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APPENDIX

Nurturing Nutrition: Evidence from a Randomized Trial of Structured Electronic Food Vouchers in the Philippines

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APPENDIX 1: BALANCE

Table A1: Baseline Balance

Variable	(1) Control		(2) Treatment		(1)-(2) Pairwise t-test	
	N/Clusters	Mean/(SE)	N/Clusters	Mean/(SE)	N/Clusters	P-value
Total food acquisition PHP	2,381 174	8,175 (181)	2,502 174	8,190 (168)	4,883 348	0.951
Per capita food acquisition PHP	2,381 174	1,308 (26)	2,502 174	1,305 (23)	4,883 348	0.924
HH size	2,381 174	6.673 (0.083)	2,502 174	6.682 (0.087)	4,883 348	0.941
Any hunger 3 months	2,381 174	0.482 (0.013)	2,502 174	0.484 (0.013)	4,883 348	0.903
FIES	2,381 174	4.621 (0.074)	2,501 174	4.591 (0.078)	4,882 348	0.781
Child illness	998 174	0.491 (0.018)	1,078 171	0.480 (0.017)	2,076 345	0.653
HH income 1 month PHP	2,381 174	10,419 (557)	2,502 174	10,725 (589)	4,883 348	0.706
N. adults working	2,381 174	1.063 (0.036)	2,502 174	1.072 (0.036)	4,883 348	0.859
N. children 4–17 in household	2,381 174	3.222 (0.055)	2,502 174	3.165 (0.056)	4,883 348	0.471
Head self-employed	2,381 174	0.353 (0.014)	2,502 174	0.348 (0.015)	4,883 348	0.820
N. mobile phones	2,381 174	1.815 (0.056)	2,502 174	1.776 (0.055)	4,883 348	0.622
Respondent: Female=2	2,381 174	1.858 (0.009)	2,502 174	1.864 (0.007)	4,883 348	0.617
Respondent: Age	2,381 174	42.235 (0.237)	2,502 174	42.450 (0.260)	4,883 348	0.540
F-test of joint significance (F-stat)						1.025
F-test, number of observations						2,075
F-test, number of clusters						345

FIES = Food Insecurity Experience Scale, HH = household, SE = standard error, 4–17 = 4 to 17 years old, PHP = Philippine Pesos, N.= number of.

Notes: This table compares households surveyed at both baseline and endline. Randomized assignment variable is used for t-tests. Asterisks indicate statistical significance at the 1% ***, 5% **, and 10% * levels. Standard errors are clustered at the cluster level. Respondent gender takes value of 1 for male and 2 for female.

Source: Authors' calculations using data from household baseline survey in 2023.

APPENDIX 2: PILOT PARTICIPATION

Table A2: Noncompliance with Treatment Assignment

Variable	(1) Joined Program		(2) Did Not Join		(1)-(2) Pairwise t-test	
	N/Clusters	Mean/(SE)	N/Clusters	Mean/(SE)	N/Clusters	P-value
Total food acquisition PHP	2,193 170	8,209 (180)	309 124	8,055 (216)	2,502 174	0.505
Per capita food acquisition PHP	2,193 170	1,303 (24)	309 124	1,318 (38)	2,502 174	0.701
HH size	2,193 170	6.705 (0.094)	309 124	6.521 (0.176)	2,502 174	0.337
Any hunger 3 months	2,193 170	0.486 (0.014)	309 124	0.472 (0.032)	2,502 174	0.668
FIES	2,192 170	4.609 (0.080)	309 124	4.460 (0.173)	2,501 174	0.390
Child illness	931 165	0.488 (0.019)	147 89	0.429 (0.047)	1,078 171	0.243
HH income 1 month PHP	2,193 170	10,793 (632)	309 124	10,241 (982)	2,502 174	0.600
N. adults working	2,193 170	1.078 (0.038)	309 124	1.032 (0.061)	2,502 174	0.496
N. children 4–17 in household	2,193 170	3.181 (0.062)	309 124	3.052 (0.112)	2,502 174	0.313
Head self-employed	2,193 170	0.351 (0.017)	309 124	0.327 (0.027)	2,502 174	0.412
N. mobile phones	2,193 170	1.777 (0.058)	309 124	1.770 (0.097)	2,502 174	0.945
Respondent: Female=2	2,193 170	1.865 (0.007)	309 124	1.858 (0.023)	2,502 174	0.768
Respondent: Age	2,193 170	42.581 (0.282)	309 124	41.524 (0.665)	2,502 174	0.145
F-test of joint significance (F-stat)						0.743
F-test, number of observations						1,077
F-test, number of clusters						171

FIES = Food Insecurity Experience Scale, HH = household, SE = standard error, 4–17 = 4 to 17 years old, PHP = Philippine Pesos, N.= number of.

