Online Appendix

The Fading Treatment Effects of a Multi-Faceted Asset-Transfer Program in Ethiopia

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Appendix A: Price Conversions

We convert prices across waves using a local price index, based on the prices that respondents report spending on goods of food in the consumption module of the household surveys.

Specifically, we build our price index using all good-unit pairs (e.g., beer bottles of cooking oil) purchased by at least five households in each of the four waves. This restriction leaves us with 22 good-unit pairs. For each good-unit pair, we calculate the median purchase price per unit (which we use as our price in the price index), and the mean amount purchased (which we use as our quantity).[1] With these values, we construct a single Fisher price index for each wave. We estimate price indices of 151, 164 and 186 for our two-, three- and seven-year surveys, respectively (with our baseline survey standardized to 100).

As a comparison, the Consumer Price Index in Ethiopia for the three follow-up years (standardizing 2010 to 100), are 156, 168, and 240, respectively. These numbers suggest that national inflation is in line with locally observed inflation in our two- and three-year surveys, but that national inflation is substantially higher by 2017.

We first use our constructed indices to convert all values from ETB in the survey year to 2010 ETB. We then convert these values to 2021 USD PPP by multiplying by 4.28, the 2010 ETB-2010 USD PPP exchange rate (per the World Bank). Finally, we multiply this value by (271.0/218.1), the ratio of the US consumer price index in 2021 over the US consumer price index in 2010.

The divergence between local and national price indices matters for the interpretation of treatment and control group trends for financial outcomes by year seven (albeit not the ratio of treatment to control group means in each wave). A higher CPI by year seven (as implied by national prices) implies lower living standards for both treatment and control households than estimated in our main results.

In assessing the relative appropriateness of local prices versus the national CPI to adjust for prices, our evaluation is that using local prices leads to a more accurate measure than do national prices. There are three reasons for this assessment.

First, there are two measures that we are able to measure especially well in real terms: livestock ownership and asset wealth. For these two measures, we can therefore compare the trajectory of these measures in real terms for treatment and control households against estimates using local and national prices, and assess the relative performance of these two price indices against the real measures.

For livestock ownership, we measure the total stock held by individuals using Tropical Livestock Units, a measure that imposes a relative value of animals based on their metabolic weight (which in turn closely correlates with their value in livestock markets. For example, a cattle is valued at 0.7 TLU, a goat at 0.1). This measure therefore captures the evolution of livestock wealth in real

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[1] We use medians for prices, to limit the potential influence of outliers. However, we use means rather than medians for quantities, because for most of these goods, the median amount purchased is equal to zero.

(metabolic weight-based) terms, and offers a chance to interrogate whether local food prices or the national price index better align with this measure. We present the TLU evolution for treatment and control households in Panel A of Appendix Figure 1, the same evolution in local price terms in Panel B, and with the national CPI in Panel C. Panels A and B show very strong agreement regarding how livestock ownership has evolved over the study years, while Panel C in contrast would imply livestock wealth has significantly declined.

Similarly, for (non-livestock) asset ownership, we observe the actual quantities of each asset type owned by each individual, and their estimate of its value if they were to sell it today. We therefore create a single price for each good (taking median prices across waves), and multiply the number of each good a given household owns by the (cross-wave) median valuation. This approach applies the same unit price of each good across waves (e.g., we assign all beds the value of $153.91 in every wave, and every bicycle a value of $182.77). If anything, this "real value" might understate gains in wealth over time, because it doesn't allow for quality improvements (despite the fact that we might expect e.g., one mobile phone in 2017 to be more valuable than one mobile phone in 2010), and thus potentially advantages the national CPI when validating the two measures.

We plot the growth of "Real Asset Wealth" in Panel A of Appendix Figure 2, and our estimates of asset wealth using local and national prices in Panels B and C (all values are standardized such that the two-year mean is equal to 1). Here, the pattern is less striking than for livestock, albeit still more consistent with local prices better capturing real wealth than national prices do. For control households, the trajectory for real wealth and wealth using local prices is very similar. For treatment households, the real wealth is directionally similar, although treatment wealth in year seven grows faster when measured with local prices than with constant prices. Again, national CPI implies a very different trajectory from what is found with real wealth—it suggests declining wealth in years three and seven for both groups, steeply so for treatment households. This comparison again suggests to us that local prices better correspond to real living standards than the national CPI does.

Second, on non-price-based measures of food security-based wellbeing, we observe results consistent with household living standards increasing rather than decreasing between years three and seven. On our food security index, control households have improved by 0.28 standard deviations (measured in terms of baseline variance of food security) between years three and seven. For example, while 17% of control households reported that children skipped meals due to a lack of food in the last 12 months at the three-year mark, that number had fallen to 7% by year seven. Similarly, the total share of consumption allocated to the consumption of grains—a measure of proximity to subsistence (Subramanian and Deaton 1996)—fell from 42% to 31% between years three and seven. Treatment households also experienced gains on these measures between years three and seven: treatment food security rose by 0.17 standard deviations, the share of households with children who skipped meals fell from 12% to 6%, and the share of expenditure on grains fell from 38% to 30%.

In Appendix Figure 3, we plot our food security index in Panel A, the share of consumption on non-grain goods in Panel B, per capita consumption using our local price index in Panel C, and per capita consumption using the national CPI in Panel D. Again, the use of the local price index

seems to capture the evolution of the real outcomes well, while the national prices suggest a meaningful deviation from the real outcomes in year 7.

Finally, food itself represents a sizable share of total consumption by households. For control households, food consumption represents 65%, 64% and 57% of total consumption at years two, three and seven, respectively. These numbers thus offer a de facto bound of sorts on the degree to which local prices are failing to capture the basket of prices faced by these poor households— it seems very likely that the prices *actually paid* by these individuals for food is a better measure to them of the cost of food than a measure that uses the national price index, and which suggests a very different evolution of living standards.

These three assessments thus lead us to believe that local prices better capture the living standards of households in our sample than do national prices, and thus that our local price index is appropriate.

For completeness, for key financial outcomes (asset wealth, per capita consumption, livestock revenues, agricultural profits, livestock purchases, livestock sales, and financial savings), we also report estimates using the national CPI in Appendix Table A27, to allow readers to assess how our patterns differ when using the national CPI.

For our comparisons of the results in Ethiopia to those in India in Appendix Tables A4 to A6, we are unable to build a similar price index across waves in India. In the household survey data in India, very few expenditures were measured in terms of physical quantities—respondents were instead asked to aggregate and report the value of consumption goods at the group level (e.g., "total value of cereals and cereal products consumed in the last 30 days"). Given this, we instead take the values in BDS (reported in 2017 USD PPP) and multiply by the ratio of the US Consumer Price Index in 2021 over the US Consumer Price Index in 2017.

Appendix B: Variable Construction

This section details the construction of the variables used in the paper.

i. Outcomes forming part of Indexed Family Outcomes

Figure 1 and Appendix Table A4 report means and treatment effects of indexed family outcomes. Eight outcomes are reported in Figure 1; these eight plus the additional two indices (that we did not present in the figure, due to space constraints) are reported in Appendix Table A4.

Indexed family outcomes are listed in bold.

Asset Ownership is equal to the aggregate value of all assets owned by the household. This includes livestock, other productive assets (e.g. farm tools, sewing machines), and durable goods (such as phones, televisions, and furniture). In the two-, three-, and seven-year surveys, individuals are asked to estimate the price they could receive if they sold the item today. We sum up the value across all of these assets. At baseline, individuals report their ownership of goods, but do not estimate the value. We therefore recover estimates of their baseline value by taking the (inflation-adjusted) median value of each asset type across the three waves with data and multiplying this median price by quantities owned.

In Figure 1 and Appendix Table A4, we standardize the values, such that the baseline sample has mean 0 and standard deviation 1. In Appendix Table A6, we report the value (and its component parts) in USD PPP.

Our measure of **per capita consumption** is the aggregate of: (1) the value of all food consumed, equal to the quantities consumed multiplied by the median purchase price in the sample (asked about in the last month), (2) other expenditures incurred, such as school fees, soap, and home repairs (asked about in both the last month and last year, depending on the good in question), and (3) the total purchase value of durable goods in the last 12 months. All values are scaled to be monthly values.

Our baseline measure of consumption differs in two ways from post-intervention measures. At baseline, individuals were asked to estimate both (a) the value of food consumed from home production, and (b) total purchases of the food in the last 30 days, whereas in our follow-up surveys, they are just asked about total consumption of each food type (and what amounts were purchased). Also, at baseline, we do not ask about durable good purchases. We therefore aggregate across (a) food consumption, and (b) non-food expenditure to produce a baseline estimate that we control for in our baseline specifications (both total consumption, and the food aggregate for food consumption), but do not include the values in the figures because they are not directly comparable.

The index in Figure 1 and Appendix Table A4 is the aggregate value of consumption, standardized against the year two control mean. The value in USD PPP is shown in Figure 2 and Appendix Table A5, as are its component parts.

The **food security index** is a z-score aggregate of the following five measures: everyone gets enough food every day, no adults skipped meals, no household member went a whole day without food, no children skipped meals, everyone eats at least two meals every day. We follow BDS and report a subset of these outcomes in Figure 2; the full set is reported in Appendix Table A22. It is standardized against the baseline sample.

The **income and revenues index** is a z-score index with the following measures: livestock revenues: equal to revenues from livestock sales and the value of livestock products, such as eggs, whey or honey, agricultural profits: equal to yields (using sample median sale prices in cases when individuals did not sell their crops) and rental income minus expenses, not including family labor, microenterprise profits: equal to revenues minus costs, again not counting family labor, wage earnings (including via the Productive Safety Net Programme), and economic self-rating, on a scale of 1/10. Component parts are reported in Figure 3 and Appendix Table A6. All income measures in Appendix Table A6 are scaled to be in monthly terms.

The measures collected at baseline were not directly comparable. At baseline, individuals gave a single estimate for the value of livestock sales, whereas in the follow up surveys sales were asked about for each animal. For agricultural income, individuals were asked about harvests and expenses in the last twelve months at baseline, and in the last harvest in the follow-up surveys (there are two harvests in this part of Ethiopia, the follow-ups all asked about the major harvest). For non-farm enterprise income, at baseline, individuals were asked about specific types of products/services, the sale price, and total sales for each product. In follow-up surveys, individuals were instead asked to report total sales and expenses for months with high, medium, and low sales, and to report how sales were (on a low/medium/high scale) in each of the last 12 months.

We therefore include these measures (and their indexed value) as baseline controls, but standardize against the year two control group, and do not report these (not directly comparable) measures in our figures and tables.

The **financial inclusion** index is a z-score index, with the following measures: amount borrowed in the last 12 months from formal sources, amount borrowed in the last 12 months from informal sources, savings balance, and savings deposits in the last three months. It is standardized against the year two control mean, given that savings questions were not asked about at baseline. Individual outcomes are reported in Appendix Table A23.

The **productive time use index** is an aggregate of minutes spent working per day on average in the last 48 hours (individuals report their time use in each of the last two days). Productive activities include time spent working on agriculture, tending to livestock, managing a business, and working for a wage. This value is standardized against the baseline sample, and reported as an index in Figure 1 and Appendix Table A4. Component parts in minutes are reported in Appendix Table A24.

The **physical health index** is a z-score index that includes: no days missed due to poor physical health in the last month, a mean score of activities of daily living (ability to lift a 10 kg bag,

ability to walk for four hours without resting, ability to work in a field all day), and a 1/5 rating of an individual's physical health. This index is standardized against the baseline sample, with component parts reported in columns 1-3 of Appendix Table A25.

The **mental health index** is a z-score index that includes: a 1/5 overall life satisfaction rating, not having an extended period of time with worry in the last 12 months, and a stress index (with component parts including how often the individual felt sad, cried a lot, didn't feel like eating, didn't feel like doing their work, and had restless sleep). This index is standardized against the year two control sample (given the stress index methodology was different at baseline); component parts are reported in columns 4-6 of Appendix Table A25.

The **political empowerment index** is a z-score index that includes: whether the individual attended a meeting with a local leader of politician, whether they asked a question of a leader or politician at a local meeting, and whether they are a member of a political party. The index is standardized against the baseline sample and reported in Appendix Table A4; component parts are reported in columns 1-3 of Appendix Table A26.

