

# Supplementary Materials

## Appendix A: Tables

**Appendix Table 1A: Number of SHGs, replication and original results**

	Baseline SHG Number (1)	Follow-up SHG Number (2)	Baseline AGK SHG Number (3)	Follow-up AGK SHG Number (4)
<b>Original intervention treatment assignment rule</b>				
Control	12	12	12	12
Credit	12	12	12	12
No Credit	12	11	12	12
Total	36	35	36	36
<b>Updated intervention treatment assignment rule</b>				
Control	12	12	12	12
Credit	13	12	12	12
No Credit	11	11	12	12
Total	36	35	36	36
<b>Follow-up intervention treatment assignment rule</b>				
Control	14	13	12	12
Credit	11	11	12	12
No Credit	11	11	12	12
Total	36	35	36	36

Note: Replication study results are reported in columns 1 and 2. Original results are reported in columns 3 and 4.

**Appendix Table 1B: SHGs and Observations by Assignment Rule**

**Appendix Table 2: Number of observations using 'updated' assignment, AGK table 2**

	Baseline Number of Observations (5)	Follow-up Number of Observations (6)	Total Number of Observations (7)	Baseline AGK Number of Observations (8)	Follow-up AGK Number of Observations (9)	Total AGK Number of Observations (10)
<b>Original intervention treatment assignment rule</b>						
Control	361	298	659	367	303	670
Credit	397	344	741	373	316	693
No Credit	352	306	658	377	337	714
Total	1110	948	2058	1117	956	2073
<b>Updated intervention treatment assignment rule</b>						
Control	361	298	659	367	303	670
Credit	397	344	741	373	316	693
No Credit	352	306	658	377	337	714
Total	1110	948	2058	1117	956	2073
<b>Follow-up intervention treatment assignment rule</b>						
Control	381	319	700	367	303	670
Credit	373	321	694	373	316	693
No Credit	356	308	664	377	337	714
Total	1110	948	2058	1117	956	2073

Note: Replication study results are reported in columns 5–7. Original paper observations vary by variable. We report the largest number of observations from each round of the original findings, as found in AGK appendix table 2.

## reproduction

	Baseline					Follow-up				
	All	Control	Treatment	Credit	No Credit	All	Control	Treatment	Credit	No Credit
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<i>Member</i>										
Age of member	1110	361	749	397	352	948	298	650	344	306
Literacy	1110	361	749	397	352	948	298	650	344	306
Risk tolerance	726	261	465	217	248	948	298	650	344	306
Months as member in SHG	726	261	465	217	248	948	298	650	344	306
Member of SHG is an officer (1=yes)	1110	361	749	397	352	948	298	650	344	306
Deposit in a formal bank (1=yes)	717	254	463	215	248	948	298	650	344	306
Loan from formal institution (1=yes)	726	261	465	217	248	948	298	650	344	306
Logarithm of total annual household income	707	255	452	214	238	874	290	584	331	253
Number of household members	722	260	462	215	247	948	298	650	344	306
<i>Land</i>										
Harvest yield per acre (in Ksh 100,000)	726	261	465	217	248	920	290	630	329	301
Proportion of land that is irrigated	1110	361	749	397	352	948	298	650	344	306
Total landholdings (Acres)	1110	361	749	397	352	948	298	650	344	306
Proportion of land devoted to cash crops	1037	327	710	375	335	809	274	535	319	216
<i>Production</i>										
Grows export crop (1=yes)	1037	327	710	375	335	945	297	648	343	305
Sells to market (1=yes)	726	261	465	217	248	948	298	650	344	306
Used hired labour (1=yes)	1110	361	749	397	352	948	298	650	344	306
Uses machinery and/or animal force (1=yes)	1110	361	749	397	352	948	298	650	344	306
Value of harvested produce (in Ksh 1,000)	699	242	457	212	245	948	298	650	344	306
Production of French beans (in 1,000 kg)	1037	327	710	375	335	945	297	648	343	305
Production of baby corn (in kg)	1037	327	710	375	335	945	297	648	343	305
Total spent in marketing (in Ksh 1,000)	726	261	465	217	248	948	298	650	344	306
Use of inputs	1037	327	710	375	335	809	274	535	319	216
<i>Follow-up</i>										
Proportions of respondents reached at follow-up	0.85	0.83	0.87	0.87	0.87					

