0.463 (0.748)	0.241 (0.850)	0.360 (0.857)	-0.850 (0.590)	-1.424** (0.537)	-1.228* (0.679)
Remittances	-0.440 (1.230)	0.328 (1.221)	0.005 (1.561)	-0.120 (1.616)	-0.163 (0.842)	0.180 (0.734)	-1.962* (1.125)
Government assistance	-1.459 (0.952)	-1.316 (0.992)	-1.541 (0.965)	-1.199 (1.017)	-1.103 (1.039)	-0.895 (1.063)	-0.685 (0.763)
NGO assistance	-4.996*** (0.873)	-3.896*** (0.885)	-6.895*** (0.905)	-4.493*** (0.935)	-2.978** (1.148)	-2.481** (0.945)	-4.161*** (0.850)
Cattle (TLU)	0.711** (0.310)	0.494 (0.326)	0.527 (0.443)	0.576 (0.387)	0.442 (0.400)	0.251 (0.477)	0.085 (0.377)
Other large animals (TLU)	0.334 (0.290)	0.459 (0.348)	0.295 (0.303)	0.456 (0.335)	0.444 (0.280)	0.660* (0.336)	0.333 (0.233)
Sheeps and goats (TLU)	-0.524*** (0.142)	-0.532*** (0.137)	-0.407*** (0.142)	-0.514*** (0.137)	-0.547*** (0.104)	-0.582*** (0.136)	-0.126 (0.156)
Poultry (TLU)	-4.344 (5.959)	-2.197 (6.071)	-3.120 (5.198)	0.183 (6.498)	-0.455 (5.264)	1.598 (6.003)	-3.588 (4.277)

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Table A17 continues from previous page

	Difference between self rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
Major ethnicity	-0.699 (1.557)	-0.299 (1.574)	-1.239 (1.553)	-1.372 (1.680)	0.121 (1.333)	0.798 (1.312)	-0.133 (1.050)
Ethnic fragmentation	-0.078 (0.146)	-0.189 (0.129)	-0.191 (0.141)	-0.250* (0.125)	0.061 (0.144)	0.008 (0.122)	-0.106 (0.087)
Distance from village center	0.042 (0.509)	0.280 (0.441)	0.408 (0.499)	0.387 (0.439)	-0.236 (0.490)	-0.133 (0.404)	0.343 (0.326)
Known vs unknown	-4.777*** (0.858)	-5.042*** (0.977)	-4.757*** (1.095)	-5.647*** (1.116)	-4.418*** (0.825)	-4.896*** (0.869)	-4.070*** (0.587)
Friend vs unknown	-5.405*** (0.829)	-5.203*** (0.761)	-5.388*** (0.858)	-5.370*** (0.888)	-5.413*** (1.075)	-5.451*** (0.904)	-5.509*** (0.552)
Family member vs unknown	-6.212* (3.195)	-6.840** (3.072)	-6.517*** (2.129)	-7.043*** (2.430)	-5.002 (3.807)	-4.831 (3.682)	-3.994 (3.264)
N. of members with targeting experience	0.829 (2.006)	3.604* (1.763)	1.919 (1.940)	3.369* (1.756)	1.641 (1.815)	3.070* (1.603)	1.549 (1.184)
N. of members in Food Security task force	-2.493 (2.556)	-5.316** (2.228)	-4.030 (2.478)	-5.457** (2.227)	-2.592 (2.346)	-3.946* (2.035)	-2.968* (1.482)
Share of females elite members	0.240* (0.131)	0.150 (0.128)	0.169 (0.146)	0.145 (0.129)	0.282** (0.129)	0.208* (0.120)	0.142 (0.087)
Average number of years spent in village by elite	0.253 (0.359)	-0.191 (0.322)	0.019 (0.358)	-0.081 (0.326)	0.034 (0.323)	-0.113 (0.290)	-0.094 (0.269)
Elite richer than average	7.581** (2.733)	1.739 (3.047)	6.015* (3.038)	2.579 (2.982)	7.711** (2.794)	3.577 (2.688)	3.976* (2.252)
Elite slightly poorer than average	7.169* (4.134)	9.323** (3.861)	10.151** (3.780)	11.552*** (3.880)	3.043 (3.941)	3.036 (3.589)	6.163** (2.627)
Elite much poorer than average							
Within-village Gini index	-0.342* (0.194)	-0.029 (0.193)	-0.242 (0.210)	-0.161 (0.202)	-0.060 (0.171)	0.069 (0.165)	-0.020 (0.158)
Exposed to drought	-0.304 (1.260)	1.503 (1.524)	-0.901 (1.265)	-1.439 (1.547)	7.197*** (1.311)	7.250*** (1.203)	1.595 (1.071)
Exposed to conflict	-0.683 (4.200)	3.958 (3.742)	2.728 (4.120)	4.681 (3.662)	-2.759 (4.145)	-0.565 (3.516)	1.657 (2.633)

