



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

Livelihood Empowerment Against Poverty Programme Endline Impact Evaluation Report Appendixes

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These appendixes are a part of the Livelihood Empowerment Against Poverty Programme Endline Impact Evaluation Report.

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Appendix A.1 Study design details

A.1.1 Propensity score matching analysis

In 2010 ISSER agreed to incorporate 699 future LEAP beneficiary households into the field work of a national household survey they were undertaking in collaboration with Yale University (U.S.A.). The idea was to exploit the national survey to construct a non-experimental comparison group using propensity score matching (PSM). These matched households would then be followed in 2012 and 2016 along with the LEAP households to create a longitudinal propensity score matching (PSM) design for the evaluation. The literature assessing PSM indicates that the technique can mimic a social experiment if data from both the treatment and comparison group are collected in the exact same way, with identical survey instruments, and if households are followed longitudinally in order to control for fixed unobservable differences across households as well as communities in which the households reside (Heckman, Ichimura & Todd, 1997; Diaz & Handa, 2006; Handa & Maluccio, 2010). The LEAP evaluation satisfies these criteria: data from the ISSER and LEAP samples were collected by the exact same field teams using the same field procedures at the same time, using identical survey instruments (the LEAP survey instrument is actually a sub-set of the larger ISSER instrument), and followed longitudinally.

The LEAP sample for the evaluation was drawn from households that were part of the LEAP expansion in late 2009; this expansion occurred in Brong Ahafo, Volta and Central Regions of Ghana. Since the ISSER survey is national and included urban households, the matched sample of households was drawn from a sub-sample of ISSER households residing in communities and districts that were geographically close to LEAP districts or that were geographically similar. Urban households from the ISSER sample were excluded, as were households in Upper East and Upper West Regions and the Northern part of the Northern Region. The full ISSER survey comprised 5,009 households of which 3136 were from rural areas. The sample selected for the matching comprised 2,330 households, whose geographical distribution is shown in the last two columns of Table A.1.1.1.

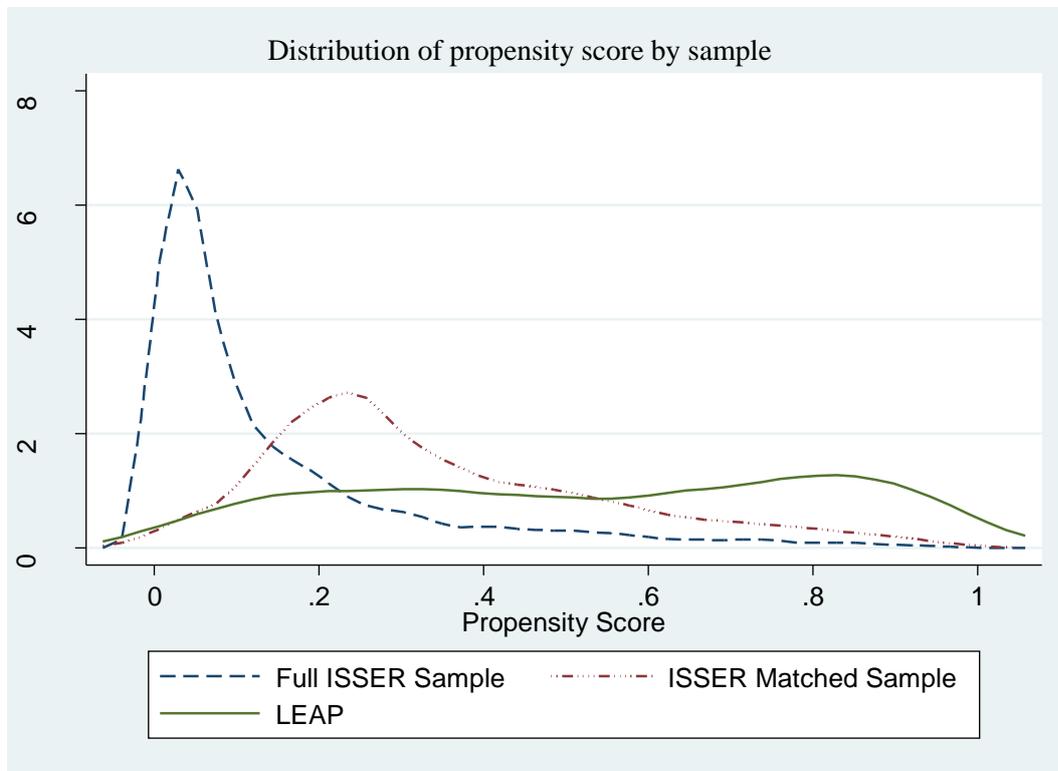
Table A.1.1.1: Distribution of LEAP and ISSER matched households

	LEAP		ISSER Matched Sample		Matched Sample Plus 215 Extra HH		Full ISSER Sample	
	(1) N	(%)	(2) N	(%)	(3) N	(%)	(4) N	(%)
Western			84	12.1	104	11.4	329	14.1
Central	176	25.2	95	13.6	118	12.9	270	11.6
Volta	82	11.7	141	20.2	185	20.2	390	16.7
Eastern			102	14.6	134	14.7	403	17.3
Ashanti			122	17.5	169	18.5	504	21.6
Brong Ahafo	441	63.1	101	14.5	135	14.8	314	13.5
Northern			54	7.7	69	7.6	120	5.2
N	699	100	699	100	914	100	2,330	100

The propensity score was calculated for each of these 2,330 households using a probit model that included all variables used by the LEAP program in ranking households for eligibility. These variables included household demographic composition and number of orphans, age, sex and education of the household head, employment status of household members, housing quality and ownership of livestock. Since LEAP and ISSER households come from different communities, we also included community variables in the model, though these are not used explicitly in LEAP targeting; these variables included the occurrence of each of shocks (flood, drought, crop disease, etc.) and the population size of the community. The distribution of the resulting propensity scores is depicted in the graph below where the ISSER matched sample is identified using one-to-one nearest neighbour without replacement in order to obtain a sample size equal to that of the LEAP sample. The scores for LEAP households are clearly to the right of those for the entire ISSER sample

indicating a higher likelihood of participating in LEAP. However the matching technique manages to pull a sample of ISSER households with scores that are distributed to the right of the ISSER households, and thus closer to the LEAP households.

Figure A.1.1.1: Distribution of propensity score by sample



With the matched sample (plus the extra 215 households that were followed-up in 2012, and again in 2016, from the ISSER sample), we calculated new propensity scores and used these new scores as ‘weights’ in the impact estimates—this technique is known as ‘inverse probability weighting’-- this technique allows us to eliminate any remaining imbalance in baseline characteristics between the LEAP and comparison group. The two figures below show the distribution of the new weights calculated using the matched sample plus the extra 215 ISSER households. These weights are calculated using a regression model similar to the one used in the original matching analysis, but using this restricted sample. The first figure (Figure A.1.1.2) shows the distribution without the inverse probability weights (IPW) while the second figure (Figure A.1.1.3) shows the distribution of scores with the weights. The weighting leads to a distribution of scores among ISSER households that is much more similar to that of LEAP households.

Figure A.1.1.2: Distribution of propensity scores (unweighted)

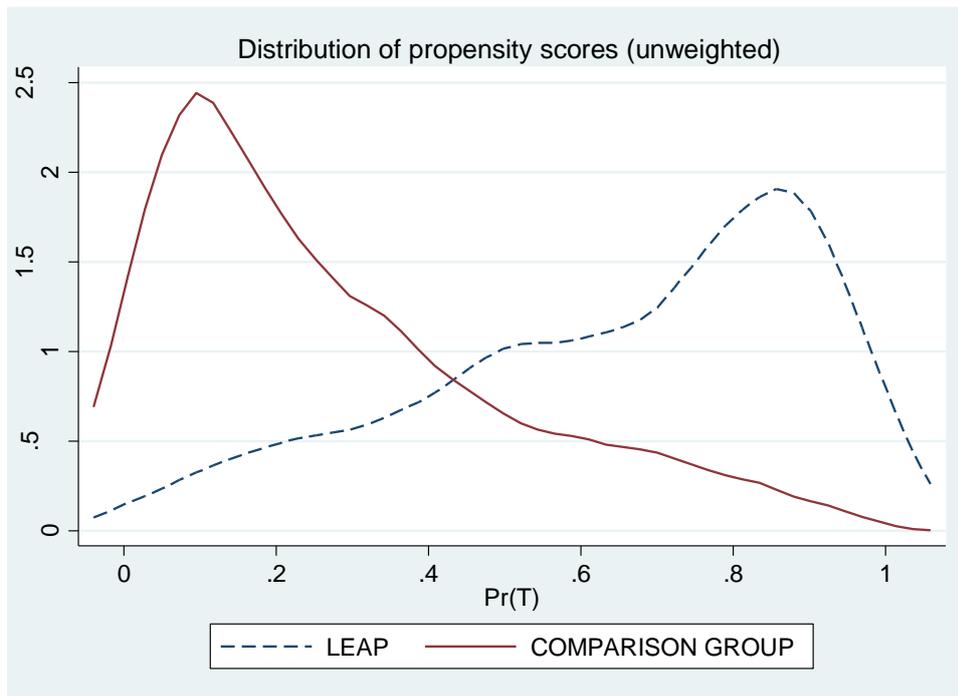
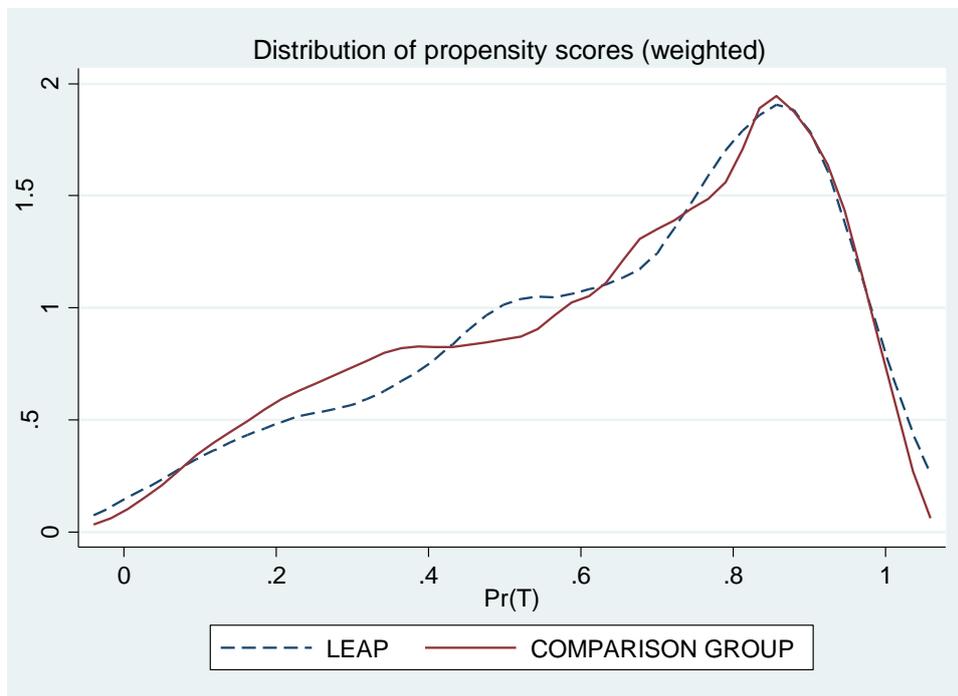


Figure A.1.1.3: Distribution of propensity scores (weighted)



A.1.2 Multivariate analysis

We estimate the DD impact estimator in a multivariate context, controlling for baseline characteristics of the sample households in order to account for differences across samples that might account for some of the observed treatment effects.

The control variables used are demographic composition, age, school, sex and marital status of the head, and log of total household size; when dealing with individual outcomes, we also control for age and sex of the individual. We emphasize that all these measures are from the baseline data set only. Because C households are pulled from a national survey and therefore come from geographically different areas than T households, we also control for community level effects in our statistical model ('community fixed effects') in order to strengthen the internal validity of the analysis. For the consumption expenditure estimates only, we also include a set of interactions between head's schooling and eleven prices of common consumption items, and head's age and the presence in the community of each of ten shocks (illness, theft, fire, water, electricity, drought, etc.). In the multivariate analysis, the basic setup of the estimation model is shown in equation (1):

$$(1) \quad Y_{it} = \alpha + \beta_1(2012)_{it} + \beta_2(2016)_{it} + \beta_3(T)_{it} + \beta_4(T * 2012)_{it} + \beta_5(T * 2016)_{it} + \beta_6 X_{it} + c_i + \varepsilon_{it}$$

In this framework '2012' is a dummy (indicator) variable equal to 1 if the observation pertains to the midline post-intervention period (2012), '2016' is a variable equal to 1 if the observation is from the endline, T is a dummy variable indicating whether the observation receives the treatment. The DD estimate of impact between baseline and midline is given by β_4 , the interaction between the two variables, while the impact between baseline and endline is given by β_5 . The X vector captures control variables described above, c is the community level control variable, and t and i indicate year of survey and individual observation respectively. The units of observation may be individuals or households depending on the outcome. The coefficient β_3 is a measure of the pre-treatment mean difference in Y between T and C while β_1 and β_2 measures general changes over time which will be important to control when outcomes are influenced by time trends (such as school enrolment). In the tables we present in the text we only report the coefficient of the DD variables representing the impacts at midline and endline, as well as a test for the difference in impacts between midline and endline. The regression is weighted using the IPW (LEAP observations are given a weight of 1).

Appendix A.2 Mean differences for attrition analysis

A.2.1 Overall attrition

Table A.2.1.1: Overall attrition - household characteristics

Variables	Attriters		Panel		Mean Diff	Diff SE	p-value
	Mean	N1	Mean	N2			
Age of household head	69.574	263	59.389	1,350	-10.185	1.587	0.000
Female household head	0.611	263	0.598	1,350	-0.013	0.045	0.770
Widow	0.499	263	0.361	1,350	-0.138	0.044	0.002
Never married	0.272	263	0.194	1,350	-0.078	0.044	0.078
Household head attended school	0.240	263	0.336	1,350	0.095	0.039	0.014
Residents age 0-5	0.231	263	0.502	1,350	0.271	0.048	0.000
Residents age 6-12	0.418	263	0.872	1,350	0.453	0.082	0.000
Residents age 13-17	0.360	263	0.563	1,350	0.203	0.087	0.021
Residents age 18-24	0.235	263	0.372	1,350	0.137	0.053	0.011
Residents age 25-64	0.507	263	0.998	1,350	0.491	0.074	0.000
Residents age 65+	0.838	263	0.751	1,350	-0.087	0.062	0.159
Household size	2.616	263	4.080	1,350	1.464	0.220	0.000

Notes: Weighted results; standard errors obtained adjusting for clustering.

Table A.2.1.2: Overall attrition - housing characteristics

Variables	Attriters		Panel		Mean Diff	Diff SE	p-value
	Mean	N1	Mean	N2			
Outer walls of cement	0.377	263	0.300	1,350	-0.077	0.049	0.115
Floor made of cement	0.617	263	0.643	1,350	0.026	0.048	0.594
Exclusive cooking room	0.396	263	0.357	1,350	-0.039	0.050	0.437
Main source of lighting is electricity	0.302	263	0.351	1,350	0.049	0.042	0.245
Flush or pit toilet	0.417	263	0.337	1,350	-0.080	0.050	0.114
Number of rooms occupied (log)	0.846	263	1.026	1,350	0.179	0.029	0.000

Notes: Weighted results; standard errors obtained adjusting for clustering.

Table A.2.1.3: Overall attrition - household NHIS enrolment

Variables	Attriters		Panel		Mean	Diff	p-value
	Mean	N1	Mean	N2	Diff	SE	
Has at least one member ever had NHIS insurance	0.642	263	0.694	1,350	0.051	0.040	0.200
All members ever have NHIS insurance	0.422	263	0.362	1,350	-0.060	0.047	0.207
Has at least one member with valid NHIS insurance	0.387	263	0.464	1,350	0.077	0.048	0.113
All members with valid NHIS insurance	0.249	263	0.209	1,350	-0.040	0.046	0.384

Notes: Weighted results; standard errors obtained adjusting for clustering.

Table A.2.1.4: Overall attrition - household poverty and vulnerability

Variables	Attriters		Panel		Mean	Diff	p-value
	Mean	N1	Mean	N2	Diff	SE	
Household real monthly consumption expenditure per adult equivalent (GH¢) - Total	48.448	263	47.265	1,350	-1.183	2.922	0.686
Household real monthly consumption expenditure per adult equivalent (GH¢) - Food	34.355	250	31.879	1,332	-2.475	1.997	0.216
Household food security score, 0 (good)- 2 (bad)	0.669	121	0.625	578	-0.045	0.068	0.514
Child food security score, 0-4	1.341	41	1.398	382	0.056	0.280	0.841
Child skipped meal in last 12 months due to money	0.122	41	0.134	387	0.012	0.061	0.840

Notes: Weighted results; standard errors obtained adjusting for clustering.

Table A.2.1.5: Overall attrition - household productive assets

Variables	Attriters		Panel		Mean	Diff	p-value
	Mean	N1	Mean	N2	Diff	SE	
Number of hh members who work for pay	0.069	263	0.097	1,350	0.028	0.022	0.214
Total days provided by casual labour	5.206	263	10.176	1,350	4.970	2.325	0.034
Crop yield	359.647	111	451.117	881	91.470	69.184	0.188
Own any sheep/goat/chicken	0.318	263	0.431	1,350	0.113	0.048	0.020
Number of sheep	0.400	263	0.630	1,350	0.230	0.153	0.135
Number of goats	0.592	263	1.126	1,350	0.535	0.212	0.012
Number of chickens	2.625	263	4.177	1,350	1.553	0.722	0.033
Own a non-farm enterprise	0.203	263	0.301	1,350	0.098	0.040	0.016
Number of hoes owned	1.016	263	1.838	1,350	0.821	0.192	0.000
Number of axes owned	0.193	263	0.379	1,350	0.186	0.047	0.000
Number of rakes owned	0.023	263	0.045	1,350	0.022	0.014	0.123
Number of shovels owned	0.059	263	0.112	1,350	0.053	0.027	0.054

Table A.2.1.5: Overall attrition - household productive assets (continued)

Variables	Attriters	Panel	Mean	Diff	Diff	Variables	Attriters
	Mean	N1	Mean	N2			Mean
Number of picks owned	0.108	263	0.102	1,350	-0.006	0.061	0.915
Number of sickles owned	0.035	263	0.111	1,350	0.076	0.029	0.010
Number of cutlasses owned	1.211	263	1.709	1,350	0.498	0.174	0.005
Number of trailers owned	0.014	263	0.038	1,350	0.025	0.017	0.141

Notes: Weighted results; standard errors obtained adjusting for clustering.

Table A.2.1.6: Overall attrition - household savings and transfers

Variables	Attriters		Panel		Mean	Diff	p-value
	Mean	N1	Mean	N2	Diff	SE	
Household has savings at formal institution	0.053	263	0.124	1,350	0.071	0.021	0.001
Household has savings at home	0.230	263	0.210	1,350	-0.020	0.038	0.605
Household received transfer in last 12 months	0.714	263	0.539	1,350	-0.175	0.046	0.000
Household giving transfer in last 12 months	0.151	263	0.272	1,350	0.120	0.040	0.003

Notes: Weighted results; standard errors obtained adjusting for clustering.