The **women's empowerment index** is a z-score index that includes whether or not adult women in the household report having a major say in: food-related spending, education-related spending, healthcare-related spending, home improvement spending, and household management decisions. The index is standardized against the baseline sample and reported in Appendix Table A4; component parts are reported in columns 4-8 of Appendix Table A26.

ii. Other Outcome Variables

Figure 2 and Appendix Table A5: Consumption and Food Security

The share of total consumption on non-grain items uses total consumption minus the value of grain consumption (calculated using the total quantity consumed times median prices) as the numerator, and total consumption as the denominator. Because the method of measuring consumption differed at baseline, we include the share of consumption on non-grains as a control, but do not report it in the Figure/Table.

Figure 3 and Appendix Table A6

The productive asset value is equal to the sum of the reported value of livestock, and non-livestock productive assets (e.g., farm tools). For baseline productive asset ownership, we use the median (inflation-adjusted) price from the three follow-up waves to estimate the value (we observe quantities only). It is standardized such that the baseline mean is equal to 0, with standard deviation 1.

Remittances received is equal to the sum of all remittances that individuals reported receiving in the past 12 months, scaled to a monthly value. (This variable is also reported in Appendix Tables A8, A14, and A19, i.e. our tables on resource-sharing).

Figure 4 and Appendix Table A7

Livestock values is equal to individuals' total estimate of the value of each type of animal owned. For years two, three and seven, individuals reported an estimate. For baseline, we use median (inflation-adjusted) prices from the three follow-up waves to infer value, based on the reported quantity owned.

For total value of livestock sold, and total value of livestock bought, we ask individuals to report how many of each animal type they sold/bought in the last twelve months, and the total money they received/paid for them.

Revenues from agriculture is equal to the total value of individuals' agricultural yields in their last harvest (using median sales prices per crop in cases where individuals did not sell their output) and rents. (As noted above, at baseline, this measure asked about the last 12 months rather than last harvest, so we include the measure as a control, but do not present the measure in our figure and table, as it is not directly comparable).

Expenditure from agriculture is equal to the total amount paid to rent land and agricultural inputs in households' last harvest (e.g., seeds, fertilizer, pesticides). (As noted above, at baseline, this measure asked about the last 12 months rather than last harvest, so we include the measure as a control, but do not present the measure in our figure and table, as it is not directly comparable).

Total acres cultivated is equal to the sum of the size of all agricultural plots that individuals report cultivating. Most units are reported in local units (timads or gemads, the amount of land an ox can plow in a day), we convert to acres using median reported conversion rates from our village survey.

Received any remittances is an indicator variable equal to one if the household received any remittances in the last 12 months, and zero otherwise.

Earned any wage income is an indicator variable equal to one if individuals worked for others for pay (cash or in-kind), including in the Productive Safety Net Programme. We asked about work for others at baseline, but did not specifically ask about PSNP work. We therefore include this measure as a control, but do not report the mean in the figure and table, as it is not directly comparable.

Appendix Tables Only, Not in Indices

Received any informal loans is an indicator variable for whether an individual reported receiving a loan in the last 12 months from a neighbor, friend, shopkeeper, family member (not in the household), moneylender, co-op, or iqub (savings group).

Cash value of informal loans is equal to the sum of the value of all cash loans received by household members from the aforementioned informal sources in the last 12 months.

For each food item in our consumption module, we asked if the household received any of this food type as a gift from others. Received any food as gifts is an indicator variable equal to one if the household received any such gifts, and zero otherwise.

Number of types of food received as gift is equal to the number of distinct types of food individuals report receiving as gifts.

Household enrolled in PSNP is an indicator variable for whether the household reports having any member enrolled in the program.

Days of PSNP in the last month is equal to the sum of all days worked by household members in PSNP in the last month.

Monthly PSNP earnings is equal to the value of cash benefits from PSNP and food benefits (valued at median prices from the consumption food survey) in a typical month, multiplied by the number of months the household reported receiving benefits in the last 12 months, divided by 12.

Appendix C: Spillover Calculations and Estimations

In this section, we expand upon the calculations and methodological steps taken to evaluate the extent to which our data supports the hypothesis that spillovers are partially responsible for the evolution of control group living standards that we observe.

i. Magnitude of transfers relative to local economy

We estimate that approximately 4% of households in the study tabias received the transfers, that the livestock transfers constitute no more than 2% of annual tabia GDP. The transfers are likely equal to an increase in supply of livestock in the communities of no more than 4.3%.

We have two (informal) estimates of total population in the ten tabias where the program operated. First, at year-seven, we conducted a village survey in which asked local leaders to estimate the population of the tabias where they reside. Aggregating their estimates suggests a total population of 55,169 in study tabias. Second, the US Census Bureau estimates annual Ethiopia population at the *woreda* (district) level. They estimate a total population of 111,950 in Kilte Awlaelo (the district in which this study took place) in 2010. Kilte Awlaelo comprises 19 tabia—our study includes ten of these 19. Assuming an equal population across tabias implies a total population in our sample tabias of 58,921—the two methods thus produce similar estimates of the total population.[2]

If we assume an average household size of 5.05 (from our baseline sample), these population estimates would suggest there are a total of 10,925 to 11,668 households in our sample tabias. Because we lack data from ineligible households, we are unable to directly test whether sample household size is greater than or less than the population at large.

As a result of this study, 458 households received capital transfers, equal to 3.9-4.1% of households in these tabias. Direct transfers to the household were equal to $1,371 2021 USD PPP, or 50% of average annual household consumption for control households at year two. We lack data on ineligible households' consumption. Because having low income is an inclusion criterion for being in PSNP (and thus our sample), it is likely that the average household in the tabia has higher consumption than do control households. However, in a conservative case where our sample's consumption is representative of consumption at the tabia level, direct livestock transfers would constitute 2% of local annual GDP in the year they took place.

At year two, the mean control value for livestock ownership is $1,341 2021 USD PPP. Our estimate is therefore that the livestock transfers represent an approximately 102% increase in livestock value for treatment households. Again, it is likely the case that because sample households are identified on the basis of poverty, their livestock ownership is lower than that of the mean household in the community. If we assume however that the households are example representative of the population at large, it would suggest that livestock transfers led to a 4.3% increase in total livestock value in the communities, likely suggesting that price effects on livestock sales are not large.

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[2] While crude, this is not an unreasonable assumption. Villages and neighborhoods are designated to tabias in a way that ensures each has a roughly equivalent population.

ii. Value of PSNP relative to consumption treatment effects

We report in our main text that growing differences between treatment and control households in PSNP receipts can explain roughly 15% of the declining per capita consumption treatment effects between years three and seven. This estimate depends on the following calculations:

We estimate in year three that treatment households receive $1.92 less per month in PSNP benefits, and that by year seven, this gap is equal to $4.21. In year three, the mean household size is 5.45, by year seven it is 5.57. If we assume a marginal propensity to consume of one from these benefits, this equates to an additional $0.40 of monthly per capita consumption to control households by year seven. Our decline in treatment effects between years three and seven is equal to $2.67 in per capita consumption, suggesting our point estimate of monthly PSNP benefit declines corresponds to 15% of the total per capita consumption decline.

iii. Spatial Spillovers

We report in the main text that control households do not appear to have received more transfers (in the form of remittances, lending or food donations) as a result of the program. One possibility though is that spillovers (in the form of transfers, or some other mechanism) might operate specifically through social networks, rather than in a diffused way to all control households.

We did not collect data information about (a) self-reported social networks, (b) participation in groups at a sufficiently fine level to link individuals, or (c) extended families (surnames are not sufficiently distinctive to decisively link families, as in e.g., Angelucci et al. (2009)).

However, we did collect GPS coordinates of households at year-seven (i.e., for 889 of the 925 households in the original sample). There is some movement by households within our study's geographic area—5% are now more than 6km from the median GPS point of other households in the same baseline village, suggesting our GPS measure likely does not capture where these households resided prior to the roll-out of the program. However, of the (non-random) 91% of control households who did not attrit and who appear not to have moved, we can examine how proximity to treatment households (once controlling for total proximity to sample households) is associated with economic outcomes.

Specifically, on the subsample of control households, we estimate:

$$(A1)\ y_{ht} = \alpha + \beta\ neighbors_{h0} + \gamma\ neighbors\_treated_{h0} + \delta\ y_{ho} + \mu_v + \epsilon_{ht}$$

Where $neighbors_{h0}$ is equal to the number of households within 200 meters of household h at baseline, and $neighbors\_treated_{h0}$ is the number of households within the same bandwidth who were randomly selected to receive the program. We report the degree of spillovers for five families of outcomes: (1) our indexed family outcomes, (2) consumption and food security, (3) income aggregates, (4) income mechanisms, and (5) resource-sharing (i.e., the outcomes in our main figures plus resource-sharing).

We report results in Appendix Tables A10-A14. γ therefore measures the marginal impact on a control household of living proximate to a treatment household, once controlling for the total number of proximate sample households.

Given our negative point estimate for many outcomes, a relevant question is whether (and the degree to which) negative spillovers are potentially overstating the treatment effects of the program. We therefore estimate:

$$(A2)\ y_{ht} = \alpha + \theta\ treat_h + \beta\ neighbors_{h0} + \gamma\ neighbors\_treated_{h0} + \delta\ y_{ho} + \mu_v + \epsilon_{ht}$$

Where $treatment_h$ is equal to the household's treatment status. We report results in Appendix Tables A15-A19. Reassuringly, we find when re-estimating our main effects with these spillovers that our estimates of the average treatment effect of the program are qualitatively quite similar.

Appendix D: Cost-Benefit Simulations

We estimate the uncertainty of our cost-benefit estimates using bootstraps. In particular, we construct bootstrapped samples of our study population, re-calculate consumption benefits on the bootstrapped sample, and use these calculations to re-estimate the benefit-cost ratio.

We take our full sample of 925 households ever in the sample, and in each of 10,000 simulations, randomly draw 925 households from this sample with replacement. (In each bootstrap, we sample at the household, rather than household-survey wave level. This preserves any autocorrelation that might exist between waves). We then re-estimate household benefits (equal to monthly per capita consumption average treatment effects * household size * 12) for our two-, three-, and seven-year results, and store these estimates in a matrix.

For each of these 10,000 estimates, we perform the same calculations done from our main estimates on these bootstrapped estimates to re-calculate our benefit-cost ratio. In particular, we assume that year one consumption benefits equal year two benefits, and that the benefits from years three to seven evolve linearly. In cases where the benefits decline from years three to seven, we assume that they follow a linear decline, until the point they are equal to zero.

In 19% of simulations, we find that benefits grew from years three to seven. For these simulations, we assume that benefits remain constant beyond year seven (rather than allowing these benefits to continue to grow in perpetuity). We additionally impose a cap that benefits extend for no more than 30 years.[3]

We discount all benefits with an annual rate of 5%.

Finally, for each of these 10,000 estimates, we calculate a benefit-cost ratio, by dividing the accumulated benefits over $4,011, our estimated program cost (we assume our costs are measured without error). We find that benefits exceed costs in 51.7% of our simulations; our median benefit-cost ratio is 1.02. Our 95% interval is [0.42, 2.36].

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[3] This simplification is done because there are households for whom consumption estimates decline between years three and seven, albeit very slowly (our 99th percentile is an additional 363 years of benefits). Applying a perpetuity formula slightly overstates the benefits for these individuals, but there is no clear cut-off between "benefits extend forever" and "benefits ultimately reach zero." In practice, results are not very sensitive to the time horizon used in the very long run. Increasing our time horizon to 72 years increases the share for whom benefits exceed costs from 51.72% to 51.90%. Extending the benefits beyond year 72 is not pivotal for whether any additional households have benefits in excess of program costs.

Appendix References

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E. Appendix Tables

List of Tables

Appendix Table A1: Baseline Balance Tests

	(1)	(2)	(3)	(4)	(5)
Panel A. Household-Level Outcomes					
	Asset Ownership	Per Capita Consumption	Food Security Index	Income and Revenues Index	Financial Inclusion Index
Treatment	0.095	-0.092	0.026	0.012	-0.134
	(0.063)	(0.064)	(0.064)	(0.064)	(0.063)
Observations	925	925	925	925	925
Control mean	0.000	0.000	0.000	0.000	0.000

Panel B. Adult-Level Outcomes					
	Physical Health Index	Mental Health Index	Time Working	Political Involvement Index	Women's Empowerment Index
Treatment (ITT): Three Year	-0.081	0.026	-0.051	0.003	-0.099
	(0.059)	(0.059)	(0.058)	(0.055)	(0.069)
Observations	1305	1304	1305	1305	773
Control Mean	0.000	0.000	0.000	0.000	0.000

Appendix Table A1 tests for balance on baseline outcomes between treatment and control. Each regression controls for tabia-level strata. Standard errors are clustered at the household level (i.e., household-level outcomes have a cluster size of one; adult-level outcomes, where we survey 1-2 members per households, share a cluster). Each outcome is standardized to have mean 1, standard deviation 0.