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Table A17 continues from previous page

	Difference between self rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
Order in list	0.035	0.054	0.045	0.043	0.047	0.077	0.050
	(0.052)	(0.061)	(0.055)	(0.062)	(0.044)	(0.052)	(0.048)
Elite's capture (% of budget)	0.473	-0.298	0.304	-0.020	-0.160	-0.530	-0.056
	(0.394)	(0.381)	(0.405)	(0.386)	(0.350)	(0.327)	(0.269)
T: Discretionary	-0.144	4.314	1.480	2.779	3.094	4.920*	3.422
	(3.110)	(2.770)	(3.128)	(2.809)	(2.804)	(2.461)	(2.024)
T: Rule-based 10k	-1.053	2.254	0.930	1.694	-0.358	1.044	2.475
	(3.506)	(3.167)	(3.685)	(3.190)	(3.240)	(2.843)	(2.349)
T: Rule-based 20k	-0.295	5.410	3.270	4.866	2.584	5.307	3.574
	(6.467)	(5.719)	(6.633)	(5.765)	(5.901)	(5.313)	(3.898)
Constant	-1.652	-0.022	1.842	-0.307	-2.315	-3.520	3.400
	(6.812)	(6.082)	(6.786)	(5.886)	(6.372)	(5.642)	(4.973)
N obs.	313	313	313	313	313	313	313
$R^2$	0.220	0.252	0.212	0.233	0.188	0.229	0.207

Authors' calculation. Additional controls: dummies for enumerators. Standard errors clustered at the village level. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A18: Relationships between observers and households

Observers' relationship with the household:	Observer:			
	Peers		Elites	
	Freq.	Percent	Freq.	Percent
0 – Unknown household	8810	20.69	74	2.83
1 – Not familiar at all	2433	5.71	152	5.81
2 – Known but never interacted with	2865	6.73	317	12.13
3 – Have talked to a family member infrequently	8906	20.92	734	28.08
4 – Have talked to a family member frequently	13140	30.86	999	38.22
5 – Close friend of family member	4764	11.19	232	8.88
6 – Family member / related	1655	3.89	106	4.06
<b>Average</b>		2.85 (1.80)		3.36 (1.25)
<b>N. observations</b>		42573		2614

Authors' calculation. Degree of relationship as reported by the observer. Peers' relationship is reported in pairwise terms. Elite members provided an aggregate relationship status for each household.

Table A19: Pairwise peers' relationship and discordance with benchmark rankings

	Difference between Pairwise Rank and rank based on:			
	Total exp.	Food exp.	Non-food exp.	Assets
<b>Reference category:</b> (4) Frequently talked with				
(0) Unknown household	4.638*** (0.312)	4.570*** (0.310)	4.628*** (0.314)	4.583*** (0.329)
(1) Not familiar at all	2.570*** (0.268)	2.722*** (0.265)	2.581*** (0.305)	2.860*** (0.299)
(2) Known but never interacted with	0.702*** (0.230)	0.670*** (0.227)	0.688*** (0.230)	0.679*** (0.216)
(3) Infrequently talked with	0.314** (0.133)	0.345** (0.136)	0.269** (0.128)	0.183 (0.139)
(5) Close friend of family member	-0.294 (0.252)	-0.179 (0.242)	-0.436* (0.243)	-0.574** (0.247)
(6) Family member/related	-1.897*** (0.159)	-1.838*** (0.158)	-1.936*** (0.161)	-2.062*** (0.153)
N obs.	45187	45187	45187	45187
$R^2$	0.089	0.085	0.092	0.098