Notes: This table compares households that were invited to participate but did not join with households that did join. No control households were reported as being registered in the Walang Gutom Monitoring Information System. Asterisks indicate statistical significance at the 1% ***, 5% **, and 10% * levels. Standard errors are clustered at the cluster level. Respondent gender takes value of 1 for male and 2 for female.

Source: Authors' calculations using data from household baseline survey in 2023 and administrative data.

APPENDIX 3: ATTRITION

Table A3: Attrition at Endline

Variable	(1) Attrition		(2) Surveyed		(1)-(2) Pairwise t-test	
	N/Clusters	Mean/(SE)	N/Clusters	Mean/(SE)	N/Clusters	P-value
Total food acquisition PHP	415 161	7,356 (251)	4,723 334	8,254 (124)	5,138 334	0.000***
Per capita food acquisition PHP	415 161	1,339 (50)	4,723 334	1,320 (17)	5,138 334	0.695
HH size	415 161	6.169 (0.189)	4,723 334	6.651 (0.060)	5,138 334	0.007***
Any hunger 3 months	415 161	0.487 (0.027)	4,723 334	0.486 (0.009)	5,138 334	0.969
HH income 1 month PHP	415 161	7,691 (1,160)	4,723 334	10,755 (417)	5,138 334	0.004***
N. adults working	415 161	0.899 (0.053)	4,723 334	1.084 (0.025)	5,138 334	0.000***
N. children 4–17 in household	415 161	3.005 (0.084)	4,723 334	3.164 (0.038)	5,138 334	0.049**
Head self-employed	415 161	0.414 (0.039)	4,723 334	0.344 (0.010)	5,138 334	0.060*
N. mobile phones	415 161	1.564 (0.099)	4,723 334	1.812 (0.040)	5,138 334	0.010***
No mobile phone	415 161	0.200 (0.022)	4,723 334	0.165 (0.009)	5,138 334	0.108
Respondent: Female=2	415 161	1.788 (0.020)	4,723 334	1.861 (0.006)	5,138 334	0.000***
Respondent: Age	415 161	44.202 (2.334)	4,723 334	42.400 (0.180)	5,138 334	0.444
Treatment household	415 161	0.463 (0.087)	4,723 334	0.516 (0.032)	5,138 334	0.495
F-test of joint significance (F-stat)						3.446***
F-test, number of observations						5,138
F-test, number of clusters						334

HH = household, SE = standard error, 4–17 = 4 to 17 years old, PHP = Philippine Pesos, N.= number of.

This table compares households surveyed at baseline and included in the randomization but that were not located at endline, with households that were surveyed at endline. Asterisks indicate statistical significance at the 1% ***, 5% **, and 10% * levels. Standard errors are clustered at the cluster level. Respondent gender takes value of 1 for male and 2 for female.

Source: Authors' calculations using data from household baseline and endline surveys in 2023 and 2024.

APPENDIX 4: INTENT TO TREAT EFFECTS

Table A4: Income and Expenditure

Outcome Variable	Control Mean	Treatment Effect	Std. Error	N. Obs.	N. Cluster Pairs
Panel A: Income and labor force participation					
Total monthly income (PHP)	17,571	-169	702	4,883	175
Monthly wages (PHP)	16,239	-151	658	4,883	175
N. people working	1.748	0.040	0.038	4,883	175
Days worked in 1 week (0–7)	2.884	-0.049	0.059	4,748	175
Hours worked in 1 day (0–24)	5.003	-0.089	0.088	4,272	175
N. people looking for work	0.456	-0.019	0.026	4,883	175
Panel B: Food and nonfood expenditures (PHP)					
Total food expenditures 1 month	9,083	1475***	169	4,883	175
Total nonfood expenditures 1 month	10,421	552*	317	4,883	175
School expenditures 1 month	2,705	147	117	4,883	175
Rent/durables expenditures 1 month	3,635	229**	112	4,883	175
Other expenditures 1 month	2,353	167	143	4,883	175
Hygiene/health expenditures 1 month	1,203	10	57	4,883	175
Vice expenditures 1 month	525	-38	51	4,883	175
Panel C: Subjective wellbeing					
Cantril ladder (0–10)	5.035	0.292***	0.095	4,883	175
Self reported poverty (0–1)	0.763	-0.014	0.012	4,883	175
Social capital index (0–3)	2.312	-0.084***	0.032	4,883	175
Panel D: Financial outcomes (PHP)					
Current savings	346	-32	75	4,883	175
Current borrowing	2,518	226	426	4,883	175