**Appendix Table 3: Baseline summary statistics using ‘updated’ intervention treatment assignments, AGK table 2 reproduction**

	Means			p-Value on t-Test of Difference (2) and (3)	Means		p-Value on F-test for (5) and (6)
	All (1)	Control (2)	Treatment (3)	(4)	Credit (5)	No Credit (6)	(7)
<i>Member</i>							
Age of member	42.32 (12.62)	40.20 (12.46)	43.34 (12.57)	0.00***	43.19 (12.84)	43.50 (12.28)	0.00***
Literacy	0.91 (0.29)	0.91 (0.29)	0.91 (0.29)	0.91	0.91 (0.29)	0.91 (0.29)	0.99
Risk tolerance	0.37 (0.42)	0.37 (0.42)	0.37 (0.42)	0.85	0.36 (0.42)	0.38 (0.43)	0.89
Months as member in SHG	53.13 (40.07)	58.33 (44.68)	50.20 (36.96)	0.01***	48.79 (33.37)	51.44 (39.86)	0.02**
Member of SHG is an officer (1=yes)	0.14 (0.35)	0.14 (0.34)	0.14 (0.35)	0.75	0.12 (0.33)	0.17 (0.37)	0.18
Deposit in a formal bank (1=yes)	0.70 (0.46)	0.73 (0.45)	0.69 (0.46)	0.25	0.72 (0.45)	0.66 (0.47)	0.22
Loan from formal institution (1=yes)	0.04 (0.19)	0.06 (0.23)	0.03 (0.17)	0.05**	0.06 (0.23)	0.00 (0.06)	0.00***
Logarithm of total annual household income	3.53 (1.17)	3.63 (1.16)	3.47 (1.18)	0.10*	3.71 (1.15)	3.27 (1.17)	0.00***
Number of household members	4.59 (2.09)	4.52 (2.10)	4.63 (2.08)	0.50	4.72 (2.24)	4.56 (1.94)	0.57
<i>Land</i>							
Harvest yield per acre (in Ksh 100,000)	1.02 (4.63)	0.80 (6.02)	1.15 (3.62)	0.33	1.41 (4.98)	0.92 (1.69)	0.32
Proportion of land that is irrigated	0.37 (0.31)	0.37 (0.29)	0.36 (0.32)	0.84	0.40 (0.32)	0.32 (0.32)	0.00***
Total landholdings (Acres)	2.13 (1.93)	2.20 (1.91)	2.09 (1.93)	0.36	2.01 (1.94)	2.18 (1.93)	0.33
Proportion of land devoted to cash crops	0.53 (0.28)	0.55 (0.28)	0.51 (0.28)	0.03**	0.53 (0.26)	0.50 (0.29)	0.03**
<i>Production</i>							
Grows export crop (1=yes)	0.48 (0.50)	0.58 (0.49)	0.44 (0.50)	0.00***	0.49 (0.50)	0.38 (0.49)	0.00***
Sells to market (1=yes)	0.34 (0.47)	0.36 (0.48)	0.33 (0.47)	0.53	0.29 (0.46)	0.37 (0.48)	0.23
Used hired labour (1=yes)	0.32 (0.47)	0.32 (0.47)	0.32 (0.47)	0.88	0.34 (0.48)	0.30 (0.46)	0.48
Uses machinery and/or animal force (1=yes)	0.05 (0.21)	0.07 (0.26)	0.03 (0.18)	0.00***	0.03 (0.18)	0.03 (0.18)	0.00***
Value of harvested produce (in Ksh 1,000)	201.18 (911.44)	126.08 (1228.09)	240.95 (685.51)	0.11	278.30 (867.85)	208.63 (473.97)	0.20
Production of French beans (in 1,000 kg)	0.75 (5.55)	0.54 (1.20)	0.85 (6.66)	0.40	0.74 (3.60)	0.98 (8.92)	0.59
Production of baby corn (in kg)	4.10 (94.60)	10.70 (167.01)	1.06 (14.95)	0.13	1.20 (13.56)	0.90 (16.39)	0.31
Total spent in marketing (in Ksh 1,000)	1.30 (5.95)	0.88 (3.64)	1.53 (6.91)	0.16	1.75 (7.89)	1.34 (5.95)	0.28
Use of Inputs	0.98 (0.15)	0.98 (0.12)	0.97 (0.17)	0.21	0.97 (0.17)	0.97 (0.16)	0.45