Authors' calculation. Pairwise ranking is the rank position received by every ranking household in the village-group. Standard errors clustered at the village level. Constant term and fixed effect for ranking households included in the model. Expenditure-based rankings are based on aggregate household-level consumption. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table A20: Performance of subjective rankings by within-village inequality

	Ranking based on:						
	Household level			Per capita			Assets-wealth
	Total exp.	Food exp.	Non-Food exp.	Total exp.	Food exp.	Non-Food exp.	
<b>Within-village Gini Index above the median (1304 obs.)</b>							
Self rank	0.13	0.10	0.12	0.06	0.04	0.09	0.21
Peers' rank	0.20	0.18	0.23	0.11	0.08	0.17	0.32
Elites' rank	0.27	0.25	0.26	0.18	0.15	0.21	0.30
AR from interaction	0.28	0.25	0.30	0.18	0.15	0.24	0.38
AR from first component	0.28	0.25	0.30	0.17	0.15	0.24	0.38
AR from all components	0.29	0.26	0.29	0.20	0.17	0.24	0.38
AR from first component for rural/urban	0.28	0.25	0.30	0.17	0.14	0.24	0.38
AR from all components for rural/urban	0.29	0.26	0.29	0.20	0.17	0.24	0.38
AR with $\omega$ based on household-level exp.	0.52	0.47	0.46	0.34	0.29	0.36	0.45
AR with $\omega$ based on per capita exp.	0.44	0.40	0.40	0.43	0.38	0.40	0.40
AR with $\omega$ based on assets	0.33	0.29	0.35	0.20	0.16	0.27	0.57
<b>Within-village Gini Index below the median (1310 obs.)</b>							
Self rank	0.22	0.17	0.23	0.08	0.03	0.15	0.30
Peers' rank	0.28	0.23	0.32	0.19	0.15	0.26	0.35
Elites' rank	0.36	0.32	0.37	0.23	0.18	0.28	0.42
AR from interaction	0.36	0.31	0.40	0.22	0.17	0.31	0.45
AR from first component	0.36	0.31	0.40	0.22	0.16	0.30	0.45
AR from all components	0.36	0.31	0.38	0.21	0.16	0.29	0.46
AR from first component for rural/urban	0.36	0.31	0.39	0.21	0.16	0.30	0.45
AR from all components for rural/urban	0.36	0.31	0.38	0.21	0.16	0.29	0.46
AR with $\omega$ based on household-level exp.	0.56	0.50	0.53	0.34	0.27	0.38	0.51
AR with $\omega$ based on per capita exp.	0.47	0.41	0.47	0.44	0.36	0.44	0.46
AR with $\omega$ based on assets	0.40	0.34	0.45	0.22	0.16	0.34	0.66

Authors' calculation. Spearmans' correlation coefficients. Aggregate rankings are based on all three subjective rankings.

AR is the aggregation of the three subjective rankings: self, peers' and elites'.

$\omega$  is the reliability parameter based on the difference between subjective and welfare- or wealth-based rankings.

Table A21: Households' composition and pairwise peers' ranking: Rural sample

	(1)	(2)	(3)	(4)	(5)	(6)
			Pairwise ranking			
Household size	0.250*** (0.046)	0.257*** (0.047)	0.481*** (0.062)	0.421*** (0.065)	0.415*** (0.065)	0.185*** (0.041)
Household size of observer		-0.048*** (0.010)	0.177*** (0.044)		-0.027** (0.013)	
Household size $\times$ Household size of observer			-0.043*** (0.008)			
Number of children under 5				-0.367*** (0.092)	-0.360*** (0.095)	
Observers' number of under 5					0.017 (0.027)	
Number of children 5-14				-0.248*** (0.076)	-0.227*** (0.077)	
Observer's number of 5-14					-0.032 (0.023)	
Number of adults over 65				-0.100 (0.153)	-0.124 (0.154)	
Observers' number of over 65					0.039 (0.042)	
No adult males						-0.638*** (0.240)
Observer's no adult males						0.390*** (0.074)
No adult males $\times$ Observer's no adult males						-1.495*** (0.242)
Constant	9.034*** (0.234)	9.231*** (0.210)	8.099*** (0.290)	8.837*** (0.246)	8.992*** (0.224)	9.446*** (0.209)
N obs.	40493	38375	38375	40493	38375	38375
$R^2$	0.009	0.009	0.011	0.012	0.012	0.013