A.2.2 Differential attrition

Table A.2.2.1: Selective attrition - household characteristics

Variables	Comparison		Treatment		Mean	Diff	P-value	Effect Size
	Mean	N1	Mean	N2	Diff	SE		
Age of head	59.760	772	59.078	578	-0.682	1.700	0.689	-0.036
Female headed households	0.613	772	0.585	578	-0.029	0.049	0.559	-0.057
Widow	0.360	772	0.362	578	0.002	0.043	0.969	0.004
Never married	0.216	772	0.176	578	-0.039	0.037	0.285	-0.096
Household head attended school	0.359	772	0.317	578	-0.042	0.050	0.394	-0.086
Residents age 0-5	0.523	772	0.484	578	-0.039	0.064	0.544	-0.048
Residents age 6-12	0.902	772	0.846	578	-0.056	0.101	0.579	-0.056
Residents age 13-17	0.522	772	0.597	578	0.074	0.072	0.304	0.093
Residents age 18-24	0.354	772	0.388	578	0.034	0.063	0.594	0.049
Residents age 25-64	0.990	772	1.005	578	0.016	0.086	0.856	0.017
Residents age 65+	0.751	772	0.751	578	0.000	0.097	0.999	0.000
Household size	4.042	772	4.112	578	0.070	0.246	0.775	0.028

Notes: Weighted results; standard errors obtained adjusting for clustering.

Table A.2.2.2: Selective attrition - housing characteristics

Variables	Comparison		Treatment		Mean Diff	Diff SE	p-value	Effect Size
	Mean	N1	Mean	N2				
Outer walls of cement	0.323	772	0.280	578	-0.043	0.062	0.494	-0.089
Floor made of cement	0.681	772	0.611	578	-0.071	0.058	0.222	-0.148
Exclusive cooking room	0.418	772	0.306	578	-0.111	0.061	0.069	-0.231
Main source of lighting is electricity	0.368	772	0.337	578	-0.030	0.069	0.661	-0.063
Flush or pit toilet	0.308	772	0.362	578	0.053	0.064	0.405	0.108
Number of rooms occupied (log)	1.015	772	1.035	578	0.020	0.041	0.617	0.053

Notes: Weighted results; standard errors obtained adjusting for clustering.

Table A.2.2.3: Selective attrition - household NHIS enrolment

Variables	Comparison		Treatment		Mean Diff	Diff SE	p-value	Effect Size
	Mean	N1	Mean	N2				
Has at least one member ever had NHIS insurance	0.699	772	0.689	578	-0.011	0.048	0.821	-0.022
All members ever have NHIS insurance	0.382	772	0.346	578	-0.036	0.053	0.504	-0.074
Has at least one member with valid NHIS insurance	0.500	772	0.434	578	-0.066	0.057	0.248	-0.134
All members with valid NHIS insurance	0.243	772	0.180	578	-0.063	0.052	0.220	-0.156

Notes: Weighted results; standard errors obtained adjusting for clustering.

Table A.2.2.4: Selective attrition - household poverty and vulnerability

Variables	Comparison		Treatment		Mean Diff	Diff SE	p-value	Effect Size
	Mean	N1	Mean	N2				
Household real monthly consumption expenditure per adult equivalent (GH¢) - Total	49.131	772	45.701	578	-3.430	3.567	0.337	-0.101
Household real monthly consumption expenditure per adult equivalent (GH¢) - Food	31.894	772	31.867	560	-0.027	2.539	0.991	-0.001
Household food security score, 0 (good)- 2 (bad)		0	0.625	578	0.000	0.000		0.000
Child food security score, 0-4		0	1.398	382	0.000	0.000		0.000
Child skipped meal in last 12 months due to money		0	0.134	387	0.000	0.000		0.000

Notes: Weighted results; standard errors obtained adjusting for clustering.

Table A.2.2.5: Selective attrition - household productive assets

Variables	Comparison		Treatment		Mean Diff	Diff SE	p-value	Effect Size
	Mean	N1	Mean	N2				
Number of hh members who work for pay	0.084	772	0.107	578	0.023	0.025	0.365	0.066
Total days provided by casual labour	11.721	772	8.881	578	-2.841	3.792	0.454	-0.096
Crop yield	492.645	568	407.407	313	-85.238	95.651	0.374	-0.031
Own any sheep/goat/chicken	0.432	772	0.431	578	-0.001	0.060	0.988	-0.002
Number of sheep	0.498	772	0.740	578	0.243	0.196	0.217	0.085
Number of goats	1.085	772	1.161	578	0.076	0.250	0.761	0.023
Number of chickens	4.259	772	4.109	578	-0.150	0.937	0.873	-0.012
Own a non-farm enterprise	0.288	772	0.311	578	0.023	0.056	0.684	0.051
Number of hoes owned	1.755	772	1.907	578	0.151	0.272	0.579	0.064
Number of axes owned	0.341	772	0.412	578	0.071	0.077	0.356	0.102
Number of rakes owned	0.016	772	0.069	578	0.053	0.016	0.001	0.205
Number of shovels owned	0.135	772	0.093	578	-0.041	0.042	0.325	-0.090
Number of picks owned	0.113	772	0.092	578	-0.022	0.031	0.489	-0.043
Number of sickles owned	0.156	772	0.073	578	-0.084	0.054	0.122	-0.190
Number of cutlasses owned	1.932	772	1.522	578	-0.409	0.160	0.011	-0.247
Number of trailers owned	0.016	772	0.057	578	0.041	0.025	0.097	0.137

Notes: Weighted results; standard errors obtained adjusting for clustering.

Table A.2.2.6: Selective attrition - household savings and transfers

Variables	Comparison		Treatment		Mean Diff	Diff SE	p-value	Effect Size
	Mean	N1	Mean	N2				
Household has savings at formal institution	0.138	772	0.112	578	-0.025	0.033	0.450	-0.079
Household has savings at home	0.302	772	0.133	578	-0.169	0.045	0.000	-0.387
Household received transfer in last 12 months	0.474	772	0.593	578	0.120	0.061	0.050	0.240
Household giving transfer in last 12 months	0.293	772	0.254	578	-0.038	0.046	0.408	-0.085

Notes: All indicators measured in percent at baseline and percentage point change in 2012 and 2016, unless otherwise indicated. Weighted results; standard errors obtained adjusting for clustering. * indicates that the change between that year and baseline statistically significant at 10 per cent; ** indicates change is statistically significant at 1 or 5 per cent.

Appendix A.3 Changes in indicators in treatment (LEAP) households

Table A.3.1: Change in consumption indicators in treatment (LEAP) households

	Baseline (2010) Mean	Change at Midline (2012)	Change at Endline (2016)
Household real monthly consumption expenditure per adult equivalent			
Household real monthly consumption expenditure per adult equivalent (GH¢) - Total	112.202	41.580**	75.147**
Household real monthly consumption expenditure per adult equivalent (GH¢) - Food	66.525	25.956**	66.965**
Household real monthly consumption expenditure per adult equivalent (GH¢) - Non-food	45.677	15.624**	8.182**
Housing characteristics			
Main source of lighting is electricity	0.327	0.165**	0.328**
Outer walls of cement	0.296	-0.021	0.187**
Floor made of cement	0.611	0.061	0.263**
Improved source of drinking water	0.773	0.029	0.034
Flush or pit toilet	0.384	0.002	-0.072
Subjective well-being			
Happy with life	0.387	0.335**	0.187**

Notes: All indicators measured in percent at baseline and percentage point change in 2012 and 2016, unless otherwise indicated. * indicates that the change between that year and baseline statistically significant at 10 percent or better. * indicates change is statistically significant at 10 per cent; ** indicates change is statistically significant at 1 or 5 per cent.

Table A.3.2: Change in productive activities and financial assets indicators in treatment households

	Baseline (2010) Mean	Change at Midline (2012)	Change at Endline (2016)
Labour productivity			
Household had any members work for pay	0.085	0.040**	0.041**
Household hired any outside labour for agricultural activities	0.391	0.032	-0.012
Household engaged in agricultural activities last 12 months	0.514	-0.014	-0.006
Household used any fertilizer	0.138	0.095**	0.139**
Household used any seeds	0.399	0.066**	0.109**
Household used any improved seeds	0.019	0.0289**	0.019
Value of seeds	65.635	49.605**	292.619**
Value of seeds (deflated)	126.482	69.997**	271.903**
Total days provided by casual labour	7.909	-1.767	-2.338
Total days provided by family labour	26.965	9.267**	-3.549
Days of labour on farm (hired and family labour)	34.874	7.500	-5.887
Crop yield	198.685	209.072**	460.503**
Crop yield (deflated)	382.878	312.332**	350.152**
Productive assets			
Any agricultural asset ownership	0.745	0.064**	0.053**
Any hoes	0.579	0.099**	0.030
Any axes	0.274	-0.023	-0.024

Table A.3.2: Change in productive activities and financial assets indicators in treatment households (continued)

	Baseline (2010) Mean	Change at Midline (2012)	Change at Endline (2016)
Any rakes	0.054	-0.025**	-0.001
Any shovels	0.062	0.029**	0.029**
Any picks	0.066	0.011	0.004
Any sickles	0.036	-0.016*	0.006
Any cutlasses	0.674	0.068**	0.085**
Any spraying machines	0.037	0.068**	0.128**
Number of hoes	1.733	-0.083	0.161
Number of axes	0.387	-0.047	-0.063
Number of rakes	0.062	-0.030**	-0.005
Number of shovels	0.084	0.037*	0.037**
Number of picks	0.081	0.014	0.010
Number of sickles	0.064	-0.034**	0.008
Number of cutlasses	1.427	0.124	0.066
Number of spraying machines	0.043	0.095**	0.182**
Savings and transfers			
Household has any savings	0.204	0.198**	0.106**
Household received transfer in last 12 months	0.624	0.088**	-0.160**
Household gave transfer in last 12 months	0.235	0.144**	0.112**
Household is owed money or goods	0.090	-0.016	0.022
Principal amount of credit – Nominal	12.424	1.352	40.103**
Payments on credit in last 12 months – Nominal	13.625	18.694	40.581**
Principal amount of credit – Real	23.942	-0.454	34.469**
Payments on credit in last 12 months – Real	26.255	28.847	34.022
Household has debt	0.239	-0.007	0.111**
Principal amount of debts – Nominal	43.892	42.620**	169.025**
Payments on debt in last 12 months – Nominal	27.226	112.934**	138.063**
Current outstanding debt – Nominal	40.067	36.08**	145.539**
Principal amount of debts – Real	84.583	62.917**	152.185**
Payments on debt in last 12 months – Real	52.467	186.501**	131.338**
Current outstanding debt – Real	77.211	52.617**	129.187**
Household has any savings	0.204	0.198**	0.106**
Value of savings – Nominal	28.415	58.603**	54.863**
Value of savings – Real	54.757	93.606**	37.849*
Household received transfer in last 12 months	0.624	0.088**	-0.160**
Value of transfer received in last 12 months	142.295	134.229**	216.403**
Transfers received amount – Real	274.212	197.253**	124.667**
Household giving transfer in last 12 months	0.235	0.144**	0.112**
Value or transfer sent in last 12 months	48.858	32.239**	159.18**
Transfers sent amount – Real	94.153	44.116*	137.19**

Table A.3.2: Change in productive activities and financial assets indicators in treatment households (continued)

	Baseline (2010) Mean	Change at Midline (2012)	Change at Endline (2016)
Livestock and home enterprises			
Own any sheep/goat/chicken	0.407	0.043	0.131**
Own any chicken	0.274	0.028	0.138**
Own any sheep	0.122	-0.009	0.014
Own any goats	0.195	0.019	0.066**
Number of chickens	3.850	0.027	-0.151
Number of sheep	0.689	-0.147	0.001
Number of goats	1.065	0.090	0.345*
Owens a non-farm enterprise	0.296	0.001	0.072**

Notes: All indicators measured in percent at baseline and percentage point change in 2012 and 2016, unless otherwise indicated. * indicates that the change between that year and baseline statistically significant at 10 per cent; ** indicates change is statistically significant at 1 or 5 per cent.

Table A.3.3: Change in education indicators for children in treatment (LEAP) households

	Baseline (2010) Mean	Change at Midline (2012)	Change at Endline (2016)
All children, 5 - 17 years			
Currently enrolled in school	0.878	0.036**	-0.005
Correct grade for age	0.345	-0.025	-0.046
Real monthly individual education expenditure	14.399	3.275**	2.022
Boys, 5 - 17 years			
Currently enrolled in school	0.889	0.041**	-0.013
Correct grade for age	0.358	-0.039	-0.060*
Real monthly individual education expenditure	14.448	3.317*	2.118
Girls, 5 - 17 years			
Currently enrolled in school	0.865	0.031	0.005
Correct grade for age	0.331	-0.008	-0.029
Real monthly individual education expenditure	14.347	3.228**	1.931
All children, 5 - 13 years			
Currently enrolled in school	0.897	0.040**	0.027
Correct grade for age	0.444	-0.030	-0.048
Real monthly individual education expenditure	13.041	2.115	1.147
Boys, 5 - 13 years			
Currently enrolled in school	0.915	0.028	0.012
Correct grade for age	0.468	-0.055	-0.081*
Real monthly individual education expenditure	12.882	2.410	1.025
Girls, 5 - 13 years			
Currently enrolled in school	0.879	0.052**	0.043
Correct grade for age	0.418	-0.002	-0.013
Real monthly individual education expenditure	13.206	1.796	1.251

Table A.3.3: Change in education indicators for children in treatment (LEAP) households (continued)

	Baseline (2010) Mean	Change at Midline (2012)	Change at Endline (2016)
All children, 13 - 17 years			
Currently enrolled in school	0.825	0.054**	-0.005
Correct grade for age	0.112	-0.033	-0.028
Real monthly individual education expenditure	16.030	7.039**	4.277*
Boys, 13 - 17 years			
Currently enrolled in school	0.833	0.085**	-0.007
Correct grade for age	0.120	-0.050*	-0.013
Real monthly individual education expenditure	16.179	7.007**	4.297
Girls, 13 - 17 years			
Currently enrolled in school	0.816	0.027	-0.002
Correct grade for age	0.103	-0.014	-0.043
Real monthly individual education expenditure	15.854	7.102**	4.279*

Notes: All indicators measured in percent at baseline and percentage point change in 2012 and 2016, unless otherwise indicated. * indicates that the change between that year and baseline statistically significant at 10 per cent; ** indicates change is statistically significant at 1 or 5 per cent.

Table A.3.4: Change in adult health indicators in treatment (LEAP) households

	Baseline (2010) Mean	Change at Midline (2012)	Change at Endline (2016)
Household NHIS enrolment			
HH has at least one member ever NHIS insurance	0.725	0.193**	0.230**
HH with all members ever NHIS insurance	0.411	0.211**	0.255**
HH has at least one member with valid NHIS insurance	0.416	0.217**	0.352**
HH has all members with valid NHIS insurance	0.183	0.112**	0.116**
Individual NHIS current enrolment - all adults (age 18 & above)			
Individual enrolment in NHIS	0.552	0.227**	0.280**
Has valid NHIS insurance for current year	0.281	0.203**	0.239**
Number of times used NHIS card in last 12 months	2.8	-0.044	-0.643*
Individual NHIS current enrolment - by age (adults)			
<i>Adults aged 18-54</i>			
Individual ever enrolled in NHIS	0.442	0.273**	0.349**
Has valid NHIS insurance for current year	0.194	0.245**	0.264**
Number of times used NHIS card in last 12 months	2.037	-0.291	-0.309
<i>Adults aged 55 or more</i>			
Individual ever enrolled in NHIS	0.667	0.176**	0.225**
Has valid NHIS insurance for current year	0.373	0.160**	0.231**
Number of times used NHIS card in last 12 months	3.231	0.526	-0.579
Adult self-reported health status			
Self-assessed healthy - Adults aged 18 or higher	0.729	0.104**	-0.006
Can easily carry a heavy load - Adults aged 18 or higher	0.550	0.086**	0.050**
Self-assessed healthy - Adults aged 18-54	0.854	0.096**	0.057**
Can easily carry a heavy load - Adults aged 18-54	0.707	0.237**	0.171**

Table A.3.4: Change in adult health indicators in treatment (LEAP) households (continued)

	Baseline (2010) Mean	Change at Midline (2012)	Change at Endline (2016)
Self-assessed healthy - Adults aged 55 or older	0.602	0.089**	-0.152**
Can easily carry a heavy load - Adults aged 55 or older	0.401	-0.141**	-0.208**
Self-assessed healthy - Adult females	0.694	0.128**	-0.001
Can easily carry a heavy load - Adult females	0.521	0.079**	0.030
Self-assessed healthy - Adult males	0.788	0.065**	-0.013
Can easily carry a heavy load - Adult males	0.598	0.100**	0.085**
Self-assessed healthy - Adults in 50% poorest households	0.759	0.061**	-0.022
Can easily carry a heavy load - Adults in 50% poorest households	0.585	0.079**	0.049
Self-assessed healthy - Adults in 50% less poor households	0.693	0.158**	0.016
Can easily carry a heavy load - Adults in less poor households	0.507	0.095**	0.056**
Adult morbidity and service use			
Any illness or injury in past four weeks	0.298	-0.055**	-0.025
Sought care if ill or sick	0.467	0.159**	0.199**
Adult hospitalization			
Hospitalized in last 12 months - All adults	0.051	-0.006	0.018*
Hospitalized in last 12 months - Adults 18-54 years	0.031	-0.011	0.017
Hospitalized in last 12 months - Adults 55+ years	0.073	0.003	0.025
Hospitalized in last 12 months - Female adults	0.051	0.003	0.032**
Hospitalized in last 12 months - Male adults	0.05	-0.02*	-0.006
Adult expenditures in health (deflated)			
Health expenditures in last 4 weeks - All adults	5.86	5.81**	5.86**
Health expenditures in last 4 weeks - Adults 18-54 years	4.76	-0.004	1.67
Health expenditures in last 4 weeks - Adults 55+ years	7.06	13.10**	12.41**
Health expenditures in last 4 weeks - Female adults	5.91	8.01**	6.05**
Health expenditures in last 4 weeks - Male adults	5.78	2.07	5.53**

Notes: All indicators measured in percent at baseline and percentage point change in 2012 and 2016, unless otherwise indicated. * indicates that the change between that year and baseline statistically significant at 10 per cent; ** indicates change is statistically significant at 1 or 5 per cent.

Table A.3.5: Change in child health indicators in treatment (LEAP) households, by age cohorts and gender

	Baseline (2010) Mean	Change at Midline (2012)	Change at Endline (2016)
All children, 0 - 17 years			
Ever enrolled in NHIS	0.514	0.215**	0.302**
Valid NHIS insurance for current year	0.234	0.255**	0.339**
Sick/injured last 4 weeks	0.097	0.007	0.068**
Sought curative care if sick/injured	0.605	0.021	0.149**
Sought preventive health services	0.006	0.004	-0.001
Real monthly health expenditures	2.007	-0.175	1.504*
All children, 0 - 5 years			
Ever enrolled in NHIS	0.503	0.199**	0.225**
Valid NHIS insurance for current year	0.251	0.281**	0.353**
Sick/injured last 4 weeks	0.137	0.075*	0.097**
Sought curative care if sick/injured	0.666	0.079	0.089
Sought preventive health services	0.014	0.014	-0.014
Real monthly health expenditures	2.454	1.859*	2.250**
All children, 6 - 17 years			
Ever enrolled in NHIS	0.518	0.219**	0.323**
Valid NHIS insurance for current year	0.228	0.248**	0.335**
Sick/injured last 4 weeks	0.083	-0.011	0.061**
Sought curative care if sick/injured	0.572	-0.049	0.183*
Sought preventive health services	0.003	0.002	0.003
Real monthly health expenditures	1.858	-0.751	1.306
Boys, 0 - 17 years			
Ever enrolled in NHIS	0.518	0.219**	0.323**
Valid NHIS insurance for current year	0.228	0.248**	0.335**
Sick/injured last 4 weeks	0.083	-0.011	0.061**
Sought curative care if sick/injured	0.572	-0.049	0.183*
Sought preventive health services	0.003	0.002	0.003
Real monthly health expenditures	1.858	-0.751	1.306
Girls, 0 - 17 years			
Ever enrolled in NHIS	0.518	0.219**	0.323**
Valid NHIS insurance for current year	0.228	0.248**	0.335**
Sick/injured last 4 weeks	0.083	-0.011	0.061**
Sought curative care if sick/injured	0.572	-0.049	0.183*
Sought preventive health services	0.003	0.002	0.003
Real monthly health expenditures	1.858	-0.751	1.306

Notes: * 10% significance ** 5% significance.

