

# **Confronting the Wall of Patriarchy: Does participatory intrahousehold Decision Making empower Women in agricultural Households?**

## **ONLINE SUPPLEMENTAL MATERIALS**

### ***Online Supplemental Materials A – Matching covariates, balance tables before and after propensity score matching and map locating treatment and control groups***

We applied propensity score matching (PSM) based on baseline characteristics with inverse probability of treatment weighting, separately for Masaka-Kalungu and Mubende sub-samples. Covariates used for controlling for initial levels of women's empowerment with PSM when comparing the group with intensive coaching (T) with the group with only couple seminars (CACB) and the group with only couple seminars (CACB) with the group without exposure to the Gender Household Approach (GHA) (CC) in both Masaka-Kalungu and Mubende sub-samples include (See Table 2 Section 5.3.): age difference between husband and wife, wife's age, whether husband has some secondary level education, wife's personal income, her personally owned tropical livestock units (TLU) (cattle and small livestock, excluding poultry), whether she manages the most important staple food crop alone, number of children, wife's membership of a microfinance group. In the Masaka-Kalungu sub-sample, we also included whether husband reported to be in a polygynous relationship. Additional controls in both Masaka-Kalungu and Mubende sub-samples include land size, household food security, and husband's personal income.

In the Masaka-Kalungu sub-sample, whether wife had some secondary level education is additionally included as a covariate in PSM to control for observed imbalance between the group with intensive coaching (T) and the group with only couple seminars (CACB). For the comparison of the group with couple seminars (CACB) and the group without exposure to the GHA (CC) no covariates were added to the ones used controlling for initial levels of women's empowerment.

In the Mubende sub-sample, the following covariates are additionally included in PSM to control for observed imbalance between the group with intensive coaching (T) and the group with only couple seminars (CACB): husband's personally owned TLU, adoption intensify for coffee, and likelihood that the house is built with fire-baked bricks. For the comparison of the group with couple seminars (CACB) and the group without exposure to the GHA (CC), the likelihood that wife believes the household's wellbeing has improved over time and whether wife has some secondary education were additionally included to control for observed imbalance between groups.

	Masaka-Kalungu sub-sample		Mubende sub-sample	
	T vs CACB	CACB vs CC	T vs CACB	CACB vs CC
Control for initial levels of women's empowerment (See Table 2 Section 5.3.)				
Age difference between husband and wife	X	X	X	X
Wife's age	X	X	X	X
Husband has some secondary level education	X	X	X	X
Wife's personal income	X	X	X	X
Wife's personally owned tropical livestock units (TLU) (cattle and small livestock, excluding poultry)	X	X	X	X
Wife manages most important staple food crop alone	X	X	X	X
Number of children	X	X	X	X
Wife's membership of a microfinance group	X	X	X	X
Polygynous (second wife reported by husband)	X	X		
Additional control variables				
Household food security	X	X	X	X
Land size	X	X	X	X
Husband's personal income	X	X	X	X
Control for baseline imbalance				
Wife has some secondary education	X			X
Husband's personally owned TLU			X	
Adoption intensify for coffee			X	
House built with fire-baked bricks			X	
Household wellbeing and/or food security improved over time (Reported by wife)				X

Table A Balance table before and after propensity score matching (PSM) for comparison of T vs CACB in the Mubende sub-sample

Mubende sub-sample T vs CACB	Before PSM			After PSM												
	Treated			Control			Treated				Control					
	Mean	Variance	Skewness	Mean	Variance	Skewness	Std-diff	Var-ratio	Mean	Variance	Skewness	Mean	Variance	Skewness	Std-diff	Var-ratio
Age HB (Husband (HB))	44.844	169.540	0.463	43.828	171.635	0.452	0.078	0.988	44.422	165.536	0.472	44.493	176.795	0.509	-0.005	0.936
Age W	36.550	120.439	0.414	36.043	125.231	0.543	0.046	0.962	36.225	121.027	0.450	36.259	129.641	0.547	-0.003	0.934
Age difference	8.294	52.075	1.034	7.785	69.889	-1.367	0.065	0.745	8.196	51.351	0.996	8.234	67.744	-0.959	-0.005	0.758
Land size (acres) (HB)	4.916	18.437	2.823	4.892	20.760	2.801	0.005	0.888	4.846	17.741	2.849	4.915	20.568	2.708	-0.016	0.863
(Some) secondary education (HB)	0.333	0.223	0.707	0.317	0.218	0.786	0.034	1.026	0.329	0.222	0.727	0.333	0.223	0.711	-0.007	0.995
(Some) secondary education (W)	0.194	0.158	1.544	0.177	0.147	1.689	0.044	1.073	0.193	0.157	1.554	0.181	0.149	1.661	0.032	1.054
Number of children (W reported)	3.883	5.914	0.807	3.898	5.952	0.309	-0.006	0.994	3.896	6.479	0.834	3.908	5.854	0.327	-0.005	1.107
Off-farm income (HB) (dummy)	0.261	0.194	1.088	0.242	0.184	1.205	0.044	1.052	0.260	0.193	1.096	0.254	0.191	1.128	0.012	1.014
Off-farm income (HB) (amount in Ugandan Shilling (UGX))	556809	2.98E+11	2.147	503779	3.17E+11	2.341	0.096	0.941	531109	2.72E+11	2.226	551542	3.31E+11	1.932	-0.037	0.821
Off-farm income (W) (dummy)	0.122	0.108	2.307	0.091	0.083	2.836	<b>0.100</b>	1.292	0.130	0.113	2.206	0.101	0.092	2.640	0.088	1.238
Off-farm income (W) (amount in UGX)	153185	1.18E+11	3.225	190297	1.13E+11	2.349	<b>-0.109</b>	1.046	141288	1.04E+11	3.357	196174	1.11E+11	2.299	-0.167	0.931
Personal income HB	142611	1.22E+11	3.366	119194	1.08E+11	3.998	0.069	1.132	135589	1.12E+11	3.436	137798	1.27E+11	3.470	-0.006	0.876
Personal income W	18856	1.64E+10	9.982	17392	1.28E+10	9.021	0.012	1.281	18408	1.52E+10	9.999	19902	1.42E+10	8.377	-0.012	1.066
House built with fire-baked bricks	0.628	0.235	-0.529	0.683	0.218	-0.786	<b>-0.116</b>	1.079	0.660	0.226	-0.677	0.658	0.226	-0.666	0.005	0.997
Number of cattle owned by household (HH) (HB reported)	0.706	4.410	6.367	0.591	2.675	5.043	0.061	1.648	0.613	3.549	6.654	0.613	2.269	4.458	-0.001	1.564
Number of small livestock owned by HH (HB reported)	2.194	7.521	1.906	2.495	11.732	2.253	-0.097	0.641	2.076	6.737	1.968	2.416	10.672	2.156	-0.115	0.631
TLU owned by HB (excluding poultry) (HB reported)	0.378	1.462	8.511	0.201	0.262	3.565	<b>0.191</b>	5.583	0.291	0.852	10.079	0.258	0.368	2.981	0.043	2.317
TLU owned by W (excluding poultry) (W reported)	0.155	0.096	3.183	0.185	0.207	3.275	-0.077	0.462	0.163	0.099	3.015	0.167	0.169	3.456	-0.013	0.584
Bicycle ownership (HB)	0.450	0.249	0.201	0.543	0.249	-0.173	<b>-0.186</b>	0.998	0.440	0.248	0.242	0.539	0.250	-0.158	-0.200	0.992
Number of coffee bags sold by HH (HB reported)	3.872	25.734	3.892	5.188	44.106	2.546	<b>-0.223</b>	0.583	3.757	21.221	3.621	5.211	43.704	2.533	-0.255	0.486
HH is food secure (W reported)	0.889	0.099	-2.475	0.866	0.117	-2.144	0.071	0.849	0.886	0.102	-2.424	0.884	0.103	-2.400	0.005	0.989
HH better off than average HH (W reported)	0.139	0.120	2.088	0.124	0.109	2.286	0.045	1.104	0.128	0.112	2.223	0.134	0.117	2.144	-0.018	0.961
HH wellbeing improved over time (W reported)	0.128	0.112	2.230	0.108	0.096	2.534	0.063	1.162	0.118	0.105	2.367	0.119	0.106	2.351	-0.003	0.992
Adoption intensity coffee	3.006	3.497	0.080	2.535	3.804	0.258	<b>0.246</b>	0.919	2.743	3.442	0.144	2.741	3.896	0.099	0.001	0.884
W member of microfinance group	0.133	0.116	2.157	0.086	0.079	2.953	<b>0.151</b>	1.470	0.108	0.097	2.522	0.105	0.094	2.584	0.012	1.031
HB manages main food crop alone	0.017	0.016	7.551	0.000	0.000	.	<b>0.184</b>	.	0.019	0.019	7.055	0.000	0.000	.	0.196	.
W manages food crop alone	0.028	0.027	5.730	0.022	0.021	6.578	0.040	1.284	0.025	0.024	6.119	0.025	0.024	6.107	-0.001	0.996
HB and W agree on joint management of main food crop	0.433	0.247	0.269	0.387	0.239	0.464	0.094	1.035	0.444	0.248	0.224	0.411	0.243	0.360	0.066	1.020
HB and W agree on joint ownership of main food crop plots	0.061	0.058	3.665	0.043	0.041	4.505	0.081	1.394	0.063	0.059	3.604	0.045	0.043	4.399	0.079	1.375
HB manages main cash crop alone	0.050	0.048	4.129	0.022	0.021	6.597	<b>0.153</b>	2.258	0.045	0.043	4.385	0.014	0.014	8.233	0.183	3.092
HB and W agree on joint management of main cash crop	0.417	0.244	0.338	0.371	0.235	0.534	0.093	1.042	0.424	0.246	0.309	0.380	0.237	0.494	0.089	1.037
HB and W agree on joint ownership of main cash crop plots	0.067	0.063	3.474	0.086	0.079	2.953	-0.073	0.792	0.067	0.063	3.476	0.085	0.078	2.982	-0.068	0.802

Std-diff=Standardised difference between treatment and control; Var-ratio=Variance ratio of treatment and control; T= Encouraged for intensive coaching; CACB=Selected for couple seminar only; CC=Without GHA exposure. Std-diff in bold black: considered imbalanced using a liberal cut-off of 0.250; Std-diff in bold grey: considered imbalanced using a stricter cut-off of 0.100

*Table B Balance table before and after propensity score matching (PSM) for comparison of T vs CACB in the Masaka-Kalungu sub-sample*