Authors' calculation. Pairwise ranking is the rank position received by every ranking household in the village-group. Standard errors clustered at the village level. No other controls are included. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table A22: Households' composition and pairwise peers' ranking: Urban sample

	(1)	(2)	(3)	(4)	(5)	(6)	
			Pairwise ranking				
Household size	-0.023 (0.096)	-0.045 (0.100)	0.164 (0.148)	0.013 (0.142)	-0.007 (0.144)	-0.061 (0.085)	
Household size of observer		0.002 (0.040)	0.211 (0.132)		0.066 (0.061)		
Household size $\times$ Household size of observer			-0.045* (0.025)				
Number of children under 5				-0.060 (0.132)	-0.042 (0.162)		
Observers' number of under 5					-0.189* (0.102)		
Number of children 5-14				-0.075 (0.150)	-0.081 (0.157)		
Observer's number of 5-14					-0.083 (0.094)		
Number of adults over 65				-0.347 (0.398)	-0.419 (0.432)		
Observers' number of over 65					0.014 (0.230)		
No adult males						0.159 (0.288)	
Observer's no adult males						0.280 (0.302)	
No adult males $\times$ Observer's no adult males						-1.363** (0.525)	
Constant	10.036*** (0.462)	10.109*** (0.438)	9.178*** (0.686)	10.047*** (0.502)	10.042*** (0.481)	10.182*** (0.428)	
N obs.	4694	4268	4268	4694	4268	4268	
$R^2$	0.000	0.000	0.002	0.001	0.002	0.002	

Authors' calculation. Pairwise ranking is the rank position received by every ranking household in the village-group. Standard errors clustered at the village level. No other controls are included. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table A23: Discordance between subjective and benchmark rankings due to treatment allocation

	Absolute difference between subjective rank and rank based on:						
	Total exp.		Food exp.		Non-Food exp.		Asset wealth
	HH	PC	HH	PC	HH	PC	
	<b>Subjective rank: Self-rank</b>						
Constrained	-0.111 (0.246)	-0.202 (0.253)	-0.137 (0.248)	-0.263 (0.255)	0.080 (0.245)	0.125 (0.248)	0.172 (0.239)
Discretionary	-0.297 (0.245)	-0.294 (0.253)	-0.323 (0.248)	-0.208 (0.255)	-0.153 (0.244)	-0.014 (0.247)	-0.254 (0.238)
Hypothetical	0.171 (0.238)	-0.077 (0.245)	0.148 (0.240)	-0.084 (0.247)	0.293 (0.237)	0.213 (0.240)	0.204 (0.231)
Constant	5.101*** (0.256)	5.856*** (0.264)	5.246*** (0.259)	5.888*** (0.266)	4.976*** (0.255)	5.389*** (0.258)	4.697*** (0.249)
N obs.	2614	2614	2614	2614	2614	2614	2614
$R^2$	0.013	0.007	0.012	0.007	0.011	0.006	0.012
	<b>Subjective rank: Peers' rank</b>						
Constrained	-0.399* (0.210)	-0.488** (0.219)	-0.437** (0.215)	-0.506** (0.223)	-0.423** (0.208)	-0.548** (0.217)	-0.164 (0.205)
Discretionary	-0.298 (0.209)	-0.368* (0.218)	-0.276 (0.214)	-0.299 (0.222)	-0.466** (0.207)	-0.453** (0.217)	0.094 (0.204)
Hypothetical	-0.269 (0.203)	-0.305 (0.211)	-0.212 (0.207)	-0.262 (0.215)	-0.250 (0.201)	-0.311 (0.210)	0.204 (0.198)
Constant	4.186*** (0.219)	5.255*** (0.228)	4.310*** (0.224)	5.234*** (0.232)	4.179*** (0.216)	5.013*** (0.226)	3.573*** (0.213)
N obs.	2614	2614	2614	2614	2614	2614	2614
$R^2$	0.019	0.018	0.018	0.021	0.020	0.011	0.021
	<b>Subjective rank: Elites' rank</b>						
Constrained	-0.630*** (0.203)	-0.474** (0.216)	-0.817*** (0.206)	-0.685*** (0.218)	-0.040 (0.204)	0.092 (0.212)	-0.164 (0.202)
Discretionary	-0.318 (0.203)	-0.209 (0.215)	-0.417** (0.205)	-0.315 (0.217)	-0.006 (0.204)	0.013 (0.212)	0.037 (0.201)
Hypothetical	-0.204 (0.197)	-0.112 (0.209)	-0.271 (0.199)	-0.222 (0.211)	0.197 (0.197)	0.203 (0.205)	0.144 (0.195)
Constant	4.594*** (0.212)	5.355*** (0.225)	4.785*** (0.215)	5.611*** (0.227)	4.092*** (0.213)	4.725*** (0.221)	4.239*** (0.210)
N obs.	2614	2614	2614	2614	2614	2614	2614
$R^2$	0.011	0.012	0.017	0.019	0.007	0.006	0.008