Appendix A.4 Impacts on consumption and well-being: sub-group and ATT results

A.4.1 Sub-group results

Table A.4.1.1: The impact of LEAP on housing characteristics, by sex of the head

Dependent Variable	Female-headed households						Male-headed households					
	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
Main source of lighting is electricity	0.001 (0.02)	0.004 (0.07)	-0.003 (0.05)	0.312	0.635	0.704	0.116 (1.44)	0.219*** (3.25)	-0.103 (1.36)	0.349	0.684	0.604
Outer walls of cement	0.027 (0.48)	0.022 (0.35)	0.005 (0.08)	0.305	0.522	0.574	0.078 (1.17)	0.114** (2.15)	-0.035 (0.61)	0.283	0.426	0.386
Floor made of cement	0.130* (1.94)	-0.082 (-0.96)	0.212*** (3.36)	0.633	0.891	0.894	0.109 (1.32)	0.009 (0.13)	0.100 (1.59)	0.580	0.850	0.790
Improved source of drinking water	0.032 (0.66)	-0.005 (-0.11)	0.037 (0.76)	0.800	0.850	0.822	0.016 (0.29)	0.008 (0.15)	0.008 (0.14)	0.733	0.743	0.758
Flush or pit toilet	-0.335*** (-5.58)	-0.259*** (-3.56)	-0.076 (0.93)	0.389	0.307	0.503	-0.197** (-2.35)	-0.151* (-1.75)	-0.045 (0.53)	0.376	0.319	0.439
<i>N</i>	2,148	2,148		338	338	378	1,902	1,902		240	240	394

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.4.1.2: The impact of LEAP on housing characteristics, by household size

Dependent Variable	Small households (4 or fewer members)						Large households (5 or more members)					
	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
Main source of lighting is electricity	-0.023 (-0.33)	0.007 (0.11)	-0.030 (0.54)	0.313	0.620	0.697	0.097 (1.34)	0.143** (2.41)	-0.047 (0.65)	0.342	0.694	0.632
Outer walls of cement	0.050 (0.80)	0.079 (1.29)	-0.028 (0.44)	0.299	0.500	0.572	0.061 (1.06)	0.035 (0.72)	0.026 (0.48)	0.294	0.465	0.427
Floor made of cement	0.089 (1.17)	-0.124 (-1.46)	0.213*** (3.09)	0.661	0.884	0.850	0.170*** (2.99)	0.042 (0.66)	0.128** (2.50)	0.557	0.864	0.859
Improved source of drinking water	-0.010 (-0.21)	-0.015 (-0.37)	0.005 (0.10)	0.800	0.835	0.849	0.098* (1.74)	0.035 (0.49)	0.063 (0.87)	0.744	0.775	0.741
Flush or pit toilet	-0.322*** (-5.13)	-0.317*** (-4.37)	-0.006 (0.07)	0.398	0.318	0.530	-0.232*** (-2.73)	-0.082 (-1.06)	-0.149* (1.77)	0.368	0.305	0.422
<i>N</i>	1,953	1,953		275	275	376	2,097	2,097		303	303	396

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.4.1.3: The impact of LEAP on housing characteristics, by baseline consumption

Dependent Variable	Poorest households						Less poor households					
	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
Main source of lighting is electricity	0.015 (0.20)	0.103 (1.38)	-0.088 (1.21)	0.272	0.631	0.641	0.025 (0.33)	0.024 (0.44)	0.002 (0.03)	0.383	0.679	0.693
Outer walls of cement	-0.024 (-0.48)	-0.030 (-0.62)	0.006 (0.12)	0.291	0.415	0.384	0.125* (1.82)	0.146** (2.32)	-0.021 (0.28)	0.302	0.552	0.630
Floor made of cement	0.142** (2.10)	0.004 (0.06)	0.138*** (2.80)	0.537	0.860	0.844	0.122* (1.76)	-0.117 (-1.33)	0.238*** (3.24)	0.688	0.889	0.865
Improved source of drinking water	0.044 (0.85)	0.018 (0.31)	0.025 (0.44)	0.760	0.791	0.762	0.000 (0.00)	-0.010 (-0.24)	0.010 (0.21)	0.786	0.822	0.836
Flush or pit toilet	-0.236*** (-3.18)	-0.158* (-1.85)	-0.077 (0.88)	0.384	0.286	0.475	-0.319*** (-4.25)	-0.271*** (-4.19)	-0.048 (0.49)	0.384	0.339	0.481
<i>N</i>	1,956	1,956		292	292	360	2,094	2,094		286	286	412

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

A.4.2 ATT results

Table A.4.2.1: ATT household real consumption expenditure

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Total real AE monthly expenditure	-11.825	-21.193***	9.368	111.111	183.255	197.569
	(-1.43)	(-3.01)	(1.05)			
Total real AE monthly food expenditure	1.566	-3.304	4.870	64.965	130.547	125.713
	(0.22)	(-0.65)	(0.66)			
Total real AE monthly non-food expenditure	-13.390**	-17.888***	4.498	46.147	52.708	71.855
	(-2.45)	(-3.56)	(0.74)			
N	3,834	3,834		497	491	777

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.4.2.2: ATT Impact of LEAP on housing characteristics

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Main source of lighting electricity	0.004	-0.042	0.047	0.315	0.647	0.693
	(0.09)	(-0.83)	(0.87)			
Outer walls of cement	0.001	-0.049	0.049	0.296	0.482	0.551
	(0.02)	(-0.95)	(0.82)			
Floor made of cement	0.074	-0.037	0.110*	0.599	0.875	0.874
	(1.13)	(-0.73)	(1.69)			
Improved source of drinking water	-0.066	-0.054	-0.012	0.778	0.802	0.784
	(-0.93)	(-1.02)	(0.26)			
Flush or pit toilet	-0.187***	-0.171***	-0.016	0.384	0.327	0.337
	(-3.00)	(-3.37)	(0.23)			
N	4,050	4,050		518	518	832

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Appendix A.5 Impacts on productive activities and financial assets

A.5.1 Household financial assets - nominal values

Table A.5.1.1: Household financial assets - nominal values

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Household is owed money or goods	-0.005 (-0.16)	-0.013 (-0.43)	0.008 (0.27)	0.090	0.112	0.122
<i>N</i>	4,050	4,050		578	578	772
Principal amount of credit	-6.532 (-0.39)	-0.814 (-0.11)	-5.719 (0.39)	12.424	52.527	57.233
<i>N</i>	4,050	4,050		578	578	772
Payments on credit in last 12 months	-34.209 (-0.40)	62.193 (0.72)	-96.402 (1.46)	13.625	54.205	104.853
<i>N</i>	471	471		56	67	106
Household has debt	-0.032 (-0.68)	-0.054 (-1.29)	0.021 (0.50)	0.239	0.349	0.336
<i>N</i>	4,050	4,050		578	578	772
Principal amount of debts	-61.449 (-1.21)	8.331 (0.42)	-69.780 (1.39)	43.892	212.917	278.998
<i>N</i>	4,050	4,050		578	578	772
Payments on debt in last 12 months	-98.389 (-1.47)	132.962 (1.59)	-231.351** (2.60)	27.226	165.289	206.247
<i>N</i>	1,071	1,071		139	207	225
Current outstanding debt	-63.764 (-1.27)	16.030 (1.02)	-79.794 (1.56)	40.067	185.606	257.675
<i>N</i>	4,050	4,050		578	578	772
Household has any savings (at home or at institution)	0.153** (2.50)	0.111* (1.88)	0.042 (0.58)	0.204	0.310	0.298
<i>N</i>	4,050	4,050		578	578	772
Value of savings	-100.777*** (-2.86)	-4.682 (-0.17)	-96.095** (2.39)	28.415	83.277	191.396
<i>N</i>	4,050	4,050		578	578	772
Household received transfer in last 12 months	-0.258*** (-5.62)	0.002 (0.03)	-0.259*** (4.66)	0.624	0.464	0.596
<i>N</i>	4,050	4,050		578	578	772
Value of transfer received in last 12 months	-161.916** (-2.06)	-48.723 (-1.17)	-113.193 (1.37)	142.295	358.698	548.658
<i>N</i>	4,050	4,050		578	578	772
Household giving transfer in last 12 months	-0.018 (-0.43)	-0.041 (-0.77)	0.022 (0.36)	0.235	0.347	0.379
<i>N</i>	4,050	4,050		578	578	772
Value of transfer sent in last 12 months	-50.447 (-0.98)	-50.762** (-2.33)	0.314 (0.01)	48.858	208.038	231.251
<i>N</i>	4,050	4,050		578	578	772

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

A.5.2 Sub-group results

Table A.5.2.1: Labour productivity - poorest 50% households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Household had any members work for pay	0.010 (0.25)	-0.009 (-0.25)	0.019 (0.41)	0.090	0.155	0.163
Hh hired any outside labour for agricultural activities	-0.086 (-1.40)	0.020 (0.40)	-0.105** (2.20)	0.422	0.407	0.430
Hh engaged in agricultural activities last 12 months	-0.047 (-0.84)	-0.068* (-1.86)	0.022 (0.47)	0.587	0.569	0.672
Household used any fertilizer	-0.070 (-1.16)	-0.080* (-1.67)	0.010 (0.15)	0.153	0.277	0.391
Household used any seeds	0.062 (1.13)	0.026 (0.52)	0.036 (0.83)	0.488	0.569	0.672
Household used any improved seeds	0.048 (0.99)	0.072 (1.54)	-0.024 (0.94)	0.018	0.035	0.047
Value of seeds	202.633*** (2.82)	-0.521 (-0.02)	203.154** (2.45)	62.158	405.349	167.440
Value of seeds (deflated)	244.176*** (2.98)	7.163 (0.13)	237.013** (2.43)	119.782	450.756	167.440
Total days provided by casual labour	-1.402 (-0.51)	-2.642 (-1.04)	1.240 (0.47)	6.625	5.984	5.862
Total days provided by family labour	12.515* (1.71)	-3.230 (-0.28)	15.745 (1.60)	33.795	26.653	38.704
Days of labour on farm (hired and family labour)	11.113 (1.39)	-5.872 (-0.45)	16.985 (1.47)	40.420	32.637	44.566
Value of crop yield	79.055 (0.44)	5.754 (0.06)	73.301 (0.42)	195.761	736.547	813.160
Crop yield (deflated)	186.860 (1.01)	78.679 (0.54)	108.181 (0.53)	377.245	819.056	813.160
<i>N</i>	1,956	1,956		292	292	360

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.2: Labour productivity - less poor 50% households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Household had any members work for pay	-0.046 (-1.32)	0.015 (0.38)	-0.061 (1.51)	0.079	0.096	0.131
Household hired any outside labour for agricultural activities	-0.039 (-0.54)	-0.030 (-0.41)	-0.009 (0.20)	0.361	0.351	0.445
Hh engaged in agricultural activities last 12 months	-0.016 (-0.24)	-0.193** (-2.51)	0.178*** (2.92)	0.439	0.446	0.501
Household used any fertilizer	0.005 (0.08)	-0.137** (-2.49)	0.143** (2.31)	0.122	0.276	0.333
Household used any seeds	0.165** (2.41)	0.046 (0.63)	0.119** (2.16)	0.308	0.446	0.501

Table A.5.2.2: Labour productivity - less poor 50% households (continued)

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Household used any improved seeds	-0.052 (-1.35)	0.036 (1.52)	-0.088** (2.39)	0.021	0.042	0.146
Value of seeds	-172.146 (-0.87)	-9.460 (-0.26)	-162.685 (0.89)	71.234	297.052	324.489
Value of seeds (deflated)	-150.186 (-0.77)	14.581 (0.30)	-164.766 (0.91)	137.272	330.328	324.489
Total days provided by casual labour	7.180* (1.73)	7.831* (1.80)	-0.651 (0.46)	9.217	5.151	5.343
Total days provided by family labour	47.881*** (4.96)	33.372*** (3.01)	14.508** (2.17)	20.010	20.119	18.396
Days of labour on farm (hired and family labour)	55.060*** (4.45)	41.203*** (3.06)	13.857* (1.92)	29.227	25.270	23.739
Value of crop yield	228.325 (1.30)	-22.345 (-0.24)	250.669* (1.67)	201.661	580.411	531.765
Crop yield (deflated)	395.781* (1.91)	12.014 (0.08)	383.766** (2.50)	388.614	645.429	531.765
<i>N</i>	2,094	2,094		286	286	412

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.3: Labour productivity - female headed households

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline T Mean (4)	Endline T Mean (5)	Endline C Mean (6)
Household had any members work for pay	-0.034 (-0.96)	0.024 (0.73)	-0.058* (1.77)	0.075	0.109	0.160
Household hired any outside labour for agricultural activities	-0.071 (-1.13)	-0.035 (-0.69)	-0.036 (0.74)	0.319	0.336	0.382
Household engaged in agricultural activities last 12 months	-0.026 (-0.41)	-0.117* (-1.96)	0.091 (1.54)	0.406	0.440	0.538
Household used any fertilizer	-0.012 (-0.25)	-0.125** (-2.47)	0.114* (1.89)	0.074	0.235	0.289
Household used any seeds	0.098 (1.60)	0.032 (0.53)	0.066 (1.17)	0.300	0.440	0.538
Household used any improved seeds	0.009 (0.23)	0.032 (0.95)	-0.022 (0.87)	0.010	0.039	0.082
Value of seeds	-5.430 (-0.04)	15.848 (0.67)	-21.277 (0.17)	30.907	217.219	141.578
Value of seeds (deflated)	19.060 (0.14)	37.443 (1.06)	-18.383 (0.15)	59.561	241.552	141.578
Total days provided by casual labour	5.809** (2.05)	5.337* (1.78)	0.472 (0.30)	3.950	4.659	3.642
Total days provided by family labour	24.513*** (3.55)	8.851 (0.99)	15.662** (2.31)	12.762	17.741	21.181
Days of labour on farm (hired and family labour)	30.322*** (3.40)	14.188 (1.29)	16.134** (2.14)	16.712	22.401	24.823
Value of crop yield	50.186 (0.46)	-44.542 (-0.58)	94.728 (0.89)	85.881	346.151	375.367
Crop yield (deflated)	100.296 (0.89)	-32.327 (-0.25)	132.623 (0.98)	165.498	384.926	375.367
<i>N</i>	2,148	2,148		338	338	378

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.4: Labour productivity - male headed households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Household had any members work for pay	0.027 (0.69)	-0.023 (-0.53)	0.050 (0.91)	0.100	0.150	0.127
Household hired any outside labour for agricultural activities	-0.059 (-0.86)	-0.007 (-0.11)	-0.051 (0.98)	0.497	0.443	0.528
Household engaged in agricultural activities last 12 months	-0.009 (-0.17)	-0.178*** (-3.28)	0.169*** (3.75)	0.672	0.608	0.673
Household used any fertilizer	-0.063 (-0.78)	-0.145** (-2.48)	0.082 (1.22)	0.232	0.338	0.484
Household used any seeds	0.138** (2.52)	-0.001 (-0.01)	0.139*** (2.82)	0.544	0.608	0.673
Household used any improved seeds	-0.022 (-0.47)	0.074* (1.70)	-0.096** (2.39)	0.033	0.038	0.116
Value of seeds	96.536 (0.74)	24.346 (0.62)	72.190 (0.51)	93.743	508.035	349.080
Value of seeds (deflated)	136.537 (1.06)	41.729 (0.67)	94.807 (0.64)	180.649	564.945	349.080
Total days provided by casual labour	-1.976 (-0.45)	-4.306 (-1.14)	2.330 (0.62)	13.726	6.910	8.808
Total days provided by family labour	43.452*** (3.16)	23.638 (1.32)	19.814 (1.51)	47.826	31.751	41.434
Days of labour on farm (hired and family labour)	41.477*** (2.65)	19.332 (0.98)	22.145 (1.39)	61.551	38.661	50.242
Value of crop yield	266.143 (1.08)	-18.338 (-0.15)	284.482 (1.13)	364.371	1,118.976	1,167.555
Crop yield (deflated)	509.251* (1.86)	52.909 (0.27)	456.343 (1.62)	702.166	1,244.324	1,167.555
<i>N</i>	1,902	1,902		240	240	394

Notes: t stats in parentheses. * 10% significance ** 5% significance, *** 1% significance; cluster fixed effects included

Table A.5.2.5: Labour productivity - small households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Household had any members work for pay	0.001 (0.03)	0.020 (0.70)	-0.019 (0.54)	0.049	0.096	0.096
Hh hired any outside labour for agricultural activities	-0.131* (-1.93)	-0.061 (-0.98)	-0.070 (1.51)	0.313	0.323	0.402
Hh engaged in agricultural activities last 12 months	-0.069 (-0.88)	-0.180** (-2.60)	0.111* (1.71)	0.401	0.406	0.424
Hh used any fertilizer	-0.028 (-0.51)	-0.071 (-1.65)	0.043 (0.83)	0.075	0.203	0.308
Household used any seeds	0.098 (1.32)	0.004 (0.06)	0.094 (1.56)	0.268	0.406	0.424
Household used any improved seeds	0.018 (0.62)	0.022 (0.91)	-0.003 (0.12)	0.020	0.053	0.045
Value of seeds	-151.220 (-0.79)	-130.043** (-2.48)	-21.177 (0.11)	36.881	265.296	289.414

Table A.5.2.5: Labour productivity - small households (continued)

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Value of seeds (deflated)	-104.087 (-0.56)	-144.806* (-1.91)	40.719 (0.20)	71.071	295.015	289.414
Total days provided by casual labour	4.623 (1.33)	5.839* (1.95)	-1.216 (0.76)	3.563	4.762	5.047
Total days provided by family labour	28.482*** (4.46)	18.830** (2.48)	9.653 (1.61)	10.197	16.627	15.779
Days of labour on farm (hired and family labour)	33.105*** (3.71)	24.669*** (2.89)	8.437 (1.27)	13.760	21.389	20.825
Value of crop yield	-30.712 (-0.20)	-35.878 (-0.59)	5.166 (0.04)	100.422	380.172	508.351
Crop yield (deflated)	58.551 (0.34)	-24.978 (-0.24)	83.529 (0.59)	193.520	422.759	508.351
<i>N</i>	1,953	1,953		275	275	376

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.6: Labour productivity - large households