**Appendix Table 4: Intervention participation factors, AGK table 3 reproduction**

	OLS			Probit				
	All (1)	Credit (2)	No Credit (3)	All (4)	All (5)	Credit (6)	No Credit (7)	All (8)
Treatment group included credit	0.125			0.125	0.385			0.125
<i>Member</i>	[0.079]			[0.080]	[0.227]*			[0.070]*
Age of member	0.002	0.003	0.001	0.002	0.005	0.003	0.001	0.002
	[0.002]	[0.004]	[0.002]	[0.002]	[0.007]	[0.004]	[0.002]	[0.002]
Literacy	0.025	0.090	-0.031	0.018	0.090	0.095	-0.033	0.020
	[0.059]	[0.130]	[0.045]	[0.061]	[0.185]	[0.120]	[0.049]	[0.062]
Risk tolerance	-0.063	-0.048	-0.080	-0.063	-0.224	-0.046	-0.095	-0.073
	[0.055]	[0.078]	[0.088]	[0.055]	[0.169]	[0.077]	[0.085]	[0.053]
Months as member in SHG	0.001	0.002	-0.000	0.001	0.002	0.002	-0.000	0.001
	[0.001]	[0.001]	[0.001]	[0.001]	[0.003]	[0.001]	[0.001]	[0.001]
Member of SHG is an officer (1=yes)	0.291	0.317	0.224	0.295	0.830	0.302	0.196	0.270
	[0.066]***	[0.100]***	[0.086]**	[0.064]***	[0.172]***	[0.084]***	[0.057]***	[0.049]***
Deposit in a formal bank (1=yes)	0.039	0.068	0.026	0.035	0.141	0.071	0.035	0.043
	[0.041]	[0.082]	[0.029]	[0.042]	[0.123]	[0.080]	[0.029]	[0.041]
Log of total annual household income	0.016	-0.008	0.033	0.126	0.054	-0.010	0.037	0.158
	[0.025]	[0.048]	[0.016]*	[0.082]	[0.075]	[0.044]	[0.016]**	[0.106]
Log of total annual household income squared				-0.016				-0.020
				[0.011]				[0.013]
Number of household members	0.027	0.030	0.021	0.028	0.084	0.030	0.022	0.028
	[0.009]***	[0.017]	[0.006]***	[0.010]***	[0.029]***	[0.017]*	[0.005]***	[0.009]***
<i>Land</i>								
Harvest yield per acre (in Ksh 100,000)	-0.004	-0.006	0.003	-0.004	-0.012	-0.007	0.004	-0.004
	[0.004]	[0.003]*	[0.029]	[0.005]	[0.017]	[0.006]	[0.024]	[0.005]
Proportion of land that is irrigated	0.105	0.101	0.135	0.110	0.334	0.087	0.130	0.110
	[0.081]	[0.151]	[0.084]	[0.079]	[0.238]	[0.144]	[0.067]*	[0.074]
Total landholdings (acres)	0.012	-0.008	0.026	0.014	0.037	-0.008	0.022	0.014
	[0.012]	[0.019]	[0.011]**	[0.013]	[0.034]	[0.018]	[0.010]**	[0.012]
<i>Production</i>								
Grows export crops (1=yes)	0.107	0.060	0.136	0.099	0.331	0.064	0.122	0.097
	[0.060]*	[0.135]	[0.029]***	[0.061]	[0.181]*	[0.128]	[0.025]***	[0.058]*
Sells to market (1=yes)	-0.128	-0.155	-0.106	-0.131	-0.420	-0.157	-0.108	-0.139
	[0.045]***	[0.078]*	[0.043]**	[0.045]***	[0.138]***	[0.074]**	[0.039]***	[0.042]***
Uses hired labour (1=yes)	-0.056	-0.078	-0.015	-0.059	-0.171	-0.081	-0.018	-0.059
	[0.057]	[0.088]	[0.092]	[0.057]	[0.168]	[0.084]	[0.087]	[0.056]
Uses machinery and/or animal force (1=yes)	-0.164	-0.176	-0.091	-0.169	-0.534	-0.172	-0.104	-0.181
	[0.097]	[0.120]	[0.095]	[0.096]*	[0.332]	[0.137]	[0.108]	[0.105]*
Mean dependent variable	0.351	0.445	0.270	0.351	0.351	1.000	0.000	0.538
Number of observations	433	200	233	433	433	200	233	433
R-squared	0.158	0.138	0.167	0.162				