OLS regression with region dummies. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

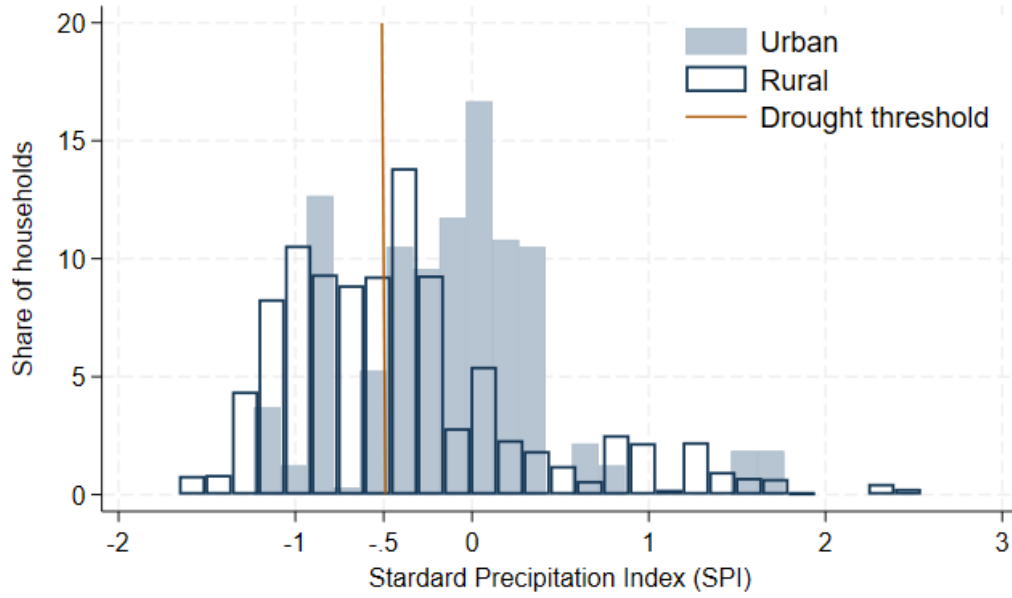


Figure A1: Standard Precipitation Index distribution

Source: authors' elaboration.