Appendix Table A2: Program Timeline

Activity	Date
Baseline Survey	April 2010
Public Lottery	May 2010
Asset Transfer	June-August 2010, December 2010*
Training and Coaching	June 2010-May 2012
Endline Survey 1	July 2012
Endline Survey 2	July-August 2013
Endline Survey 3	September 2017

Initital transfers took place from June-August. Due to concerns livestock purchases would drive up the price of livestock (and reduce the number of livestock that could be transferred), households receiving sheep and goats received half their livestock in June-August, and the other half in December

Appendix Table A3: Attrition

	(1) 2 Years	(2) 3 Years	(3) 7 Years
Panel A: Attrition by Treatment Status			
Treatment	0.000	-0.006	-0.008
	(0.007)	(0.009)	(0.013)
Control Mean	0.0107	0.0214	0.0428
Panel B: Correlates of Attrition			
Asset Ownership Index	0.006	0.002	0.000
	(0.004)	(0.005)	(0.007)
Per Capita Consumption Index	0.003	0.001	-0.001
	(0.003)	(0.004)	(0.006)
Food Security Index	-0.004	-0.005	-0.011
	(0.003)	(0.005)	(0.007)
Income and Revenues Index	0.001	0.002	-0.005
	(0.003)	(0.005)	(0.007)
Financial Inclusion Index	-0.002	-0.004	-0.002
	(0.003)	(0.004)	(0.006)
Physical Health Index, HH-Level Average	0.000	0.000	0.007
	(0.004)	(0.005)	(0.008)
Mental Health Index, HH-Level Average	0.000	-0.005	-0.007
	(0.004)	(0.005)	(0.008)
Productive Time Use Index, HH-Level Average	-0.001	0.002	0.006
	(0.004)	(0.005)	(0.007)
Political Involvement Index, HH-Level Average	0.000	-0.001	0.001
	(0.004)	(0.005)	(0.008)
Women's Empowerment Index	0.001	0.001	0.011
	(0.004)	(0.005)	(0.007)

Panel C: Test for Differential Composition of Attriters by Treatment

Joint F-Test: Treatment and Indices Interacted with			
Treatment Status	0.315	0.348	0.770
p-value	0.99	0.984	0.693

Panel A reports regression results of whether or not an individual attrited from the sample on treatment status, with attrition as the dependent variable, with adult-level outcomes averaged at the household level. Panel B regresses attrition on the baseline values of our indexed family outcomes. Panel C reports the joint F-Test from a regression of attrition on the correlates in Panel B interacted with treatment. In all cases, we include tabia-level strata indicator variables; standard errors are Huber-White heteroskedastic.

Appendix Table A4: Indexed Family Outcomes

	Ethiopia (this paper)			India (BDS)		
	Average Treatment Effects (Full Compliance)			*Intention-to-Treat Effects (52% Take-Up)*		
	(1)	(2)	(3)	(4)	(5)	(6)
	2 Years	3 Years	7 Years	1.5 Years	3 Years	7 Years
Asset Ownership	0.950	0.947	0.429	0.217	0.389	0.814
	(0.091)	(0.090)	(0.109)	(0.111)	(0.103)	(0.132)
q-value	0.001	0.001	0.001	0.041	0.001	0.001
Control Mean	0.374	0.518	1.159	-0.20	-0.25	-0.46
Baseline Mean		0.000			0.000	
Per Capita Consumption	0.239	0.25	0.172	0.311	0.292	0.717
	(0.068)	(0.054)	(0.082)	(0.076)	(0.079)	(0.125)
q-value	0.001	0.001	0.196	0.001	0.001	0.001
Control Mean	0.000	-0.095	0.487	0.35	0.85	1.09
Baseline Mean		-			0.00	
Food Security Index	0.116	0.145	0.035	0.184	0.251	0.431
	(0.052)	(0.050)	(0.038)	(0.05)	(0.06)	(0.06)
q-value	0.022	0.003	0.467	0.00	0.00	0.00
Control Mean	0.706	0.742	1.024	0.35	0.94	1.09
Baseline Mean		0.000			0.00	
Income and Revenues Index	1.411	0.411	0.244	0.145	0.172	0.334
	(0.163)	(0.115)	(0.241)	(0.08)	(0.07)	(0.07)
q-value	0.001	0.001	0.467	0.04	0.02	0.00
Control Mean	0.00	0.512	1.247	0	0	0
Baseline Mean		-			-	
Financial Inclusion Index	1.853	0.779	0.301	-0.004	0.192	0.181
	(0.118)	(0.126)	(0.252)	0.04	(0.06)	(0.14)
q-value	0.001	0.001	0.449	0.26	0.00	0.05
Control Mean	0.00	0.0473	0.736	0.14	0.3	0.67
Baseline Mean		-			0.000	
Physical Health Index	-0.0158	0.0499	-0.0704	0.061	0.027	0.13
	(0.050)	(0.043)	(0.054)	(0.028)	(0.027)	(0.031)
q-value	0.293	0.104	0.434	0.028	0.160	0.001
Control Mean	-0.0749	0.0112	-0.0603	0.913	0.921	0.987
Baseline Mean		0.005			0.000	
Mental Health Index	0.053	-0.038	-0.087	0.115	0.012	0.011
	(0.055)	(0.060)	(0.063)	(0.029)	(0.037)	(0.018)
q-value	0.148	0.210	0.434	0.00	0.33	0.00
Control Mean	0.000	0.000	0.000	0.32	0.75	1.09
Baseline Mean		-			0.000	
Productive Time Use	0.278	0.224	0.0805	0.285	0.102	0.165
	(0.057)	(0.059)	(0.049)	(0.05)	(0.04)	(0.04)
q-value	0.001	0.001	0.385	0.001	0.018	0.000
Control Mean	0.508	0.604	0.463	0.23	0.28	-0.04
Baseline Mean		0.002			0.000	
Political Empowerment Index	0.097	0.115	0.007	0.009	0.021	0.031
	(0.057)	(0.060)	(0.060)	(0.34)	(0.03)	(0.03)
q-value	0.055	0.032	0.632	0.248	0.232	0.060
Control Mean	0.442	0.235	0.214	-0.05	0.13	0.27
Baseline Mean		0.001			0.000	
Women's Decision-Making Index	-0.016	-0.027	-0.054			
	(0.047)	(0.049)	(0.059)			
q-value	0.293	0.214	0.467			
Control Mean	0.188	0.241	0.572			
Baseline Mean		-0.005				

Appendix Table A4 reports results from intention-to-treat effects of the graduation program on indexed family outcomes. Columns (1) to (3) report results from Ethiopia, and Columns (4) to (6) from India, as presented in Banerjee et al. 2021. Each cell reports results from a separate regression. Observations range from 889 to 915 for the household level outcomes in Ethiopia and from 679 to 875 in India, and from 723 to 1307 for the adult-level outcomes in Ethiopia and from 1,229 to 1,950 in India. For asset ownership, consumption and time use, outcomes are aggregated and then rescaled; other outcomes are a z-score index of outcomes variables in the given category. Outcomes are either (a) standardized so the baseline has mean zero and standard deviation one (done whenever possible), or (b) standardized so the endline 1 control group has mean zero and standard deviation one (done in cases where we do not have baseline data, or the baseline components differed from the components in subsequent waves). Reported q-values are sharpened using the false discovery rate procedure detailed in Anderson (2008). They reflect a correction for 10 family outcomes in Ethiopia, and 9 family outcomes in India. The full list of variables used to construct each index is reported in Appendix B. Each regression controls for baseline values, and for tabia-level strata. Standard errors are clustered at the household level (i.e., household-level outcomes have a cluster size of one; adult-level outcomes, where we survey 1-2 members per households, share a cluster).

Appendix Table A5: Monthly Consumption and Food Security

	Ethiopia (this paper) Average Treatment Effects (Full Compliance)			India (BDS) Intention-to-Treat Effects (52% Take-Up)		
	(1)	(2)	(3)	(4)	(5)	(6)
	2 Years	3 Years	7 Years	1.5 Years	3 Years	7 Years
Monthly Per Capita Consumption	8.21	8.56	5.90	8.35	7.83	19.22
	(2.32)	(1.83)	(2.81)	(2.03)	(2.12)	(3.35)
Control Mean	50.2	46.9	66.9	54.5	67.9	74.2
Baseline Mean		-			45.0	
Monthly Per Capita Food Consumption	2.91	2.35	1.08	5.93	3.34	10.81
	(1.78)	(1.00)	(1.42)	(1.32)	(1.27)	(1.91)
Control Mean	32.6	30.0	38.3	36.8	41.5	41.8
Baseline Mean		-			29.6	
Monthly Per Capita Nonfood Consumption	4.41	4.61	3.86	2.36	4.43	8.34
	(1.02)	(1.11)	(1.84)	(1.20)	(1.26)	(1.86)
Control Mean	16.2	16.2	26.4	17.7	26.3	32.5
Baseline Mean		16.1			15.5	
Monthly Per Capita Durable Good Expenditure	0.50	1.21	0.39	-0.39	0.97	2.73
	(0.40)	(0.34)	(0.52)	(0.41)	(0.43)	(0.56)
Control Mean	1.42	0.685	2.12	2.52	2.13	2.51
Baseline Mean		-			1.07	
Everyone in HH gets enough food every day	0.039	0.077	0.023	0.074	0.141	0.205
	(0.031)	(0.030)	(0.025)	(0.025)	(0.034)	(0.032)
Control Mean	0.640	0.640	0.826	0.110	0.420	0.590
Baseline Mean		0.335			0.11	
No one HH went whole day without food	0.029	0.041	-0.007	0.128	0.038	0.095
	(0.017)	(0.015)	(0.009)	(0.03)	(0.02)	(0.02)
Control Mean	0.913	0.921	0.987	0.68	0.85	0.83
Baseline Mean		0.745			0.28	
No Children Skipped Meals	0.045	0.047	0.011	0.032	0.085	0.045
	(0.022)	(0.023)	(0.018)	(0.034)	(0.025)	(0.026)
Control Mean	0.845	0.833	0.926	0.750	0.860	0.870
Baseline Mean		0.489			0.510	
Share of total consumption on non-grain items	0.038	0.037	0.013	0.006	0.021	0.024
	(0.009)	(0.008)	(0.008)	(0.007)	(0.007)	(0.006)
Control Mean	0.612	0.580	0.686	0.708	0.714	0.773
Baseline Mean		0.525			0.237	

Appendix Table A5 reports results from intention-to-treat effects of the graduation program on consumption and food security-related outcomes. Columns (1) to (3) report results from Ethiopia, and Columns (4) to (6) from India, as presented in Banerjee et al. 2021. Each cell reports results from a separate regression. Observations range from 889 to 915 for Ethiopia and from 679 to 875 in India. All outcomes in Ethiopia are reported in 2021 USD in PPP terms. Each regression controls for baseline values (when available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic. Additional food security outcomes are reported in Appendix Table A22.