Masaka-Kalungu sub-sample T vs CACB	Before PSM								After PSM							
	Treated			Control					Treated			Control				
	Mean	Variance	Skewness	Mean	Variance	Skewness	Std-diff	Var-ratio	Mean	Variance	Skewness	Mean	Variance	Skewness	Std-diff	Var-ratio
Age HB	48.482	150.700	0.426	48.170	149.357	0.301	0.025	1.009	48.159	155.129	0.446	48.209	143.007	0.285	-0.004	1.085
Age W	39.524	121.221	0.394	39.327	134.310	0.531	0.017	0.903	39.091	124.362	0.442	39.139	127.980	0.526	-0.004	0.972
Age difference	8.958	54.744	1.228	8.843	52.361	1.041	0.016	1.046	9.067	54.088	1.136	9.069	54.292	0.925	0.000	0.996
Land size (acres) (HB)	4.518	19.760	3.281	4.510	14.752	2.286	0.002	1.340	4.391	18.658	3.573	4.421	14.136	2.371	-0.007	1.320
(Some) secondary education (HB)	0.337	0.225	0.688	0.384	0.238	0.479	-0.096	0.945	0.346	0.228	0.648	0.356	0.231	0.603	-0.020	0.987
(Some) secondary education (W)	0.187	0.153	1.608	0.346	0.228	0.648	<b>-0.365</b>	0.671	0.268	0.197	1.048	0.262	0.195	1.080	0.013	1.013
Number of children (W reported)	3.800	4.931	0.524	3.549	3.512	0.206	<b>0.122</b>	1.404	3.660	4.900	0.495	3.662	3.500	0.177	-0.001	1.400
Off-farm income (HB) (dummy)	0.464	0.250	0.145	0.478	0.251	0.088	-0.028	0.996	0.454	0.249	0.183	0.458	0.250	0.169	-0.007	0.998
Off-farm income (HB) (amount in UGX)	476366	8.38E+11	4.580	421581	2.51E+11	1.433	0.074	3.336	471913	8.52E+11	4.704	425068	2.60E+11	1.436	0.063	3.272
Off-farm income (W) (dummy)	0.223	0.174	1.332	0.239	0.183	1.224	-0.038	0.952	0.232	0.179	1.271	0.218	0.171	1.367	0.033	1.045
Off-farm income (W) (UGX)	122706	6.79E+10	3.781	271187	1.73E+11	1.989	<b>-0.428</b>	0.392	244641	1.85E+11	1.950	215554	1.44E+11	2.410	0.072	1.278
Personal income HB	253374	2.59E+11	2.894	256163	2.17E+11	2.504	-0.006	1.195	247910	2.42E+11	2.959	244417	2.08E+11	2.562	0.007	1.165
Personal income W	46446	2.44E+10	6.334	90220	7.15E+10	4.689	<b>-0.200</b>	0.341	79556	6.44E+10	4.269	69268	5.09E+10	5.540	0.043	1.266
House built with fire-baked bricks	0.922	0.073	-3.139	0.918	0.076	-3.053	0.013	0.961	0.924	0.070	-3.206	0.923	0.071	-3.182	0.003	0.989
Number of cattle owned by HH (HB reported)	1.108	2.146	1.645	1.176	6.842	7.218	-0.032	0.314	1.032	2.001	1.740	1.278	7.446	6.983	-0.113	0.269
Number of small livestock owned by HH (HB reported)	4.651	120.653	7.724	3.956	69.068	9.614	0.071	1.747	4.172	87.262	8.935	4.202	79.815	9.157	-0.003	1.093
TLU owned by HB (excluding poultry) (HB reported)	0.635	0.558	1.350	0.558	0.909	3.069	0.090	0.614	0.605	0.518	1.428	0.581	0.947	3.014	0.028	0.547
TLU owned by W (excluding poultry) (W reported)	0.467	0.436	2.820	0.334	0.251	2.358	<b>0.227</b>	1.738	0.403	0.328	3.069	0.390	0.288	1.960	0.025	1.142
Bicycle ownership (HB)	0.717	0.204	-0.963	0.667	0.224	-0.707	<b>0.109</b>	0.913	0.702	0.211	-0.881	0.658	0.226	-0.668	0.092	0.931
Income HH earned by selling coffee (HB reported)	200808	2.31E+11	4.602	212779	2.17E+11	3.032	-0.025	1.067	176245	1.32E+11	3.088	211553	2.20E+11	3.008	-0.084	0.600
HH is food secure (W reported)	0.229	0.178	1.290	0.214	0.169	1.396	0.036	1.050	0.225	0.175	1.320	0.225	0.175	1.318	-0.001	0.999
HH better off than average HH (W reported)	0.357	0.231	0.596	0.345	0.228	0.652	0.025	1.015	0.372	0.235	0.528	0.342	0.227	0.664	0.062	1.037
HH wellbeing improved over time (W reported)	0.472	0.251	0.111	0.427	0.246	0.296	0.092	1.019	0.486	0.251	0.057	0.417	0.245	0.338	0.139	1.027
Adoption intensity coffee	3.828	1.437	0.008	3.544	1.425	0.506	<b>0.238</b>	1.008	3.902	1.526	-0.042	3.570	1.392	0.731	0.275	1.096
W member of microfinance group	0.392	0.240	0.444	0.358	0.231	0.590	0.068	1.036	0.360	0.232	0.582	0.371	0.235	0.536	-0.021	0.988
HB manages main food crop alone	0.133	0.116	2.168	0.157	0.133	1.883	-0.070	0.867	0.132	0.115	2.171	0.167	0.140	1.783	-0.098	0.824
W manages food crop alone	0.169	0.141	1.770	0.166	0.139	1.799	0.008	1.014	0.167	0.140	1.782	0.164	0.138	1.811	0.008	1.015
HB and W agree on joint management of main food crop	0.301	0.212	0.867	0.358	0.231	0.590	<b>-0.122</b>	0.915	0.268	0.197	1.047	0.371	0.235	0.534	-0.221	0.841
HB and W agree on joint ownership of main food crop plots	0.030	0.029	5.498	0.019	0.019	7.072	0.073	1.578	0.027	0.027	5.826	0.016	0.016	7.797	0.079	1.707
HB manages main cash crop alone	0.259	0.193	1.100	0.283	0.204	0.963	-0.054	0.946	0.262	0.195	1.081	0.296	0.210	0.893	-0.076	0.928
HB and W agree on joint management of main cash crop	0.096	0.088	2.735	0.082	0.076	3.053	0.051	1.160	0.091	0.083	2.848	0.080	0.074	3.093	0.038	1.120
HB and W agree on joint ownership of main cash crop plots	0.018	0.018	7.235	0.013	0.012	8.747	0.045	1.428	0.015	0.015	7.860	0.011	0.011	9.350	0.038	1.389
Polygynous relationship (HB reported)	0.078	0.073	3.139	0.069	0.065	3.395	0.035	1.121	0.067	0.063	3.470	0.066	0.062	3.488	0.002	1.007

Std-diff=Standardised difference between treatment and control; Var-ratio=Variance ratio of treatment and control; T= Encouraged for intensive coaching; CACB=Selected for couple seminar only; CC=Without GHA exposure. Std-diff in bold black: considered imbalanced using a liberal cut-off of 0.250; Std-diff in bold grey: considered imbalanced using a stricter cut-off of 0.100

Table C Balance table before and after propensity score matching (PSM) for comparison of CACB vs CC in the Mubende sub-sample

Mubende sub-sample CACB vs CC	Before PSM								After PSM									
	Treated				Control				Treated				Control					
	Mean	Variance	Skewness		Mean	Variance	Skewness	Std-diff	Var-ratio	Mean	Variance	Skewness		Mean	Variance	Skewness	Std-diff	Var-ratio
Age HB	43.828	171.635	0.452		46.673	157.150	0.791	<b>-0.222</b>	1.092	44.305	171.901	0.390		44.351	189.233	0.800	-0.003	0.908
Age W	36.043	125.231	0.543		39.073	111.439	0.343	<b>-0.279</b>	1.124	36.497	127.218	0.549		36.636	125.164	0.455	-0.012	1.016
Age difference	7.785	69.889	-1.367		7.600	43.615	2.093	0.025	1.602	7.808	74.192	-1.626		7.715	52.933	2.036	0.012	1.402
Land size (acres) (HB)	4.892	20.760	2.801		6.182	32.522	2.450	<b>-0.250</b>	0.638	5.018	20.124	2.740		4.825	17.082	3.135	0.045	1.178
(Some) secondary education (HB)	0.317	0.218	0.786		0.473	0.254	0.109	<b>-0.320</b>	0.858	0.353	0.230	0.615		0.357	0.234	0.599	-0.007	0.983
(Some) secondary education (W)	0.177	0.147	1.689		0.364	0.236	0.567	<b>-0.426</b>	0.623	0.225	0.175	1.320		0.226	0.178	1.313	-0.002	0.984
Number of children (W reported)	3.898	5.952	0.309		4.127	4.706	0.230	-0.099	1.265	3.979	5.814	0.258		3.889	4.926	0.267	0.039	1.180
Off-farm income (HB) (dummy)	0.242	0.184	1.205		0.236	0.184	1.241	0.013	1.003	0.236	0.181	1.241		0.182	0.152	1.645	<b>0.132</b>	1.195
Off-farm income (HB) (amount in UGX)	503779	3.17E+11	2.341		615386	7.31E+11	1.987	<b>-0.154</b>	0.433	481044	2.98E+11	2.284		413426	5.27E+11	2.853	<b>0.105</b>	0.565
Off-farm income (W) (dummy)	0.091	0.083	2.836		0.255	0.193	1.127	<b>-0.439</b>	0.432	0.093	0.085	2.810		0.207	0.167	1.445	<b>-0.323</b>	0.505
Off-farm income (W) (amount in UGX)	190297	1.13E+11	2.349		180001	1.61E+11	2.834	0.028	0.701	208901	1.19E+11	2.162		107071	6.88E+10	4.688	<b>0.332</b>	1.727
Personal income HB	119194	1.08E+11	3.998		136364	1.84E+11	4.264	-0.045	0.587	111581	9.99E+10	4.067		70605	9.01E+10	6.499	<b>0.133</b>	1.108
Personal income W	17392	1.28E+10	9.021		45818	4.50E+10	6.194	<b>-0.167</b>	0.284	19357	1.41E+10	8.429		22181	1.54E+10	10.314	-0.023	0.916
House built with fire-baked bricks	0.683	0.218	-0.786		0.764	0.184	-1.241	<b>-0.180</b>	1.184	0.709	0.208	-0.918		0.619	0.240	-0.490	<b>0.189</b>	0.864
Number of cattle owned by HH (HB reported)	0.591	2.675	5.043		0.982	4.907	4.191	<b>-0.201</b>	0.545	0.645	2.820	4.839		0.635	2.329	4.955	0.006	1.211
Number of small livestock owned by HH (HB reported)	2.495	11.732	2.253		2.127	4.817	0.919	<b>0.128</b>	2.436	2.526	11.887	2.184		1.694	3.823	1.189	<b>0.297</b>	3.109
TLU owned by HB (excluding poultry) (HB reported)	0.201	0.262	3.565		0.343	0.665	4.574	<b>-0.208</b>	0.394	0.221	0.287	3.258		0.305	0.421	5.007	<b>-0.141</b>	0.681
TLU owned by W (excluding poultry) (W reported)	0.185	0.207	3.275		0.301	0.306	2.168	<b>-0.228</b>	0.676	0.205	0.238	3.019		0.192	0.187	3.080	0.027	1.275
Bicycle ownership (HB)	0.543	0.249	-0.173		0.436	0.251	0.257	<b>0.213</b>	0.996	0.548	0.249	-0.192		0.414	0.247	0.348	<b>0.268</b>	1.008
Number of coffee bags sold by HH (HB reported)	5.188	44.106	2.546		5.923	43.928	1.822	<b>-0.111</b>	1.004	5.652	57.677	2.597		6.051	50.069	1.784	-0.054	1.152
HH is food secure (W reported)	0.866	0.117	-2.144		0.945	0.053	-3.923	<b>-0.274</b>	2.227	0.878	0.108	-2.308		0.904	0.089	-2.734	-0.082	1.214
HH better off than average HH (W reported)	0.124	0.109	2.286		0.473	0.254	0.109	<b>-0.820</b>	0.429	0.202	0.162	1.484		0.244	0.188	1.192	<b>-0.100</b>	0.863
HH wellbeing improved over time (W reported)	0.108	0.096	2.534		0.473	0.254	0.109	<b>-0.873</b>	0.380	0.188	0.153	1.600		0.190	0.156	1.584	-0.005	0.979
Adoption intensity coffee	2.535	3.804	0.258		4.036	2.739	-0.380	<b>-0.830</b>	1.389	2.671	4.084	0.204		3.753	2.215	-0.448	<b>-0.609</b>	1.844
W member of microfinance group	0.086	0.079	2.953		0.091	0.084	2.846	-0.017	0.939	0.081	0.075	3.070		0.065	0.062	3.537	0.062	1.214
HB manages main food crop alone	0.000	0.000	.		0.000	0.000	.	.	.	0.000	0.000	.		0.000	0.000	.	.	.
W manages food crop alone	0.022	0.021	6.578		0.000	0.000	.	<b>0.210</b>	.	0.019	0.018	7.145		0.000	0.000	.	<b>0.194</b>	.
HB and W agree on joint management of main food crop	0.387	0.239	0.464		0.327	0.224	0.736	<b>0.124</b>	1.064	0.362	0.232	0.572		0.303	0.215	0.856	<b>0.125</b>	1.080
HB and W agree on joint ownership of main food crop plots	0.043	0.041	4.505		0.091	0.084	2.846	<b>-0.191</b>	0.492	0.042	0.041	4.547		0.067	0.064	3.468	<b>-0.108</b>	0.641
HB manages main cash crop alone	0.022	0.021	6.597		0.036	0.036	4.954	-0.088	0.593	0.021	0.021	6.641		0.027	0.026	5.888	-0.035	0.794
HB and W agree on joint management of main cash crop	0.371	0.235	0.534		0.327	0.224	0.736	0.091	1.046	0.381	0.237	0.489		0.357	0.234	0.598	0.050	1.015
HB and W agree on joint ownership of main cash crop plots	0.086	0.079	2.953		0.109	0.099	2.508	-0.077	0.799	0.087	0.080	2.922		0.116	0.104	2.400	-0.094	0.768