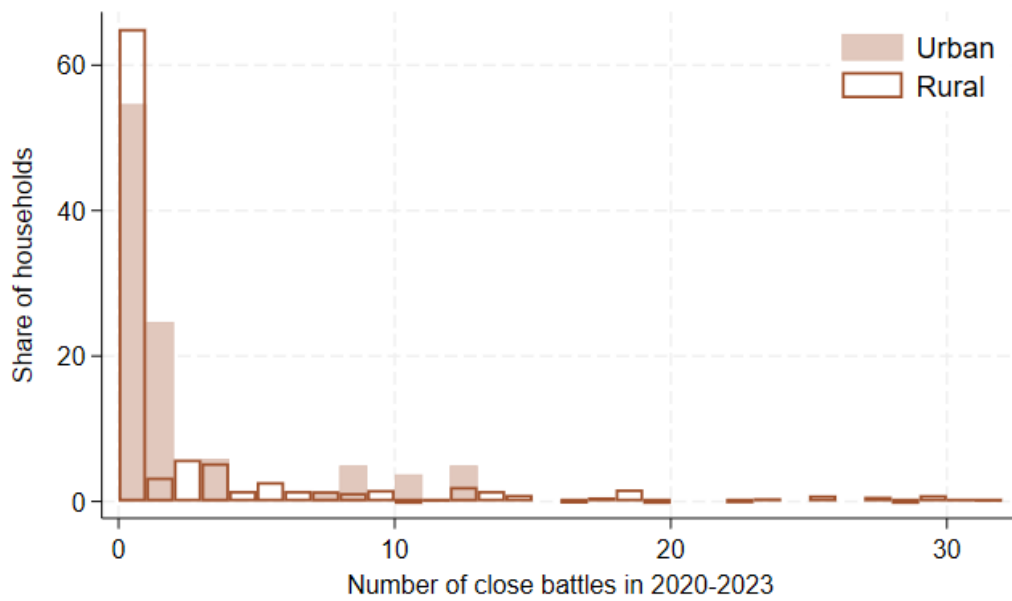


Figure A2: ACLED battles distribution

Source: authors' elaboration.