Appendix Table A6: Monthly Income and Revenue

	Ethiopia (this paper) *Average Treatment Effects (Full Compliance)*			India (BDS) *Intention-to-Treat Effects (52% Take-Up)*		
	(1) 2 Years	(2) 3 Years	(3) 7 Years	(4) 1.5 Years	(5) 3 Years	(6) 7 Years
Monthly Livestock Revenues	128.5	30.9	40.2	11.3	8.5	30.1
	(8.7)	(6.2)	(21.0)	(2.6)	(6.9)	(5.7)
Control Mean	32.5	29.5	89.9	3.7	8.8	10.7
Baseline Mean		-			0.0	
Monthly Agricultural Profits (ETH) / Fishing & Horticulture (IND)	5.05	6.85	4.30	20.64	34.34	119.81
	(2.30)	(2.38)	(3.49)	(6.408)	(7.626)	(16.750)
Control Mean	25.72	34.62	33.46	50.96	66.89	114.05
Baseline Mean		-			18.02	
Monthly Non-Farm Enterprise Profits	12.03	-0.86	-1.35	8.77	27.77	74.74
	(4.91)	(3.13)	(5.78)	(5.018)	(6.918)	(15.771)
Control Mean	4.07	16.30	7.42	40.07	54.70	100.05
Baseline Mean		-			14.64	
Monthly Income from Wage Labor (including workfare)	-2.80	-2.29	-2.98	5.62	5.12	98.43
	(2.95)	(2.68)	(6.76)	(9.382)	(15.119)	(28.449)
Control Mean	34.78	29.83	89.97	117.70	240.91	333.15
Baseline Mean		-			-	
Rating of Economic Status (1/10)	1.13	0.90	0.01	0.20	0.30	1.58
	(0.15)	(0.12)	(0.13)	(0.07)	(0.08)	(0.14)
Control Mean	3.73	4.34	4.99	2.77	3.36	4.73
Baseline Mean		3.742			1.97	
Productive Asset Value, Indexed	0.776	0.761	0.374	0.444	0.571	0.795
	(0.076)	(0.074)	(0.102)	(0.086)	(0.072)	(0.083)
Control Mean	0.068	0.173	0.863	-0.230	-0.300	-0.400
Baseline Mean		0.000			0.000	
Monthly Remittances Received	1.55	1.21	4.27	-	4.09	9.81
	(1.18)	(2.89)	(3.90)	-	(2.62)	(7.14)
Control Mean	2.75	9.06	10.34	-	14.24	38.55
Baseline Mean		-			-	

Appendix Table A6 reports results from intention-to-treat effects of the graduation program on income and revenue outcomes. Columns (1) to (3) report results from Ethiopia, and Columns (4) to (6) from India, as presented in Banerjee et al. 2021. Each cell reports results from a separate regression. Observations range from 889 to 915 for Ethiopia and from 679 to 875 in India. All financial outcomes in 2021 USD in PPP terms. Each regression controls for baseline values (when available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic.

Appendix Table A7: Income Mechanisms, Ethiopia

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Total Value of Livestock	Total Value of Livestock Sold per Month, last 12 months	Total Value of Livestock Bought per Month, last 12 months	Monthly Revenue from Agriculture	Monthly Expenditure on Agriculture	Total Acres Cultivated, Major Growing Season	Received any remittances	Earned any wage income (including from workfare program)
Treatment (ITT): Two Year	967	79.2	73.7	8.00	4.03	0.153	-0.029	0.004
	(91.2)	(5.49)	(5.28)	(2.55)	(1.17)	(0.068)	(0.023)	(0.007)
Observations	914	914	914	915	915	915	911	915
Control mean	1341	17.66	12.97	37.5	11.8	1.44	0.148	0.99
Treatment (ITT): Three Year	988	30.3	30.9	8.36	2.91	0.221	-0.080	-0.037
	(89.0)	(5.52)	(5.33)	(2.51)	(0.81)	(0.066)	(0.026)	(0.017)
Observations	908	908	908	908	908	908	908	915
Control mean	1481	13.9	10.8	42.0	7.35	1.56	0.239	0.94
Treatment (ITT): Seven Year	419	38.1	5.93	6.43	3.69	0.254	0.038	-0.082
	(108)	(20.0)	(3.41)	(4.04)	(1.31)	(0.098)	(0.025)	(0.022)
Observations	889	889	889	889	889	889	889	889
Control mean	2030	68.1	25.2	54.2	20.7	1.43	0.141	0.91
Baseline Mean	1107	-	-	-	-	0.856	-	-

Appendix Table A7 reports average treatment effects of the graduation program on mechanisms through which household-level income and revenues have evolved. All financial outcomes are reported in 2021 USD in PPP terms. Each regression controls for baseline values (when available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic.

Appendix Table A8: Transfers and Lending In

	(1)	(2)	(3)	(4)	(5)	(6)
	Any Remittances Received, Last 12 Months	Remittance Income per Month	Received any Informal Loans	Cash Value of Informal Loans Received	Received any Food as Gifts	Number of Types of Food Received as Gift
Treatment (ITT): Two Year	-0.029	1.55	-0.021	19.6	0.017	-0.116
	(0.023)	(1.18)	(0.028)	(16.5)	(0.030)	(0.076)
Observations	911	915	915	915	915	915
Control mean	0.148	2.75	0.729	117	0.294	0.606
Treatment (ITT): Three Year	-0.080	1.21	-0.003	28.9	0.006	-0.013
	(0.026)	(2.89)	(0.026)	(11.3)	(0.025)	(0.051)
Observations	908	908	908	908	908	908
Control mean	0.239	9.06	0.799	135	0.171	0.271
Treatment (ITT): Seven Year	0.038	4.27	0.004	26.7	-0.032	-0.115
	(0.025)	(3.90)	(0.019)	(45.9)	(0.033)	(0.080)
Observations	889	889	889	889	889	889
Control mean	0.141	10.3	0.085	55.6	0.593	1.24
Baseline Mean	-	-	0.014	4.70	-	-

Appendix Table A8 reports average treatment effects of the graduation program on mechanisms on transfer receipt. All financial outcomes are reported in 2021 USD in PPP terms. Each regression controls for baseline values (when available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic.

Appendix Table A9 Productive Safety Net Participation

	(1)	(2)	(3)
	Household enrolled in Productive Safety Net Programme (PSNP)	Days of PSNP by Household in Last Month	Monthly Earnings from PSNP
Treatment (ITT): Two Year	-0.003	1.30	2.94
	(0.009)	(0.573)	(1.839)
Observations	913	911	913
Control mean	0.98	15.1	46.8
Treatment (ITT): Three Year	-0.059	-0.624	-1.92
	(0.021)	(0.600)	(2.13)
Observations	908	908	908
Control mean	0.91	11.0	50.5
Treatment (ITT): Seven Year	-0.052	-0.370	-4.21
	(0.027)	(0.645)	(2.61)
Observations	889	889	889
Control mean	0.81	8.19	56.9

Appendix Table A9 reports average treatment effects of the graduation program on participation and benefits from the Productive Safety Net Programme. Monthly PSNP earnings are reported in 2021 USD in PPP terms. Each regression controls tabia-level strata (we do have data for these outcomes at baseline). Standard errors are Huber-White heteroskedastic.

Appendix Tables A10: Spatial Spillovers - Indices - Control Households Only

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Asset Ownership	Per Capita Consumption	Food Security Index	Income and Revenues Index	Financial Inclusion Index	Physical Health Index	Mental Health Index	Time Working	Political Involvement Index	Women's Empowerment Index
Two Year										
Neighbors within 200m	0.101	0.045	0.030	0.008	-0.012	0.047	-0.060	-0.029	-0.027	-0.035
	(0.046)	(0.051)	(0.034)	(0.038)	(0.027)	(0.026)	(0.038)	(0.035)	(0.029)	(0.028)
Treated Neighbors within 200m	-0.163	-0.028	-0.086	-0.105	-0.056	-0.048	-0.004	-0.002	0.065	0.043
	(0.070)	(0.107)	(0.052)	(0.056)	(0.059)	(0.048)	(0.004)	(0.002)	0.065	0.043
Observations	426	426	426	426	426	615	615	388	615	352
Mean: No neighbors within 200m	0.442	-0.080	0.810	0.082	0.065	0.004	0.072	0.635	0.517	0.138
Three Year										
Neighbors within 200m	0.054	0.067	0.087	0.135	-0.015	0.018	-0.003	0.041	-0.032	0.004
	(0.039)	(0.031)	(0.031)	(0.111)	(0.032)	(0.026)	(0.027)	(0.041)	(0.030)	(0.031)
Treated Neighbors within 200m	-0.097	-0.061	-0.116	-0.128	-0.021	-0.019	-0.021	-0.117	0.047	0.013
	(0.052)	(0.045)	(0.046)	(0.072)	(0.039)	(0.019)	(0.021)	(0.117)	0.047	0.013
Observations	426	426	426	426	426	596	595	386	595	340
Mean: No neighbors within 200m	0.580	-0.218	0.723	0.464	0.256	0.040	-0.013	0.659	0.402	0.167
Seven Year										
Neighbors within 200m	0.006	0.049	0.012	0.219	-0.023	0.041	0.020	-0.020	0.011	0.030
	(0.051)	(0.037)	(0.020)	(0.091)	(0.170)	(0.048)	(0.042)	(0.024)	(0.034)	(0.036)
Treated Neighbors within 200m	-0.180	-0.009	-0.042	-0.336	0.138	-0.079	-0.020	-0.006	0.029	-0.051
	(0.071)	(0.053)	(0.030)	(0.115)	(0.245)	(0.079)	(0.020)	(0.006)	0.029	(0.051)
Observations	426	426	426	426	426	593	593	593	593	352
Mean: No neighbors within 200m	1.53	0.473	1.029	1.101	0.842	0.020	0.098	0.588	0.259	0.463

Appendix Table A10 reports spillover effects of the graduation program on control households. The sample includes the 426 control households for whom we both have their GPS coordinates (from year seven), and who at year seven, are not more than 6 kilometers from the median GPS point of individuals they shared a baseline village with. For asset ownership, consumption and time use, outcomes are aggregated and then rescaled; other outcomes are a z-score index of outcomes variables in the given category. Outcomes are either (a) standardized so the baseline has mean zero and standard deviation one (done whenever possible), or (b) standardized so the endline 1 control group has mean zero and standard deviation one (done in cases where we do not have baseline data, or the baseline components differed from the components in subsequent waves). Reported q-values are sharpened using the false discovery rate procedure detailed in Anderson (2008). They reflect a correction for 10 family outcomes. The full list of variables used to construct each index is reported in Appendix B. Each regression controls for baseline values, and for tabia-level strata. Standard errors are clustered at the household level (i.e., household-level outcomes have a cluster size of one; adult-level outcomes, where we survey 1-2 members per households, share a cluster).

Appendix Table A11: Spatial Spillovers - Consumption - Control Households Only

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Monthly Per Capita Consumption	Monthly Per Capita Food Consumption	Monthly Per Capita Nonfood Consumption	Monthly Per Capita Durable Good Expenditure	Everyone in HH gets enough food every day	No one HH went whole day without food	No Children Skipped Meals	Share of total consumption on non-grain items
Two Year								
Neighbors within 200m	1.54	0.247	0.721	0.537	0.011	0.012	0.001	0.019
	(1.74)	(1.55)	(0.497)	(0.238)	(0.019)	(0.011)	(0.015)	(0.006)
Treated Neighbors within 200m	-0.944	0.781	-1.383	-0.400	-0.031	-0.026	-0.020	-0.020
	(3.66)	(3.418)	(0.787)	(0.365)	(0.029)	(0.018)	(0.022)	(0.010)
Observations	426	426	426	426	425	423	423	426
Mean: No neighbors within 200m	52.9	33.6	17.8	1.42	0.685	0.945	0.890	0.632
Three Year								
Neighbors within 200m	2.29	0.723	1.289	0.241	0.051	0.002	0.023	0.013
	(1.06)	(0.471)	(0.765)	(0.179)	(0.017)	(0.011)	(0.013)	(0.005)
Treated Neighbors within 200m	-2.08	-0.789	-1.004	-0.329	-0.076	-0.019	-0.023	-0.010
	(1.53)	(0.816)	(1.16)	(0.236)	(0.027)	(0.017)	(0.020)	(0.007)
Observations	426	426	426	426	425	425	425	426
Mean: No neighbors within 200m	47.7	29.6	16.8	1.31	0.660	0.945	0.817	0.600
Seven Year								
Neighbors within 200m	1.68	1.01	0.501	0.151	0.013	-0.002	0.008	0.005
	(1.26)	(0.643)	(0.771)	(0.131)	(0.016)	(0.005)	(0.009)	(0.004)
Treated Neighbors within 200m	-0.307	-0.261	0.296	-0.403	-0.021	-0.002	-0.024	-0.004
	(1.80)	(0.939)	(1.16)	(0.149)	(0.022)	(0.005)	(0.019)	(0.006)
Observations	426	426	426	426	426	426	392	426
Mean: No neighbors within 200m	69.1	38.9	27.7	2.56	0.835	0.980	0.935	0.702

Appendix Table A11 reports spillover effects of the graduation program on control households. The sample includes the 426 control households for whom we both have their GPS coordinates (from year seven), and who at year seven, are not more than 6 kilometers from the median GPS point of individuals they shared a baseline village with. All financial outcomes are reported in 2021 USD in PPP terms. Each regression controls for baseline values (when available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic.