Std-diff=Standardised difference between treatment and control; Var-ratio=Variance ratio of treatment and control; T= Encouraged for intensive coaching; CACB=Selected for couple seminar only; CC=Without GHA exposure. Std-diff in bold black: considered imbalanced using a liberal cut-off of 0.250; Std-diff in bold grey: considered imbalanced using a stricter cut-off of 0.100

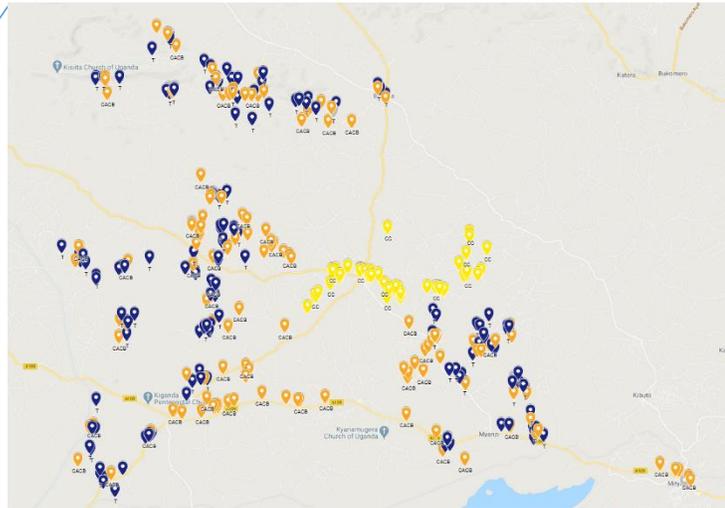
*Table D Balance table before and after propensity score matching (PSM) for comparison of CACB vs CC in the Masaka-Kalungu sub-sample*

Masaka-Kalungu sub-sample CACB vs CC	Before PSM			After PSM												
	Treated			Control				Treated				Control				
	Mean	Variance	Skewness	Mean	Variance	Skewness	Std-diff	Var-ratio	Mean	Variance	Skewness	Mean	Variance	Skewness	Std-diff	Var-ratio
Age HB	48.170	149.357	0.301	52.463	225.055	0.675	<b>-0.314</b>	0.664	49.383	153.097	0.203	45.755	273.885	1.088	<b>0.248</b>	0.559
Age W	39.327	134.310	0.531	43.073	200.720	0.724	<b>-0.289</b>	0.669	40.261	135.837	0.479	37.483	226.507	1.177	<b>0.206</b>	0.600
Age difference	8.843	52.361	1.041	9.390	49.244	0.426	-0.077	1.063	9.122	49.732	0.947	8.273	75.477	0.644	<b>0.107</b>	0.659
Land size (acres) (HB)	4.510	14.752	2.286	4.590	22.038	4.397	-0.019	0.669	4.599	13.837	2.183	4.175	15.721	5.249	<b>0.110</b>	0.880
(Some) secondary education (HB)	0.384	0.238	0.479	0.415	0.249	0.347	-0.063	0.957	0.401	0.242	0.404	0.370	0.239	0.537	0.063	1.010
(Some) secondary education (W)	0.346	0.228	0.648	0.268	0.201	1.046	<b>0.168</b>	1.132	0.355	0.230	0.607	0.409	0.248	0.368	<b>-0.112</b>	0.928
Number of children (W reported)	3.549	3.512	0.206	4.427	5.065	0.749	<b>-0.424</b>	0.693	3.595	3.565	0.240	3.229	3.697	1.085	<b>0.192</b>	0.964
Off-farm income (HB) (dummy)	0.478	0.251	0.088	0.293	0.212	0.911	<b>0.385</b>	1.183	0.454	0.250	0.183	0.348	0.233	0.639	<b>0.217</b>	1.072
Off-farm income (HB) (amount in UGX)	421581	2.51E+11	1.433	590000	2.94E+11	0.609	<b>-0.323</b>	0.853	417119	2.48E+11	1.425	350063	1.78E+11	1.695	<b>0.145</b>	1.389
Off-farm income (W) (dummy)	0.239	0.183	1.224	0.098	0.090	2.713	<b>0.383</b>	2.028	0.254	0.191	1.131	0.046	0.045	4.329	<b>0.605</b>	4.226
Off-farm income (W) (amount in UGX)	271187	1.73E+11	1.989	795000	4.29E+11	0.190	<b>-0.954</b>	0.403	242149	1.55E+11	2.163	991908	6.12E+11	-0.200	<b>-1.210</b>	0.254
Personal income HB	256164	2.17E+11	2.504	175122	1.54E+11	2.408	<b>0.188</b>	1.405	239673	2.00E+11	2.598	122631	8.63E+10	3.278	<b>0.309</b>	2.316
Personal income W	90220	7.15E+10	4.689	80000	8.90E+10	4.145	0.036	0.804	85465	6.48E+10	4.834	47379	6.36E+10	5.807	<b>0.150</b>	1.018
House built with fire-baked bricks	0.918	0.076	-3.053	1.000	0.000	.	<b>-0.421</b>	.	0.930	0.066	-3.361	1.000	0.000	.	<b>-0.388</b>	.
Number of cattle owned by HH (HB reported)	1.176	6.842	7.218	1.146	1.928	0.983	0.014	3.549	1.395	10.743	6.604	0.915	1.414	1.221	<b>0.194</b>	7.600
Number of small livestock owned by HH (HB reported)	3.956	69.068	9.614	4.390	13.694	0.765	-0.068	5.044	3.993	61.683	9.966	3.239	9.102	1.233	<b>0.127</b>	6.777
TLU owned by HB (excluding poultry) (HB reported)	0.558	0.909	3.069	0.759	1.112	1.694	<b>-0.200</b>	0.817	0.564	0.891	2.901	0.507	0.550	2.746	0.068	1.620
TLU owned by W (excluding poultry) (W reported)	0.334	0.251	2.358	0.496	0.436	1.861	<b>-0.277</b>	0.576	0.378	0.296	1.951	0.357	0.185	2.904	0.043	1.596
Bicycle ownership (HB)	0.667	0.224	-0.707	0.634	0.238	-0.557	0.068	0.940	0.676	0.220	-0.754	0.756	0.189	-1.192	<b>-0.176</b>	1.164
Income HH earned by selling coffee (HB reported)	212779	2.17E+11	3.032	291026	4.42E+11	2.829	<b>-0.136</b>	0.490	243669	2.74E+11	2.775	169560	2.65E+11	4.056	<b>0.143</b>	1.033
HH is food secure (W reported)	0.214	0.169	1.396	0.707	0.212	-0.911	<b>-1.130</b>	0.797	0.310	0.215	0.821	0.312	0.220	0.813	-0.003	0.978
HH better off than average HH (W reported)	0.345	0.228	0.652	.	.	.	.	.	0.351	0.229	0.624	.	.	.	.	.
HH wellbeing improved over time (W reported)	0.427	0.246	0.296	.	.	.	.	.	0.430	0.247	0.282	.	.	.	.	.
Adoption intensity coffee	3.544	1.425	0.506	3.263	0.686	0.062	<b>0.273</b>	2.079	3.539	1.270	0.659	3.334	0.451	-0.181	<b>0.221</b>	2.815
W member of microfinance group	0.358	0.231	0.590	0.634	0.238	-0.557	<b>-0.569</b>	0.973	0.419	0.245	0.330	0.458	0.255	0.169	-0.079	0.962
HB manages main food crop alone	0.157	0.133	1.883	0.073	0.070	3.278	<b>0.264</b>	1.918	0.143	0.123	2.043	0.140	0.124	2.069	0.006	0.994
W manages food crop alone	0.166	0.139	1.799	0.049	0.048	4.189	<b>0.382</b>	2.924	0.139	0.120	2.089	0.020	0.020	6.852	<b>0.448</b>	5.975
HB and W agree on joint management of main food crop	0.358	0.231	0.590	0.341	0.230	0.669	0.035	1.004	0.358	0.231	0.591	0.329	0.227	0.726	0.061	1.021
HB and W agree on joint ownership of main food crop plots	0.019	0.019	7.072	0.000	0.000	.	<b>0.195</b>	.	0.024	0.024	6.189	0.000	0.000	.	<b>0.222</b>	.
HB manages main cash crop alone	0.283	0.204	0.963	0.220	0.176	1.355	<b>0.146</b>	1.163	0.273	0.200	1.018	0.279	0.206	0.986	-0.013	0.968
HB and W agree on joint management of main cash crop	0.082	0.076	3.053	0.073	0.070	3.278	0.032	1.087	0.082	0.076	3.038	0.092	0.086	2.828	-0.033	0.889
HB and W agree on joint ownership of main cash crop plots	0.013	0.012	8.747	0.000	0.000	.	<b>0.159</b>	.	0.019	0.019	7.043	0.000	0.000	.	<b>0.196</b>	.
Polygynous relationship (HB reported)	0.069	0.065	3.395	0.073	0.070	3.278	-0.015	0.932	0.067	0.063	3.473	0.042	0.041	4.570	<b>0.109</b>	1.519