**Appendix Table 5: OLS intervention impacts, AGK table 4 reproduction**

	Export Crop (1)	Proportion of Land Devoted to Cash Crops (2)	Use of Inputs (3)	Production of French Beans (1,000 kg) (4)	Production of Baby Corn (kg) (5)	Value of Harvested Produce (in Ksh 1,000) (6)	Total Spent in Marketing (7)	Logarithm of Household Income (8)	Loan from Formal Institutions (9)	Deposit in Formal Institutions (10)
Post	-0.005 [0.053]	-0.096 [0.014]***	0.009 [0.013]	0.345 [1.473]	21.455 [19.496]	-92.039 [114.018]	0.801 [0.791]	-0.253 [0.099]**	-0.047 [0.017]**	0.075 [0.032]**
Post x Treatment	0.246 [0.067]***	0.061 [0.017]***	0.014 [0.016]	2.232 [2.867]	86.465 [41.947]**	138.950 [229.956]	-1.825 [0.943]*	0.176 [0.113]	0.032 [0.020]	0.082 [0.038]**
Number of observations	1983	1847	1847	1983	1983	1647	1674	1581	1674	1665
R-squared	0.20	0.16	0.05	0.03	0.02	0.03	0.03	0.16	0.05	0.15
Mean of dependent variable	0.563	0.515	0.985	2.034	43.872	228.535	1.053	3.498	0.027	0.789

Note: As mentioned in the text, we did not replicate the IV portion of the results reported in the original publication.

**Appendix Table 6: OLS intervention impact by treatment arm, AGK table 5 reproduction**

	Export Crop	Proportion of Land Devoted to Cash Crops	Use of Inputs	Production of French Beans (in 1,000 kg)	Production of Baby Corn (in kg)	Value of Harvested Produce (in Ksh 1,000)	Total Spent in Marketing (in Ksh 1,000)	Logarithm of Household Income	Loan from Formal Institutions	Deposit in Formal Institutions
Post	-0.005 [0.053]	-0.096 [0.014]***	0.009 [0.013]	0.334 [1.476]	21.591 [19.464]	-89.598 [113.408]	0.801 [0.792]	-0.253 [0.099]**	-0.047 [0.017]***	0.075 [0.032]**
Post X credit	0.228 [0.067]***	0.078 [0.020]***	0.020 [0.018]	-1.172 [1.138]	127.722 [67.326]*	374.234 [386.552]	-1.903 [1.173]	0.107 [0.114]	0.014 [0.027]	0.078 [0.046]*
Post X no credit	0.266 [0.092]**	0.038 [0.024]	0.006 [0.018]	6.059 [5.472]	40.080 [27.441]	-87.675 [106.579]	-1.748 [0.880]*	0.250 [0.133]*	0.050 [0.019]**	0.085 [0.039]**
Number of observations	1983	1847	1847	1983	1983	1647	1674	1581	1674	1665
R-squared	0.20	0.16	0.06	0.03	0.02	0.03	0.03	0.16	0.05	0.15
<i>p-value of F-test post x credit = post x no credit</i>	0.657	0.145	0.465	0.185	0.199	0.197	0.857	0.181	0.103	0.878

Note: As mentioned in the text, we did not replicate the IV portion of the results reported in the original publication.