Appendix Table A12: Spatial Spillovers - Income Aggregates - Control Households Only

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Monthly Livestock Revenues	Monthly Agricultural Profits	Monthly Non-Farm Enterprise Profits	Monthly Income from Wage Labor (including workfare)	Rating of Economic Status (1/10)	Productive Asset Value, Indexed	Monthly Remittances Received
Two Year							
Neighbors within 200m	-0.515	0.018	-1.21	0.583	0.109	0.067	0.322
	(2.18)	(0.433)	(1.27)	(2.19)	(0.087)	(0.037)	(0.555)
Treated Neighbors within 200m	-1.75	-0.776	0.434	-2.75	-0.297	-0.129	-0.015
	(3.30)	(0.489)	(1.99)	(3.19)	(0.133)	(0.056)	(0.596)
Observations	426	426	426	426	426	426	426
Mean: No neighbors within 200m	110	13.4	27.5	34.4	4.43	0.74	2.05
Three Year							
Neighbors within 200m	-1.37	4.60	-0.904	2.52	-0.003	0.027	-0.171
	(1.87)	(3.51)	(1.43)	(1.936)	(0.070)	(0.032)	(1.63)
Treated Neighbors within 200m	-1.21	-2.61	-1.01	-3.63	-0.024	-0.066	0.570
	(2.53)	(1.91)	(2.27)	(2.610)	(0.099)	(0.044)	(1.92)
Observations	426	426	426	426	426	426	426
Mean: No neighbors within 200m	52.1	14.6	33.2	25.4	4.81	0.78	5.70
Seven Year							
Neighbors within 200m	5.46	3.82	-0.738	7.85	0.092	-0.032	0.647
	(8.34)	(2.20)	(1.73)	(4.02)	(0.077)	(0.050)	(1.35)
Treated Neighbors within 200m	-3.63	-5.69	-5.18	-7.95	-0.125	-0.141	-0.103
	(8.13)	(2.64)	(2.89)	(5.39)	(0.120)	(0.068)	(2.52)
Observations	426	426	426	426	425	426	426
Mean: No neighbors within 200m	120	11.3	36.1	86.4	5.00	1.58	6.58

Appendix Table A12 reports spillover effects of the graduation program on control households. The sample includes the 426 control households for whom we both have their GPS coordinates (from year seven), and who at year seven, are not more than 6 kilometers from the median GPS point of individuals they shared a baseline village with. All financial outcomes are reported in 2021 USD in PPP terms. Each regression controls for baseline values (when available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic.

Appendix Table A13: Spatial Spillovers - Income Mechanisms - Control Households Only

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Total Value of Livestock	Total Value of Livestock Sold per Month, last 12 months	Total Value of Livestock Bought per Month, last 12 months	Monthly Revenue from Agriculture	Monthly Expenditure on Agriculture	Total Acres Cultivated, Major Growing Season	Received any remittances	Earned any wage income (including from workfare program)
Two Year								
Neighbors within 200m	95.0	-0.724	-0.302	-1.51	0.156	0.023	0.024	-0.005
	(49.4)	(1.47)	(1.18)	(1.24)	(0.689)	(0.040)	(0.017)	(0.003)
Treated Neighbors within 200m	-170	0.877	1.60	0.873	-0.305	-0.046	-0.003	-0.003
	(74.890)	(2.07)	(1.73)	(2.06)	(1.08)	(0.053)	(0.024)	(0.004)
Observations	425	425	425	426	426	426	424	426
Mean: No neighbors within 200m	2141.00	63.20	53.26	42.33	14.87	1.36	0.09	1.00
Three Year								
Neighbors within 200m	41.1	0.199	2.29	-1.17	0.334	0.006	0.014	-0.001
	(42.7)	(1.33)	(1.20)	(1.46)	(0.463)	(0.037)	(0.019)	(0.007)
Treated Neighbors within 200m	-92.5	-2.552	-3.13	-0.761	-0.785	-0.083	0.005	-0.002
	(57.9)	(1.59)	(1.41)	(2.30)	(0.673)	(0.050)	(0.029)	(0.014)
Observations	426	426	426	426	426	426	426	426
Mean: No neighbors within 200m	2190.00	32.04	25.04	42.94	9.76	1.53	0.19	0.94
Seven Year								
Neighbors within 200m	-22.5	8.18	5.07	-1.18	0.542	0.022	0.018	0.019
	(54.9)	(8.27)	(2.33)	(2.03)	(0.825)	(0.051)	(0.013)	(0.012)
Treated Neighbors within 200m	-155	-3.92	-8.44	-5.47	-1.99	-0.127	0.004	-0.010
	(74.7)	(7.87)	(2.87)	(3.29)	(1.12)	(0.066)	(0.019)	(0.015)
Observations	426	426	426	426	426	426	426	426
Mean: No neighbors within 200m	2765	90.3	31.2	57.5	21.3	1.44	0.13	0.89

Appendix Table A13 reports spillover effects of the graduation program on control households. The sample includes the 426 control households for whom we both have their GPS coordinates (from year seven), and who at year seven, are not more than 6 kilometers from the median GPS point of individuals they shared a baseline village with. All financial outcomes are reported in 2021 USD in PPP terms. Each regression controls for baseline values (when available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic.

Appendix Table A14: Spatial Spillovers - Resource Sharing - Control Households Only

	(1)	(2)	(3)	(4)	(5)	(6)
	Any Remittances Received, Last 12 Months	Remittance Income per Month	Received any Informal Loans	Cash Value of Informal Loans Received	Received any Food as Gifts	Number of Types of Food Received as Gift
Two Year						
Neighbors within 200m	0.024	0.322	0.019	-4.63	0.025	0.050
	(0.017)	(0.555)	(0.016)	(7.07)	(0.019)	(0.040)
Treated Neighbors within 200m	-0.003	-0.015	-0.046	-3.20	0.010	0.010
	(0.024)	(0.596)	(0.025)	(10.8)	(0.027)	(0.061)
Observations	424	426	426	426	426	426
Mean: No neighbors within 200m	0.095	2.05	0.705	123	0.287	0.453
Three Year						
Neighbors within 200m	0.014	-0.171	-0.010	-6.52	0.009	-0.011
	(0.019)	(1.63)	(0.014)	(5.70)	(0.016)	(0.029)
Treated Neighbors within 200m	0.005	0.570	-0.010	1.77	0.007	0.049
	(0.029)	(1.92)	(0.021)	(8.43)	(0.025)	(0.055)
Observations	426	426	426	426	426	426
Mean: No neighbors within 200m	0.185	5.70	0.776	158	0.193	0.311
Seven Year						
Neighbors within 200m	0.018	0.647	-0.007	6.99	-0.018	0.014
	(0.013)	(1.35)	(0.010)	(10.8)	(0.019)	(0.060)
Treated Neighbors within 200m	0.004	-0.103	-0.001	-27.8	0.008	-0.066
	(0.019)	(2.52)	(0.013)	(22.3)	(0.029)	(0.082)
Observations	426	426	426	426	426	426
Mean: No neighbors within 200m	0.126	6.58	0.098	111	0.602	1.21

Appendix Table A14 reports spillover effects of the graduation program on control households. The sample includes the 426 control households for whom we both have their GPS coordinates (from year seven), and who at year seven, are not more than 6 kilometers from the median GPS point of individuals they shared a baseline village with. All financial outcomes are reported in 2021 USD in PPP terms. Each regression controls for baseline values (when available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic.

Appendix Table A15: Spatial Spillovers - Indices - All Households

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Asset Ownership	Per Capita Consumption	Food Security Index	Income and Revenues Index	Financial Inclusion Index	Physical Health Index	Mental Health Index	Time Working	Political Involvement Index	Women's Empowerment Index
Two Year										
Treatment	0.983	0.235	0.124	1.48	1.90	-0.033	0.079	0.274	0.078	-0.002
	(0.098)	(0.072)	(0.054)	(0.181)	(0.132)	(0.049)	(0.053)	(0.059)	(0.060)	(0.049)
Neighbors within 200m	0.034	0.023	0.062	-0.001	-0.030	0.042	-0.018	-0.018	-0.004	-0.020
	(0.041)	(0.037)	(0.023)	(0.056)	(0.060)	(0.019)	(0.023)	(0.029)	(0.025)	(0.021)
Treated Neighbors within 200m	-0.114	-0.029	-0.097	-0.034	-0.063	-0.022	-0.023	0.001	0.047	0.028
	(0.058)	(0.071)	(0.034)	(0.067)	(0.055)	(0.027)	(0.033)	(0.040)	(0.038)	(0.031)
Observations	844	844	844	844	844	1227	1227	774	1227	704
Mean: No neighbors within 200m	0.442	-0.080	0.810	0.082	0.065	0.004	0.072	0.635	0.517	0.138
Three Year										
Treatment	0.978	0.263	0.134	0.451	0.755	0.036	-0.050	0.189	0.116	-0.001
	(0.095)	(0.055)	(0.051)	(0.124)	(0.133)	(0.043)	(0.057)	(0.061)	(0.061)	(0.051)
Neighbors within 200m	0.046	0.063	0.067	0.122	-0.006	0.014	0.007	0.062	-0.043	-0.001
	(0.039)	(0.025)	(0.021)	(0.065)	(0.054)	(0.018)	(0.026)	(0.030)	(0.024)	(0.024)
Treated Neighbors within 200m	-0.079	-0.046	-0.070	-0.118	-0.054	0.005	-0.039	-0.092	0.106	0.006
	(0.055)	(0.035)	(0.031)	(0.062)	(0.059)	(0.026)	(0.036)	(0.041)	(0.037)	(0.033)
Observations	844	844	844	844	844	1198	1196	772	1196	676
Mean: No neighbors within 200m	0.580	-0.218	0.723	0.464	0.256	0.040	-0.013	0.659	0.402	0.167
Seven Year										
Treatment	0.444	0.197	0.030	0.369	0.311	-0.130	-0.089	0.082	-0.001	-0.050
	(0.112)	(0.081)	(0.039)	(0.212)	(0.263)	(0.072)	(0.059)	(0.051)	(0.062)	(0.061)
Neighbors within 200m	-0.009	0.047	0.006	0.155	0.081	0.041	-0.002	-0.027	-0.007	0.033
	(0.051)	(0.035)	(0.016)	(0.082)	(0.116)	(0.030)	(0.026)	(0.021)	(0.026)	(0.028)
Treated Neighbors within 200m	-0.082	-0.008	-0.016	-0.264	-0.074	-0.034	0.024	0.006	0.026	-0.050
	(0.066)	(0.051)	(0.022)	(0.107)	(0.145)	(0.045)	(0.037)	(0.031)	(0.038)	(0.039)
Observations	844	844	844	844	844	1179	1179	1179	1179	690
Mean: No neighbors within 200m	1.525	0.473	1.029	1.101	0.842	0.020	0.098	0.588	0.259	0.463

Appendix Table A15 reports spillover effects of the graduation program on all households. The sample includes the 844 households for whom we both have their GPS coordinates (from year seven), and who at year seven, are not more than 6 kilometers from the median GPS point of individuals they shared a baseline village with. For asset ownership, consumption and time use, outcomes are aggregated and then rescaled; other outcomes are a z-score index of outcomes variables in the given category. Outcomes are either (a) standardized so the baseline has mean zero and standard deviation one (done whenever possible), or (b) standardized so the endline 1 control group has mean zero and standard deviation one (done in cases where we do not have baseline data, or the baseline components differed from the components in subsequent waves). Reported q-values are sharpened using the false discovery rate procedure detailed in Anderson (2008). They reflect a correction for 10 family outcomes. The full list of variables used to construct each index is reported in Appendix B. Each regression controls for baseline values, and for tabia-level strata. Standard errors are clustered at the household level (i.e., household-level outcomes have a cluster size of one; adult-level outcomes, where we