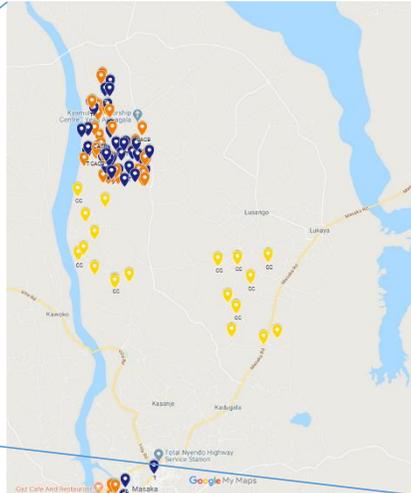
Std-diff=Standardised difference between treatment and control; Var-ratio=Variance ratio of treatment and control; T= Encouraged for intensive coaching; CACB=Selected for couple seminar only; CC=Without GHA exposure. Std-diff in bold black: considered imbalanced using a liberal cut-off of 0.250; Std-diff in bold grey: considered imbalanced using a stricter cut-off of 0.100

Figure A Maps plotting baseline interview location of treatment and control groups

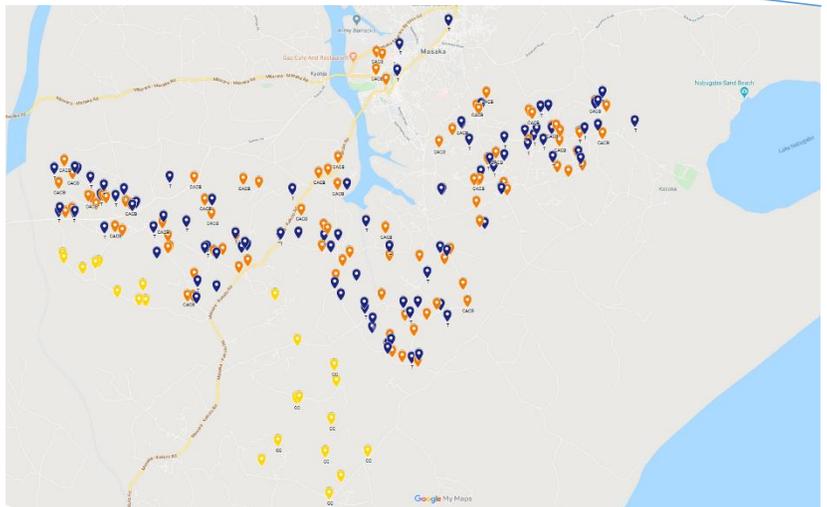
**Mubende district**



**Kalungu district**



**Masaka district**



T: Blue markers; CACB: Orange markers; CC: Yellow markers

## ***Online Supplemental Materials B***

*Table E Results and test statistics of the first stage regression predicting 'treatment' based on the randomised (non)-encouragement status as an instrumental variable (IV).*

Predicted treatment based on a comparison of	T vs CACB
IV	0.925***
S.E.	(0.017)
p	[0.000]
N	678
Kleibergen-Paap Wald rk F statistic (F test of excluded instruments: weak identification test)	F(1,675)= 3081.28
Kleibergen-Paap rk LM (underidentification test)	$\chi^2(1)= 539.14$
Anderson-Rubin Wald test (test of joint significance of endogenous regressors in main equation)	F(1,675)= 0.59

Generalised method of moments (GMM) estimation with robust standard errors (S.E.) on matched samples using propensity score matching and controlling for area fixed effects with a dummy for the Mubende sub-sample. p=p-value; T= Encouraged for intensive coaching; CACB=Selected for couple seminar only.

**Online Supplemental Materials C - Assessment of balance of household and individual**

**spouse's characteristics of attrited couples**

*Table F Assessment of balance of household and individual spouse's characteristics of attrited couples – Mubende sub-sample, husband*

Mubende sub-sample Baseline characteristics of husband (HB) or household (reported by HB) (Attrited HB=37)	Included in sample			Attrited from endline sample			Balance	
	Mean	Variance	Skewness	Mean	Variance	Skewness	Std-diff	Var-ratio
Age	44.634	168.914	0.487	42.243	217.911	0.902	<b>0.172</b>	0.775
Education level	4.860	5.345	0.604	4.216	4.119	-0.177	<b>0.296</b>	1.298
Member of a credit or microfinance group	0.304	0.212	0.852	0.162	0.140	1.833	<b>0.338</b>	
Bicycle ownership	0.489	0.250	0.043	0.324	0.225	0.751	<b>0.338</b>	
Number of cattle owned by household	0.691	3.704	5.734	0.432	1.419	2.711	<b>0.162</b>	2.611
Number of small livestock owned by household	2.318	9.017	2.178	1.432	2.974	1.153	<b>0.362</b>	3.032
Earns an off-farm income	0.249	0.188	1.158	0.216	0.174	1.379	0.078	
House has iron roof	0.993	0.007	-11.719	1.000	0.000	.	<b>-0.120</b>	
House built with fire-baked bricks	0.701	0.210	-0.877	0.568	0.252	-0.273	<b>0.277</b>	
House has concrete or tiled floor	0.297	0.209	0.889	0.216	0.174	1.379	<b>0.184</b>	

Std-diff=Standardised difference between treatment and control; Var-ratio=Variance ratio of treatment and control. Std-diff in bold black: considered imbalanced using a liberal cut-off of 0.250; Std-diff in bold grey: considered imbalanced using a stricter cut-off of 0.100.

*Table G Assessment of balance of household and individual spouse's characteristics of attrited couples – Mubende sub-sample, wife*

Mubende sub-sample Baseline characteristics of wife (W) or household (reported by W) (Attrited W=37)	Included in sample			Attrited from endline sample			Balance	
	Mean	Variance	Skewness	Mean	Variance	Skewness	Std-diff	Var-ratio
Age	36.656	121.755	0.452	35.250	203.564	1.220	<b>0.110</b>	0.598
Education level	4.033	4.347	0.625	4.056	4.511	0.525	-0.011	0.964
Member of a credit or microfinance group	0.107	0.096	2.545	0.056	0.054	3.881	<b>0.188</b>	
Bicycle ownership	0.048	0.045	4.254	0.028	0.028	5.747	<b>0.103</b>	
Number of cattle owned by household	0.964	31.201	14.589	0.194	0.561	4.225	<b>0.193</b>	55.606
Number of small livestock owned by household	2.271	8.960	2.231	1.139	2.752	1.643	<b>0.468</b>	3.256
Earns an off-farm income	0.126	0.110	2.256	0.028	0.028	5.747	<b>0.373</b>	
House has iron roof	0.993	0.007	-11.719	1.000	0.000	.	<b>-0.120</b>	
House built with fire-baked bricks	0.670	0.222	-0.722	0.556	0.254	-0.224	<b>0.234</b>	
House has concrete or tiled floor	0.242	0.184	1.203	0.167	0.143	1.789	<b>0.187</b>	

Std-diff=Standardised difference between treatment and control; Var-ratio=Variance ratio of treatment and control. Std-diff in bold black: considered imbalanced using a liberal cut-off of 0.250; Std-diff in bold grey: considered imbalanced using a stricter cut-off of 0.100

*Table H Assessment of balance of household and individual spouse's characteristics of attrited couples – Masaka-Kalungu sub-sample, husband*

Masaka-Kalungu sub-sample Baseline characteristics of HB or household (reported by HB) Included in sample								
	Included in sample			Attrited from endline sample			Balance	
	Mean	Variance	Skewness	Mean	Variance	Skewness	Std-diff	Var-ratio
Age	48.792	159.168	0.464	53.000	311.714	-0.180	<b>-0.274</b>	0.511
Education level	5.213	4.343	0.759	4.250	1.071	0.310	<b>0.585</b>	4.054
Member of a credit or microfinance group	0.336	0.224	0.694	0.375	0.268	0.516	-0.079	
Bicycle ownership	0.686	0.216	-0.800	0.875	0.125	-2.268	<b>-0.458</b>	
Number of cattle owned by household	1.142	4.144	6.952	0.125	0.125	2.268	<b>0.696</b>	33.153
Number of small livestock owned by household	4.320	86.048	8.808	4.625	9.696	-0.659	-0.044	8.874
Earns an off-farm income	0.451	0.248	0.198	0.125	0.125	2.268	<b>0.754</b>	
House has iron roof	0.981	0.019	-7.022	1.000	0.000	.	<b>-0.197</b>	
House built with fire-baked bricks	0.926	0.069	-3.261	0.875	0.125	-2.268	<b>0.165</b>	

Std-diff=Standardised difference between treatment and control; Var-ratio=Variance ratio of treatment and control. Std-diff in bold black: considered imbalanced using a liberal cut-off of 0.250; Std-diff in bold grey: considered imbalanced using a stricter cut-off of 0.100

*Table I Assessment of balance of household and individual spouse's characteristics of attrited couples – Masaka-Kalungu sub-sample, wife*

Masaka-Kalungu sub-sample Baseline characteristics of W or household (reported by W) Included in sample								
	Included in sample			Attrited from endline sample			Balance	
	Mean	Variance	Skewness	Mean	Variance	Skewness	Std-diff	Var-ratio
Age	39.836	136.269	0.562	38.833	222.167	0.022	0.075	0.613
Education level	4.710	3.368	0.484	3.833	5.767	-0.167	<b>0.410</b>	0.584
Member of a credit or microfinance group	0.404	0.242	0.390	0.000	0.000	.	<b>1.164</b>	
Bicycle ownership	0.158	0.134	1.870	0.167	0.167	1.789	-0.021	
Number of cattle owned by household	2.888	685.240	17.092	0.000	0.000	.	<b>0.156</b>	.
Number of small livestock owned by household	4.066	63.689	9.514	2.833	6.567	-0.033	<b>0.208</b>	9.699
Earns an off-farm income	0.216	0.170	1.381	0.000	0.000	.	<b>0.741</b>	
House has iron roof	0.978	0.021	-6.540	1.000	0.000	.	<b>-0.211</b>	
House built with fire-baked bricks	0.929	0.066	-3.340	1.000	0.000	.	<b>-0.391</b>	