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Household had any members work for pay	-0.054 (-1.00)	-0.006 (-0.17)	-0.048 (0.79)	0.124	0.158	0.203
Household hired any outside labour for agricultural activities	0.031 (0.45)	0.085 (1.60)	-0.054 (0.93)	0.477	0.440	0.475
Household engaged in agricultural activities last 12 months	0.025 (0.53)	-0.066 (-1.54)	0.091** (2.17)	0.637	0.621	0.768
Household used any fertilizer	-0.004 (-0.05)	-0.153** (-2.36)	0.150* (1.80)	0.207	0.357	0.423
Household used any seeds	0.154*** (3.03)	0.088 (1.55)	0.066 (1.30)	0.542	0.621	0.768
Household used any improved seeds	-0.036 (-0.49)	0.093 (1.63)	-0.129*** (3.27)	0.019	0.023	0.150
Value of seeds	178.740*** (2.80)	51.658** (2.32)	127.082** (2.09)	81.228	424.778	197.454
Value of seeds (deflated)	219.719*** (3.07)	88.037** (2.46)	131.681* (1.94)	156.531	472.362	197.454
Total days provided by casual labour	2.881 (0.69)	1.229 (0.26)	1.652 (0.54)	12.670	6.458	6.224
Total days provided by family labour	41.920*** (2.98)	18.100 (1.03)	23.819** (2.10)	45.329	30.851	43.132
Days of labour on farm (hired and family labour)	44.801*** (2.69)	19.329 (0.93)	25.471* (1.94)	57.999	37.309	49.355
Value of crop yield	424.780** (1.99)	-5.468 (-0.04)	430.248** (2.13)	306.305	964.775	860.562
Crop yield (deflated)	611.454** (2.53)	82.860 (0.38)	528.595** (2.18)	590.270	1,072.850	860.562
<i>N</i>	2,097	2,097		303	303	396

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.7: Productive assets - poorest 50% households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Any agricultural asset ownership	0.034 (1.10)	0.010 (0.22)	0.024 (0.56)	0.793	0.808	0.886
Any specific asset ownership:						
Hoes	-0.153** (-2.55)	-0.009 (-0.18)	-0.144** (2.39)	0.625	0.617	0.735
Axes	-0.054 (-0.80)	-0.103 (-1.35)	0.049 (0.73)	0.317	0.264	0.347
Rakes	0.010 (0.51)	-0.109*** (-2.63)	0.119** (2.53)	0.032	0.059	0.032
Shovels	-0.081** (-2.04)	-0.037 (-1.16)	-0.044 (1.18)	0.045	0.080	0.175
Picks	-0.097*** (-2.85)	-0.014 (-0.56)	-0.083** (2.56)	0.058	0.060	0.134
Sickles	-0.008 (-0.14)	0.088** (2.07)	-0.097*** (2.79)	0.032	0.033	0.128
Cutlasses	0.046 (1.18)	0.013 (0.31)	0.033 (0.71)	0.725	0.795	0.872
Spraying machines	-0.092** (-2.28)	-0.013 (-0.34)	-0.079* (1.69)	0.043	0.174	0.280
Number of specific assets owned:						
Hoes	-0.368* (-1.81)	-0.147 (-0.67)	-0.220 (0.79)	1.978	1.871	1.980
Axes	-0.120 (-1.46)	-0.345** (-2.36)	0.225 (1.55)	0.471	0.344	0.429
Rakes	0.006 (0.29)	-0.149** (-2.60)	0.155** (2.59)	0.042	0.062	0.033
Shovels	-0.133 (-1.60)	-0.025 (-0.59)	-0.108 (1.49)	0.054	0.111	0.297
Picks	-0.129** (-2.43)	-0.032 (-1.01)	-0.097* (1.72)	0.073	0.084	0.172
Sickles	0.026 (0.29)	0.159** (2.09)	-0.133*** (3.01)	0.058	0.041	0.200
Cutlasses	-0.359** (-2.53)	-0.319 (-1.65)	-0.040 (0.21)	1.631	1.645	2.159
Spraying machines	-0.065 (-1.17)	-0.030 (-0.52)	-0.035 (0.55)	0.046	0.242	0.336
<i>N</i>	1,956	1,956		292	292	360

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.8: Productive assets - less poor 50% households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Any agricultural asset ownership	0.196*** (3.79)	0.068** (1.99)	0.128** (2.54)	0.697	0.787	0.821
Any specific asset ownership:						
Hoes	0.087 (1.62)	0.033 (0.63)	0.054 (1.04)	0.531	0.600	0.557
Axes	0.006 (0.13)	0.034 (0.67)	-0.028 (0.63)	0.231	0.237	0.179
Rakes	-0.087*** (-3.30)	-0.059*** (-2.63)	-0.028 (1.05)	0.077	0.047	0.064
Shovels	-0.049* (-1.68)	-0.047 (-1.41)	-0.003 (0.08)	0.079	0.101	0.165
Picks	0.001 (0.03)	0.017 (0.41)	-0.016 (0.53)	0.073	0.080	0.142
Sickles	-0.010 (-0.30)	-0.040 (-1.43)	0.030 (1.06)	0.040	0.050	0.068
Cutlasses	0.225*** (4.23)	0.135*** (3.54)	0.089 (1.59)	0.623	0.724	0.774
Spraying machines	0.013 (0.30)	0.010 (0.30)	0.003 (0.06)	0.031	0.157	0.190
Number of specific assets owned:						
Hoes	0.161 (0.48)	-0.032 (-0.16)	0.193 (0.61)	1.484	1.918	1.375
Axes	-0.030 (-0.48)	0.002 (0.02)	-0.032 (0.42)	0.301	0.303	0.263
Rakes	-0.114*** (-3.60)	-0.088*** (-2.96)	-0.026 (0.75)	0.083	0.053	0.080
Shovels	-0.117* (-1.97)	-0.083 (-1.60)	-0.034 (0.46)	0.115	0.132	0.285
Picks	0.004 (0.09)	0.037 (0.75)	-0.033 (0.75)	0.089	0.099	0.177
Sickles	-0.018 (-0.33)	-0.078* (-1.68)	0.060 (1.13)	0.071	0.106	0.097
Cutlasses	0.104 (0.53)	0.080 (0.54)	0.024 (0.12)	1.218	1.337	1.617
Spraying machines	-0.094 (-1.08)	0.027 (0.65)	-0.120 (1.31)	0.040	0.208	0.334
<i>N</i>	2,094	2,094		286	286	412

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.9: Productive assets - female headed households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	
Any agricultural asset ownership	0.160*** (3.54)	0.067 (1.53)	0.093* (1.84)	0.682	0.758	0.802	
Any specific asset ownership:							
Hoes	-0.048 (-0.74)	0.051 (1.05)	-0.099 (1.61)	0.482	0.533	0.606	
Axes	(0.22)	-0.012 (-0.23)	-0.013 (0.51)	0.025	0.229	0.222	0.242
Rakes	-0.038** (-2.47)	-0.101*** (-2.72)	0.063 (1.61)	0.044	0.036	0.038	
Shovels	-0.025 (-0.92)	-0.038 (-1.51)	0.013 (0.46)	0.028	0.055	0.129	
Picks	-0.001 (-0.02)	0.041 (1.35)	-0.042* (1.73)	0.023	0.036	0.091	
Sickles	-0.003 (-0.09)	0.015 (0.48)	-0.018 (0.91)	0.014	0.019	0.051	
Cutlasses	0.198*** (3.94)	0.110*** (2.80)	0.088* (1.69)	0.594	0.708	0.762	
Spraying machines	-0.015 (-0.40)	-0.022 (-0.87)	0.007 (0.16)	0.015	0.091	0.123	
Cutlasses							
Number of specific assets owned:							
Hoes	0.107 (0.29)	-0.268 (-1.50)	0.376 (0.92)	1.095	1.484	1.288	
Axes	(0.03)	-0.002 (-1.73)	0.002 (1.89)	-0.165*	0.167*	0.288	0.272
Rakes	-0.059*** (-2.95)	-0.119*** (-3.12)	0.060 (1.51)	0.058	0.038	0.039	
Shovels	-0.052 (-1.41)	-0.055 (-1.28)	0.003 (0.06)	0.036	0.067	0.201	
Picks	-0.000 (-0.01)	0.049 (1.39)	-0.050 (1.40)	0.026	0.048	0.112	
Sickles	-0.023 (-0.47)	0.014 (0.44)	-0.038 (1.04)	0.017	0.026	0.073	
Cutlasses	0.001 (0.00)	-0.253 (-1.63)	0.254 (1.57)	0.996	1.232	1.603	
Spraying machines	-0.042 (-0.78)	-0.029 (-0.86)	-0.012 (0.24)	0.018	0.126	0.176	
Cutlasses							
<i>N</i>	2,148	2,148		338	338	378	

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.10: Productive assets - male headed households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Any agricultural asset ownership	0.019 (0.56)	0.004 (0.10)	0.015 (0.30)	0.838	0.856	0.939
Any specific asset ownership:						
Hoes	-0.044 (-0.87)	-0.069 (-1.08)	0.025 (0.52)	0.721	0.720	0.719
Axes	-0.086* (-1.67)	-0.061 (-0.89)	-0.025 (0.37)	0.342	0.292	0.305
Rakes	-0.047 (-1.20)	-0.088*** (-2.95)	0.041 (1.18)	0.068	0.078	0.064
Shovels	-0.117** (-2.41)	-0.064 (-1.35)	-0.053 (1.02)	0.111	0.143	0.238
Picks	-0.114** (-2.48)	-0.067* (-1.80)	-0.047 (0.95)	0.128	0.119	0.214
Sickles	0.001 (0.02)	0.060 (1.37)	-0.059 (1.14)	0.068	0.074	0.177
Cutlasses	0.021 (0.50)	0.017 (0.35)	0.004 (0.07)	0.793	0.835	0.927
Spraying machines	-0.070 (-1.33)	0.013 (0.23)	-0.082 (1.33)	0.069	0.274	0.421
Number of specific assets owned:						
Hoes	-0.083 (-0.31)	0.111 (0.38)	-0.194 (0.74)	2.670	2.495	2.337
Axes	-0.190** (-2.42)	-0.200 (-1.42)	0.010 (0.07)	0.532	0.400	0.424
Rakes	-0.058 (-1.14)	-0.155*** (-2.62)	0.097 (1.47)	0.068	0.086	0.084
Shovels	-0.228** (-2.20)	-0.099 (-1.52)	-0.129 (1.27)	0.156	0.201	0.437
Picks	-0.129* (-1.81)	-0.087 (-1.53)	-0.043 (0.54)	0.163	0.156	0.276
Sickles	0.103 (1.10)	0.134 (1.43)	-0.031 (0.39)	0.135	0.143	0.275
Cutlasses	-0.319 (-1.33)	-0.042 (-0.20)	-0.276 (1.32)	2.060	1.874	2.374
Spraying machines	-0.125 (-1.31)	0.007 (0.09)	-0.131 (1.20)	0.081	0.372	0.593
<i>N</i>	1,902	1,902		240	240	394

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.11: Productive assets - small households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Any agricultural asset ownership	0.149*** (2.61)	0.063 (1.44)	0.086 (1.41)	0.632	0.718	0.793
Any specific asset ownership:						
Hoes	-0.022 (-0.34)	0.127** (2.26)	-0.149** (2.38)	0.449	0.524	0.573
Axes	0.004 (0.10)	-0.054 (-1.26)	0.058 (1.24)	0.184	0.208	0.156
Rakes	-0.010 (-0.49)	-0.082** (-2.30)	0.072* (1.76)	0.032	0.046	0.022
Shovels	-0.020 (-0.59)	-0.070** (-2.26)	0.050 (1.61)	0.038	0.089	0.137
Picks	0.006 (0.17)	0.000 (0.00)	0.006 (0.23)	0.033	0.064	0.103
Sickles	-0.029 (-0.87)	-0.016 (-0.70)	-0.013 (0.44)	0.021	0.038	0.086
Cutlasses	0.143** (2.06)	0.076 (1.58)	0.067 (1.01)	0.575	0.668	0.756
Spraying machines	-0.018 (-0.51)	0.021 (0.65)	-0.039 (1.13)	0.012	0.108	0.186
Number of specific assets owned:						
Hoes	0.070 (0.42)	0.234* (1.71)	-0.165 (0.96)	0.984	1.175	1.211
Axes	-0.016 (-0.27)	-0.181*** (-2.62)	0.165* (1.89)	0.236	0.257	0.187
Rakes	-0.013 (-0.59)	-0.115** (-2.53)	0.102** (2.10)	0.035	0.049	0.023
Shovels	-0.031 (-0.43)	-0.099** (-2.08)	0.068 (1.01)	0.050	0.116	0.252
Picks	-0.017 (-0.41)	-0.010 (-0.23)	-0.007 (0.19)	0.039	0.070	0.144
Sickles	-0.030 (-0.60)	-0.018 (-0.45)	-0.012 (0.27)	0.039	0.062	0.134
Cutlasses	-0.053 (-0.38)	-0.227* (-1.84)	0.174 (1.03)	0.963	1.165	1.530
Spraying machines	-0.055 (-0.90)	0.023 (0.45)	-0.077 (1.27)	0.019	0.143	0.273
<i>N</i>	1,953	1,953		275	275	376

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.12: Productive assets - large households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Any agricultural asset ownership	0.071** (2.17)	0.018 (0.48)	0.053 (1.40)	0.868	0.885	0.922
Any specific asset ownership:						
Hoes	-0.079 (-1.42)	-0.116** (-2.56)	0.037 (0.70)	0.721	0.702	0.732
Axes	-0.042 (-0.60)	0.042 (0.51)	-0.084 (1.39)	0.374	0.297	0.385
Rakes	-0.088*** (-2.63)	-0.085*** (-3.67)	-0.003 (0.09)	0.078	0.060	0.075
Shovels	-0.096** (-2.08)	0.004 (0.10)	-0.100* (1.96)	0.088	0.093	0.206
Picks	-0.114** (-2.29)	0.006 (0.18)	-0.120** (2.53)	0.102	0.077	0.176
Sickles	0.012 (0.20)	0.070 (1.25)	-0.058* (1.79)	0.052	0.046	0.112
Cutlasses	0.114*** (3.22)	0.064* (1.82)	0.050 (1.34)	0.783	0.859	0.899
Spraying machines	-0.067 (-1.36)	-0.028 (-0.63)	-0.039 (0.59)	0.064	0.228	0.292
Number of specific assets owned:						
Hoes	-0.194 (-0.45)	-0.342 (-1.00)	0.148 (0.29)	2.553	2.681	2.205
Axes	-0.138 (-1.48)	-0.043 (-0.31)	-0.095 (0.74)	0.552	0.396	0.524
Rakes	-0.119*** (-2.83)	-0.109*** (-4.15)	-0.009 (0.26)	0.091	0.067	0.091
Shovels	-0.181** (-2.32)	0.010 (0.18)	-0.191** (2.27)	0.122	0.127	0.333
Picks	-0.103 (-1.51)	0.017 (0.37)	-0.120* (1.75)	0.127	0.116	0.207
Sickles	0.036 (0.37)	0.103 (1.08)	-0.067 (1.26)	0.092	0.085	0.167
Cutlasses	-0.211 (-0.98)	0.031 (0.11)	-0.242 (1.01)	1.935	1.851	2.296
Spraying machines	-0.103 (-1.40)	-0.016 (-0.27)	-0.087 (1.02)	0.070	0.315	0.403
<i>N</i>	2,097	2,097		303	303	396

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.13: Savings and transfers by sub-group

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Poorest 50% households						
Household has any savings (at home or at institution)	0.178** (2.39)	0.213** (2.59)	-0.036 (0.39)	0.156	0.270	0.299
Household received transfer in last 12 months	-0.287*** (-5.36)	-0.081 (-1.43)	-0.206*** (2.85)	0.589	0.421	0.520
Household giving transfer in last 12 months	-0.036 (-0.74)	-0.130* (-1.91)	0.094 (1.25)	0.231	0.297	0.341
<i>N</i>	1,956	1,956		292	292	360
Less poor 50% households						
Household has any savings (at home or at institution)	0.134* (1.85)	0.004 (0.06)	0.130* (1.79)	0.253	0.350	0.297
Household received transfer in last 12 months	-0.206*** (-2.98)	0.052 (0.93)	-0.257*** (3.76)	0.660	0.507	0.677
Household giving transfer in last 12 months	-0.008 (-0.13)	0.055 (1.15)	-0.064 (0.91)	0.239	0.398	0.420
<i>N</i>	2,094	2,094		286	286	412
Female headed households						
Household has any savings (at home or at institution)	0.178** (2.33)	0.070 (1.05)	0.108 (1.29)	0.178	0.322	0.255
Household received transfer in last 12 months	-0.232*** (-4.22)	-0.001 (-0.01)	-0.231*** (3.04)	0.676	0.493	0.671
Household giving transfer in last 12 months	0.016 (0.28)	0.000 (0.00)	0.016 (0.20)	0.163	0.316	0.358
<i>N</i>	2,148	2,148		338	338	378
Male headed households						
Household has any savings (at home or at institution)	0.087 (1.20)	0.128 (1.52)	-0.041 (0.51)	0.243	0.292	0.368
Household received transfer in last 12 months	-0.315*** (-3.67)	-0.012 (-0.17)	-0.302*** (3.11)	0.547	0.420	0.473
Household giving transfer in last 12 months	-0.053 (-0.83)	-0.117 (-1.46)	0.064 (0.80)	0.340	0.392	0.414
<i>N</i>	1,902	1,902		240	240	394
Small households						
Household has any savings (at home or at institution)	0.159** (2.15)	0.132** (2.04)	0.027 (0.29)	0.149	0.289	0.313
Household received transfer in last 12 months	-0.205*** (-3.63)	0.042 (0.79)	-0.247*** (4.66)	0.749	0.541	0.708
Household giving transfer in last 12 months	-0.048 (-0.78)	-0.049 (-0.81)	0.000 (0.01)	0.143	0.297	0.337
<i>N</i>	1,953	1,953		275	275	376
Large households						
Household has any savings (at home or at institution)	0.185** (2.52)	0.139 (1.58)	0.046 (0.49)	0.265	0.333	0.283
Household received transfer in last 12 months	-0.247*** (-4.19)	0.020 (0.28)	-0.267*** (3.01)	0.487	0.379	0.474
Household giving transfer in last 12 months	0.015 (0.24)	-0.009 (-0.12)	0.024 (0.31)	0.335	0.402	0.425
<i>N</i>	2,097	2,097		303	303	396

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.14: Household financial assets - real values - poorest 50% households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Household is owed money or goods	0.016 (0.35)	0.005 (0.12)	0.011 (0.29)	0.064	0.108	0.112
<i>N</i>	1,956	1,956		292	292	360
Credit amount	13.953 (0.57)	-1.441 (-0.10)	15.394 (0.71)	8.467	53.784	53.026
<i>N</i>	1,956	1,956		292	292	360
Credit paid amount	115.349 (1.00)	591.195** (2.06)	-475.846* (1.78)	11.249	67.076	93.145
<i>N</i>	192	192		20	33	50
Household has debt	-0.033 (-0.43)	-0.061 (-1.12)	0.029 (0.41)	0.253	0.370	0.343
<i>N</i>	1,956	1,956		292	292	360
Debt amount	-75.026 (-0.97)	10.839 (0.28)	-85.865 (0.98)	62.921	222.653	287.553
<i>N</i>	1,956	1,956		292	292	360
Debt paid amount	-219.122** (-2.23)	117.572 (0.94)	-336.694** (2.11)	11.980	186.430	141.327
<i>N</i>	515	515		72	110	105
Outstanding debt amount	-106.273 (-1.32)	12.413 (0.43)	-118.686 (1.35)	61.325	202.024	303.375
<i>N</i>	1,956	1,956		292	292	360
Household has any savings (at home or at institution)	0.178** (2.39)	0.213** (2.59)	-0.036 (0.39)	0.156	0.270	0.299
<i>N</i>	1,956	1,956		292	292	360
Savings amount	-34.352 (-0.63)	49.062 (0.80)	-83.415 (1.32)	32.278	86.224	164.421
<i>N</i>	1,956	1,956		292	292	360
Household received transfer in last 12 months	-0.287*** (-5.36)	-0.081 (-1.43)	-0.206*** (2.85)	0.589	0.421	0.520
<i>N</i>	1,956	1,956		292	292	360
Transfers received amount	-145.856 (-1.25)	-37.767 (-0.40)	-108.090 (1.22)	233.257	368.278	500.610
<i>N</i>	1,956	1,956		292	292	360
Household gave transfer in last 12 months	-0.036 (-0.74)	-0.130* (-1.91)	0.094 (1.25)	0.231	0.297	0.341
<i>N</i>	1,956	1,956		292	292	360
Transfers sent amount	-46.083 (-0.74)	-126.189** (-2.55)	80.106 (0.99)	49.276	188.002	225.447
<i>N</i>	1,956	1,956		292	292	360