Appendix Table A16: Spatial Spillovers - Consumption - All Households

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Per Capita Consumption	Per Capita Food Consumption	Per Capita Nonfood Consumption	Per capita Durable Good Expenditure	Everyone in HH gets enough food every day	No one HH went whole day without food	No Children Skipped Meals	Share of total consumption on non-grain items
Two Year								
Treatment	8.05	3.00	4.18	0.531	0.045	-0.033	0.048	0.035
	(2.48)	(1.93)	(1.06)	(0.448)	(0.032)	(0.049)	(0.024)	(0.010)
Neighbors within 200m	0.781	-0.204	0.631	0.342	0.029	0.042	0.014	0.014
	(1.27)	(1.03)	(0.485)	(0.190)	(0.014)	(0.019)	(0.010)	(0.004)
Treated Neighbors within 200m	-0.988	0.508	-0.982	-0.536	-0.034	-0.022	-0.026	-0.018
	(2.42)	(2.01)	(0.879)	(0.263)	(0.020)	(0.027)	(0.014)	(0.007)
Observations	844	844	844	844	843	839	839	844
Mean: No neighbors within 200m, Control	47.4	30.5	15.9	0.970	0.679	0.939	0.885	0.613
Three Year								
Treatment	9.01	2.58	4.80	1.24	0.061	0.036	0.038	0.035
	(1.89)	(1.04)	(1.13)	(0.364)	(0.032)	(0.043)	(0.024)	(0.008)
Neighbors within 200m	2.17	0.715	1.24	0.189	0.041	0.014	0.022	0.009
	(0.854)	(0.399)	(0.563)	(0.178)	(0.013)	(0.018)	(0.009)	(0.004)
Treated Neighbors within 200m	-1.57	-0.631	-0.721	-0.238	-0.048	0.005	-0.016	-0.005
	(1.21)	(0.630)	(0.837)	(0.245)	(0.020)	(0.026)	(0.013)	(0.005)
Observations	844	844	844	844	843	842	840	844
Mean: No neighbors within 200m, Control	42.7	27.6	14.5	0.504	0.646	0.939	0.794	0.586
Seven Year								
Treatment	6.76	1.96	4.10	0.453	0.030	-0.130	0.004	0.011
	(2.77)	(1.27)	(1.84)	(0.403)	(0.025)	(0.072)	(0.018)	(0.008)
Neighbors within 200m	1.60	0.397	0.956	0.255	0.006	0.041	0.000	0.006
	(1.19)	(0.542)	(0.808)	(0.151)	(0.011)	(0.030)	(0.008)	(0.003)
Treated Neighbors within 200m	-0.271	-0.139	0.141	-0.299	-0.006	-0.034	-0.011	-0.004
	(1.74)	(0.789)	(1.26)	(0.217)	(0.015)	(0.045)	(0.012)	(0.005)
Observations	844	844	844	844	844	844	765	844
Mean: No neighbors within 200m, Control	66.4	37.3	26.2	2.91	0.824	0.985	0.917	0.696

Appendix Table A16 reports spillover effects of the graduation program on all households. The sample includes the 844 households for whom we both have their GPS coordinates (from year seven), and who at year seven, are not more than 6 kilometers from the median GPS point of individuals they shared a baseline village with. All financial outcomes are reported in 2021 USD in PPP terms. Each regression controls for baseline values (when available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic.

Appendix Table A17: Spatial Spillovers - Income Aggregates - All Households

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Monthly Livestock Revenues	Monthly Agricultural Profits	Monthly Non-Farm Enterprise Profits	Monthly Income from Wage Labor (including workfare)	Rating of Economic Status (1/10)	Productive Asset Value, Indexed	Monthly Remittances Received
Two Year							
Treatment	129	13.6	5.88	-3.32	1.20	0.804	1.09
	(9.00)	(5.55)	(2.42)	(3.00)	(0.153)	(0.081)	(1.238)
Neighbors within 200m	4.66	-0.972	-2.66	0.730	0.125	0.018	-0.146
	(4.76)	(1.49)	(0.992)	(1.39)	(0.070)	(0.033)	(0.646)
Treated Neighbors within 200m	-4.95	0.368	2.17	-0.913	-0.160	-0.082	-0.054
	(6.71)	(1.35)	(1.61)	(2.32)	(0.104)	(0.046)	(0.552)
Observations	844	844	844	844	842	844	844
Mean: No neighbors within 200m, control	37.6	5.28	23.5	37.2	3.85	0.14	1.09
Three Year							
Treatment	32.4	-0.153	8.14	-3.72	0.948	0.794	1.72
	(6.42)	(3.45)	(2.47)	(2.79)	(0.123)	(0.078)	(3.08)
Neighbors within 200m	3.92	2.73	-1.36	2.34	0.071	0.023	0.720
	(3.01)	(1.91)	(1.07)	(1.26)	(0.052)	(0.033)	(1.519)
Treated Neighbors within 200m	-3.44	-1.66	-1.63	-2.30	-0.043	-0.060	-1.51
	(2.96)	(1.64)	(1.61)	(1.78)	(0.077)	(0.046)	(1.56)
Observations	844	844	844	844	843	844	844
Mean: No neighbors within 200m, control	36.5	14.7	29.1	28.6	4.47	0.23	6.51
Seven Year							
Treatment	41.4	1.50	5.72	-2.25	0.036	0.382	4.79
	(21.5)	(4.49)	(3.59)	(6.72)	(0.128)	(0.104)	(4.00)
Neighbors within 200m	13.4	1.02	-1.51	5.45	0.060	-0.037	0.238
	(8.79)	(1.60)	(1.35)	(3.03)	(0.057)	(0.047)	(1.75)
Treated Neighbors within 200m	-18.9	-1.97	-4.35	-2.61	-0.047	-0.062	2.46
	(10.1)	(2.03)	(1.91)	(4.76)	(0.086)	(0.062)	(3.72)
Observations	844	844	844	844	843	844	844
Mean: No neighbors within 200m, control	72.7	7.72	31.5	89.4	4.89	1.23	6.25

Appendix Table A17 reports spillover effects of the graduation program on all households. The sample includes the 844 households for whom we both have their GPS coordinates (from year seven), and who at year seven, are not more than 6 kilometers from the median GPS point of individuals they shared a baseline village with. All financial outcomes are reported in 2021 USD in PPP terms. Each regression controls for baseline values (when available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic.

Appendix Table A18: Spatial Spillovers - Income Mechanims - All Households

	(1) Total Value of Livestock	(2) Total Value of Livestock Sold per Month, last 12 months	(3) Total Value of Livestock Bought per Month, last 12 months	(4) Monthly Revenue from Agriculture	(5) Monthly Expenditure on Agriculture	(6) Total Acres Cultivated, Major Growing Season	(7) Received any remittances	(8) Earned any wage income (including from workfare program)
Two Year								
Treatment	992	79.7	74.1	9.07	4.24	0.177	-0.028	-0.003
	(97.2)	(5.71)	(5.54)	(2.70)	(1.26)	(0.071)	(0.023)	(0.007)
Neighbors within 200m	41.7	2.11	1.669	-3.34	-0.248	-0.012	0.020	-0.006
	(41.2)	(2.65)	(2.53)	(1.05)	(0.494)	(0.034)	(0.012)	(0.004)
Treated Neighbors within 200m	-100	-2.31	-0.387	2.10	-0.904	-0.030	-0.012	0.004
	(58.7)	(3.69)	(3.59)	(1.78)	(0.753)	(0.042)	(0.016)	(0.005)
Observations	843	843	843	844	844	844	840	844
Mean: No neighbors within 200m, control	1401	20.4	13.8	34.4	10.9	1.23	0.092	1.00
Three Year								
Treatment	1,026	31.8	32.0	9.86	3.09	0.231	-0.074	-0.045
	(93.5)	(5.69)	(5.49)	(2.62)	(0.858)	(0.069)	(0.028)	(0.017)
Neighbors within 200m	37.8	4.51	3.628	-1.98	-0.138	-0.026	0.009	-0.002
	(40.2)	(2.66)	(2.54)	(1.19)	(0.388)	(0.030)	(0.013)	(0.008)
Treated Neighbors within 200m	-77.0	-3.65	-0.797	-0.861	-0.259	-0.030	-0.012	0.004
	(56.8)	(2.15)	(2.26)	(1.74)	(0.568)	(0.039)	(0.018)	(0.011)
Observations	844	844	844	844	844	844	844	844
Mean: No neighbors within 200m, control	1498	17.5	13.1	36.0	6.89	1.39	0.198	0.962
Seven Year								
Treatment	428	39.7	5.294	8.13	4.05	0.266	0.046	-0.088
	(111)	(20.4)	(3.49)	(4.14)	(1.33)	(0.101)	(0.025)	(0.022)
Neighbors within 200m	-32.9	15.3	3.35	-1.55	0.570	-0.005	0.013	0.012
	(50.3)	(8.63)	(1.71)	(1.63)	(0.663)	(0.037)	(0.011)	(0.010)
Treated Neighbors within 200m	-72.2	-18.5	-3.97	-4.43	-1.34	-0.094	-0.009	0.007
	(68.1)	(9.85)	(2.58)	(2.30)	(0.926)	(0.049)	(0.016)	(0.013)
Observations	844	844	844	844	844	844	844	844
Mean: No neighbors within 200m, control	2362	46.1	28.5	49.5	18.0	1.25	0.107	0.939

Appendix Table A18 reports spillover effects of the graduation program on all households. The sample includes the 844 households for whom we both have their GPS coordinates (from year seven), and who at year seven, are not more than 6 kilometers from the median GPS point of individuals they shared a baseline village with. All financial outcomes are reported in 2021 USD in PPP terms. Each regression controls for baseline values (when available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic.

Appendix Table A19: Spatial Spillovers - Resource Sharing - All Households

	(1)	(2)	(3)	(4)	(5)	(6)
	Any Remittances Received, Last 12 Months	Remittance Income per Month	Received any Informal Loans	Cash Value of Informal Loans Received	Received any Food as Gifts	Number of Types of Food Received as Gift
Two Year						
Treatment	-0.028	1.09	-0.030	19.4	0.010	-0.033
	(0.023)	(1.24)	(0.029)	(18.0)	(0.031)	(0.049)
Neighbors within 200m	0.020	-0.146	0.002	-13.5	0.028	0.042
	(0.012)	(0.646)	(0.012)	(6.24)	(0.014)	(0.019)
Treated Neighbors within 200m	-0.012	-0.054	-0.024	8.91	-0.014	-0.022
	(0.016)	(0.552)	(0.019)	(8.23)	(0.021)	(0.027)
Observations	840	844	844	844	844	844
Mean: No neighbors within 200m, Control	0.092	1.09	0.718	103	0.244	0.443
Three Year						
Treatment	-0.074	1.72	0.006	30.1	0.008	0.036
	(0.028)	(3.08)	(0.027)	(11.9)	(0.026)	(0.043)
Neighbors within 200m	0.009	0.720	-0.007	-6.59	0.008	0.014
	(0.013)	(1.52)	(0.011)	(4.578)	(0.012)	(0.018)
Treated Neighbors within 200m	-0.012	-1.51	-0.003	3.62	-0.003	0.005
	(0.018)	(1.560)	(0.016)	(6.829)	(0.017)	(0.026)
Observations	844	844	844	844	844	844
Mean: No neighbors within 200m, Control	0.198	6.51	0.771	150	0.176	0.282
Seven Year						
Treatment	0.046	4.79	0.011	29.5	-0.030	-0.130
	(0.025)	(4.00)	(0.019)	(49.280)	(0.033)	(0.072)
Neighbors within 200m	0.013	0.238	-0.005	2.30	-0.019	0.041
	(0.011)	(1.75)	(0.008)	(9.964)	(0.015)	(0.030)
Treated Neighbors within 200m	-0.009	2.46	-0.005	-6.61	0.045	-0.034
	(0.016)	(3.72)	(0.010)	(13.790)	(0.022)	(0.045)
Observations	844	844	844	844	844	844
Mean: No neighbors within 200m, Control	0.107	6.25	0.084	56.0	0.641	1.37

Appendix Table A14 reports spillover effects of the graduation program on sample households. The sample includes the 844 households for whom we both have their GPS coordinates (from year seven), and who at year seven, are not more than 6 kilometers from the median GPS point of individuals they shared a baseline village with. All financial outcomes are reported in 2021 USD in PPP terms. Each regression controls for baseline values (when available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic.