Std-diff=Standardised difference between treatment and control; Var-ratio=Variance ratio of treatment and control. Std-diff in bold black: considered imbalanced using a liberal cut-off of 0.250; Std-diff in bold grey: considered imbalanced using a stricter cut-off of 0.100

**Online Supplemental Materials D**

**Table J Correlation within family of outcome indicators per comparison of groups with propensity score matching**

Comparison		Involvement farm decisions	Involvement household decisions	Share TLU	Personal income	Share coffee income	Transparency	Time	Improved welfare
Variables	T vs CACB								
	Involvement farm decisions	1							
	Involvement household decisions	0.372	1						
	Share TLU	0.033	0.018	1					
	Personal income	-0.040	0.061	0.046	1				
	Share coffee income	0.349	0.132	-0.017	-0.049	1			
	Transparency	0.104	-0.041	0.006	-0.050	0.162	1		
	Time	-0.295	-0.306	0.011	0.031	-0.047	-0.042	1	
Improved welfare	-0.027	0.161	-0.064	0.125	-0.081	-0.036	-0.029	1	
Comparison									
Variables	CACB vs CC								
	Involvement farm decisions	1							
	Involvement household decisions	0.456	1						
	Share TLU	0.059	0.034	1					
	Personal income	-0.134	0.010	0.156	1				
	Share coffee income	0.394	0.289	-0.017	-0.082	1			
	Transparency	0.153	0.092	0.055	0.056	0.295	1		
	Time	-0.288	-0.346	0.088	0.104	-0.190	-0.105	1	
Improved welfare	0.036	0.163	-0.086	0.077	-0.026	-0.032	-0.030	1	
Comparison									
Variables	CA vs CB								
	Involvement farm decisions	1							
	Involvement household decisions	0.473	1						
	Share TLU	-0.010	-0.028	1					
	Personal income	-0.156	0.047	0.033	1				
	Share coffee income	0.418	0.206	-0.060	-0.168	1			
	Transparency	0.198	-0.106	-0.063	-0.092	0.304	1		
	Time	-0.355	-0.397	0.053	0.049	-0.242	-0.071	1	
Improved welfare	-0.030	0.123	-0.182	0.157	-0.137	-0.056	0.066	1	
Comparison									
Variables	T vs CACB								
	Involvement farm decisions A	1							
	Involvement household decisions A	0.445	1						
	Share TLU A	0.054	0.011	1					
	Share coffee income A	0.383	0.217	0.011	1				
	Improved welfare A	-0.020	0.186	-0.118	-0.100	1			

Comparison		Involvement farm decisions A	Involvement household decisions A	Share TLU A	Share coffee income A	Improved welfare A
CACB vs CC						
Variables	Involvement farm decisions A	1				
	Involvement household decisions A	0.559	1			
	Share TLU A	0.074	0.038	1		
	Share coffee income A	0.431	0.284	0.135	1	
	Improved welfare A	-0.021	0.182	-0.131	-0.027	1
Comparison		Involvement farm decisions A	Involvement household decisions A	Share TLU A	Share coffee income A	Improved welfare A
CA vs CB						
Variables	Involvement farm decisions A	1				
	Involvement household decisions A	0.561	1			
	Share TLU A	0.021	-0.007	1		
	Share coffee income A	0.504	0.267	-0.006	1	
	Improved welfare A	-0.026	0.092	-0.241	-0.143	1

T= Encouraged for intensive coaching; CACB=Selected for couple seminar only; CC=Without GHA exposure.

*Involvement farm decisions* = Percentage out of four types of strategic farm decisions in which the wife was involved, personally or jointly with her husband or another household member, based on women's accounts. *Involvement farm decisions A*= Idem but based on husband and wife agreeing upon wife's involvement. *Involvement household decisions* = Percentage out of four types of strategic household decisions in which the wife was involved, personally or jointly with her husband or another household member, based on women's accounts. *Involvement household decisions A*= Idem but based on husband and wife agreeing upon wife's involvement. *Improved welfare* = Indicator taking the value one if wife believes that the household has improved its (economic) wellbeing and/or food security situation as compared to a year before. *Improved welfare A* = Idem but based on husband and wife agreeing upon improved wellbeing and/or food security. *Share TLU* = Share of household tropical livestock units (TLU) (excluding poultry) the wife reported to personally or jointly own. *Share TLU A* = Idem but based on averages of TLU reported by husband and wife. *Personal income* = Indicator taking the value one if the wife reported she personally earned any income from off-farm activities, fishing, sales of livestock and/or remittances in three months prior to endline. *Share coffee income* = Share of total household income from selling coffee in which the wife was involved, personally or jointly with her husband, in sales transaction including receiving money. *Share coffee income A* = Idem but based on averages of coffee income in which the wife was involved in sales transaction reported by husband and wife. *Transparency* = Ratio of wife versus husband reported total household coffee income as an indicator of transparency. *Time* = Difference in proportion of work time (i.e. total time allocated to productive, reproductive and domestic activities) wife and husband reported to allocate to tasks in reproductive and domestic sphere.

## *Online Supplemental Materials E - Interview guide*

This Supplemental file contains the interview guideline which was used during the qualitative semi-structured interviews. The same questions are repeated for five different categories of decision-making (food crops, cash crops, land, daily needs, and strategic decisions) and for women's input in group decisions. In practice we did not always strictly follow the guideline, but focused on fully exploring the respondents' story. The final section "Extra questions" contains questions which were asked whenever relevant or appropriate and mostly focus on income or ask about concrete situations or examples to aid our interpretation of the women's stories. The average interview duration was one and a half hours, with a range of 45 minutes to three hours.

### **A. Introduction**

My name is [ ], I have been with you before for research on decision making. I'm back now with my colleague [ ] from Belgium, we have some more questions related to the same study.

We want to tell you that it is ok to refuse to participate, there will not be any consequences. All your answers will be kept confidential and not shared with anyone besides the research team.

The interview will take 1-1.5 hours. Do you have any questions about the study or the interview? Do you consent to participate? *Ask respondent to sign the ethical consent form.*

### **B. Interview**

We would like to ask questions about decision making in your home. I would like to start with the crops you grow.

- What are the main food crops which are grown in this household?
- What are the main cash crops?
- If you think back to the past three seasons, did anything change in the crops you grow?

#### **Food crops**

We want to first ask about food crops.

- How have you been relating with your husband when it comes to making decisions on food crops for your household?

#### **Change over time**

*(Ranking)* We want to ask you to give marks for your weight in decision making on food crops over the past three seasons. To what extent do you have a final say in decisions about food crops for your household? How heavy does your opinion, preference or will influence the final decision? Each mark is right, you give the marks according to how it is in your household. The marks go from one to 10. one means that you have no weight in the final decision on food crops, 10 means you have a lot of weight. *(Figure B shows an example of the ranking method used).*

*Confirm the answer.* I see from the ranking that there was a change from . . . to . . .

- Why did your weight in decisions on food crops change?
- Was there a specific moment or event when things changed?
- How do you feel about this change?

Other women

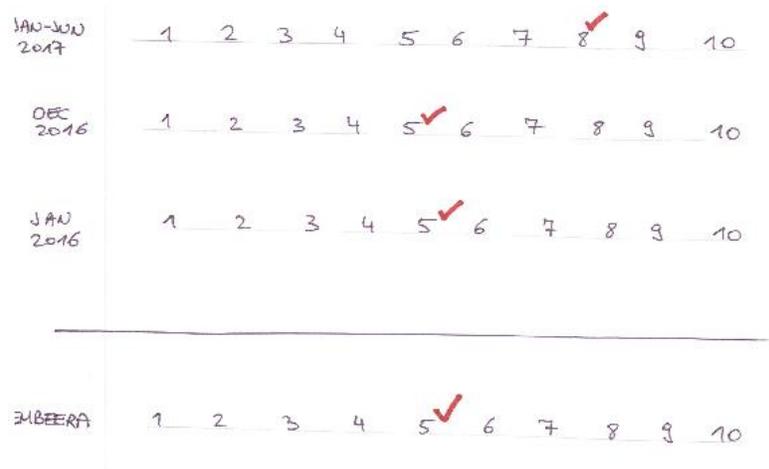
Now think about 20 women in your community.

- Compared to these 20 women, where do you stand in terms of your weight in decision making on food

crops in your home?

- Why do you say you stand at this position?
- How do you feel about being in this position?

*Figure B: Example of ranking method used for women’s weight in final decisions on food crops. We ask respondents to report changes over the previous three agricultural seasons as well as indicate their ideal situation (‘embeera’) in terms of their decision-making weight.*



Ideal situation

Show the respondent the piece of paper with rankings. Now think about your ideal situation, in your life. (We’re not asking about what HRNS tells them is the ideal situation, or what the community expects from them or their household, we want to know how important this is for them in their own life.)

To what extent would you like to have weight in the final decisions on food crops in your household? Can you mark that here? Again one means in your ideal situation you have no weight, 10 means you have a lot of weight.

If the ideal situation is to have very little weight.

- Why is this your ideal situation? You do not want weight in final decisions on food crops?

*If the ideal situation is to have more weight than respondent has now.*

This ideal situation is different from your current situation.

- Do you feel you will be able to reach this ideal situation in the near future? Or will it be hardly possible?
- What would be needed for you to reach your ideal situation? What should change?
- Have you always thought you would or would not be able to reach your ideal situation? If not, why did you change your mind? Was there a special occasion or event which has changed your thinking?

### **Cash crops**

Now we want to ask about the cash crops your household grows.

- How have you been relating with your husband when it comes to making decisions on cash crops for your household?

### Change over time

*(Ranking)* We want to ask you to give marks for your weight in decision making on cash crops over the past three seasons. To what extent do you have a final say in the decisions about cash crops for your household? How heavy does your opinion, preference or will influence the final decision?

*Confirm the answer.* I see from the ranking that there was a change from . . . to . . .

- Why did your weight in decisions on cash crops change?
- How do you feel about this change?

### Other women

Now think about 20 women in your community.

- Compared to these 20 women, where do you stand in terms of your weight in decision making on cash crops in your home?
- Why do you say you stand at this position?
- How do you feel about being in this position?

### Ideal situation

Now think about *your* ideal situation, in *your* life.

*(Ranking)* To what extent would you like to have weight in the final decisions on cash crops in your household? Can you mark that here?

*If the ideal situation is to have very little weight.*

- Why is this your ideal situation? You do not want weight in final decisions on cash crops?

*If the ideal situation is to have more weight than respondent has now.*

This ideal situation is different from your current situation.