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.15: Household financial assets - real values - less poor 50% households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Household is owed money or goods	-0.029 (-0.66)	-0.014 (-0.40)	-0.015 (0.41)	0.116	0.116	0.132
<i>N</i>	2,094	2,094		286	286	412
Credit amount	-16.848 (-0.55)	-3.848 (-0.17)	-13.000 (0.62)	39.700	63.122	61.741
<i>N</i>	2,094	2,094		286	286	412
Credit paid amount	-221.177 (-1.34)	39.978 (0.32)	-261.155 (1.66)	34.673	53.868	115.512
<i>N</i>	279	279		36	34	56
Household has debt	-0.015 (-0.25)	-0.038 (-0.63)	0.023 (0.42)	0.224	0.329	0.329
<i>N</i>	2,094	2,094		286	286	412
Debt amount	-43.091 (-0.50)	13.299 (0.26)	-56.390 (0.76)	106.643	251.142	269.833
<i>N</i>	2,094	2,094		286	286	412
Debt paid amount	-180.259 (-1.35)	260.845 (1.45)	-441.104*** (3.34)	98.933	180.799	278.621
<i>N</i>	556	556		67	97	120
Outstanding debt amount	-33.038 (-0.39)	31.872 (0.78)	-64.910 (0.80)	93.387	210.850	208.716
<i>N</i>	2,094	2,094		286	286	412
Household has any savings (at home or at institution)	0.134* (1.85)	0.004 (0.06)	0.130* (1.79)	0.253	0.350	0.297
<i>N</i>	2,094	2,094		286	286	412
Savings amount	-118.324** (-2.06)	-50.739 (-0.78)	-67.584 (0.94)	77.647	99.105	220.295
<i>N</i>	2,094	2,094		286	286	412
Household received transfer in last 12 months	-0.206*** (-2.98)	0.052 (0.93)	-0.257*** (3.76)	0.660	0.507	0.677
<i>N</i>	2,094	2,094		286	286	412
Transfers received amount	-28.576 (-0.28)	-50.432 (-0.34)	21.856 (0.14)	315.917	430.041	600.133
<i>N</i>	2,094	2,094		286	286	412
Household gave transfer in last 12 months	-0.008 (-0.13)	0.055 (1.15)	-0.064 (0.91)	0.239	0.398	0.420
<i>N</i>	2,094	2,094		286	286	412
Transfers sent amount	-17.753 (-0.19)	-16.998 (-0.37)	-0.756 (0.01)	139.851	275.477	237.470
<i>N</i>	2,094	2,094		286	286	412

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.16: Household financial assets - real values - female headed households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Household is owed money or goods	-0.034 (-0.95)	-0.063* (-1.82)	0.029 (0.72)	0.094	0.113	0.097
<i>N</i>	2,148	2,148		338	338	378
Credit amount	-21.582 (-1.04)	-23.602 (-1.56)	2.019 (0.10)	23.331	44.808	35.851
<i>N</i>	2,148	2,148		338	338	378
Credit paid amount	-132.206 (-0.78)	215.463 (1.52)	-347.668*** (2.76)	33.993	19.287	50.405
<i>N</i>	232	232		34	39	48
Household has debt	-0.099 (-1.61)	-0.069 (-1.24)	-0.030 (0.48)	0.237	0.363	0.398
<i>N</i>	2,148	2,148		338	338	378
Debt amount	-183.374** (-2.30)	22.922 (0.49)	-206.296*** (2.65)	58.309	187.015	358.718
<i>N</i>	2,148	2,148		338	338	378
Debt paid amount	5.439 (0.03)	482.887*** (2.73)	-477.448** (2.28)	42.184	167.690	237.607
<i>N</i>	580	580		82	124	114
Outstanding debt amount	-185.225** (-2.28)	33.391 (1.01)	-218.616*** (2.62)	52.274	146.998	331.404
<i>N</i>	2,148	2,148		338	338	378
Household has any savings (at home or at institution)	0.178** (2.33)	0.070 (1.05)	0.108 (1.29)	0.178	0.322	0.255
<i>N</i>	2,148	2,148		338	338	378
Savings amount	-69.616* (-1.89)	-34.063 (-0.83)	-35.553 (0.68)	47.060	81.342	117.472
<i>N</i>	2,148	2,148		338	338	378
Household received transfer in last 12 months	-0.232*** (-4.22)	-0.001 (-0.01)	-0.231*** (3.04)	0.676	0.493	0.671
<i>N</i>	2,148	2,148		338	338	378
Transfers received amount	11.308 (0.11)	24.445 (0.29)	-13.136 (0.11)	270.001	391.860	523.312
<i>N</i>	2,148	2,148		338	338	378
Household gave transfer in last 12 months	0.016 (0.28)	0.000 (0.00)	0.016 (0.20)	0.163	0.316	0.358
<i>N</i>	2,148	2,148		338	338	378
Transfers sent amount	-10.088 (-0.15)	-29.405 (-0.67)	19.317 (0.27)	73.051	206.826	170.944
<i>N</i>	2,148	2,148		338	338	378

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.17: Household financial assets - real values - male headed households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Household is owed money or goods	0.040 (0.61)	0.087* (1.72)	-0.047 (0.99)	0.085	0.111	0.163
<i>N</i>	1,902	1,902		240	240	394
Credit amount	36.687 (0.82)	46.171 (1.57)	-9.484 (0.29)	24.840	78.390	91.952
<i>N</i>	1,902	1,902		240	240	394
Credit paid amount	-193.029* (-1.87)	409.730** (2.47)	-602.759*** (3.56)	13.661	121.821	157.636
<i>N</i>	239	239		22	28	58
Household has debt	0.116* (1.68)	-0.027 (-0.41)	0.143*** (2.79)	0.241	0.330	0.235
<i>N</i>	1,902	1,902		240	240	394
Debt amount	137.798* (1.81)	-10.848 (-0.23)	148.645* (1.73)	123.175	309.846	149.560
<i>N</i>	1,902	1,902		240	240	394
Debt paid amount	34.589 (0.20)	275.084 (1.14)	-240.495 (0.95)	67.294	209.812	119.887
<i>N</i>	491	491		57	83	111
Outstanding debt amount	112.589 (1.51)	5.786 (0.15)	106.803 (1.39)	113.838	293.643	137.965
<i>N</i>	1,902	1,902		240	240	394
Household has any savings (at home or at institution)	0.087 (1.20)	0.128 (1.52)	-0.041 (0.51)	0.243	0.292	0.368
<i>N</i>	1,902	1,902		240	240	394
Savings amount	-88.205 (-1.16)	51.198 (0.65)	-139.403 (1.59)	66.063	109.151	311.423
<i>N</i>	1,902	1,902		240	240	394
Household received transfer in last 12 months	-0.315*** (-3.67)	-0.012 (-0.17)	-0.302*** (3.11)	0.547	0.420	0.473
<i>N</i>	1,902	1,902		240	240	394
Transfers received amount	-328.275** (-2.33)	-160.331 (-1.59)	-167.945 (1.32)	280.398	409.190	589.810
<i>N</i>	1,902	1,902		240	240	394
Household gave transfer in last 12 months	-0.053 (-0.83)	-0.117 (-1.46)	0.064 (0.80)	0.340	0.392	0.414
<i>N</i>	1,902	1,902		240	240	394
Transfers sent amount	-78.339 (-1.03)	-142.368** (-2.05)	64.029 (0.62)	125.148	267.353	329.169
<i>N</i>	1,902	1,902		240	240	394

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.18: Household financial assets - real values - small households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Household is owed money or goods	-0.054 (-1.20)	-0.040 (-1.18)	-0.014 (0.36)	0.079	0.097	0.151
<i>N</i>	1,953	1,953		275	275	376
Credit amount	-1.457 (-0.05)	-6.741 (-0.40)	5.285 (0.19)	21.255	52.498	57.427
<i>N</i>	1,953	1,953		275	275	376
Credit paid amount	-228.109 (-1.31)	378.363* (1.79)	-606.473** (2.52)	37.104	80.105	66.757
<i>N</i>	220	220		24	27	53
Household has debt	-0.104* (-1.95)	-0.116** (-2.01)	0.012 (0.22)	0.215	0.307	0.275
<i>N</i>	1,953	1,953		275	275	376
Debt amount	-84.925 (-1.35)	-0.961 (-0.02)	-83.964 (1.45)	59.390	155.414	215.278
<i>N</i>	1,953	1,953		275	275	376
Debt paid amount	93.605 (0.47)	680.184*** (2.67)	-586.579*** (3.79)	42.841	84.724	254.708
<i>N</i>	436	436		59	86	97
Outstanding debt amount	-58.275 (-1.02)	-12.016 (-0.49)	-46.260 (0.75)	47.468	135.616	178.059
<i>N</i>	1,953	1,953		275	275	376
Household has any savings (at home or at institution)	0.159** (2.15)	0.132** (2.04)	0.027 (0.29)	0.149	0.289	0.313
<i>N</i>	1,953	1,953		275	275	376
Savings amount	-62.641 (-1.28)	-53.521 (-1.45)	-9.120 (0.16)	27.565	97.154	193.299
<i>N</i>	1,953	1,953		275	275	376
Household received transfer in last 12 months	-0.205*** (-3.63)	0.042 (0.79)	-0.247*** (4.66)	0.749	0.541	0.708
<i>N</i>	1,953	1,953		275	275	376
Transfers received amount	-120.060 (-1.00)	-100.101 (-1.00)	-19.959 (0.14)	317.975	457.525	698.726
<i>N</i>	1,953	1,953		275	275	376
Household gave transfer in last 12 months	-0.048 (-0.78)	-0.049 (-0.81)	0.000 (0.01)	0.143	0.297	0.337
<i>N</i>	1,953	1,953		275	275	376
Transfers sent amount	-37.160 (-0.60)	5.525 (0.15)	-42.685 (0.73)	46.088	150.408	180.140
<i>N</i>	1,953	1,953		275	275	376

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.19: Household financial assets - real values - large households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Household is owed money or goods	0.050 (1.25)	0.020 (0.45)	0.030 (0.68)	0.102	0.128	0.091
<i>N</i>	2,097	2,097		303	303	396
Credit amount	7.915 (0.28)	8.982 (0.44)	-1.066 (0.04)	26.885	64.887	57.023
<i>N</i>	2,097	2,097		303	303	396
Credit paid amount	-57.319 (-0.86)	41.163 (0.43)	-98.481 (0.89)	17.058	43.829	173.358
<i>N</i>	251	251		32	40	53
Household has debt	0.025 (0.32)	-0.018 (-0.28)	0.043 (0.56)	0.265	0.395	0.402
<i>N</i>	2,097	2,097		303	303	396
Debt amount	-32.611 (-0.39)	38.195 (0.73)	-70.806 (0.76)	112.177	325.870	348.110
<i>N</i>	2,097	2,097		303	303	396
Debt paid amount	-67.454 (-0.39)	6.816 (0.06)	-74.270 (0.44)	61.030	268.200	170.310
<i>N</i>	635	635		80	121	128
Outstanding debt amount	-65.053 (-0.78)	53.773 (1.14)	-118.826 (1.37)	109.786	283.919	344.028
<i>N</i>	2,097	2,097		303	303	396
Household has any savings (at home or at institution)	0.185** (2.52)	0.139 (1.58)	0.046 (0.49)	0.265	0.333	0.283
<i>N</i>	2,097	2,097		303	303	396
Savings amount	-61.480 (-0.97)	120.140 (1.56)	-181.621** (2.18)	84.539	87.625	189.332
<i>N</i>	2,097	2,097		303	303	396
Household received transfer in last 12 months	-0.247*** (-4.19)	0.020 (0.28)	-0.267*** (3.01)	0.487	0.379	0.474
<i>N</i>	2,097	2,097		303	303	396
Transfers received amount	-33.174 (-0.36)	87.205 (1.03)	-120.379 (1.21)	226.282	334.648	385.890
<i>N</i>	2,097	2,097		303	303	396
Household gave transfer in last 12 months	0.015 (0.24)	-0.009 (-0.12)	0.024 (0.31)	0.335	0.402	0.425
<i>N</i>	2,097	2,097		303	303	396
Transfers sent amount	-12.226 (-0.12)	-157.236** (-2.47)	145.010 (1.27)	146.796	319.985	286.687
<i>N</i>	2,097	2,097		303	303	396

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.20: Livestock and home enterprises - poorest 50% households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Own any sheep/goat/chicken	-0.117 (-1.40)	-0.139** (-2.28)	0.022 (0.28)	0.481	0.525	0.598
Own any chicken	-0.040 (-0.66)	-0.178*** (-2.96)	0.138 (1.63)	0.304	0.383	0.480
Own any sheep	-0.018 (-0.54)	-0.056* (-1.77)	0.038 (1.32)	0.153	0.165	0.075
Own any goats	0.013 (0.17)	-0.007 (-0.11)	0.020 (0.29)	0.232	0.260	0.239
Number of chickens	-1.095 (-0.95)	-0.561 (-0.43)	-0.534 (0.51)	4.231	3.869	5.567
Number of sheep	-0.320 (-1.04)	-0.378 (-1.31)	0.058 (0.25)	0.797	0.862	0.649
Number of goats	0.284 (0.73)	-0.288 (-0.83)	0.572 (1.18)	1.024	1.401	1.214
Own a non-farm enterprise	-0.108* (-1.91)	-0.080 (-1.53)	-0.029 (0.41)	0.244	0.326	0.359
<i>N</i>	1,956	1,956		292	292	360

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.21: Livestock and home enterprises - less poor 50% households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Own any sheep/goat/chicken	0.106 (1.41)	-0.047 (-0.96)	0.153** (2.25)	0.331	0.551	0.453
Own any chicken	0.041 (0.65)	-0.078 (-1.59)	0.119* (1.72)	0.243	0.440	0.379
Own any sheep	0.003 (0.10)	0.016 (0.56)	-0.013 (0.37)	0.090	0.107	0.100
Own any goats	0.102 (1.49)	-0.072 (-1.57)	0.174*** (3.37)	0.158	0.262	0.218
Number of chickens	-3.150*** (-2.66)	-3.060** (-2.32)	-0.090 (0.07)	3.463	3.527	5.545
Number of sheep	0.020 (0.07)	0.210 (0.68)	-0.190 (0.91)	0.578	0.514	0.611
Number of goats	0.296 (0.73)	-0.398 (-1.59)	0.694** (2.10)	1.106	1.418	1.245
Own a non-farm enterprise	-0.177*** (-3.12)	-0.042 (-1.17)	-0.135** (2.08)	0.349	0.411	0.489
<i>N</i>	2,094	2,094		286	286	412

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.22: Livestock and home enterprises - female headed households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Own any sheep/goat/chicken	-0.044 (-0.55)	-0.176*** (-3.68)	0.133* (1.69)	0.344	0.512	0.476
Own any chicken	0.044 (0.66)	-0.172*** (-3.39)	0.216** (2.52)	0.202	0.393	0.366
Own any sheep	0.007 (0.25)	-0.040 (-1.34)	0.048 (1.44)	0.100	0.122	0.054
Own any goats	0.024 (0.32)	-0.074 (-1.43)	0.098 (1.36)	0.163	0.221	0.219
Number of chickens	-1.334 (-1.46)	-2.500** (-2.04)	1.166 (0.92)	2.606	2.981	3.778
Number of sheep	-0.237 (-1.27)	-0.278* (-1.92)	0.040 (0.24)	0.456	0.514	0.347
Number of goats	0.404 (1.13)	-0.610** (-2.39)	1.014*** (2.89)	0.621	1.254	1.011
Own a non-farm enterprise	-0.105* (-1.71)	-0.051 (-0.98)	-0.054 (0.66)	0.304	0.416	0.474
<i>N</i>	2,148	2,148		338	338	378

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.23: Livestock and home enterprises - male headed households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Own any sheep/goat/chicken	0.025 (0.40)	0.019 (0.34)	0.005 (0.08)	0.499	0.575	0.612
Own any chicken	-0.065 (-0.98)	-0.091 (-1.42)	0.026 (0.41)	0.379	0.438	0.537
Own any sheep	-0.030 (-0.83)	0.013 (0.35)	-0.043 (0.97)	0.155	0.157	0.141
Own any goats	0.088 (1.38)	0.032 (0.66)	0.057 (0.87)	0.242	0.320	0.244
Number of chickens	-3.051 (-1.64)	-1.134 (-0.64)	-1.917 (1.60)	5.678	4.756	8.444
Number of sheep	-0.072 (-0.20)	0.087 (0.25)	-0.159 (0.46)	1.031	0.947	1.092
Number of goats	0.192 (0.42)	0.117 (0.25)	0.076 (0.13)	1.715	1.638	1.583
Own a non-farm enterprise	-0.218*** (-3.75)	-0.091** (-2.31)	-0.127** (2.33)	0.284	0.296	0.337
<i>N</i>	1,902	1,902		240	240	394

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.24: Livestock and home enterprises - small households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Own any sheep/goat/chicken	0.021 (0.31)	-0.072 (-1.51)	0.093 (1.25)	0.282	0.456	0.449
Own any chicken	0.094 (1.36)	-0.092** (-2.05)	0.186** (2.34)	0.170	0.345	0.322
Own any sheep	0.025 (0.88)	0.019 (0.80)	0.006 (0.17)	0.076	0.116	0.064
Own any goats	0.023 (0.32)	-0.070* (-1.69)	0.093 (1.25)	0.111	0.211	0.235
Number of chickens	-1.411* (-1.76)	-2.690** (-2.40)	1.280 (1.06)	2.201	2.569	3.937
Number of sheep	0.110 (0.44)	0.332 (1.31)	-0.222 (0.90)	0.408	0.506	0.475
Number of goats	0.178 (0.46)	-0.496* (-1.93)	0.674* (1.77)	0.552	1.038	1.108
Own a non-farm enterprise	-0.232*** (-3.60)	-0.070 (-1.52)	-0.162** (2.01)	0.237	0.341	0.477
<i>N</i>	1,953	1,953		275	275	376

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Table A.5.2.25: Livestock and home enterprises - large households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Own any sheep/goat/chicken	-0.016 (-0.20)	-0.069 (-1.60)	0.053 (0.65)	0.543	0.627	0.613
Own any chicken	-0.083 (-1.15)	-0.143** (-2.30)	0.059 (0.82)	0.388	0.484	0.549
Own any sheep	-0.045 (-1.10)	-0.051 (-1.14)	0.006 (0.16)	0.172	0.159	0.112
Own any goats	0.088 (1.20)	0.009 (0.14)	0.079 (1.23)	0.287	0.316	0.222
Number of chickens	-2.478 (-1.46)	-0.386 (-0.24)	-2.092 (1.51)	5.657	4.939	7.313
Number of sheep	-0.635* (-1.85)	-0.509 (-1.44)	-0.126 (0.47)	0.997	0.891	0.800
Number of goats	0.413 (0.96)	0.217 (0.61)	0.195 (0.38)	1.626	1.816	1.360
Own a non-farm enterprise	-0.048 (-0.89)	-0.081* (-1.73)	0.033 (0.53)	0.360	0.397	0.362
<i>N</i>	2,097	2,097		303	303	396