Appendix Table A20: Cost-benefit analysis

Panel A: Program Costs per Household, USD PPP 2021

(1)	Direct Transfer Costs	1371
	Asset Cost	1371
	Food stipend	0
	Total Supervision Costs	2122
	Salaries of Implementing Organization Staff	387
	Materials	37
	Training	949
	Travel Costs	194
	Other Supervision Expenses	554
	Total Direct Costs	3493
	Start-up expenses	48
	Indirect Costs	470
(2)	Total Costs, calculated as if all incurred immediately at beginning of Year 0	4011

Panel B: Benefits per Household, USD PPP, All Values Deflated to Baseline at 5% annual social discount rate

(3)	Year 1 Annual Consumption ITT, assuming treatment effect equal to Year 2	509
(4)	Year 2 Annual Consumption ITT Treatment Effect	484
(5)	Year 3 Annual Consumption ITT Treatment Effect	484
(6)	Year 7 Annual Consumption ITT Treatment Effect	280
	Estimated Benefits, Years 4-6, assuming linear decay from Year 3 to 7	1125
(7)	Projected Future Benefits, Years 8-16, assuming linear decay from Year 3 to Year 7 continues	1012
(8)	Total Estimated and Projected Consumption Benefits, (3) + (4) + (5) + (6) + (7)	3894

Panel C: Benefit-Cost Ratio

Total Consumption Benefits divided by Costs, (8) / (2)	0.971
Total Consumption Benefits divided by Direct Transfer to Recipients, (8) / (1)	2.839
Consumption Benefits Realized by Year 7, Divided by Costs, ((8) - (7)) / (1)	0.718
Total Consumption Benefits divided by Costs, if not discounting future	1.233
Share of bootstraps in which benefits exceed costs	0.519
Median benefit-cost ratio from bootstrapped estimates	1.024
95% Confidence Interval for benefit-cost ratio from bootstrapped estimates	[0.42, 2.36]

Appendix Table A20 presents cost-benefit estimates. Costs are reported by the implementing partner, and converted to 2021 USD in PPP terms. Benefits are calculated as equal to the sum of accumulated and projected future consumption benefits. We calculate the benefits in years 2, 3, and 7 from our consumption modules (and scaled to annual values). We assume that the decay in consumption benefits from Year 3 to 7 is linear, and that this decay continues linearly until the benefits reach 0, by Year 16.

Appendix Table A21: Asset Ownership

	(1) Total Asset Value	(2) Productive Asset Value	(3) Durable Good Value
Treatment (ITT): Two Year	1,162	931	61.8
	(112)	(91.0)	(20.0)
Control mean	1659	1239	207
Observations	915	915	910
Treatment (ITT): Three Year	1,158	914	72.5
	(109)	(88.4)	(17.8)
Control mean	1835	1364	206
Observations	908	908	908
Treatment (ITT): Seven Year	525	448	84.1
	(133)	(122)	(39.4)
Control mean	2618	2193	424
Observations	889	889	889
Baseline Mean	1201	1157	44.1

Appendix Table A21 reports average treatment effects of the graduation program on asset ownership (and its component parts), the indexed version of which is reported in Figure 1 and Appendix Table A4. Each regression controls for baseline values (which we construct using relative prices in subsequent waves--we observe baseline quantities of the same asset types, but not baseline values.). We additionally control for tabia-level strata. Standard errors are Huber-White heteroskedastic.

Appendix Table A22: Food Security

	(1)	(2)	(3)	(4)	(5)
	Everyone gets enough food every day	No Adults skipped meals	No HH member went a whole day without food	No children skipped meals	Everyone eats at least two meals every day
Treatment (ITT): Two Year	0.039	0.063	0.029	0.045	0.018
	(0.031)	(0.030)	(0.017)	(0.022)	(0.018)
Control mean	0.640	0.656	0.913	0.845	0.910
Observations	914	910	910	910	909
Treatment (ITT): Three Year	0.077	0.051	0.041	0.047	0.025
	(0.030)	(0.030)	(0.015)	(0.023)	(0.016)
Control mean	0.640	0.687	0.921	0.833	0.923
Observations	907	907	906	904	906
Treatment (ITT): Seven Year	0.023	0.021	-0.007	0.011	0.012
	(0.025)	(0.023)	(0.009)	(0.018)	(0.019)
Control mean	0.826	0.850	0.987	0.926	0.908
Observations	889	889	889	802	889
Baseline Mean	0.335	0.370	0.745	0.489	0.827

Appendix Table A22 reports average treatment effects of the graduation program on food security. A subset of these variables is reported in Figure 2 and in Appendix Table A5, replicating the procedure of Banerjee et al. 2021. Each of these variables is used to construct the food security index in Figure 1 and Appendix Table A4. Each regression controls for baseline values (where available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic.

Appendix Table A23: Financial Inclusion

	(1)	(2)	(3)	(4)
	Amount borrowed, last 12 months, formal sources	Amount borrowed, last 12 months, informal sources	Savings balance	Savings deposits, last 3 months
Treatment (ITT): Two Year	37.3	19.6	849.7	43.6
	(14.9)	(16.5)	(38.6)	(4.44)
Control mean	22.3	117	91.1	10.1
Observations	915	915	915	915
Treatment (ITT): Three Year	42.0	28.9	315.9	9.47
	(19.7)	(11.3)	(41.9)	(4.95)
Control mean	34.61	135	84.9	7.55
Observations	908	908	908	908
Treatment (ITT): Seven Year	-8.961	26.7	75.9	17.1
	(36.5)	(45.9)	(55.3)	(14.4)
Control mean	102	55.6	244	43.9
Observations	889	889	889	889
Baseline Mean	42.3	4.70	-	-

Appendix Table A23 reports average treatment effects of the graduation program on financial inclusion. Each of these variables is used to construct the financial inclusion index in Figure 2 and Appendix Table A4. Each regression controls for baseline values (where available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic.

Appendix Table A24: Productive Time Use

	(1)	(2)	(3)	(4)	(5)
	Minutes working per day on average, last 48 hours	Minutes working in agriculture on average, last 48 hours	Minutes working with livestock on average, last 48 hours	Minutes working on non-farm enterprise on average, last 48 hours	Minutes working in wage labor on average, last 48 hours
Treatment (ITT): Two Year	58.5	21.3	37.8	6.44	-6.14
	(12.0)	(9.34)	(7.58)	(3.54)	(6.35)
Control mean	225	96.4	80.3	2.86	45.0
Observations	834	834	834	834	834
Treatment (ITT): Three Year	47.1	22.6	30.9	4.41	-9.80
	(12.4)	(10.55)	(7.88)	(3.03)	(6.78)
Control mean	245	125	75.7	3.59	40.4
Observations	825	825	825	825	825
Treatment (ITT): Seven Year	16.9	8.2	6.52	3.40	0.176
	(10.4)	(9.04)	(6.90)	(2.65)	(4.43)
Control mean	215	103	88.1	3.96	20.4
Observations	1,228	1,228	1,228	1,228	1,228
Baseline Mean	118	18.5	39.6	2.67	57.5

Appendix Table A24 reports average treatment effects of the graduation program on productive time use. The aggregate (in column 1) is reported in Figure 1 (rescaled to have baseline mean 0 and standard deviation 1) and Appendix Table A4. Each regression controls for baseline values, and for tabia-level strata. Standard errors are clustered at the household level.

Appendix Table A25: Physical and Mental Health

	Physical Health Variables			Mental Health Variables		
	(1)	(2)	(3)	(4)	(5)	(6)
	No days of work missed due to poor physical health	Mean Score, Activites of Daily Living (0/1)	Perception of Physical Health (1/5)	Overall Satisfaction with Life (1/5)	No extended period of time with worry	Stress Index
Treatment (ITT): Two Year	0.004	-0.007	-0.029	0.146	0.004	-0.007
	(0.013)	(0.015)	(0.066)	(0.070)	(0.020)	(0.054)
Control mean	0.949	0.861	3.620	3.52	0.860	0.000
Observations	1,301	1,292	1,292	1,307	1,307	1,307
Treatment (ITT): Three Year	0.005	0.028	-0.028	0.083	-0.025	-0.059
	(0.010)	(0.014)	(0.060)	(0.061)	(0.015)	(0.059)
Control mean	0.959	0.879	3.731	3.55	0.939	0.000
Observations	1,263	1,256	1,256	1,265	1,264	1,265
Treatment (ITT): Seven Year	-0.002	-0.018	-0.102	-0.075	-0.009	-0.066
	(0.012)	(0.017)	(0.063)	(0.060)	(0.019)	(0.066)
Control mean	0.954	0.848	3.705	3.80	0.896	0.000
Observations	1,228	1,227	1,228	1,228	1,227	1,228
Baseline Mean	0.907	0.874	3.938	3.52	0.854	0.009

Appendix Table A25 reports average treatment effects of the graduation program on physical and mental health outcomes. The physical health index in Figure 1 and Appendix Table A4 is comprised of the variables in columns 1-3, while the mental health index is comprised of the variables in columns 4-6. Each regression controls for baseline values, and for tabia-level strata. Standard errors are clustered at the household level.

Appendix Table A26: Political and Women's Empowerment

	Political Involvement			*Women's Decision-Making*				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Individual has attended meeting with local leader or politician	Individual has asked a question of local leader or politician at meeting	Individual is member of political party	Women has major say in food-related spending decisions in household	Women has major say in education-related spending decisions in household	Women has major say in healthcare-related spending decisions in household	Women has major say in home improvement spending decisions in household	Women has major say in household management decisions in household
Treatment (ITT): Two Year	0.047	-0.009	0.061	-0.045	-0.007	-0.013	0.025	-0.020
	(0.026)	(0.025)	(0.026)	(0.030)	(0.030)	(0.030)	(0.027)	(0.028)
Control mean	0.613	0.296	0.349	0.735	0.491	0.556	0.406	0.402
Observations	1,307	1,307	1,306	758	742	757	755	745
Treatment (ITT): Three Year	0.047	0.004	0.061	0.010	-0.009	-0.015	-0.023	-0.030
	(0.028)	(0.023)	(0.027)	(0.029)	(0.031)	(0.032)	(0.030)	(0.031)
Control mean	0.522	0.216	0.328	0.780	0.492	0.563	0.447	0.393
Observations	1,262	1,265	1,265	711	717	725	722	655
Treatment (ITT): Seven Year	0.012	-0.003	-0.001	0.003	-0.025	-0.025	-0.046	-0.041
	(0.028)	(0.022)	(0.028)	(0.027)	(0.034)	(0.034)	(0.033)	(0.035)
Control mean	0.510	0.192	0.349	0.836	0.652	0.661	0.707	0.615
Observations	1,227	1,227	1,228	723	723	723	723	723
Baseline Mean	0.350	0.184	0.303	0.473	0.411	0.446	0.409	0.383

Appendix Table A26 reports average treatment effects of the graduation program on physical and mental health outcomes. The political empowerment index in Appendix Table A4 is comprised of the variables in columns 1-3, while the women's empowerment index is comprised of the variables in columns 4-8. Each regression controls for baseline values, and for tabia-level strata. Standard errors are clustered at the household level.

Appendix Table A27: Key Financial Variables, Inflated using National CPI

	(1)	(2)	(3)	(4)	(5)
	Total Asset Value	Monthly Per Capita Consumption	Livestock Revenues, Monthly	Total Value of Livestock	Total Savings Balance
Treatment (ITT): Two Year	1,274	9.01	141	883	932
	(122.40)	(2.55)	(9.55)	(83.2)	(42.3)
Control mean	1820	55.0	35.6	1223	100.0
Observations	915	915	915	914	915
Treatment (ITT): Three Year	1,231	9.10	32.8	905	336
	(116.30)	(1.95)	(6.64)	(81.5)	(44.5)
Control mean	1951	49.9	31.4	1356	90.3
Observations	908	908	908	908	908
Treatment (ITT): Seven Year	391	4.39	30.0	312	56.58
	(99.3)	(2.09)	(15.6)	(80.5)	(41.2)
Control mean	1951	49.8	67.0	1512	182.1
Observations	889	889	889	889	889
Baseline Mean	1342	-	-	1237	-

Appendix Table A27 reports average treatment effects of the graduation program on key financial outcomes. In contrast to our base case, in which we use a price index based on the prices of food faced by sample households, here we use Ethiopia's national consumer price index to convert waves to be in constant (USD PPP 2021) prices. A discussion of both methods can be found in Appendix A. Each regression controls for baseline values (where available), and for tabia-level strata. Standard errors are Huber-White heteroskedastic.