**Appendix Table 7A: Intervention impact by production OLS, AGK table 6 reproduction**

	Proportion of Land Devoted to Cash Crops		Use of Inputs		Production of French Beans (1,000 kg)		Production of Baby Corn (kg)	
	Yes (1)	No (2)	Yes (3)	No (4)	Yes (5)	No (6)	Yes (7)	No (8)
Grows Export Crops at Baseline								
Post	-0.117	-0.059	-0.006	0.032	1.514	-1.569	13.235	40.277
	[0.020]***	[0.022]**	[0.007]	[0.029]	[1.849]	[2.426]	[19.918]	[23.447]*
Post x Treat	-0.016	0.104	0.008	0.007	-2.229	6.427	150.759	30.338
	[0.029]	[0.029]***	[0.006]	[0.031]	[1.958]	[4.825]	[84.862]*	[33.668]
Number of observations	895	940	896	939	957	1014	957	1014
R-squared	0.19	0.15	0.04	0.09	0.05	0.04	0.03	0.05
Mean dependent variable	0.601	0.432	0.998	0.973	1.593	2.471	58.274	29.971

**Appendix Table 7B: Intervention impact by production OLS, AGK table 6 reproduction**

	Value of Harvested Produce (in Ksh 1,000)		Total Spent in Marketing (in Ksh 1,000)		Logarithm of Household Income		Loan from Formal Institutions		Deposit in Formal Institutions	
	Yes (9)	No (10)	Yes (11)	No (12)	Yes (13)	No (14)	Yes (15)	No (16)	Yes (17)	No (18)
Grows Export Crops at Baseline										
Post	19.088	-242.484	0.698	1.512	-0.143	-0.364	-0.067	-0.005	0.074	0.085
	[142.153]	[212.881]	[0.966]	[2.112]	[0.093]	[0.223]	[0.016]***	[0.030]	[0.032]**	[0.063]
Post x Treat	-107.578	461.017	-2.037	-2.270	-0.077	0.494	0.042	-0.006	0.045	0.116
	[224.379]	[506.278]	[1.132]*	[2.481]	[0.133]	[0.234]**	[0.021]*	[0.032]	[0.048]	[0.069]
Number of observations	856	779	883	779	842	727	883	779	875	778
R-squared	0.04	0.07	0.03	0.08	0.16	0.2	0.06	0.08	0.14	0.21
Mean dependent variable	221.453	239.833	1.085	1.006	3.603	3.374	0.027	0.026	0.803	0.772

Note: As mentioned in the text, we did not replicate the IV portion of the results reported in the original publication.

**Appendix Table 8A: Intervention impact by production history and arm OLS, AGK  
table 7 reproduction**

	Proportion of Land Devoted to Cash Crops		Use of Inputs		Production of French Beans (1,000 kg)		Production of Baby Corn (kg)		Value of Harvested Produce (in Ksh 1,000)	
	Yes (1)	No (2)	Yes (3)	No (4)	Yes (7)	No (8)	Yes (9)	No (10)	Yes (11)	No (12)
Grows Export Crops at Baseline										
Post	-0.117 [0.020]***	-0.059 [0.022]**	-0.006 [0.007]	0.032 [0.029]	1.516 [1.850]	-1.547 [2.405]	13.632 [19.942]	40.193 [23.342]*	20.499 [142.268]	-231.456 [202.335]
Post x Credit	-0.009 [0.032]	0.141 [0.033]***	0.011 [0.008]	0.018 [0.035]	-1.957 [1.835]	-0.005 [0.595]	206.118 [134.582]	55.416 [57.241]	-6.891 [329.242]	1042.071 [1130.266]
Post x No Credit	-0.026 [0.046]	0.060 [0.034]*	0.005 [0.006]	-0.005 [0.034]	-2.603 [2.603]	12.559 [8.864]	74.770 [48.691]	6.427 [25.080]	-241.193 [162.033]	86.350 [118.288]
Number of observations	895	940	896	939	957	1014	957	1014	856	779
R-squared	0.19	0.16	0.04	0.09	0.05	0.04	0.04	0.05	0.04	0.07
Mean dependent variable	0.601	0.432	0.998	0.973	1.593	2.471	58.274	29.971	221.453	239.833
<i>p-value of F-test post x credit = post x no credit</i>	0.735	0.038	0.298	0.438	0.745	0.156	0.356	0.395	0.461	0.370