- Do you feel you will be able to reach this ideal situation in the near future? Or will it be hardly possible?
- What would be needed for you to reach your ideal situation? What should change?
- Have you always thought you would or would not be able to reach your ideal situation? If not, why did you change your mind? Was there a special occasion or event which has changed your thinking?

## **Land**

Now we want to ask about the land your household owns.

- Who owns the land we are currently on?
- Would you have the power to sell it?
- Imagine your husband decided to sell the land tomorrow. Can you oppose this decision?

## Change over time

*(Ranking)* We want to ask you to give marks for your weight in decision making on land. To what extent do you have a final say in decisions about land for your household? How heavy does your opinion, preference or will influence the final decision? Can you rank this for three periods: your current situation, the situation last Christmas, and the situation the Christmas before that.

- Where does your weight in decisions on land come from?

Since in almost all cases the land belongs to the husband, we are interested to know where women derive their decision-making power from.

Confirm the answer. I see from the ranking that there was a change from . . . to . . .

- Why did your weight in decisions on land change?
- How do you feel about this change?

## Other women

Now think about 20 women in your community.

- Compared to these 20 women, where do you stand in terms of your weight in decision making on land in your home?
- Why do you say you stand at this position?
- How do you feel about being in this position?

## Ideal situation

Now think about *your* ideal situation, in *your* life.

*(Ranking)* To what extent would you like to have weight in the final decisions on land in your household? Can you mark that here?

*If the ideal situation is to have very little weight.*

- Why is this your ideal situation? You do not want weight in final decisions on land?

*If the ideal situation is to have more weight than respondent has now.*

This ideal situation is different from your current situation.

- Do you feel you will be able to reach this ideal situation in the near future? Or will it be hardly possible?
- What would be needed for you to reach your ideal situation? What should change?
- Have you always thought you would or would not be able to reach your ideal situation? If not, why did you change your mind? Was there a special occasion or event which has changed your thinking?

#### Extra

- If your husband would insist on carrying through with a decision to sell, what would happen? • Do you know your legal rights regarding land?

#### **Daily needs**

Now we want to ask about daily needs for your home. This refers to basic items like soap, salt, or paraffin, which your household uses everyday.

- How does your household make decisions on daily needs?

#### Change over time

*(Ranking)* We want to ask you to give marks for your weight in decision making on daily needs. To what extent do you have a final say in the decisions on daily needs for your household? How heavy does your opinion, preference or will influence the final decision? Can you rank this for three periods: your current situation, the situation last Christmas, and the situation the Christmas before that.

*Confirm the answer.* I see from the ranking that there was a change from . . . to . . . • Why did your weight in decisions on daily needs change?

- How do you feel about this change?

#### Other women

Now think about 20 women in your community.

- Compared to these 20 women, where do you stand in terms of your weight in decision making on daily needs in your home?
- Why do you say you stand at this position?

- How do you feel about being in this position?

### Ideal situation

Now think about *your* ideal situation, in *your* life.

*(Ranking)* To what extent would you like to have weight in the final decisions on daily needs in your household? Can you mark that here?

*If the ideal situation is to have very little weight.*

- Why is this your ideal situation? You do not want weight in final decisions on daily needs? *If the ideal situation is to have more weight than respondent has now.*

This ideal situation is different from your current situation.

- Do you feel you will be able to reach this ideal situation in the near future? Or will it be hardly possible?
- What would be needed for you to reach your ideal situation? What should change?
- Have you always thought you would or would not be able to reach your ideal situation? If not, why did you change your mind? Was there a special occasion or event which has changed your thinking?

### **Strategic expenditures**

Now we want to ask about big decisions for your home. Examples are when you buy a bicycle, or maybe a TV, or you repair the roof, or you decide to invest some money in a personal business. • How does your household make these strategic decisions?

### Change over time

*(Ranking)* We want to ask you to give marks for your weight in making these strategic decisions. To what extent do you have a final say in strategic decisions for your household? How heavy does your opinion, preference or will influence the final decision? Can you rank this for three periods: your current situation, the situation last Christmas, and the situation the Christmas before that.

*Confirm the answer.* I see from the ranking that there was a change from . . . to . . .

- Why did your weight in strategic decisions change?
- How do you feel about this change?

### Other women

Now think about 20 women in your community.

- Compared to these 20 women, where do you stand in terms of your weight in making strategic decisions in your home?
- Why do you say you stand at this position?

- How do you feel about being in this position?

### Ideal situation

Now think about *your* ideal situation, in *your* life.

*(Ranking)* To what extent would you like to have weight in the final strategic decisions in your household? Can you mark that here?

*If the ideal situation is to have very little weight.*

- Why is this your ideal situation? You do not want weight in strategic decisions?

*If the ideal situation is to have more weight than respondent has now.*

This ideal situation is different from your current situation.

- Do you feel you will be able to reach this ideal situation in the near future? Or will it be hardly possible?
- What would be needed for you to reach your ideal situation? What should change?
- Have you always thought you would or would not be able to reach your ideal situation? If not, why did you change your mind? Was there a special occasion or event which has changed your thinking?

### **Groups**

- Do you belong to any groups? Which ones?
- Are these groups mixed?
- Do you hold a leadership position?

*We want to focus on one example, preferably a group with both male and female members.*

*(If respondent is not a member of any group.)*

- Would you like to join a group?
- What is stopping you from doing this?

### Change over time

*(Ranking)* We want to ask you to give marks for your input in the decisions made in this group. To what extent does your opinion, preference or will influence the final decision? Can you rank this for three periods: your current situation, the situation last Christmas, and the situation the Christmas before that.

*Confirm the answer.* I see from the ranking that there was a change from . . . to . . . • Why did your input in the group's decisions change?

- How do you feel about this change?

### Other women

Now think about the other women in your group.

- Compared to these women, where do you stand in terms of your input in the group's decisions?
- Why do you say you stand at this position?
- How do you feel about being in this position?

### Ideal situation

Now think about *your* ideal situation, in *your* life.

*(Ranking)* To what extent would you like to have input in the group's decisions? Can you mark that here?

*If the ideal situation is to have very little input.*

- Why is this your ideal situation? You do not want input in the group's decisions? 72

*If the ideal situation is to have more weight than respondent has now.*

This ideal situation is different from your current situation.

- Do you feel you will be able to reach this ideal situation in the near future? Or will it be hardly possible?
- What would be needed for you to reach your ideal situation? What should change?
- Have you always thought you would or would not be able to reach your ideal situation? If not, why did you change your mind? Was there a special occasion or event which has changed your thinking?

### Importance

- Is it important for women to be a member of a group?
- Why?

### **Importance of weight in decision making**

Now for each of the things we discussed I want to ask you how important it is *for you* to have weight in the final decisions on these items. On this paper there are three boxes, *very important* on the left, *somewhat important* in the middle and *not important* on the right (see Figure C). For each of the things we discussed you can place a sticky note in the box of your choice.

- How important is it for you to have weight in the final decisions on food crops? How important is it to feel comfortable and to live the life you want? *Again, we're not asking about what HRNS tells them, or what their husband or the community thinks.*
- How important is it for you to have weight in the final decisions on cash crops?
- How important is it for you to have weight in the final decisions on land?
- How important is it for you to have weight in the final decisions on daily needs?

- How important is it for you to have weight in the final decisions on strategic expenditures?
- How important is it for you to have input in the decisions of your group?

If women rank some categories as somewhat or not important.

- Why is it less or not important for you to have weight in final decisions on . . .

### **Couple seminar**

*When respondents do not mention the gender program themselves as a reason for change in their weight in final decisions in any of the categories discussed above.*

- Did you attend the HRNS couple seminars? How often?
- (If women belong to a Change Agent couple) Did you receive a house visit? Were you told to go and visit other households?
- What did you learn in the seminar(s)?
- Did anything change at home afterwards? • Did you discuss things with your husband?

### **Extra questions**

#### Income

- Who sells the cash crops?
- Do you know the income from the sale?
- What is the money used for?
- Do you have a source of personal income?
- Does your husband know how much money you have?
- What do you use your personal income for?
- Would you like to have more personal income?
- Would you like to have personal food and/or coffee gardens? • How does your husband finance his personal needs?
- Do you own any personal livestock?
- Why is livestock not owned jointly by the household?

#### Daily needs

- What happens if there is not enough money?
- Can you give an example of a daily need you requested from your husband which he refused? • If he refuses, how do you manage?

#### Strategic expenditures

- Has there been a situation where your husband asked your opinion on a decision?

- Can you give an example of a decision you initiated?
- Can you give an example of a decision you did not agree with and successfully opposed?

Community

- How do other women relate to you? How do they see you?
- Has anything changed in this respect because of changes in decision making in your home? • Do you receive support from other women?
- What if people came to talk to your husband about the importance of working together?

Summary

- What is the biggest challenge in your household in terms of decision making?
- What do you hope for in the future?
- *(Only when respondent has reported significant changes and ascribed them to the HRNS gender program.)* Given all the changes you told me about after the couple seminar, what has been the most significant change for you, in your life?
- I have now asked you many things, is there anything you want to ask me?

Thank you!

*Figure C: Example of participatory method used to rank the importance women assign to their weight in final decisions for the five categories of decision making discussed during the interview (food crops, cash crops, land, daily needs and strategic decisions), and for their input in group decisions.*



**Online Supplemental Materials F**

*Table K: Full results Table 3 – Estimates of average treatment effects ( $\beta_x$ ) on women's control over assets and income and on time allocation*