N. Obs. = number of observations, Std. Error = standard error, N. Cluster Pairs = number of cluster pairs, N. people working = number of people working, PHP = Philippine Pesos.

Notes: This table presents the intent to treat effect (ITT) of being in the treatment cluster relative to the control cluster on income and expenditure outcomes. The treatment variable is the randomized treatment assignment at baseline. Control mean shows the value of the outcome variable in control group at endline. All values are reported on a monthly spending basis. Asterisks indicate statistical significance at the 1% ***, 5% **, and 10% * levels. Standard errors are clustered at the cluster pair level. Total food spending is winsorized at 99%; this means values from 99.1% to 100% were set to the value of the 99th percentile. Covariates included presence of market near house, flood or typhoon shock at endline, baseline household size, and baseline value of outcome variable.

Source: Authors' calculations using data from household baseline and endline surveys in 2023 and 2024.

Table A5: Food Consumption

Outcome Variable	Control Mean	Treatment Effect	Std. Error	N. Obs.	N. Cluster Pairs
Panel A: Food expenditures disaggregated 1 month (PHP)					
All food (total)	9,083	1475***	169	4,883	175
All food (per capita)	1,478	228***	29	4,874	175
Carbohydrates (total)	3,515	533***	60	4,883	175
Protein (total)	3,128	572***	82	4,883	175
Fruits and vegetables (total)	991	310***	35	4,883	175
Other food (total)	1,449	46	45	4,883	175
Panel B: Food security					
Hunger in last 3 months (0–1)	0.534	-0.026*	0.015	4,883	175
Experiences hunger frequently (0–1)	0.150	-0.024**	0.010	4,883	175
FIES moderate or severe food insecurity (0–1)	0.751	-0.021*	0.012	4,803	175
FIES severe food insecurity (0–1)	0.344	-0.019	0.013	4,803	175
FCS (household) (10–112)	53.051	0.784	0.523	4,882	175
FCS (males 18+) (10–112)	51.102	0.996*	0.530	4,319	175
FCS (females 18+) (10–112)	52.238	0.949*	0.518	4,611	175
FCS (boys 3–17) (10–112)	53.585	0.484	0.610	3,825	175
FCS (girls 3–17) (10–112)	53.740	0.729	0.675	3,661	175
Panel C: Perceived food insufficiency (share of households) (0–1)					
Insufficiency: carbohydrates	0.372	-0.024**	0.012	4,883	175
Insufficiency: protein	0.418	-0.012	0.010	4,883	175
Insufficiency: fruits and vegetables	0.361	-0.031***	0.010	4,883	175
Insufficiency: other food	0.486	0.018	0.014	4,883	175

FCS = food consumption score, FIES = Food Insecurity Experience Scale, N. Obs. = number of observations, Std. Error = standard error, N. Cluster Pairs = number of cluster pairs, PHP = Philippine Pesos.

Notes: This table presents the intent to treat effect (ITT) of being in the treatment cluster relative to the control cluster on food consumption outcomes. The treatment variable is the randomized treatment assignment at baseline. Control mean shows the value of the outcome variable in the control group at endline. All values are reported on a monthly spending basis. Asterisks indicate statistical significance at the 1% ***, 5% **, and 10% * levels. Standard errors are clustered at the cluster pair level. Total food spending is winsorized at 99%; this means values from 99.1% to 100% were set to the value of the 99th percentile. Covariates included presence of market near house, flood or typhoon shock at endline, baseline household size, and baseline value of outcome variable. Perceived food sufficiency refers to the share of households reporting “oo little” of each food category.

Source: Authors' calculations using data from household baseline and endline surveys in 2023 and 2024.