**Appendix Table 8B: Intervention impact by production history and arm OLS, AGK  
table 7 reproduction**

	Total Spent in Marketing (in Ksh 1,000)		Logarithm of Household Income		Loan from Formal Institutions		Deposit in Formal Institutions	
	Yes (13)	No (14)	Yes (15)	No (16)	Yes (17)	No (18)	Yes (19)	No (20)
Grows Export Crops at Baseline								
Post	0.698 [0.967]	1.515 [2.113]	-0.143 [0.093]	-0.366 [0.224]	-0.067 [0.016]***	-0.005 [0.030]	0.073 [0.032]**	0.086 [0.063]
Post x Credit	-2.061 [1.317]	-2.096 [2.848]	-0.062 [0.135]	0.330 [0.247]	0.027 [0.027]	-0.035 [0.037]	0.010 [0.061]	0.171 [0.070]**
Post x No Credit	-2.006 [1.166]*	-2.382 [2.371]	-0.099 [0.204]	0.620 [0.250]**	0.062 [0.020]***	0.013 [0.031]	0.092 [0.052]*	0.081 [0.073]
Number of observations	883	779	842	727	883	779	875	778
R-squared	0.03	0.08	0.16	0.2	0.07	0.09	0.14	0.22
Mean dependent variable	1.085	1.006	3.603	3.374	0.027	0.026	0.803	0.772
<i>p-value of F-test post x credit = post x no credit</i>	0.960	0.834	0.858	0.059	0.147	0.072	0.218	0.112

Note: As mentioned in the text, we did not replicate the IV portion of the results reported in the original publication.

**Appendix Table 9: Intervention impact on prices OLS, AGK table 8 reproduction**

	All Crops		French Beans		Bananas		Maize (dry)		Beans		Coffee	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Post	5.58	5.21	-5.87	-5.87	-2.32	-2.33	-0.12	-0.13	0.14	0.14	0.88	0.87
	[14.62]	[14.68]	[2.80]**	[2.80]**	[0.64]***	[0.64]***	[0.08]	[0.09]	[0.33]	[0.33]	[0.75]	[0.75]
Treatment x	-21.48		-5.34		-0.34		0.09		-0.31		-1.78	
post	[14.64]		[3.06]*		[0.30]		[0.20]		[0.34]		[1.19]	
Credit x		-39.37		-5.24		-0.58		-0.09		-0.36		-1.35
post		[12.36]***		[3.20]		[0.26]**		[0.09]		[0.38]		[1.35]
No Credit x		5.80		-5.55		0.00		0.30		-0.25		-2.49
post		[21.83]		[4.27]		[0.55]		[0.39]		[0.36]		[1.29]*
Observations	1373	1373	729	729	690	690	324	324	265	265	858	858
R-squared	0.03	0.04	0.05	0.05	0.05	0.05	0.03	0.04	0.07	0.07	0.05	0.06
Mean dependent variable	46.30	46.30	18.50	18.50	1.86	1.86	0.19	0.19	0.42	0.42	4.88	4.88
<i>p-value of test post x credit = post x no credit</i>												
		0.02		0.94		0.30		0.34		0.74		0.38
Note: As mentioned in the text, we did not replicate the IV portion of the results reported in the original publication.												