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Share TLU	Share TLU A	Personal income	Share coffee income	Share coffee income A	Transparency	Time
<b>Panel A</b>								
T vs CACB	$\beta_x$	0.008	0.006	0.018	0.104*	0.074	0.162	0.031
	S.E.	(0.035)	(0.031)	(0.042)	(0.043)	(0.042)	(0.099)	(0.021)
	p	0.813	0.849	0.672	0.015	0.079	0.101	0.137
	<i>p adj</i>	1.000	0.998	0.999	0.097	0.280	0.514	0.523
	N	558	555	678	535	521	483	627
Mubende	$\beta_x$	0.074**	0.117***	-0.210***	0.001	0.046	0.239*	-0.012
	S.E.	(0.032)	(0.029)	(0.039)	(0.040)	(0.040)	(0.092)	(0.019)
	p	0.020	0.000	0.000	0.989	0.253	0.009	0.538
	<i>p adj</i>	0.118	0.000	0.000	1.000	0.688	0.059	0.979
	N	558	555	678	535	521	483	627
Constant	$\beta_x$	0.374***	0.409***	0.652***	0.262***	0.261***	0.424***	0.294***
	S.E.	(0.028)	(0.026)	(0.035)	(0.037)	(0.037)	(0.088)	(0.016)
	p	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	<i>p adj</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	558	555	678	535	521	483	627
R <sup>2</sup>	0.009	0.030	0.045	0.008	0.006	0.016	0.002	
F degrees of freedom	555.00	552.00	675.00	532.00	518.00	480.00	624.00	
F statistic	2.73	8.12	14.90	2.95	2.23	3.83	1.35	
Adj. R <sup>2</sup>	0.01	0.03	0.04	0.00	0.00	0.01	-0.00	
<b>Panel B</b>								
CACB vs CC	$\beta_x$	0.013	0.007	0.054	-0.102	-0.095	-0.062	-0.028
	S.E.	(0.078)	(0.072)	(0.074)	(0.087)	(0.076)	(0.140)	(0.030)
	p	0.871	0.917	0.460	0.242	0.214	0.658	0.342
	<i>p adj</i>	1.000	0.999	0.973	0.828	0.597	0.999	0.851
	N	359	356	434	348	342	314	403
Mubende	$\beta_x$	0.057	0.133	-0.309***	0.026	-0.046	-0.066	-0.042
	S.E.	(0.082)	(0.079)	(0.075)	(0.097)	(0.083)	(0.165)	(0.029)
	p	0.490	0.093	0.000	0.791	0.579	0.691	0.144
	<i>p adj</i>	0.983	0.242	0.000	1.000	0.962	0.999	0.507
	N	359	356	434	348	342	314	403
Constant	$\beta_x$	0.374***	0.405***	0.656***	0.378***	0.426***	0.683***	0.340***
	S.E.	(0.108)	(0.103)	(0.088)	(0.116)	(0.094)	(0.199)	(0.027)
	p	0.001	0.000	0.000	0.001	0.000	0.001	0.000
	<i>p adj</i>	0.006	0.000	0.000	0.006	0.000	0.006	0.000
	N	359	356	434	348	342	314	403
R <sup>2</sup>	0.007	0.042	0.098	0.013	0.014	0.002	0.013	
F degrees of freedom	359.00	356.00	434.00	348.00	342.00	314.00	403.00	
F statistic	0.31	2.56	10.07	0.93	0.83	0.12	1.80	
Adj. R <sup>2</sup>	0.00	0.04	0.09	0.01	0.01	-0.00	0.01	

Estimates of local average treatment effects ( $\beta_x$ ) based on second stage of IV regression using two-step GMM in case of T vs CACB (Panel A) and estimates of average treatment effects using ordinary least square (OLS) regression in case of CACB vs CC (Panel B), with robust standard errors (S.E.) on matched samples using PSM and controlling for area fixed effects with a dummy for the Mubende sub-sample.

Mubende= dummy controlling for sub-sample from Mubende district; T= Encouraged for intensive coaching; CACB=Selected for couple seminar only; CC=Without GHA exposure. p=p-value; p adj.=p-value adjusted for multiple hypotheses testing; \*\*\* significance at 99%, \*\* 95%, \* 90% based on p adj.

*Share TLU* = Share of household tropical livestock units (TLU) (excluding poultry) the wife reported to personally or jointly own. *Share TLU A* = Idem but based on averages of TLU reported by husband and wife. *Personal income* = Indicator taking the value one if the wife reported she personally earned any income from off-farm activities, fishing, sales of livestock and/or remittances in three months prior to endline. *Share coffee income* = Share of total household income from selling coffee in which the wife was involved, personally or jointly with her husband, in sales transaction including receiving money. *Share coffee income A* = Idem but based on averages of coffee income in which the wife was involved in sales transaction reported by husband and wife. *Transparency* = Ratio of wife versus husband reported total household coffee income as an indicator of transparency. *Time* = Difference in proportion of work time (i.e. total time allocated to productive, reproductive and domestic activities) wife and husband reported to allocate to tasks in reproductive and domestic sphere.

Table L: Full results Table 4 – Estimates of average treatment effects ( $\beta_x$ ) on women's involvement in strategic farm and household decisions and on improved household welfare

		(1)	(2)	(3)	(4)	(5)	(6)
		Involvement farm decisions	Involvement farm decisions A	Involvement household decisions	Involvement household decisions A	Improved welfare	Improved welfare A
Panel A							
T vs CACB	$\beta_x$	-0.019	-0.034	0.018	-0.018	-0.013	0.002
	S.E.	(0.025)	(0.023)	(0.025)	(0.024)	(0.029)	(0.026)
	p	0.441	0.141	0.475	0.459	0.648	0.951
	<i>p adj</i>	0.983	0.503	0.990	0.941	0.999	1.000
	N	678	678	678	678	667	662
Mubende	$\beta_x$	0.108***	0.137***	0.065**	0.123	-0.024	-0.028
	S.E.	(0.023)	(0.021)	(0.023)	(0.022)	(0.027)	(0.025)
	p	0.000	0.000	0.004	0.000	0.372	0.258
	<i>p adj</i>	0.000	0.000	0.028	0.000	0.948	0.613
Constant	$\beta_x$	0.330***	0.187***	0.555***	0.362***	0.145***	0.113***
	S.E.	(0.020)	(0.017)	(0.020)	(0.020)	(0.027)	(0.024)
	p	0.000	0.000	0.000	0.000	0.000	0.000
	<i>p adj</i>	0.000	0.000	0.000	0.000	0.000	0.000
N	678	678	678	678	667	662	
R <sup>2</sup>	0.033	0.063	0.012	0.046	0.001	0.002	
F degrees of freedom	675.00	675.00	675.00	675.00	664.00	659.00	
F statistic	11.74	22.09	4.38	15.33	0.45	0.64	
Adj. R <sup>2</sup>	0.03	0.06	0.01	0.04	-0.00	-0.00	
Panel B							
CACB vs CC	$\beta_x$	0.141***	0.093*	0.151***	0.165***	0.098***	0.072***
	S.E.	(0.043)	(0.042)	(0.044)	(0.043)	(0.023)	(0.020)
	p	0.001	0.025	0.001	0.000	0.000	0.000
	<i>p adj</i>	0.007	0.099	0.007	0.000	0.000	0.000
	N	434	434	434	434	427	424
Mubende	$\beta_x$	0.124**	0.133***	0.107	0.167***	-0.044	-0.025
	S.E.	(0.041)	(0.039)	(0.044)	(0.041)	(0.024)	(0.021)
	p	0.003	0.001	0.016	0.000	0.063	0.218
	<i>p adj</i>	0.020	0.004	0.105	0.000	0.318	0.487
Constant	$\beta_x$	0.191***	0.104***	0.379***	0.172***	0.051*	0.034
	S.E.	(0.036)	(0.032)	(0.048)	(0.040)	(0.021)	(0.017)
	p	0.000	0.001	0.000	0.000	0.015	0.039
	<i>p adj</i>	0.000	0.004	0.000	0.000	0.085	0.102
N	434	434	434	434	427	424	
R <sup>2</sup>	0.089	0.071	0.087	0.142	0.042	0.028	
F degrees of freedom	.	.	.	.	.	.	
F statistic	15.87	13.75	8.50	19.55	12.05	7.75	
Adj. R <sup>2</sup>	0.08	0.07	0.08	0.14	0.04	0.02	

Estimates of local average treatment effects ( $\beta_x$ ) based on second stage of IV regression using two-step GMM in case of T vs CACB (Panel A) and estimates of average treatment effects and using ordinary least square (OLS) regression in case of CACB vs CC (Panel B), with robust standard errors (S.E.) on matched samples using PSM and controlling for area fixed effects with a dummy for the Mubende sub-sample.

Mubende= dummy controlling for sub-sample from Mubende district; T= Encouraged for intensive coaching; CACB=Selected for couple seminar only; CC=Without GHA exposure. p=p-value; *p adj.*=p-value adjusted for multiple hypotheses testing; \*\*\* significance at 99%, \*\* 95%, \* 90% based on *p adj.*

*Involvement farm decisions* = Percentage out of four types of strategic farm decisions in which the wife was involved, personally or jointly with her husband or another household member, based on women's accounts. *Involvement farm decisions A* = Idem but based on husband and wife agreeing upon wife's involvement. *Involvement household decisions* = Percentage out of four types of strategic household decisions in which the wife was involved, personally or jointly with her husband or another household member, based on women's accounts. *Involvement household decisions A* = Idem but based on husband and wife agreeing upon wife's involvement. *Improved welfare* = Indicator taking the value one if wife believes that the household has improved its (economic) wellbeing and/or food security situation as compared to a year before. *Improved welfare A* = Idem but based on husband and wife agreeing upon improved wellbeing and/or food security.

## Online Supplemental Materials G

Table M – Estimates of intention to treat effects (ITT) ( $\beta_x$ ) of intensive coaching versus only couple seminar on women's control over assets and income and on time allocation

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Share TLU	Share TLU A	Personal income	Share coffee income	Share coffee income A	Transparency	Time
T vs CACB	$\beta_x$	0.008	0.006	0.016	0.097*	0.069	0.151	0.028
	S.E.	(0.032)	(0.029)	(0.039)	(0.040)	(0.039)	(0.092)	(0.019)
	p	0.813	0.849	0.673	0.015	0.080	0.103	0.139
	p adj	1.000	0.998	0.999	0.097	0.283	0.521	0.529
	N	558	555	678	535	521	483	627

Estimates of intention to treat effects (ITT) ( $\beta_x$ ) using ordinary least square (OLS) regression with robust standard errors (S.E.) on matched samples using PSM and controlling for area fixed effects with a dummy for the Mubende sub-sample.

T= Encouraged for intensive coaching; CACB=Selected for couple seminar only. p=p-value; p adj.=p-value adjusted for multiple hypotheses testing; \*\*\* significance at 99%, \*\* 95%, \* 90% based on p adj.

*Share TLU* = Share of household tropical livestock units (TLU) (excluding poultry) the wife reported to personally or jointly own. *Share TLU A* = Idem but based on averages of TLU reported by husband and wife. *Personal income* = Indicator taking the value one if the wife reported she personally earned any income from off-farm activities, fishing, sales of livestock and/or remittances in three months prior to endline. *Share coffee income* = Share of total household income from selling coffee in which the wife was involved, personally or jointly with her husband, in sales transaction including receiving money. *Share coffee income A* = Idem but based on averages of coffee income in which the wife was involved in sales transaction reported by husband and wife. *Transparency* = Ratio of wife versus husband reported total household coffee income as an indicator of transparency. *Time* = Difference in proportion of work time (i.e. total time allocated to productive, reproductive and domestic activities) wife and husband reported to allocate to tasks in reproductive and domestic sphere.

*Table N – Estimates of intention to treat effects (ITT) ( $\beta_x$ ) of intensive coaching versus only couple seminar on women’s involvement in strategic farm and household decisions and on improved household welfare*

		(1)	(2)	(3)	(4)	(5)	(6)
		Involvement farm decisions	Involvement farm decisions A	Involvement household decisions	Involvement household decisions A	Improved welfare	Improved welfare A
T vs CACB	$\beta_x$	-0.018	-0.032	0.016	-0.017	-0.012	0.002
	S.E.	(0.023)	(0.021)	(0.023)	(0.022)	(0.027)	(0.025)
	p	0.442	0.142	0.476	0.461	0.649	0.951
	p adj	0.983	0.506	0.990	0.942	0.999	1.000
	N	678	678	678	678	667	662

Estimates of intention to treat effects (ITT) ( $\beta_x$ ) using ordinary least square (OLS) regression with robust standard errors (S.E.) on matched samples using PSM and controlling for area fixed effects with a dummy for the Mubende sub-sample.