Table A6: Children’s Dietary Diversity and Health

Outcome Variable	Control Mean	Treatment Effect	Std. Error	N. Obs.	N. Cluster Pairs
Panel A: Children’s dietary diversity					
FCS (all children 3–17) (10–112)	53.932	0.638	0.574	4,547	175
Minimum acceptable diet (all children 0–2) (0–1)	0.139	-0.009	0.036	638	138
Minimum meal frequency (all children 0–2) (0-1)	0.487	0.020	0.044	638	138
Minimum dietary diversity (all children 0–2) (0–1)	0.149	-0.014	0.036	638	138
Panel B: Health of children under 5 years old (share of children under 5) (0–1)					
Any illness (boys)	0.468	-0.038	0.028	1,177	161
Any illness (girls)	0.543	-0.101***	0.033	1,085	164
Fever (all children)	0.335	-0.065***	0.023	1,966	173
Cough/cold (all children)	0.339	-0.050**	0.025	1,966	173
Diarrhea (all children)	0.096	-0.026*	0.013	1,966	173
Underweight (all children)	0.049	-0.010	0.009	1,966	173
Micronutrient deficiency (all children)	0.029	-0.002	0.009	1,966	173

N. Obs. = number of observations, Std. Error = standard error, N. Cluster Pairs = number of cluster pairs, FCS = food consumption score.

Notes: This table presents the intent to treat effect (ITT) of being in the treatment cluster relative to the control cluster on children’s dietary diversity and health outcomes. The treatment variable is the randomized treatment assignment at baseline. Control mean shows the value of outcome variable in control group at endline round. Asterisks indicate statistical significance at the 1% ***, 5% **, and 10% * levels. Standard errors are clustered at the cluster pair level. Covariates included presence of market near house, flood or typhoon shock at endline, baseline household size, and baseline value of outcome variable.

Source: Authors’ calculations using data from household baseline and endline surveys in 2023 and 2024.

Table A7: Nutritional Knowledge

Outcome Variable	Control Mean	Treatment Effect	Std. Error	N. Obs.	N. Cluster Pairs
Panel A: Nutritional knowledge					
Nutrition quiz score (0–16)	9.218	0.051	0.069	4,883	175
Share answered correctly (0–1)	0.542	0.003	0.004	4,883	175
Attitude: Food impacts health of adults (0–10)	5.648	0.300***	0.099	4,883	175
Attitude: Food impacts health of children (0–10)	5.845	0.207**	0.100	4,883	175
Attitude: Vegetables impacts health of children (0–10)	6.701	0.167	0.103	4,883	175

N. Obs. = number of observations, Std. Error = standard error, N. Cluster Pairs = number of cluster pairs.

Notes: This table presents the intent to treat effect (ITT) of being in the treatment cluster relative to the control cluster on nutritional knowledge outcomes. The treatment variable is the randomized treatment assignment at baseline. Control mean shows the value of the outcome variable in the control group at endline. Asterisks indicate statistical significance at the 1% ***, 5% **, and 10% * levels. Standard errors are clustered at the cluster pair level. Covariates included presence of market near house, flood or typhoon shock at endline, baseline household size, and baseline value of outcome variable. Questions on the relationship between food consumption and health of household members were asked from food planners using a Likert scale from 0 to 10 on whether they agreed with statements that eating choices affected adult health and child health, and specifically whether eating vegetables affected child health.

Source: Authors’ calculations using data from household baseline and endline surveys in 2023 and 2024.

APPENDIX 5: INSTRUMENTAL VARIABLES FIRST STAGE

Table A8: First Stage Instrumental Variables Regression

	(1)	(2)	(3)
	Actual Enrollment	Actual Enrollment in Tondo	Total
Treatment Assignment	0.870*** (0.035)	0.000 (0.000)	
In Tondo	0.003 (0.037)	0.874*** (0.010)	
Lagged outcome	0.000 (0.000)	0.000* (0.000)	0.305*** (0.022)
Has nearby market	-0.008 (0.007)	-0.002 (0.005)	-134 (149)
Negative shock	0.005 (0.009)	0.005 (0.008)	-767*** (171)
Baseline household size	0.003 (0.002)	-0.001 (0.001)	245*** (37)
Manila household	-0.070* (0.036)	-0.026 (0.030)	-2,202** (1,001)
Actual enrollment			1,502*** (295)
Actual enrollment in Tondo			337 (398)
N. of Obs			4,883
N. of Cluster Pairs			175
Fixed Effects			Pair
Sample			Endline