F. Appendix Figures

List of Figures

Appendix Fig. 1: Validating Local vs. National Prices: Livestock Ownership

Appendix Fig. 2: Validating Local vs. National Prices: Non-Livestock Asset Ownership
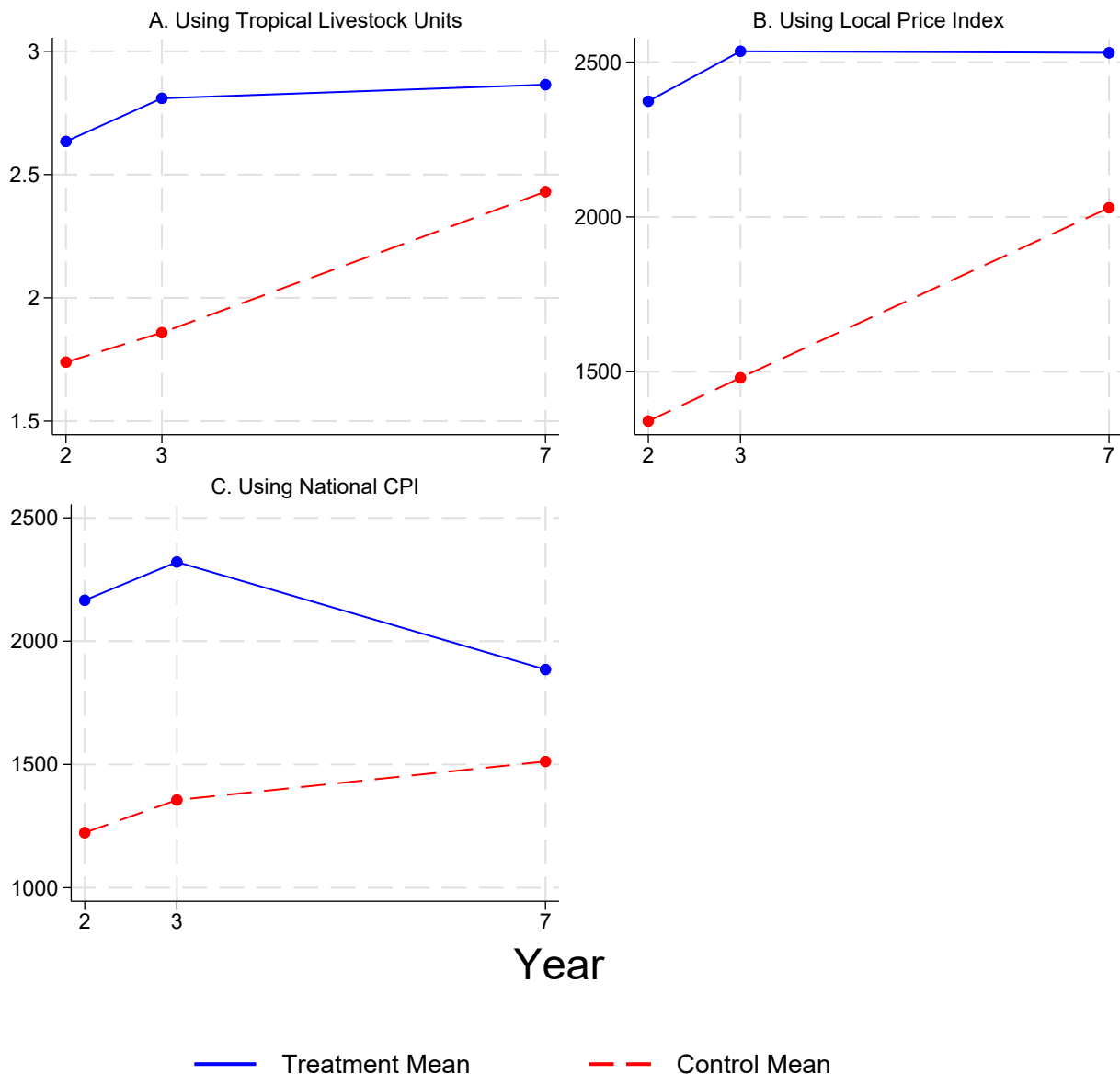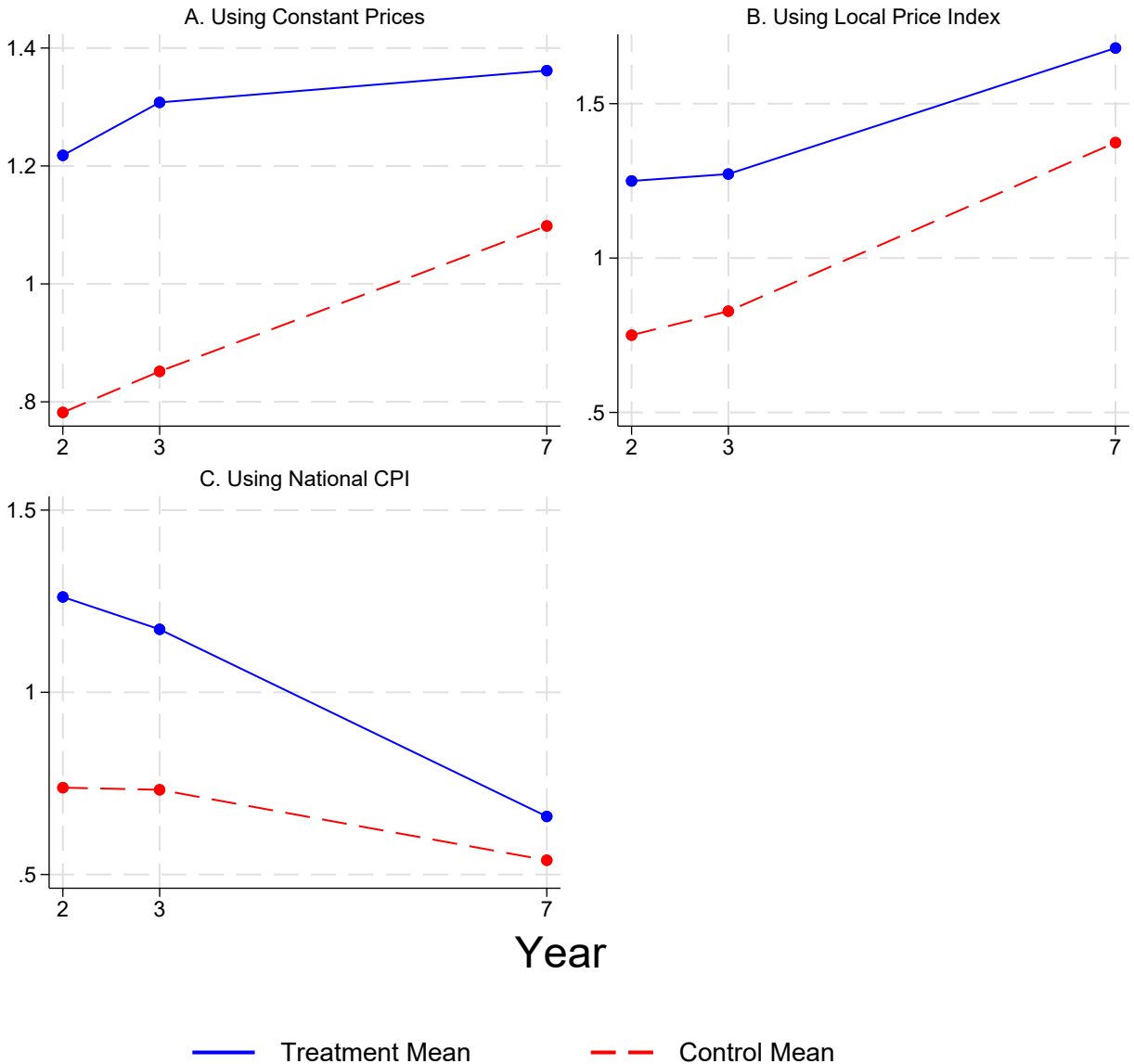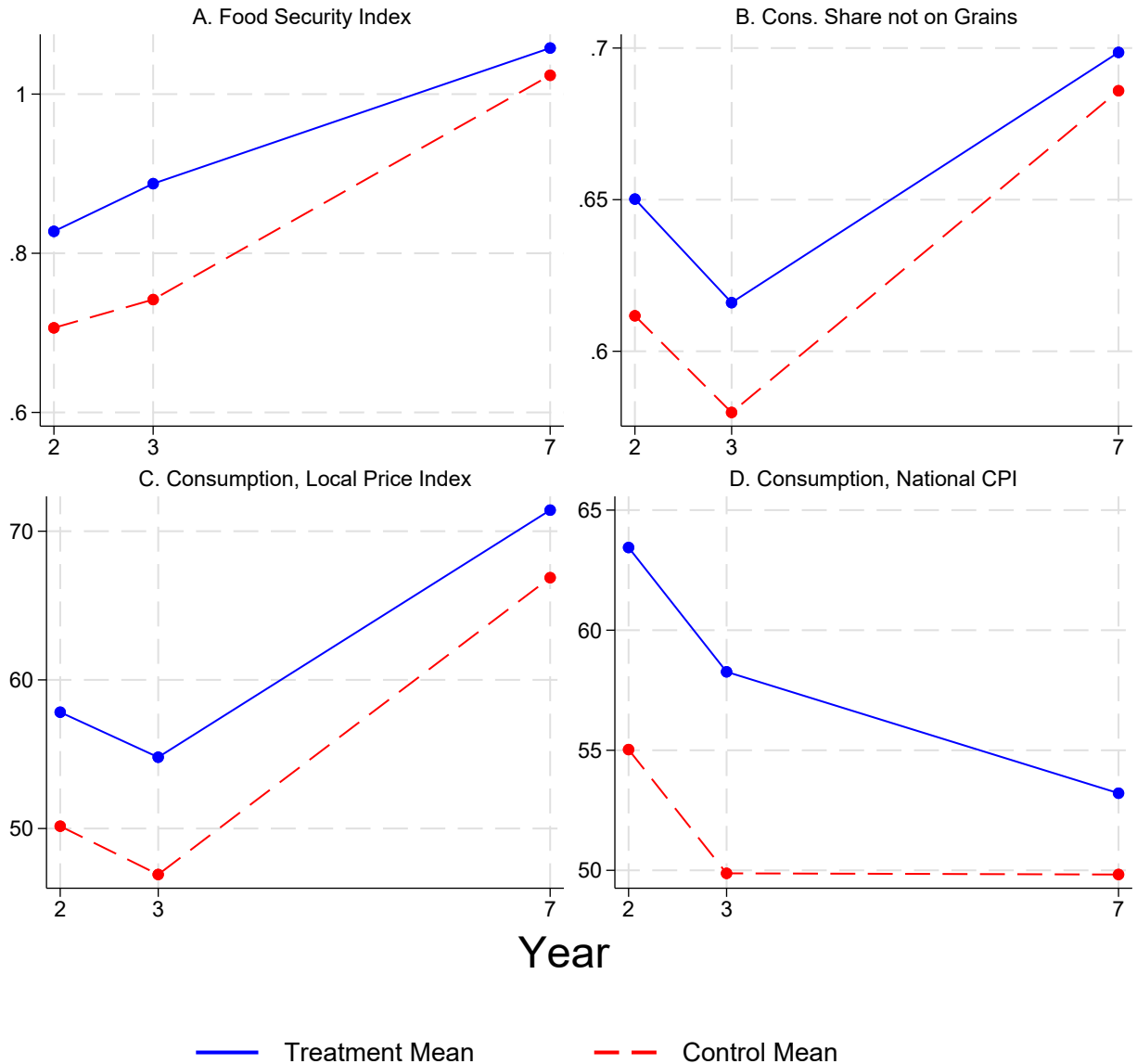

Notes: Appendix Figure 2 compares the evolution of non-asset livestock wealth for treatment and control groups over time under different measures of cross-wave prices, to assess the relative performance of using a local price index to measure inflation (the method used in our paper) versus the national consumer price index. Panel A reports the evolution in real terms (multiplying quantities owned by constant relative asset prices), Panel B reports the evolution using our local price index, and Panel C reports the evolution using the national CPI.

Appendix Fig. 3: Validating Local vs. National Prices: Welfare