T= Encouraged for intensive coaching; CACB=Selected for couple seminar only. p=p-value; p adj.=p-value adjusted for multiple hypotheses testing. p=p-value; p adj.=p-value adjusted for multiple hypotheses testing; \*\*\* significance at 99%, \*\* 95%, \* 90% based on p adj.

*Involvement farm decisions* = Percentage out of four types of strategic farm decisions in which the wife was involved, personally or jointly with her husband or another household member, based on women’s accounts. *Involvement farm decisions A*= Idem but based on husband and wife agreeing upon wife’s involvement. *Involvement household decisions* = Percentage out of four types of strategic household decisions in which the wife was involved, personally or jointly with her husband or another household member, based on women’s accounts. *Involvement household decisions A*= Idem but based on husband and wife agreeing upon wife’s involvement. *Improved welfare* = Indicator taking the value one if wife believes that the household has improved its (economic) wellbeing and/or food security situation as compared to a year before. *Improved welfare A* = Idem but based on husband and wife agreeing upon improved wellbeing and/or food security.

*Table O Estimates of average treatment effects ( $\beta_x$ ) on changes over time in women's access to assets and income and on changes over time in time allocation*

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
		share TLU	share TLU A	personal income	Difference end- vs baseline in		transparency	time
					share coffee income	share coffee income A		
					Only Mubende	Only Mubende	Only Mubende	Only Mubende
Panel A								
T vs CACB	$\beta_x$	-0.085	0.020	-0.004	0.027	0.064	0.064	0.095
	S.E.	(0.045)	(0.038)	(0.049)	(0.092)	(0.078)	(0.286)	(0.046)
	p	0.056	0.594	0.927	0.767	0.415	0.824	0.039
	<i>p adj</i>	0.346	0.970	1.000	1.000	0.926	1.000	0.217
	N	471	487	685	247	233	195	300
Panel B								
CACB vs CC	$\beta_x$	0.121	0.025	-0.010	-0.126	-0.040	-0.171	-0.199***
	S.E.	(0.061)	(0.051)	(0.078)	(0.127)	(0.097)	(0.222)	(0.062)
	p	0.047	0.626	0.901	0.324	0.681	0.442	0.001
	<i>p adj</i>	0.359	0.980	1.000	0.961	0.996	0.992	0.006
	N	302	308	436	159	153	131	196

Estimates of local average treatment effects (LATE) ( $\beta_x$ ) based on second stage of IV regression using two-step GMM in case of T vs CACB (Panel A) and estimates of average treatment effects using ordinary least square (OLS) regression in case of CACB vs CC (Panel B), with robust standard errors (S.E.). In both cases, controlling for area fixed effects with a dummy for the Mubende sub-sample and controlling for spousal age difference, wife's age, husband, resp. wife, has some secondary education, polygynous relationship, wife's membership of a microfinance group, number of children, and land size; additionally for house built with fire-baked bricks in case of T vs CACB.<sup>i</sup>

T= Encouraged for intensive coaching; CACB=Selected for couple seminar only; CC=Without GHA exposure. p=p-value; *p adj*=p-value adjusted for multiple hypotheses testing; \*\*\* significance at 99%, \*\* 95%, \* 90% based on *p adj*.

*Share TLU* = Share of household tropical livestock units (TLU) (excluding poultry) the wife reported to personally or jointly own. *Share TLU A* = Idem but based on averages of TLU reported by husband and wife. *Personal income* = Indicator taking the value one if the wife reported she personally earned any income from off-farm activities, fishing, sales of livestock and/or remittances in three months prior to endline. *Share coffee income* = Share of total household income from selling coffee in which the wife was involved, personally or jointly with her husband, in sales transaction including receiving money. *Share coffee income A* = Idem but based on averages of coffee income in which the wife was involved in sales transaction reported by husband and wife. *Transparency* = Ratio of wife versus husband reported total household coffee income as an indicator of transparency. *Time* = Difference in proportion of work time (i.e. total time allocated to productive, reproductive and domestic activities) wife and husband reported to allocate to tasks in reproductive and domestic sphere.

<sup>i</sup> Changes over time of some outcome indicators were only available for the Mubende sub-sample because these were not or differently measured at baseline in the Masaka-Kalungu sub-sample.

*Table P Estimates of average treatment effects ( $\beta_x$ ) on changes over time in women's involvement in strategic farm and household decisions and on changes over time in improved household welfare*

		(1)	(2)	Difference end- vs baseline in		(5)	(6)
		involvement farm decisions	involvement farm decisions A	involvement household decisions	involvement household decisions A	improved welfare	improved welfare A
Panel A							
T vs CACB	$\beta_x$	-0.021	-0.026	-0.010	-0.025	-0.036	0.016
	S.E.	(0.025)	(0.024)	(0.029)	(0.029)	(0.040)	(0.033)
	p	0.420	0.278	0.723	0.382	0.367	0.628
	<i>p adj</i>	0.977	0.836	1.000	0.921	0.964	0.982
	N	685	685	685	685	673	668
Panel B							
CACB vs CC	$\beta_x$	0.147***	0.107**	0.159***	0.233***	0.196***	-0.027
	S.E.	(0.035)	(0.037)	(0.040)	(0.040)	(0.058)	(0.032)
	p	0.000	0.004	0.000	0.000	0.001	0.394
	<i>p adj</i>	0.000	0.023	0.000	0.000	0.008	0.866
	N	436	436	436	436	428	425

Estimates of local average treatment effects (LATE) ( $\beta_x$ ) based on second stage of IV regression using two-step GMM in case of T vs CACB (Panel A) and estimates of average treatment effects and using ordinary least square (OLS) regression in case of CACB vs CC (Panel B), with robust standard errors (S.E.). In both cases, controlling for area fixed effects with a dummy for the Mubende sub-sample and controlling for spousal age difference, wife's age, husband, resp. wife, has some secondary education, polygynous relationship, wife's membership of a microfinance group, number of children, and land size; additionally for house built with fire-baked bricks in case of T vs CACB.

T= Encouraged for intensive coaching; CACB=Selected for couple seminar only; CC=Without GHA exposure. p=p-value; *p adj*.=p-value adjusted for multiple hypotheses testing; \*\*\* significance at 99%, \*\* 95%, \* 90% based on *p adj*.

*Involvement farm decisions* = Percentage out of four types of strategic farm decisions in which the wife was involved, personally or jointly with her husband or another household member, based on women's accounts. *Involvement farm decisions A*= Idem but based on husband and wife agreeing upon wife's involvement. *Involvement household decisions* = Percentage out of four types of strategic household decisions in which the wife was involved, personally or jointly with her husband or another household member, based on women's accounts. *Involvement household decisions A*= Idem but based on husband and wife agreeing upon wife's involvement. *Improved welfare* = Indicator taking the value one if wife believes that the household has improved its (economic) wellbeing and/or food security situation as compared to a year before. *Improved welfare A* = Idem but based on husband and wife agreeing upon improved wellbeing and/or food security.

## Online Supplemental Materials H

Table Q - Average treatment (spillover) effects ( $\beta_x$ ) estimated by comparing the group selected for couple seminar with potential spillovers and the group selected for couple seminar without spillovers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
			Personal	Share coffee	Share coffee			Involvement	Involvement	Involvement	Involvement	Improved	Improved
CA vs CB	Share TLU	Share TLU A	income	income	income A	Transparency	Time	farm	farm	household	household	welfare	welfare A
$\beta_x$	-0.093	-0.100	0.071	0.036	0.053	-0.025	0.004	0.055	0.046	0.088	0.041	0.058	0.085*
S.E.	(0.069)	(0.056)	(0.083)	(0.071)	(0.075)	(0.138)	(0.040)	(0.052)	(0.053)	(0.050)	(0.049)	(0.046)	(0.037)
p	0.179	0.075	0.392	0.610	0.483	0.854	0.920	0.296	0.388	0.081	0.406	0.211	0.023
p adj	0.742	0.210	0.973	0.999	0.940	1.000	1.000	0.943	0.917	0.508	0.917	0.823	0.066
N	141	140	184	153	151	137	171	184	184	184	184	184	182

Estimates of average treatment (spillover) effects ( $\beta_x$ ) using ordinary least square (OLS) regression with robust standard errors (S.E.) on matched samples using PSM and controlling for area fixed effects with a dummy for the Mubende sub-sample.<sup>ii</sup>

CA=Selected for couple seminar only with potential spillovers; CB=Selected for couple seminar only without spillovers. p=p-value; p adj.=p-value adjusted for multiple hypotheses testing; \*\*\* significance at 99%, \*\* 95%, \* 90% based on p adj.

*Share TLU* = Share of household tropical livestock units (TLU) (excluding poultry) the wife reported to personally or jointly own. *Share TLU A* = Idem but based on averages of TLU reported by husband and wife. *Personal income* = Indicator taking the value one if the wife reported she personally earned any income from off-farm activities, fishing, sales of livestock and/or remittances in three months prior to endline. *Share coffee income* = Share of total household income from selling coffee in which the wife was involved, personally or jointly with her husband, in sales transaction including receiving money. *Share coffee income A* = Idem but based on averages of coffee income in which the wife was involved in sales transaction reported by husband and wife. *Transparency* = Ratio of wife versus husband reported total household coffee income as an indicator of transparency. *Time* = Difference in proportion of work time (i.e. total time allocated to productive, reproductive and domestic activities) wife and husband reported to allocate to tasks in reproductive and domestic sphere. *Involvement farm decisions* = Percentage out of four types of strategic farm decisions in which the wife was involved, personally or jointly with her husband or another household member, based on women's accounts. *Involvement farm decisions A* = Idem but based on husband and wife agreeing upon wife's involvement. *Involvement household decisions* = Percentage out of four types of strategic household decisions in which the wife was involved, personally or jointly with her husband or another household member, based on women's accounts. *Involvement household decisions A* = Idem but based on husband and wife

<sup>ii</sup> When comparing the group selected for couple seminar with potential spillovers (CA) and the group selected for couple seminar without spillovers (CB), in addition to covariates to control for initial levels of women's empowerment, food security, land size and husband's off-farm income (listed in Online Supplemental Materials A), we controlled for husband's personally owned TLU and house built with fire-baked bricks to correct for baseline imbalance

agreeing upon wife's involvement. *Improved welfare* = Indicator taking the value one if wife believes that the household has improved its (economic) wellbeing and/or food security situation as compared to a year before. *Improved welfare A* = Idem but based on husband and wife agreeing upon improved wellbeing and/or food security.