N. of Obs. = number of observations, SE = standard error, Tondo = Tondo District of Manila.

This table presents the first stage of the instrumental Variables specification used in all average treatment effect on the treated (ATT) regressions. Column 1 shows the effect of being assigned to treatment on actual pilot enrollment, with 87% of invited households joining the pilot at endline. Column 2 shows what share of households assigned into treatment in the Tondo subsample ended up joining the pilot. Column 3 is the ATT coefficient of the pilot outside Tondo labeled as “actual enrollment.” The additional impact of the pilot in Tondo subsample, labeled “actual enrollment in Tondo” in Table 9. Outcome variable is the household total food expenditure. The instrumental variables method was used with the treatment variable being administrative participation status and the instrument being assigned into a treatment cluster. Asterisks indicate statistical significance at the 1% ***, 5% **, and 10% * levels. Standard errors are clustered at the cluster pair level.

Source: Authors’ calculations using data from household baseline and endline surveys in 2023 and 2024.

APPENDIX 6: SUBGROUP INTERACTION COEFFICIENTS

Table A9: Subgroup Interaction Coefficients—Food Expenditures Level per Capita

	(1) Total	(2) Per Capita Total	(3) Carbohydrates	(4) Protein	(5) Fruit/Veg.	(6) Other
Tondo/outside Tondo	337*** (398)	-25*** (68)	-4*** (23)	12*** (31)	-12*** (13)	-32*** (16)
Higher nutrition knowledge (baseline)	145*** (300)	30*** (59)	-3*** (20)	16*** (27)	5*** (10)	-11 (14)
Received 4Ps CCT	326*** (307)	73*** (58)	3*** (21)	17*** (32)	18*** (10)	5 (16)
Smaller than median household size	-194*** (283)	93*** (58)	24*** (19)	39*** (25)	34*** (10)	10 (13)
Last redemption <= 11 days (Tondo only)	65*** (484)	-45*** (90)	-0*** (29)	-29*** (42)	13*** (16)	-40 (25)
Below median food consumption (baseline)	140*** (321)	100*** (59)	31*** (20)	27*** (27)	14*** (11)	-6 (16)
Control group mean	9083	1478	536	483	153	228
N. of Obs./Cluster Pairs	4,883/175	4,874/175	4,883/175	4,883/175	4,883/175	4,883/175

4Ps: Pantawid Pamilyang Pilipino Program, CCT = conditional cash transfer, N. of Obs. = number of observations, veg. = vegetables, Tondo = Tondo District of Manila.

Notes: This table presents the subgroup interaction coefficient derived from a household being a member of different subgroups on food expenditure outcomes. This can be interpreted as the additional impact of the pilot on subgroup members. Instrumental variables method was used with the treatment variable being administrative participation status and the instrument being assigned into a treatment cluster. Asterisks indicate statistical significance at the 1% ***, 5% **, and 10% * levels. Standard errors are clustered at the cluster pair level. Column 1 shows total food expenditure, while columns 2–6 are converted to per capita adjusted values. Time since redemption subgroup analysis was done only for households residing in Tondo, as they received seven voucher redemptions instead of five or six elsewhere, and their last redemption date was closest to the endline survey dates. Covariates included presence of market near house, flood or typhoon shock at endline, baseline household size, and baseline value of outcome variable. Coefficient for the interaction term is β_2 from equation 6.

Source: Authors' calculations using data from household baseline and endline surveys in 2023 and 2024.

Table A10: Subgroup Interaction Coefficients—Food Security and Dietary Diversity

	(1) Hunger 3mo.	(2) Freq. Hunger	(3) FIES	(4) FCS Avg.	(5) FCS Adult	(6) FCS Child
Tondo/outside Tondo	0.015 (0.034)	-0.007 (0.022)	0.056** (0.029)	0.787 (1.229)	0.640 (1.173)	0.546 (1.358)
Higher nutrition knowledge (baseline)	-0.020 (0.036)	-0.011 (0.023)	-0.031 (0.024)	0.738 (1.017)	0.355 (1.008)	0.449 (1.102)
Received 4Ps CCT	-0.052 (0.035)	-0.034 (0.025)	-0.012 (0.025)	-0.221 (1.135)	-0.167 (1.116)	0.027 (1.189)
Smaller than median household size	-0.030 (0.030)	-0.018 (0.022)	0.003 (0.025)	0.814 (1.032)	1.242 (1.044)	0.852 (1.113)
Last redemption <= 11 days (Tondo only)	-0.002 (0.042)	0.048** (0.033)	-0.022 (0.031)	3.293 (1.333)	3.392 (1.295)	3.581 (1.498)
Below median food consumption (baseline)	0.024** (0.033)	-0.016 (0.021)	-0.012 (0.025)	-0.028 (1.060)	-0.426* (1.038)	0.149 (1.160)
Control group mean	0.534	0.150	0.751	53.051	51.732	53.932
N. of Obs./Cluster Pairs	4,883/175	4,883/175	4,803/175	4,882/175	4,878/175	4,547/175