Notes: t stats in parentheses. * 10% significance ** 5% significance; *** 1% significance; cluster fixed effects included

Appendix A.6 Impacts on education and child's work: sub-group and ATT results

A.6.1 Sub-group results

Table A.6.1.1: The impact of LEAP on school enrolment, by sex of the head, household size and baseline consumption (children 5 – 17 years)

Dependent Variable	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
Female-headed households						Male-headed households						
Current enrolment	-0.066	-0.051	-0.015	0.868	0.860	0.894	0.022	0.003	0.018	0.889	0.890	0.834
	(-1.30)	(-0.97)	(0.38)				(0.42)	(0.08)	(0.40)			
<i>N</i>	2,791	2,791		469	460	445	2,902	2,902		417	377	529
Small households (4 or less members)						Large households (5 or more members)						
Current enrolment	0.023	0.094	-0.071	0.813	0.850	0.902	-0.040	-0.065	0.026	0.888	0.885	0.862
	(0.30)	(1.36)	(1.02)				(-0.99)	(-1.52)	(0.75)			
<i>N</i>	1,125	1,125		109	257	267	4,568	4,568		777	580	707
Poorest households						Less poor households						
Current enrolment	-0.062	-0.073	0.011	0.865	0.853	0.850	0.023	0.061	-0.038	0.904	0.896	0.910
	(-1.27)	(-1.39)	(0.30)				(0.54)	(1.49)	(0.88)			
<i>N</i>	3,391	3,391		593	457	540	2,302	2,302		293	380	434

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.6.1.2: The impact of LEAP on school attendance, by sex of head, household size and baseline consumption (children 5 – 17 years)

Dependent Variable	Endline Impact (1)	Endline Treated Mean (2)	Endline Control Mean (3)	Endline Impact (4)	Endline Treated Mean (5)	Endline Control Mean (6)
	Female-headed households			Male-headed households		
Missed any school	-0.012 (-0.42)	0.078	0.079	-0.055 (-1.23)	0.082	0.115
<i>N</i>	667	343	324	626	276	350
	Small households (4 or less members)			Large households (5 or more members)		
Missed any school	-0.016 (-0.43)	0.066	0.055	-0.032 (-0.95)	0.086	0.104
<i>N</i>	372	182	190	921	437	484
	Poorest households			Less poor households		
Missed any school	-0.000 (-0.00)	0.075	0.075	-0.056 (-1.52)	0.085	0.115
<i>N</i>	688	326	362	605	293	312

Notes: Estimations use cross-sectional modelling at endline among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance

Table A.6.1.3: The impact of LEAP on grade for age, by sex of head, household size and baseline consumption (children 5 – 17 years)

Dependent Variable	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
	Female-headed households						Male-headed households					
Grade for age	0.028	0.060	-0.033	0.337	0.280	0.453	-0.201***	-0.067	-0.134***	0.355	0.324	0.409
	(0.49)	(1.02)	(0.57)				(-4.13)	(-1.37)	(2.70)			
<i>N</i>	2,402	2,402		395	379	366	2,436	2,436		359	318	401
	Small households (4 or less members)						Large households (5 or more members)					
Grade for age	0.096	0.019	0.076	0.311	0.344	0.288	-0.125***	-0.007	-0.118**	0.350	0.277	0.499
	(0.99)	(0.21)	(0.89)				(-2.75)	(-0.17)	(2.51)			
<i>N</i>	948	948		83	209	221	3,890	3,890		671	488	546
	Poorest households						Less poor households					
Grade for age	-0.011	0.008	-0.019	0.331	0.298	0.467	-0.115*	0.044	-0.160**	0.373	0.301	0.394
	(-0.20)	(0.18)	(0.46)				(-1.75)	(0.73)	(2.48)			
<i>N</i>	2,829	2,829		496	370	420	2,009	2,009		258	327	347

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.6.1.4: The impact of LEAP on schooling expenditures, by sex of head, household size and baseline consumption (children 5 – 17 years)

Dependent Variable	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
Female-headed households						Male-headed households						
Schooling expenditures	-18.313*	-6.075	-12.238	14.701	16.680	44.704	-6.660*	-13.506***	6.846	14.050	16.092	22.628
	(-1.81)	(-1.57)	(1.34)				(-1.91)	(-2.76)	(1.36)			
<i>N</i>	2,791	2,791		469	460	445	2,902	2,902		417	377	529
Small households (4 or less members)						Large households (5 or more members)						
Schooling expenditures	0.679	10.806	-10.128	12.696	17.206	33.760	-22.383**	-11.512***	-10.871	14.662	16.011	37.983
	(0.06)	(1.08)	(1.38)				(-2.05)	(-3.22)	(0.93)			
<i>N</i>	1,125	1,125		109	257	267	4,568	4,568		777	580	707
Poorest households						Less poor households						
Schooling expenditures	-24.588**	-11.707***	-12.881	9.615	12.962	38.609	-2.257	-3.823	1.566	24.204	20.353	33.839
	(-2.27)	(-3.28)	(1.13)				(-0.32)	(-0.68)	(0.33)			
<i>N</i>	3,391	3,391		593	457	540	2,302	2,302		293	380	434

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.6.1.5: The impact of LEAP on children's work in the last 7 days, by age group and sex

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Children 7 – 12 years						
Paid work last 7 days	0.000 (0.02)	0.006 (0.89)	-0.006 (0.78)	0.002	0.005	0.000
Weeks worked (job last 7 days)	0.124 (0.55)	0.057 (0.87)	0.068 (0.34)	0.027	0.195	0.003
<i>N</i>	2,740	2,740		424	380	475
Children 13 – 17 years						
Paid work last 7 days	0.004 (0.31)	-0.001 (-0.09)	0.005 (0.38)	0.012	0.028	0.024
Weeks worked (job last 7 days)	0.486 (1.34)	-0.075 (-0.38)	0.561 (1.56)	0.266	0.561	0.253
<i>N</i>	2,199	2,199		345	370	364
Boys 7 – 17 years						
Paid work last 7 days	-0.004 (-0.37)	-0.012** (-2.07)	0.008 (0.83)	0.010	0.017	0.016
Weeks worked (job last 7 days)	0.267 (1.02)	-0.161 (-1.43)	0.429* (1.66)	0.166	0.429	0.185
<i>N</i>	2,609	2,609		402	378	461
Girls 7 – 17 years						
Paid work last 7 days	-0.000 (-0.02)	0.013 (1.31)	-0.013 (1.07)	0.003	0.017	0.003
Weeks worked (job last 7 days)	0.029 (0.10)	0.107 (0.70)	-0.078 (0.27)	0.101	0.324	0.010
<i>N</i>	2,330	2,330		367	372	378

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.6.1.6: The impact of LEAP on children's work, by sex of the head, household size and baseline consumption (children 7 – 17 years)

Dependent Variable	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
Female-headed households						Male-headed households						
Paid work last 7 days	0.011 (0.78)	0.010 (0.91)	0.000 (0.02)	0.005	0.021	0.013	-0.027* (-1.89)	-0.018 (-1.61)	-0.010 (0.96)	0.009	0.011	0.005
Weeks worked (job last 7 days)	0.412 (1.30)	0.070 (0.48)	0.341 (1.08)	0.028	0.405	0.154	-0.495 (-1.26)	-0.530 (-1.65)	0.034 (0.15)	0.257	0.341	0.017
<i>N</i>	2,441	2,441		404	414	382	2,498	2,498		365	336	457
Small households (4 or less members)						Large households (5 or more members)						
Paid work last 7 days	-0.060** (-2.07)	-0.006 (-0.31)	-0.054 (1.46)	0.009	0.016	0.023	-0.000 (-0.04)	-0.001 (-0.09)	0.000 (0.04)	0.006	0.017	0.004
Weeks worked (job last 7 days)	-0.569* (-1.92)	0.190 (0.54)	-0.759 (1.65)	0.108	0.177	0.182	0.202 (0.78)	-0.086 (-0.63)	0.288 (1.22)	0.139	0.479	0.070
<i>N</i>	986	986		96	226	232	3,953	3,953		673	524	607
Poorest households						Less poor households						
Paid work last 7 days	0.002 (0.13)	-0.011* (-1.80)	0.012 (1.17)	0.008	0.025	0.012	-0.015 (-1.19)	0.023 (1.23)	-0.038* (1.97)	0.004	0.007	0.007
Weeks worked (job last 7 days)	0.444 (1.33)	-0.206 (-1.24)	0.651** (2.26)	0.178	0.700	0.089	-0.360 (-1.52)	0.161 (0.78)	-0.521** (1.98)	0.045	0.010	0.127
<i>N</i>	2,937	2,937		516	410	463	2,002	2,002		253	340	376

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

A.6.2 ATT results

Table A.6.2.1: The ATT impact of LEAP on school enrolment

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
All children 5 - 17 years						
Current enrolment	0.034 (1.05)	-0.037 (-1.17)	0.071** (2.08)	0.873	0.886	0.851
<i>N</i>	5,693	5,693		836	758	1,053
Boys 5 - 17 years						
Current enrolment	0.062 (1.34)	-0.031 (-0.67)	0.092* (1.82)	0.878	0.890	0.848
<i>N</i>	2,984	2,984		442	366	587
Girls 5 - 17 years						
Current enrolment	0.026 (0.62)	-0.036 (-1.03)	0.062* (1.76)	0.867	0.882	0.855
<i>N</i>	2,709	2,709		394	392	466
All children 5 - 13 years						
Current enrolment	0.036 (0.81)	-0.063** (-2.22)	0.099*** (2.65)	0.888	0.934	0.852
<i>N</i>	3,930	3,930		585	493	724
Boys 5 - 13 years						
Current enrolment	0.031 (0.43)	-0.077* (-1.65)	0.108* (1.85)	0.898	0.934	0.853
<i>N</i>	2,029	2,029		300	233	396
Girls 5 - 13 years						
Current enrolment	0.097** (2.22)	-0.000 (-0.00)	0.097** (2.39)	0.878	0.935	0.851
<i>N</i>	1,901	1,901		285	260	328
All children 13 - 17 years						
Current enrolment	0.060 (1.13)	0.052 (1.36)	0.008 (0.17)	0.829	0.833	0.873
<i>N</i>	2,199	2,199		324	330	404
Boys 13 - 17 years						
Current enrolment	0.083 (1.27)	0.060 (0.96)	0.023 (0.37)	0.828	0.847	0.868
<i>N</i>	1,181	1,181		182	163	233
Girls 13 - 17 years						
Current enrolment	-0.029 (-0.45)	-0.025 (-0.42)	-0.004 (0.08)	0.830	0.820	0.883
<i>N</i>	1,018	1,018		142	167	171

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. Sex/age group sub-groups use region fixed effects instead of cluster fixed effects. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.6.2.2: The ATT impact of LEAP on school attendance

Dependent Variable	Endline Impact (1)	Endline Treated Mean (2)	Endline Control Mean (3)
All children 5 - 17 years			
Missed any school	-0.076 (-1.58)	0.079	0.143
<i>N</i>	1,293	572	721
Boys 5 - 17 years			
Missed any school	-0.087 (-1.56)	0.080	0.135
<i>N</i>	666	276	390
Girls 5 - 17 years			
Missed any school	-0.090 (-1.51)	0.079	0.159
<i>N</i>	627	296	331
All children 5 - 13 years			
Missed any school	-0.142** (-1.98)	0.076	0.197
<i>N</i>	932	401	531
Boys 5 - 13 years			
Missed any school	-0.145* (-1.85)	0.080	0.201
<i>N</i>	470	188	282
Girls 5 - 13 years			
Missed any school	-0.134* (-1.93)	0.073	0.191
<i>N</i>	462	213	249
All children 13 - 17 years			
Missed any school	0.017 (0.86)	0.079	0.030
<i>N</i>	478	232	246
Boys 13 - 17 years			
Missed any school	0.011 (0.39)	0.083	0.018
<i>N</i>	254	116	138
Girls 13 - 17 years			
Missed any school	0.023 (0.65)	0.075	0.061
<i>N</i>	224	116	108

Notes: Estimations use cross-sectional modelling at endline among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance

Table A.6.2.3: The ATT impact of LEAP on grade for age

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
All children 5 - 17 years						
Grade for age	-0.128** (-2.54)	-0.022 (-0.63)	-0.105** (2.19)	0.344	0.297	0.402
<i>N</i>	4,838	4,838		708	644	820
Boys 5 - 17 years						
Grade for age	-0.120 (-1.60)	0.008 (0.17)	-0.128* (1.71)	0.352	0.268	0.390
<i>N</i>	2,536	2,536		377	309	452
Girls 5 - 17 years						
Grade for age	-0.095 (-1.52)	-0.044 (-0.81)	-0.051 (0.86)	0.335	0.324	0.423
<i>N</i>	2,302	2,302		331	335	368
All children 5 - 13 years						
Grade for age	-0.125* (-1.89)	-0.006 (-0.12)	-0.119** (2.06)	0.444	0.392	0.493
<i>N</i>	3,478	3,478		510	448	604
Boys 5 - 13 years						
Grade for age	-0.102 (-1.09)	0.002 (0.04)	-0.104 (1.09)	0.470	0.352	0.456
<i>N</i>	1,790	1,790		265	209	327
Girls 5 - 13 years						
Grade for age	-0.047 (-0.57)	-0.005 (-0.07)	-0.043 (0.60)	0.415	0.427	0.548
<i>N</i>	1,688	1,688		245	239	277
All children 13 - 17 years						
Grade for age	-0.178*** (-2.79)	-0.019 (-0.38)	-0.160** (2.56)	0.105	0.087	0.201
<i>N</i>	1,757	1,757		255	259	283
Boys 13 - 17 years						
Grade for age	-0.254*** (-3.05)	-0.073 (-1.56)	-0.181** (2.29)	0.105	0.095	0.223
<i>N</i>	955	955		143	129	164
Girls 13 - 17 years						
Grade for age	-0.021 (-0.34)	0.019 (0.24)	-0.040 (0.62)	0.104	0.080	0.154
<i>N</i>	802	802		112	130	119

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. Sex/age group sub-groups use region fixed effects instead of cluster fixed effects. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.6.2.4: The ATT impact of LEAP on schooling expenditures

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)		(4)	(5)	(6)
All children 5 - 17 years						
Real monthly schooling expenditures	-12.477*	-6.844***	-5.633 (0.90)	13.839	15.815	30.983
<i>N</i>	5,693	5,693		836	758	1,053
Boys 5 - 17 years						
Real monthly schooling expenditures	-10.356*	-6.966**	-3.390 (0.71)	13.902	15.560	32.906
<i>N</i>	2,984	2,984		442	366	587
Girls 5 - 17 years						
Real monthly schooling expenditures	-7.070*	-8.062**	0.991 (0.28)	13.769	16.049	27.889
<i>N</i>	2,709	2,709		394	392	466
All children 5 - 13 years						
Real monthly schooling expenditures	-13.271**	-12.317***	-0.954 (0.20)	12.406	13.962	29.150
<i>N</i>	3,930	3,930		585	493	724
Boys 5 - 13 years						
Real monthly schooling expenditures	-15.278*	-5.835**	-9.442 (1.27)	12.236	13.053	34.544
<i>N</i>	2,029	2,029		300	233	396
Girls 5 - 13 years						
Real monthly schooling expenditures	-3.856	-12.932***	9.076** (2.53)	12.584	14.761	21.008
<i>N</i>	1,901	1,901		285	260	328
All children 13 - 17 years						
Real monthly schooling expenditures	-10.097	-1.136	-8.961 (1.36)	15.487	19.767	32.039
<i>N</i>	2,199	2,199		324	330	404
Boys 13 - 17 years						
Real monthly schooling expenditures	-6.834	-11.663**	4.829 (0.71)	15.672	19.845	26.476
<i>N</i>	1,181	1,181		182	163	233
Girls 13 - 17 years						
Real monthly schooling expenditures	-17.511**	-0.834	-16.677* (1.87)	15.255	19.693	42.534
<i>N</i>	1,018	1,018		142	167	171

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. Sex/age group sub-groups use region fixed effects instead of cluster fixed effects. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.6.2.5: The ATT impact of LEAP on school enrolment, by sex of the head, age group and sex

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (7)	Midline Impact (8)	Impact Diff (9)=(7)-(8)	Baseline Treated Mean (10)	Endline Treated Mean (11)	Endline Control Mean (12)
Female-headed households						Male-headed households						
Current enrolment	-0.015 (-0.37)	-0.027 (-0.61)	0.011 (0.34)	0.862	0.862	0.928	0.159*** (3.65)	-0.043 (-1.07)	0.202*** (3.50)	0.888	0.917	0.714
<i>N</i>	2,791	2,791		484	426	479	2,902	2,902		352	332	574
Small households (4 or less members)						Large households (5 or more members)						
Current enrolment	-0.067 (-0.93)	-0.049 (-0.68)	-0.018 (0.27)	0.818	0.852	0.847	0.030 (0.78)	-0.044 (-1.15)	0.074* (1.89)	0.880	0.899	0.855
<i>N</i>	1,125	1,125		93	196	328	4,568	4,568		743	562	725
Poorest households						Less poor households						
Current enrolment	-0.004 (-0.09)	-0.037 (-0.82)	0.033 (0.74)	0.857	0.862	0.856	0.052 (1.59)	-0.011 (-0.26)	0.064 (1.42)	0.906	0.913	0.845
<i>N</i>	3,391	3,391		562	423	574	2,302	2,302		274	335	479

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.6.2.6: The ATT impact of LEAP on school attendance, by sex of head, household size and baseline consumption (children 5 – 17 years)

Dependent Variable	Endline Impact (1)	Endline Treated Mean (2)	Endline Control Mean (3)	Endline Impact (4)	Endline Treated Mean (5)	Endline Control Mean (6)
	Female-headed households			Male-headed households		
Missed any school	-0.015 (-0.56)	0.082	0.083	-0.264** (-2.04)	0.075	0.283
<i>N</i>	667	326	341	626	246	380
	Small households (4 or less members)			Large households (5 or more members)		
Missed any school	-0.020 (-0.48)	0.063	0.084	-0.100* (-1.95)	0.085	0.187
<i>N</i>	372	141	231	921	431	490
	Poorest households			Less poor households		
Missed any school	0.035 (1.38)	0.087	0.051	-0.200** (-2.55)	0.071	0.268
<i>N</i>	688	303	385	605	269	336

Notes: Estimations use cross-sectional modelling at endline among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance

Table A.6.2.7: The ATT impact of LEAP on grade progression, by sex of head, household size and baseline consumption (children 5 – 17 years)

Dependent Variable	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
Female-headed households						Male-headed households						
Grade for age	-0.092	0.041	-0.134**	0.340	0.270	0.363	-0.207***	-0.068*	-0.139**	0.350	0.331	0.495
	(-1.47)	(0.81)	(1.98)				(-3.15)	(-1.66)	(2.20)			
<i>N</i>	2,402	2,402		406	355	390	2,436	2,436		302	289	430
Small households (4 or less members)						Large households (5 or more members)						
Grade for age	-0.127	0.010	-0.137	0.318	0.327	0.330	-0.157***	-0.035	-0.122**	0.347	0.285	0.457
	(-1.56)	(0.13)	(1.49)				(-3.19)	(-0.97)	(2.56)			
<i>N</i>	948	948		72	162	268	3,890	3,890		636	482	552
Poorest households						Less poor households						
Grade for age	-0.063	-0.031	-0.032	0.327	0.297	0.378	-0.197***	0.022	-0.219***	0.376	0.297	0.432
	(-1.20)	(-0.67)	(0.70)				(-3.71)	(0.59)	(3.83)			
<i>N</i>	2,829	2,829		466	349	441	2,009	2,009		242	295	379