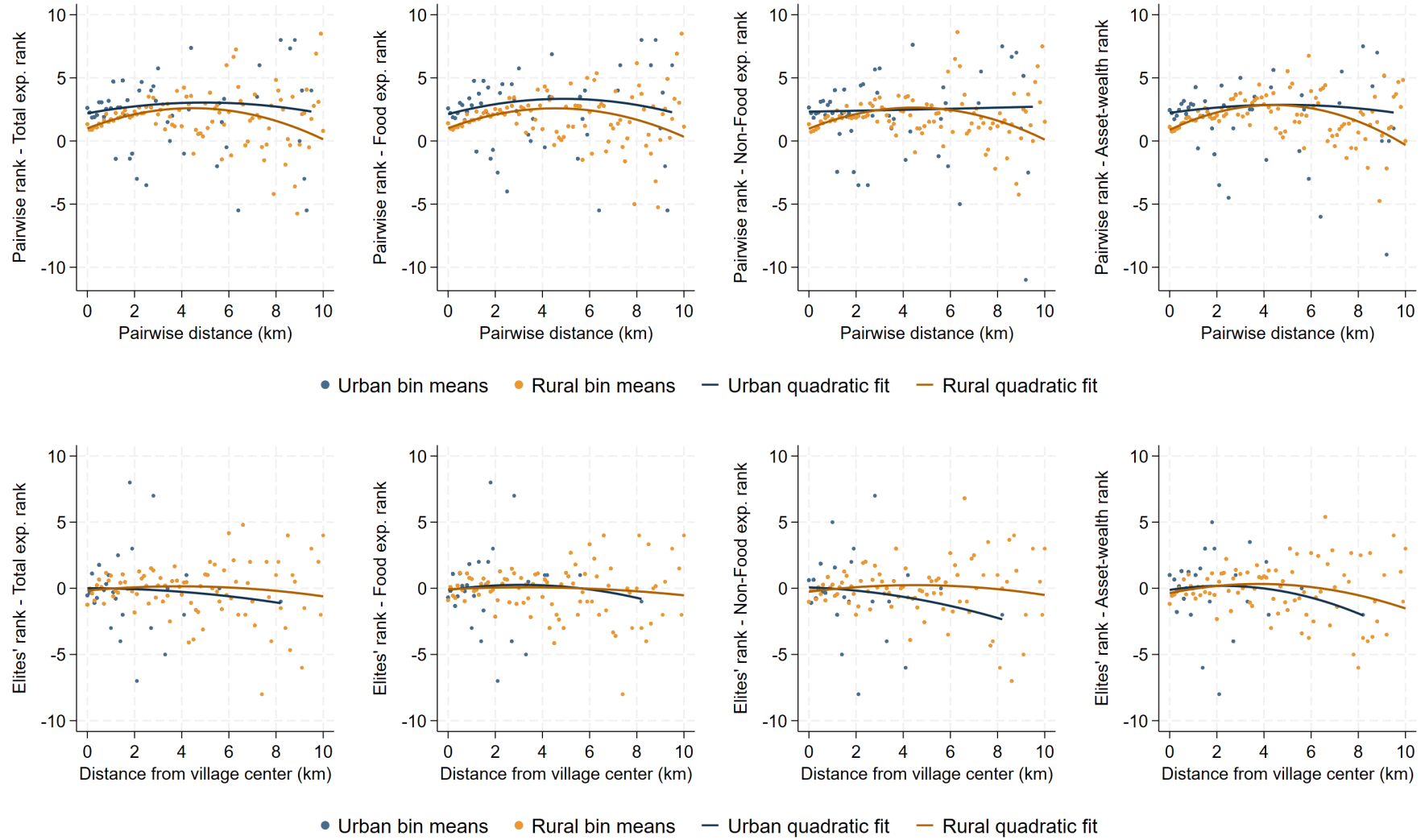


Figure A3: Discrepancies between subjective and benchmark rankings by distance from peers and village center

Source: authors' elaboration. Distance is trimmed at 10 km to exclude outliers.

Household size coefficient estimates:

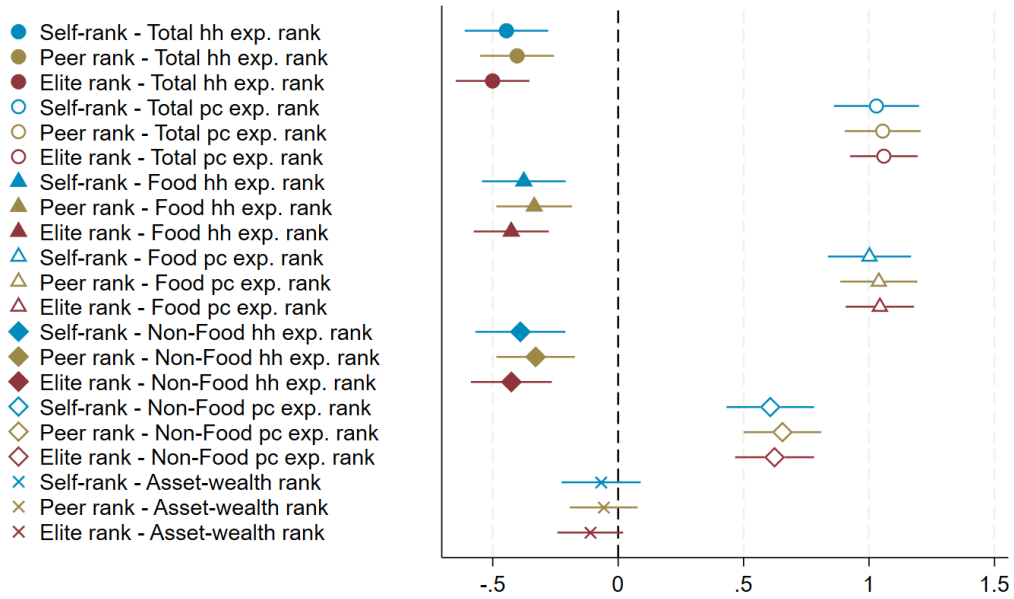


Figure A4: Coefficient plot for household size - Rural sample.

The plot shows the estimated coefficient for *Household size* included as an independent variable in the regressions whose estimates are presented in Tables A12, A14, and A16. All the tables refer to the rural sample. A negative (positive) coefficient implies that the subjective ranking of households is underestimated (overestimated) relative to their ranking based on expenditure or wealth.

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