3mo. = 3 months, 4Ps = Pantawid Pamilyang Pilipino Program, avg. = average, CCT = conditional cash transfer, FCS = food consumption score, FIES = Food Insecurity Experience Scale moderate or severe food insecurity indicator, freq. = frequent, N. of Obs. = number of observations, Tondo = Tondo District of Manila.

Notes: This table presents the subgroup interaction coefficient derived from a household being a member of different subgroups on food security and dietary diversity outcomes. This can be interpreted as the additional impact of the pilot on subgroup members. Instrumental variables method was used with the treatment variable being administrative participation status and the instrument being assigned into a treatment cluster. Asterisks indicate statistical significance at the 1% ***, 5% **, and 10% * levels. Standard errors are clustered at the cluster pair level. Time since redemption subgroup analysis was done only for households residing in Tondo, as they received seven voucher redemptions instead of five or six elsewhere, and their last redemption date was closest to the endline survey dates. Covariates included presence of market near house, flood or typhoon shock at endline, baseline household size, and baseline value of outcome variable. Coefficient for the interaction term is β_2 from equation 6.

Source: Authors' calculations using data from household baseline and endline surveys in 2023 and 2024.

Table A11: Subgroup Interaction Coefficients: Children's Health

	(1)	(2)	(3)	(4)	(5)	(6)
	Any Illness	Fever	Cough/Cold	Diarrhea	Underweight	MND
Tondo/outside Tondo	0.070*** (0.057)	-0.035 (0.054)	0.057** (0.059)	-0.038 (0.031)	0.040* (0.022)	0.010 (0.021)
Higher nutrition knowledge (baseline)	-0.012** (0.054)	-0.022* (0.050)	-0.065 (0.048)	0.019* (0.032)	0.026 (0.022)	-0.027 (0.018)
Received 4Ps CCT	-0.055 (0.052)	-0.094 (0.051)	-0.045 (0.050)	-0.011 (0.032)	-0.021 (0.023)	-0.017 (0.020)
Smaller than median household size	-0.033** (0.052)	0.087*** (0.045)	0.003* (0.050)	0.026** (0.034)	-0.020 (0.021)	-0.022 (0.022)
Last redemption <= 11 days (Tondo only)	-0.054 (0.065)	0.032** (0.067)	0.026 (0.063)	-0.022 (0.046)	0.034 (0.024)	0.007 (0.019)
Below median food consumption (baseline)	0.002** (0.059)	0.079*** (0.046)	-0.012 (0.053)	0.031** (0.029)	0.019 (0.023)	-0.020 (0.016)
Control group mean	0.476	0.335	0.339	0.096	0.049	0.029
N. of Obs./Cluster Pairs	1,966/173	1,966/173	1,966/173	1,966/173	1,966/173	1,966/173

4Ps: Pantawid Pamilyang Pilipino Program, CCT = conditional cash transfer, MND = micronutrient deficiency, N. of Obs. = number of observations, Tondo = Tondo District of Manila.

Notes: This table presents the subgroup interaction coefficient derived from a household on the probability that the average child under 5 in the household experienced any of the listed symptoms in the past 2 weeks. This can be interpreted as the additional impact of the pilot on subgroup members. Instrumental variables method was used with the treatment variable being administrative participation status and the instrument being assigned into a treatment cluster. Asterisks indicate statistical significance at the 1% ***, 5% **, and 10% * levels. Standard errors are clustered at the cluster pair level. Time since redemption subgroup analysis was done only for households residing in Tondo, as they received seven voucher redemptions instead of five or six elsewhere, and their last redemption date was closest to the endline survey dates. Covariates included presence of market near house, flood or typhoon shock at endline, baseline household size, and baseline value of outcome variable. Coefficient for the interaction term is β_2 from equation 6.

Source: Authors' calculations using data from household baseline and endline surveys in 2023 and 2024.