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.6.2.8: The ATT impact of LEAP on schooling expenditures, by sex of head, household size and baseline consumption (children 5 – 17 years)

Dependent Variable	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
Female-headed households						Male-headed households						
Schooling expenditures	-15.280*	-7.424**	-7.856	13.854	16.089	35.345	-10.615**	-7.762***	-2.853	13.816	15.448	23.229
	(-1.68)	(-2.41)	(0.87)				(-2.19)	(-2.89)	(0.58)			
<i>N</i>	2,791	2,791		484	426	479	2,902	2,902		352	332	574
Small households (4 or less members)						Large households (5 or more members)						
Schooling expenditures	0.534	0.561	-0.027	12.359	16.291	21.510	-18.101**	-6.649***	-11.452	14.042	15.623	38.381
	(0.07)	(0.08)	(0.01)				(-2.22)	(-2.62)	(1.32)			
<i>N</i>	1,125	1,125		93	196	328	4,568	4,568		743	562	725
Poorest households						Less poor households						
Schooling expenditures	-18.888**	-6.135**	-12.752	9.344	12.631	30.996	-5.793	-6.695	0.901	23.026	19.596	30.968
	(-2.05)	(-2.07)	(1.37)				(-0.75)	(-1.30)	(0.19)			
<i>N</i>	3,391	3,391		562	423	574	2,302	2,302		274	335	479

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.6.2.9: The ATT impact of LEAP on children's work in the last 7 days, by age and sex

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Children 7 – 17 years						
Paid work last 7 days	0.010 (1.26)	0.015** (2.31)	-0.005 (0.70)	0.003	0.014	0.009
Weeks worked (job last 7 days)	0.418*** (2.78)	0.222** (2.01)	0.196 (1.37)	0.048	0.377	0.076
<i>N</i>	4,939	4,939		722	673	916
Children 7 – 12 years						
Paid work last 7 days	0.017** (2.04)	0.020** (2.41)	-0.003 (0.49)	0.000	0.005	0.000
Weeks worked (job last 7 days)	0.363* (1.93)	0.207** (2.36)	0.156 (0.98)	0.000	0.215	0.002
<i>N</i>	2,740	2,740		398	343	512
Children 13 – 17 years						
Paid work last 7 days	0.003 (0.24)	0.008 (0.92)	-0.005 (0.43)	0.006	0.023	0.019
Weeks worked (job last 7 days)	0.547* (1.93)	0.220 (1.35)	0.327 (1.16)	0.106	0.544	0.160
<i>N</i>	2,199	2,199		324	330	404
Boys 7 – 17 years						
Paid work last 7 days	0.019 (1.52)	0.017 (1.34)	0.002 (0.32)	0.006	0.015	0.009
Weeks worked (job last 7 days)	0.425* (1.78)	0.197 (1.06)	0.229 (1.27)	0.092	0.411	0.111
<i>N</i>	2,609	2,609		383	327	512
Girls 7 – 17 years						
Paid work last 7 days	0.009 (0.77)	0.017** (2.02)	-0.008 (0.53)	0.000	0.014	0.010
Weeks worked (job last 7 days)	0.494* (1.82)	0.321** (2.32)	0.173 (0.54)	0.000	0.346	0.015
<i>N</i>	2,330	2,330		339	346	404

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.6.2.10: The ATT impact of LEAP on children's work, by sex of the head, household size and baseline consumption (children 7 – 17 years)

Dependent Variable	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
Female-headed households						Male-headed households						
Paid work last 7 days	0.014 (1.02)	0.032** (2.58)	-0.018* (1.70)	0.002	0.015	0.012	-0.003 (-0.32)	-0.004 (-0.80)	0.001 (0.12)	0.004	0.013	0.003
Weeks worked (job last 7 days)	0.414 (1.46)	0.448*** (2.69)	-0.034 (0.13)	0.000	0.364	0.109	0.164 (0.60)	-0.170 (-1.26)	0.335 (1.45)	0.117	0.396	0.011
<i>N</i>	2,441	2,441		417	381	415	2,498	2,498		305	292	501
Small households (4 or less members)						Large households (5 or more members)						
Paid work last 7 days	-0.002 (-0.05)	0.071** (2.54)	-0.073** (2.55)	0.000	0.006	0.016	0.011* (1.89)	0.003 (0.51)	0.008 (1.07)	0.003	0.018	0.003
Weeks worked (job last 7 days)	0.297 (0.67)	1.090** (2.26)	-0.793** (2.26)	0.000	0.083	0.103	0.384** (2.27)	0.033 (0.47)	0.352** (2.06)	0.055	0.495	0.053
<i>N</i>	986	986		81	172	286	3,953	3,953		641	501	630
Poorest households						Less poor households						
Paid work last 7 days	0.010 (1.37)	-0.006* (-1.81)	0.016** (2.46)	0.004	0.024	0.008	0.006 (0.42)	0.019 (0.99)	-0.013 (0.76)	0.000	0.004	0.010
Weeks worked (job last 7 days)	0.408** (2.01)	-0.078 (-1.18)	0.486** (2.59)	0.072	0.694	0.079	0.016 (0.09)	0.240 (0.91)	-0.224 (1.09)	0.000	0.007	0.072
<i>N</i>	2,937	2,937		486	374	499	2,002	2,002		236	299	417

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. Sex and age group sub-groups use region fixed effects instead of cluster fixed effects. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Appendix A.7 Adult health impacts: sub-group and ATT results

A.7.1 NHIS enrolment, ever and current- adults

Table A.7.1.1: NHIS enrolment – by sex of the head of household

Dependent Variable	Female headed households						Male headed households					
	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
HH has at least one member ever NHIS insurance	0.062 (1.15)	0.123** (2.17)	-0.061* (1.66)	0.715	0.959	0.907	0.047 (0.73)	0.037 (0.82)	0.010 (0.17)	0.741	0.950	0.864
HH with all members ever NHIS insurance	0.137** (2.21)	0.105** (2.39)	0.032 (0.67)	0.424	0.664	0.572	0.120* (1.78)	-0.026 (-0.38)	0.146** (2.46)	0.393	0.668	0.507
HH has at least one member with valid NHIS insurance	0.194*** (3.21)	0.185** (2.58)	0.009 (0.12)	0.402	0.778	0.741	0.161** (2.27)	0.133* (1.97)	0.029 (0.42)	0.437	0.755	0.649
HH has all members with valid NHIS insurance	0.078 (1.35)	0.061 (1.27)	0.017 (0.29)	0.195	0.301	0.343	-0.030 (-0.48)	0.012 (0.17)	-0.042 (0.61)	0.166	0.296	0.299
HH with member who ever benefitted from NHIS	0.079 (1.22)	0.166*** (3.10)	-0.087 (1.65)	0.524	0.893	0.853	0.085 (1.19)	0.122* (1.74)	-0.037 (0.65)	0.556	0.872	0.785
<i>N</i>	2,148	2,148		338	338	378	1,902	1,902		240	240	394

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.7.1.2: NHIS enrolment – by household size

Dependent Variable	Small households						Large households					
	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
HH has at least one member ever NHIS insurance	0.016 (0.34)	-0.005 (-0.11)	0.021 (0.50)	0.702	0.944	0.884	0.103* (1.86)	0.191*** (3.15)	-0.088* (1.77)	0.750	0.968	0.897
HH with all members ever NHIS insurance	0.128* (1.69)	0.052 (1.04)	0.076 (1.18)	0.508	0.674	0.621	0.109* (1.67)	0.071 (1.25)	0.038 (0.64)	0.305	0.656	0.467
HH has at least one member with valid NHIS insurance	0.093 (1.43)	0.020 (0.27)	0.073 (0.87)	0.410	0.721	0.707	0.264*** (4.07)	0.330*** (4.58)	-0.067 (1.29)	0.424	0.820	0.704
HH has all members with valid NHIS insurance	0.054 (0.70)	0.036 (0.57)	0.018 (0.26)	0.265	0.339	0.401	0.010 (0.21)	0.081 (1.63)	-0.071 (1.26)	0.094	0.255	0.245
HH with member who ever benefitted from NHIS	0.138** (2.44)	0.185*** (3.30)	-0.046 (1.07)	0.466	0.858	0.828	0.023 (0.39)	0.116** (1.97)	-0.092** (2.05)	0.614	0.913	0.826
<i>N</i>	1,953	1,953		275	275	376	2,097	2,097		303	303	396

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.7.1.3: NHIS enrolment – by baseline consumption

Dependent Variable	50% poorest households						50% less poor households					
	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
HH has at least one member ever NHIS insurance	0.064 (1.23)	0.111** (2.04)	-0.047 (0.99)	0.720	0.944	0.903	0.055 (1.00)	0.074 (1.44)	-0.020 (0.47)	0.731	0.967	0.876
HH with all members ever NHIS insurance	0.138** (2.15)	0.030 (0.52)	0.107** (2.14)	0.334	0.613	0.529	0.122* (1.70)	0.061 (1.29)	0.061 (1.04)	0.490	0.719	0.567
HH has at least one member with valid NHIS insurance	0.212*** (3.99)	0.259*** (3.45)	-0.047 (0.73)	0.376	0.760	0.751	0.159** (2.28)	0.083 (1.03)	0.076 (1.01)	0.458	0.777	0.657
HH has all members with valid NHIS insurance	0.028 (0.55)	0.057 (1.17)	-0.029 (0.54)	0.110	0.260	0.368	0.050 (0.62)	0.034 (0.63)	0.016 (0.22)	0.257	0.338	0.282
HH with member who ever benefitted from NHIS	0.042 (0.95)	0.121** (2.32)	-0.079** (2.06)	0.534	0.868	0.844	0.119* (1.71)	0.178*** (2.79)	-0.059 (1.12)	0.540	0.901	0.810
<i>N</i>	1,956	1,956		292	292	360	2,094	2,094		286	286	412

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.7.1.4: ATT impact of LEAP on household-level NHIS enrolment

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
HH has at least one member ever NHIS insurance	-0.035 (-0.66)	-0.013 (-0.25)	-0.022 (-0.70)	0.742	0.957	0.901
HH with all members ever NHIS insurance	0.004 (0.07)	-0.051 (-0.83)	0.055 (1.22)	0.418	0.676	0.628
HH has at least one member with valid NHIS insurance	0.091* (1.77)	0.137** (2.52)	-0.046 (0.93)	0.435	0.784	0.708
HH has all members with valid NHIS insurance	0.016 (0.39)	0.047 (1.08)	-0.031 (0.61)	0.191	0.302	0.312
HH with member who ever benefitted from NHIS	-0.087 (-1.57)	-0.041 (-0.80)	-0.047 (1.37)	0.583	0.883	0.839
<i>N</i>	4,050	4,050		518	518	832

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.7.1.5: ATT impact on individual NHIS current enrolment – by age group

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
All adults						
Individual ever enrolled in NHIS	-0.080 (-1.04)	-0.092 (-1.18)	0.012 (0.36)	0.570	0.844	0.813
<i>N</i>	9,055	9,055		1,126	1,273	1,885
Has valid NHIS insurance for current year	-0.027 (-0.51)	0.038 (0.72)	-0.064 (1.55)	0.298	0.529	0.572
<i>N</i>	9,055	9,055		1,126	1,273	1,885
Number of times used NHIS card in last 12 months	-0.903** (-2.13)	-0.175 (-0.38)	-0.728* (1.96)	2.812	2.301	2.205
<i>N</i>	3,788	3,788		341	687	879
Adults 18 – 54 years						
Individual ever enrolled in NHIS	-0.062 (-0.54)	-0.079 (-0.68)	0.018 (0.43)	0.464	0.806	0.775
<i>N</i>	5,530	5,530		599	747	1,223
Has valid NHIS insurance for current year	-0.035 (-0.49)	0.054 (0.71)	-0.089* (1.74)	0.214	0.460	0.550
<i>N</i>	5,530	5,530		599	747	1,223

Table A.7.1.5: ATT impact on individual NHIS current enrolment – by age group (continued)

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Adults 18 – 54 years (cont'd)						
Number of times used NHIS card in last 12 months	-0.042 (-0.08)	0.188 (0.33)	-0.230 (0.78)	1.969	1.827	1.390
<i>N</i>	1,949	1,949		130	350	495
Adults 55+ years						
Individual ever enrolled in NHIS	-0.087* (-1.89)	-0.070 (-01.48)	-0.017 (0.44)	0.683	0.895	0.894
<i>N</i>	3,525	3,525		527	526	662
Has valid NHIS insurance for current year	0.030 (0.58)	0.033 (0.58)	-0.004 (0.06)	0.387	0.624	0.617
<i>N</i>	3,525	3,525		527	526	662
Number of times used NHIS card in last 12 months	-1.371** (-2.51)	0.013 (0.02)	-1.384* (1.89)	3.306	2.778	3.754
<i>N</i>	1,839	1,839		211	337	384

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

A.7.2 Self-reported health status- adults

Table A.7.2.1: ATT impact on self-reported health status – adults aged 18 or higher

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Self-assessed health	0.003 (0.12)	0.116*** (3.82)	-0.113*** (3.38)	0.736	0.714	0.824
<i>N</i>	8,965	8,965		1,066	1,272	1,882
Can easily carry a heavy load	0.102*** (3.47)	0.058* (1.95)	0.044 (1.54)	0.561	0.583	0.691
<i>N</i>	8,890	8,890		1,011	1,272	1,882

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.7.2.2: ATT impact on self-reported health status, by adult age group

Dependent Variable	Adults aged 18-54						Adults aged 55 or older					
	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
Self-assessed healthy	0.058** (2.47)	0.106*** (5.16)	-0.047* (1.94)	0.853	0.911	0.942	-0.014 (-0.30)	0.140** (2.36)	-0.154** (2.47)	0.616	0.446	0.572
<i>N</i>	5,466	5,466		563	746	1,220	3,499	3,499		503	526	662
Can easily carry a heavy load	0.180*** (4.72)	0.173*** (4.34)	0.007 (0.24)	0.706	0.879	0.905	0.030 (0.60)	-0.027 (-0.45)	0.057 (1.18)	0.416	0.179	0.237
<i>N</i>	5,414	5,414		525	746	1,220	3,476	3,476		486	526	662

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.7.2.3: ATT impact on self-reported health status, by sex

Dependent Variable	Adult females						Adult males					
	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
Self-assessed healthy	0.026 (0.72)	0.145*** (3.62)	-0.119*** (2.86)	0.707	0.685	0.791	-0.053 (-1.59)	0.060* (1.91)	-0.113*** (3.13)	0.785	0.764	0.876
<i>N</i>	5,515	5,515		663	804	1,119	3,450	3,450		403	468	763
Can easily carry a heavy load	0.122*** (3.30)	0.055 (1.52)	0.068* (1.74)	0.544	0.538	0.619	0.086** (2.40)	0.064* (1.68)	0.022 (0.77)	0.589	0.660	0.808
<i>N</i>	5,469	5,469		628	804	1,119	3,421	3,421		383	468	763

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

A.7.3 Morbidity and service use-adults

Table A.7.3.1: Adult morbidity and service use, by age

Dependent Variable	Adults 18 – 54 years						Adults 55+ years					
	Endline Impact	Midline Impact	Midline Treated Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Midline Treated Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Any illness or injury in past four weeks	-0.025 (-1.01)	-0.009 (-0.38)	0.122	0.118	0.185	0.207	-0.048 (-1.13)	-0.027 (-0.51)	0.391	0.475	0.403	0.453
<i>N</i>	1,970	1,892	772	1,120	850	1,120	1,188	1,184	582	602	557	631
Sought care if ill or sick	0.050 (0.71)	-0.125* (-1.73)	0.526	0.702	0.688	0.674	0.093 (1.25)	0.144** (2.31)	0.663	0.538	0.651	0.606
<i>N</i>	369	229	95	134	154	215	501	438	214	224	219	282

Notes: Estimations use cross-sectional modelling at midline and endline among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.7.3.2: Adult morbidity and service use, by sex

Dependent Variable	Females						Males					
	Endline Impact	Midline Impact	Midline Treated Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Midline Treated Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Any illness or injury in past four weeks	-0.067* (-1.86)	-0.044 (-1.25)	0.277	0.319	0.314	0.385	0.016 (0.55)	0.006 (0.16)	0.185	0.162	0.205	0.165
<i>N</i>	1,925	1,889	847	1,042	873	1,052	1,233	1,187	507	680	534	699
Sought care if ill or sick	0.047 (0.72)	0.098 (1.51)	0.647	0.562	0.688	0.659	0.114 (1.29)	-0.102 (-1.17)	0.570	0.652	0.610	0.514
<i>N</i>	627	475	221	254	267	360	243	192	88	104	106	137

Notes: Estimations use cross-sectional modelling at midline and endline among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.7.3.3: ATT impact on adult morbidity and service use

Dependent Variable	Endline Impact	Midline Impact	Midline Treatment Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Any illness or injury in past four weeks	-0.053** (-2.21)	-0.055** (-1.99)	0.234	0.266	0.272	0.286
<i>N</i>	3,158	3,076	1,217	1,859	1,273	1,885
Sought care if ill or sick	0.050 (0.83)	-0.025 (-0.39)	0.621	0.642	0.671	0.678
<i>N</i>	870	667	269	398	334	536

Notes: Estimations use cross-sectional modelling at midline and endline among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.7.3.4: ATT impact on adult morbidity and service use, by age

Dependent Variable	Adults 18 – 54 years						Adults 55+ years					
	Endline Impact	Midline Impact	Midline Treated Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Midline Treated Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Any illness or injury in past four weeks	-0.054** (-2.44)	-0.009 (-0.40)	0.120	0.132	0.174	0.214	-0.042 (-0.93)	-0.071 (-1.49)	0.370	0.478	0.406	0.440
<i>N</i>	1,970	1,892	682	1,210	747	1,223	1,188	1,184	535	649	526	662
Sought care if ill or sick	0.038 (0.62)	-0.188** (-2.01)	0.543	0.680	0.712	0.706	0.096 (1.37)	0.062 (1.02)	0.652	0.626	0.647	0.648
<i>N</i>	369	229	82	147	127	242	501	438	187	251	207	294

Notes: Estimations use cross-sectional modelling at midline and endline among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance

Table A.7.3.5: ATT impact on adult morbidity and service use, by sex

Dependent Variable	Females						Males					
	Endline Impact	Midline Impact	Midline Treated Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Midline Treated Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Any illness or injury in past four weeks	-0.066* (-1.70)	-0.042 (-1.11)	0.269	0.297	0.314	0.329	-0.029 (-0.80)	-0.066* (-1.68)	0.173	0.213	0.199	0.218
<i>N</i>	1,925	1,889	768	1,121	804	1,121	1,233	1,187	449	738	469	764
Sought care if ill or sick	0.036 (0.59)	-0.021 (-0.27)	0.638	0.648	0.687	0.699	0.053 (0.68)	0.020 (0.24)	0.577	0.629	0.629	0.626
<i>N</i>	627	475	197	278	244	383	243	192	72	120	90	153

Notes: Estimations use cross-sectional modelling at midline and endline among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.7.3.6: ATT impact on adult hospitalization

Dependent Variable	Endline Impact	Midline Impact	Midline Treatment Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
All adults						
Hospitalized in last 12 months	-0.024 (-1.54)	-0.039** (-2.24)	0.043	0.074	0.070	0.082
<i>N</i>	3,158	3,077	1,218	1,859	1,273	1,885
Adults 18 – 54 years						
Hospitalized in last 12 months	0.007 (0.37)	-0.027* (-1.78)	0.017	0.049	0.048	0.032
<i>N</i>	1,970	1,892	682	1,210	747	1,223
Adults 55+ years						
Hospitalized in last 12 months	-0.085** (-2.47)	-0.043 (-1.57)	0.075	0.113	0.100	0.187
<i>N</i>	1,188	1,185	536	649	526	662
Female adults						
Hospitalized in last 12 months	-0.031 (-1.65)	-0.010 (-0.64)	0.054	0.055	0.081	0.104
<i>N</i>	1,925	1,890	769	1,121	804	1,121
Male adults						
Hospitalized in last 12 months	-0.012 (-0.64)	-0.101*** (-3.25)	0.024	0.107	0.051	0.046
<i>N</i>	1,233	1,187	449	738	469	764

Notes: Estimations use cross-sectional modelling at midline and endline among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.7.3.7: ATT impact of LEAP on expenditures in health

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
All adults						
Health expenditures in last 4 weeks (deflated)	-5.703** (-2.25)	-5.941 (-1.35)	0.238 (0.05)	5.907	12.418	15.526
<i>N</i>	9,055	9,055		1,126	1,273	1,885
Adults 18 – 54 years						
Health expenditures in last 4 weeks (deflated)	-7.047*** (-2.99)	-2.329 (-1.03)	-4.718** (2.10)	4.821	6.281	11.570
<i>N</i>	5,530	5,530		599	747	1,223
Adults 55+ years						
Health expenditures in last 4 weeks (deflated)	-2.963 (-0.60)	-8.449 (-0.85)	5.486 (0.51)	7.057	20.798	23.941
<i>N</i>	3,525	3,525		527	526	662
Female adults						
Health expenditures in last 4 weeks (deflated)	-8.852*** (-2.82)	0.902 (0.23)	-9.754*** (2.88)	5.923	11.905	17.161
<i>N</i>	5,573	5,573		700	804	1,121
Male adults						
Health expenditures in last 4 weeks (deflated)	-1.698 (-0.42)	-20.063* (-1.75)	18.364 (1.35)	5.881	13.308	12.905
<i>N</i>	3,482	3,482		426	469	764

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Appendix A.8 Impacts on child health: sub-group and ATT results

A.8.1 NHIS enrolment, ever and current- children

Table A.8.1.1: Impact of LEAP on children’s NHIS enrolment, by sex of the head, household size and baseline consumption (0 – 17 years)

Dependent Variable	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
Female-headed households						Male-headed households						
Individual enrolment in NHIS	0.051 (0.59)	0.247*** (2.97)	-0.196** (2.48)	0.522	0.803	0.737	0.220** (2.11)	0.118* (1.69)	0.101 (1.27)	0.505	0.832	0.637
Valid NHIS insurance for current year	-0.032 (-0.37)	0.163* (1.94)	-0.195** (2.10)	0.262	0.554	0.544	0.229** (2.43)	0.210*** (2.80)	0.019 (0.22)	0.201	0.596	0.451
<i>N</i>	3,404	3,404		581	553	547	3,729	3,729		533	458	691
Small households (4 or less members)						Large households (5 or more members)						
Individual enrolment in NHIS	0.093 (1.01)	0.116 (1.13)	-0.023 (0.27)	0.467	0.798	0.737	0.213** (2.44)	0.236*** (3.74)	-0.024 (0.35)	0.521	0.825	0.683
Valid NHIS insurance for current year	-0.148* (-1.68)	-0.035 (-0.35)	-0.113 (0.96)	0.278	0.570	0.562	0.155* (1.93)	0.223*** (3.40)	-0.068 (0.99)	0.227	0.573	0.487
<i>N</i>	1,446	1,446		127	320	362	5,687	5,687		987	691	876
Poorest households						Less poor households						
Individual enrolment in NHIS	0.226*** (2.63)	0.292*** (4.45)	-0.065 (0.90)	0.476	0.779	0.682	0.094 (1.09)	0.061 (0.74)	0.034 (0.55)	0.589	0.858	0.724
Valid NHIS insurance for current year	0.147* (1.87)	0.280*** (3.99)	-0.133* (1.79)	0.197	0.540	0.518	0.093 (1.05)	0.013 (0.16)	0.080 (1.01)	0.306	0.609	0.495
<i>N</i>	4,287	4,287		737	548	707	2,846	2,846		377	463	531

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. Sex and age group sub-groups use region fixed effects instead of cluster fixed effects. All estimations control for gender, age, baseline head of household’s characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.8.1.2: ATT impact of LEAP on children's NHIS enrolment, by age and sex

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Children 0 – 17 years (<i>N</i> =7,133)						
Individual enrolment in NHIS	0.000 (0.00)	0.057 (0.74)	-0.056 (1.31)	0.535	0.815	0.767
Valid NHIS insurance for current year	-0.003 (-0.05)	0.150*** (2.64)	-0.153*** (2.86)	0.244	0.556	0.625
Children 0 – 5 years (<i>N</i> =1,791)						
Individual enrolment in NHIS	0.152 (1.30)	0.223* (1.89)	-0.071 (0.88)	0.503	0.732	0.705
Valid NHIS insurance for current year	0.131 (1.35)	0.200* (1.71)	-0.069 (0.72)	0.256	0.593	0.640
Children 6 – 17 years (<i>N</i> =5,342)						
Individual enrolment in NHIS	-0.022 (-0.25)	0.025 (0.34)	-0.047 (0.98)	0.546	0.839	0.786
Valid NHIS insurance for current year	-0.024 (-0.34)	0.140** (2.47)	-0.164*** (2.95)	0.240	0.546	0.620
Boys 0 – 17 years (<i>N</i> =3,714)						
Individual enrolment in NHIS	0.049 (0.53)	0.043 (0.46)	0.006 (0.11)	0.539	0.798	0.751
Valid NHIS insurance for current year	0.055 (0.75)	0.161** (2.19)	-0.107* (1.65)	0.241	0.517	0.616
Girls 0 – 17 years (<i>N</i> =3,419)						
Individual enrolment in NHIS	-0.038 (-0.37)	0.059 (0.72)	-0.097* (1.71)	0.530	0.831	0.789
Valid NHIS insurance for current year	-0.032 (-0.43)	0.133** (2.03)	-0.165** (2.45)	0.248	0.592	0.637

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.8.1.3: ATT impact of LEAP on children's NHIS enrolment, by sex of the head, household size and baseline consumption (0 – 17 years)

Dependent Variable	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
	Female-headed households						Male-headed households					
Individual enrolment in NHIS	-0.006 (-0.07)	0.085 (0.82)	-0.091 (1.17)	0.541	0.798	0.795	0.012 (0.14)	0.042 (0.77)	-0.030 (0.41)	0.527	0.837	0.717
Valid NHIS insurance for current year	-0.054 (-0.61)	0.147** (2.09)	-0.202** (1.98)	0.257	0.527	0.656	0.020 (0.27)	0.139** (2.54)	-0.119* (1.71)	0.227	0.594	0.570
<i>N</i>	3,404	3,404		600	508	592	3,729	3,729		456	409	740
	Small households (4 or less members)						Large households (5 or more members)					
Individual enrolment in NHIS	-0.111 (-1.15)	-0.142 (-1.17)	0.031 (0.40)	0.500	0.808	0.819	0.038 (0.39)	0.084 (1.08)	-0.045 (0.84)	0.539	0.818	0.725
Valid NHIS insurance for current year	-0.247*** (-2.78)	-0.047 (-0.50)	-0.200* (1.70)	0.321	0.535	0.685	0.024 (0.29)	0.145** (2.11)	-0.121** (2.26)	0.235	0.565	0.576
<i>N</i>	1,446	1,446		107	245	437	5,687	5,687		949	672	895
	Poorest households						Less poor households					
Individual enrolment in NHIS	0.095 (1.16)	0.179** (2.36)	-0.084 (1.26)	0.502	0.786	0.755	-0.041 (-0.53)	-0.043 (-0.60)	0.002 (0.04)	0.600	0.850	0.783
Valid NHIS insurance for current year	0.035 (0.48)	0.241*** (3.87)	-0.206*** (2.79)	0.205	0.520	0.629	-0.023 (-0.33)	0.013 (0.21)	-0.035 (0.55)	0.323	0.599	0.620
<i>N</i>	4,287	4,287		706	504	751	2,846	2,846		350	413	581

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

A.8.2 Morbidity and service use- children

Table A.8.2.1: Impact of LEAP on child morbidity and use of health services, by sex of the head, household size and baseline consumption (0 – 17 years)

Dependent Variable	Endline Impact	Midline Impact	Midline Treated Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Midline Treated Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Female-headed household						Male-headed household						
Children 0 – 17 years												
Sick/injured last 4 weeks	0.027 (0.64)	0.003 (0.10)	0.106	0.134	0.172	0.211	0.067** (2.18)	0.016 (0.57)	0.101	0.096	0.155	0.106
Sought preventive health services	-0.001 (-0.33)	-0.020 (-1.54)	0.009	0.023	0.002	0.002	0.000 (0.02)	0.002 (0.33)	0.012	0.002	0.008	0.005
<i>N</i>	1,100	1,070	511	559	553	547	1,149	1,204	474	730	458	691
Small households (4 or less members)						Large households (5 or more members)						
Children 0 – 17 years												
Sick/injured last 4 weeks	0.004 (0.08)	-0.023 (-0.45)	0.175	0.208	0.168	0.186	0.037 (0.96)	0.022 (1.25)	0.085	0.101	0.162	0.165
Sought preventive health services	-0.004 (-1.53)	-0.000 (-0.02)	0.006	0.008	0.000	0.005	0.003 (0.87)	-0.005 (-0.85)	0.011	0.016	0.007	0.002
<i>N</i>	682	425	182	243	320	362	1,567	1,849	803	1,046	691	876
Poorest households						Less poor households						
Children 0 – 17 years												
Sick/injured last 4 weeks	0.040 (0.98)	0.007 (0.36)	0.083	0.102	0.173	0.160	0.027 (0.66)	-0.004 (-0.11)	0.136	0.152	0.155	0.189
Sought preventive health services	0.004 (1.19)	-0.016* (-1.83)	0.007	0.020	0.007	0.001	-0.006* (-1.69)	0.013 (1.27)	0.015	0.005	0.002	0.006
<i>N</i>	1,255	1,366	596	770	548	707	994	908	389	519	463	531

Notes: Estimations use cross-sectional modelling at midline and endline among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.8.2.2: ATT Impact of LEAP on child morbidity and use of health services, by age and sex

Dependent Variable	Endline Impact	Midline Impact	Midline Treatment Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Children 0 – 17 years						
Sick/injured last 4 weeks	-0.003 (-0.11)	0.046*** (2.99)	0.115	0.090	0.147	0.161
<i>N</i>	2,249	2,274	894	1,380	917	1,332
Sought curative care if sick/injured	0.171** (2.21)	-0.005 (-0.05)	0.616	0.547	0.754	0.676
<i>N</i>	345	240	103	137	133	212
Sought preventive health services	0.003 (1.14)	-0.001 (-0.17)	0.011	0.011	0.004	0.002
<i>N</i>	2,249	2,274	894	1,380	917	1,332
Children 0 – 5 years						
Sick/injured last 4 weeks	0.016 (0.25)	0.168*** (4.01)	0.218	0.079	0.207	0.263
<i>N</i>	549	544	209	335	200	349
Sought curative care if sick/injured	0.052 (0.43)	-0.031 (-0.26)	0.718	0.624	0.754	0.725
<i>N</i>	133	93	46	47	41	92
Sought preventive health services	-0.000 (-0.13)	-0.023 (-0.77)	0.030	0.032	0.000	0.005
<i>N</i>	549	544	209	335	200	349
Children 6 – 17 years						
Sick/injured last 4 weeks	0.003 (0.11)	0.015 (0.86)	0.084	0.093	0.129	0.129
<i>N</i>	1,700	1,730	685	1,045	717	983
Sought curative care if sick/injured	0.155* (1.87)	-0.104 (-0.92)	0.536	0.527	0.753	0.644
<i>N</i>	212	147	57	90	92	120
Sought preventive health services	0.005 (1.44)	0.001 (0.28)	0.005	0.005	0.005	0.001
<i>N</i>	1,700	1,730	685	1,045	717	983
Boys 0 – 17 years						
Sick/injured last 4 weeks	-0.023 (-0.67)	0.053*** (2.83)	0.108	0.070	0.119	0.142
<i>N</i>	1,182	1,197	456	741	441	741
Sought curative care if sick/injured	0.132 (1.04)	0.083 (0.82)	0.658	0.606	0.736	0.640
<i>N</i>	168	127	49	78	52	116
Sought preventive health services	0.001 (0.34)	0.010 (1.22)	0.016	0.007	0.002	0.002
<i>N</i>	1,182	1,197	456	741	441	741
Girls 0 – 17 years						
Sick/injured last 4 weeks	0.007 (0.17)	0.040* (1.97)	0.123	0.110	0.172	0.187
<i>N</i>	1,067	1,077	438	639	476	591
Sought curative care if sick/injured	0.076 (0.89)	0.110 (0.88)	0.579	0.506	0.765	0.714
<i>N</i>	177	113	54	59	81	96
Sought preventive health services	0.005* (1.71)	-0.012 (-0.97)	0.006	0.015	0.006	0.002
<i>N</i>	1,067	1,077	438	639	476	591

Notes: Estimations use cross-sectional modelling at midline and endline among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.8.2.3: ATT Impact of LEAP on child morbidity and use of health services, by sex of the head, household size and baseline consumption (0 – 17 years)

Dependent Variable	Endline Impact	Midline Impact	Midline Treated Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Midline Treated Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Female-headed household						Male-headed household						
Children 0 – 17 years												
Sick/injured last 4 weeks	-0.042 (-1.06)	0.057** (2.31)	0.108	0.086	0.152	0.196	0.051 (1.44)	0.050 (1.58)	0.125	0.094	0.140	0.099
Sought preventive health services	-0.001 (-0.42)	-0.016 (-1.06)	0.009	0.019	0.002	0.001	0.006 (1.03)	0.008 (1.23)	0.014	0.001	0.007	0.004
<i>N</i>	1,100	1,070	499	571	508	592	1,149	1,204	395	809	409	740
Small households (4 or less members)						Large households (5 or more members)						
Children 0 – 17 years												
Sick/injured last 4 weeks	-0.068 (-1.35)	0.109*** (2.66)	0.204	0.177	0.127	0.176	0.033 (0.94)	0.052*** (3.07)	0.098	0.063	0.155	0.148
Sought preventive health services	0.000 (0.03)	0.000 (0.03)	0.008	0.004	0.000	0.002	0.005 (1.18)	-0.000 (-0.05)	0.012	0.013	0.006	0.002
<i>N</i>	682	425	137	288	245	437	1,567	1,849	757	1,092	672	895
Poorest households						Less poor households						
Children 0 – 17 years												
Sick/injured last 4 weeks	0.026 (0.75)	0.054** (2.38)	0.101	0.065	0.158	0.149	-0.051 (-1.52)	0.029 (1.14)	0.137	0.126	0.134	0.176
Sought preventive health services	0.005 (1.08)	-0.014 (-1.38)	0.008	0.016	0.006	0.001	0.001 (0.28)	0.012 (1.65)	0.016	0.003	0.002	0.003
<i>N</i>	1,255	1,366	547	819	504	751	994	908	347	561	413	581

Notes: Estimations use cross-sectional modelling at midline and endline among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance

Table A.8.2.4: Impact of LEAP on child health expenditures, by sex of the head, household size and baseline consumption (0 – 17 years)

Dependent Variable	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
Female-headed household							Male-headed household					
Children 0 – 17 years												
Real monthly health expenditures	-1.645	-7.213**	5.568*	2.015	3.277	4.295	3.012	-0.596	3.609**	1.999	3.809	2.355
	(-0.87)	(-2.26)	(1.69)				(1.29)	(-0.36)	(2.19)			
<i>N</i>	3,404	3,404		581	553	547	3,729	3,729		533	458	691
Small households (4 or less members)							Large households (5 or more members)					
Children 0 – 17 years												
Real monthly health expenditures	-0.847	-8.857	8.010	4.986	3.610	3.785	1.322	-1.809	3.131*	1.586	3.457	3.461
	(-0.46)	(-1.63)	(1.47)				(0.87)	(-1.43)	(1.77)			
<i>N</i>	1,446	1,446		127	320	362	5,687	5,687		987	691	876
Poorest households							Less poor households					
Children 0 – 17 years												
Real monthly health expenditures	1.143	-1.771	2.914	1.056	3.487	2.927	-1.633	-7.714**	6.081*	3.892	3.541	4.530
	(0.81)	(-1.05)	(1.49)				(-0.59)	(-2.46)	(1.88)			
<i>N</i>	4,287	4,287		737	548	707	2,846	2,846		377	463	531

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance

Table A.8.2.5: ATT impact of LEAP on children's health expenditures (in GH¢), by age and sex

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Children 0 – 17 years						
Real monthly health expenditures	-0.687 (-0.59) 7,133	-2.426* (-1.73) 7,133	1.739 (1.13)	2.020 1,056	3.368 917	3.010 1,332
Children 0 – 5 years						
Real monthly health expenditures	1.739 (1.16) 1,791	-0.241 (-0.10) 1,791	1.980 (0.69)	2.438 268	4.168 200	4.243 349
Children 6 – 17 years						
Real monthly health expenditures	-1.190 (-0.94) 5,342	-2.600* (-1.87) 5,342	1.410 (0.90)	1.878 788	3.137 717	2.625 983
Boys 0 – 17 years						
Real monthly health expenditures	0.289 (0.17) 3,714	-3.017 (-1.45) 3,714	3.306 (1.43)	1.860 540	3.686 441	2.987 741
Girls 0 – 17 years						
Real monthly health expenditures	-1.640 (-1.22) 3,419	-0.907 (-0.83) 3,419	-0.733 (0.58)	2.186 516	3.073 476	3.044 591

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table A.8.2.6: ATT Impact of LEAP on child health expenditures, by sex of the head, household size and baseline consumption (0 – 17 years)

Dependent Variable	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(7)	(8)	(9)=(7)-(8)	(10)	(11)	(12)
Female-headed household						Male-headed household						
Children 0 – 17 years												
Real monthly health expenditures	-3.364*	-6.961**	3.597	1.827	2.784	3.684	2.422	0.996	1.426	2.281	4.124	1.828
	(-1.83)	(-2.24)	(1.28)				(1.15)	(0.52)	(0.69)			
<i>N</i>	3,404	3,404		600	508	592	3,729	3,729		456	409	740
Small households (4 or less members)						Large households (5 or more members)						
Children 0 – 17 years												
Real monthly health expenditures	-1.306	-3.511	2.205	4.711	2.872	3.019	0.697	-1.609	2.306	1.686	3.581	3.004
	(-0.74)	(-1.38)	(0.76)				(0.53)	(-1.08)	(1.37)			
<i>N</i>	1,446	1,446		107	245	437	5,687	5,687		949	672	895
Poorest households						Less poor households						
Children 0 – 17 years												
Real monthly health expenditures	1.052	-1.204	2.256	1.127	3.680	2.302	-3.170	-5.915**	2.745	3.815	3.000	3.939
	(0.73)	(-0.58)	(0.97)				(-1.23)	(-2.00)	(0.98)			
<i>N</i>	4,287	4,287		706	504	751	2,846	2,846		350	413	581

Notes: Estimations use difference-in-differences, cluster fixed effects modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age, baseline head of household's characteristics (age in years, sex, indicator of any schooling, widowhood), presence of an exclusive cooking room at baseline, household demographic composition and size at baseline, baseline presence of cluster-level shocks interacted with age of head. All control variables are also interacted with dummies for wave 2 and wave 3. Robust t-statistics were obtained by clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Livelihood Empowerment Against Poverty Programme Endline Impact Evaluation Appendixes

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