

Annex 1: Tables

In this section we report the correlations between the different wealth indices, in particular the estimated Regional WI, and a set of wealth indices derived from the original DHS data (Tables A2 to A5). The critical correlation between the original country-specific WI using all the variables available for that country, and the Regional WI using just the variables common to all country datasets is highlighted in red. The correlation between the country-specific WI calculated using only the common regional variables and the same Regional WI is highlighted in blue.

Tables A6, A7 and A8 show the results of the model (at the cluster and household level), through the list of the predictor variables and their means, and the accuracy results.

Table A 1. Definitions of the wealth indices calculated for this project.

Name	Definition
WI_COMMC	Country-specific WI calculated with common variables
WI_ALLC	Country-specific WI calculated with all available variables
WI_REG	Regional WI (with all common variables)
WI_REGIM	Regional WI without wc_bush and fl_dirt
WI_REG2	Regional WI without w_pipe_r and wc_pit
WLTHINF	Original WI

Table A 2. Correlations between the different wealth indices for Eritrea. All correlation values are significant at $p < 0.001$ or better.

Name	ERITREA 2002	WI_COMMC	WI_ALLC	WI_REG	WI_REGIM	WI_REG2	WLTHINF
WI_COM-MC	Pearson Correlation	1	0.994	0.995	0.983	0.994	0.973
	N	9 389	7 194	9 389	9 389	9 389	9 389
WI_ALLC	Pearson Correlation	0.994	1	0.99	0.983	0.99	0.98
	N	7 194	7 194	7 194	7 194	7 194	7 194
WI_REG	Pearson Correlation	0.995	0.99	1	0.99	1	0.969
	N	9 389	7 194	9 389	9 389	9 389	9 389
WI_REGIM	Pearson Correlation	0.983	0.983	0.99	1	0.991	0.959
	N	9 389	7 194	9 389	9 389	9 389	9 389
WI_REG2	Pearson Correlation	0.994	0.99	1	0.991	1	0.968
	N	9 389	7 194	9 389	9 389	9 389	9 389
WLTHINF	Pearson Correlation	0.973	0.98	0.969	0.959	0.968	1
	N	9 389	7 194	9 389	9 389	9 389	9 389

Table A 3. Correlations between the different wealth indices for Ethiopia. All correlation values are significant at $p < 0.001$ or better.

Name	ETHIOPIA 2005	WI_COMMC	WI_ALLC	WI_REG	WI_REGIM	WI_REG2	WLTHINF
WI_COM-MC	Pearson Correlation	1	0.987	0.996	0.973	0.992	0.962
	N	13 721	13 721	13 721	13 721	13 721	13 721
WI_ALLC	Pearson Correlation	0.987	1	0.985	0.966	0.981	0.97
	N	13 721	13 721	13 721	13 721	13 721	13 721
WI_REG	Pearson Correlation	0.996	0.985	1	0.987	0.999	0.965
	N	13 721	13 721	13 721	13 721	13 721	13 721
WI_REGIM	Pearson Correlation	0.973	0.966	0.987	1	0.991	0.954
	N	13 721	13 721	13 721	13 721	13 721	13 721
WI_REG2	Pearson Correlation	0.992	0.981	0.999	0.991	1	0.964
	N	13 721	13 721	13 721	13 721	13 721	13 721
WLTHINF	Pearson Correlation	0.962	0.97	0.965	0.954	0.964	1
	N	13 721	13 721	13 721	13 721	13 721	13 721

Table A 4. Correlations between the different wealth indices for Kenya. All correlation values are significant at $p < 0.001$ or better.

Name	KENYA 2003	WI_COMMC	WI_ALLC	WI_REG	WI_REGIM	WI_REG2	WLTHINF
WI_COM- MC	Pearson Correlation	1	0.981	0.988	0.987	0.993	0.928
	N	8 561	8 561	8 561	8 561	8 561	8 561
WI_ALLC	Pearson Correlation	0.981	1	0.971	0.977	0.975	0.923
	N	8 561	8 561	8 561	8 561	8 561	8 561
WI_REG	Pearson Correlation	0.988	0.971	1	0.982	0.999	0.916
	N	8 561	8 561	8 561	8 561	8 561	8 561
WI_REGIM	Pearson Correlation	0.987	0.977	0.982	1	0.986	0.898
	N	8 561	8 561	8 561	8 561	8 561	8 561
WI_REG2	Pearson Correlation	0.993	0.975	0.999	0.986	1	0.917
	N	8 561	8 561	8 561	8 561	8 561	8 561
WLTHINF	Pearson Correlation	0.928	0.923	0.916	0.898	0.917	1
	N	8 561	8 561	8 561	8 561	8 561	8 561

Table A 5. Correlations between the different wealth indices for Uganda. All correlation values are significant at $p < 0.001$ or better.

Name	UGANDA 2001	WI_COMMC	WI_ALLC	WI_REG	WI_REGIM	WI_REG2	WLTHINF
WI_COM- MC	Pearson Correlation	1	0.978	0.984	0.981	0.987	0.953
	N	7 885	7 885	7 885	7 885	7 885	7 885
WI_ALLC	Pearson Correlation	0.978	1	0.972	0.96	0.973	0.963
	N	7 885	7 885	7 885	7 885	7 885	7 885
WI_REG	Pearson Correlation	0.984	0.972	1	0.974	0.999	0.952
	N	7 885	7 885	7 885	7 885	7 885	7 885
WI_REGIM	Pearson Correlation	0.981	0.96	0.974	1	0.98	0.932
	N	7 885	7 885	7 885	7 885	7 885	7 885
WI_REG2	Pearson Correlation	0.987	0.973	0.999	0.98	1	0.951
	N	7 885	7 885	7 885	7 885	7 885	7 885
WLTHINF	Pearson Correlation	0.953	0.963	0.952	0.932	0.951	1
	N	7 885	7 885	7 885	7 885	7 885	7 885

Table A 6. Modelled WI by household cluster (Model 1) details. Predictor variables and their mean values are shown in the upper two tables. Model accuracy by category is shown in the lower table.

WI_REG	hum foot	ig1515a0	igpp51p2	ig1507a0	iget41mx	igep42mx	ig1514p1	ig0535mn	iget41a3	ig1508p3	n (Sample)
Cat. 1	23.38	0.21	2.6	35.59	269.99	467.87	7.57	7.79	31.43	1.67	151
Cat. 2	26.1	0.22	2.53	34.63	274.3	451.77	7.43	11.05	32	1.8	159
Cat. 3	27.51	0.25	2.6	33.22	267.96	447.36	7.63	22.4	28.32	1.63	149
Cat. 4	28.82	0.27	2.74	32.57	272.95	440.37	7.62	35.34	27.47	1.9	148
Cat. 5	31.94	0.35	3.16	30.84	259.26	434.01	6.41	69.66	24.18	2.05	155
Cat. 6	33.33	0.36	3.4	30.48	253.25	455.67	6.44	79.07	28.75	1.92	151
Cat. 7	33.93	0.36	3.69	29.74	247.46	469.81	5.5	67.97	29.26	2.07	151
Cat. 8	43.67	0.31	3.55	30.66	238.93	461.84	5.79	57.13	28.28	1.8	152
Cat. 9	51.83	0.25	3.17	31.65	242.95	444.36	6.31	29.24	27.52	1.79	148
Cat. 10	63.33	0.2	3.15	31.01	220.99	441.58	5.61	4.67	31.07	1.55	150

Name	Variable Name
humfoot	Human Footprint
ig1515a0	EVI mean
igpp51p2	EARSNL Precipitation phase2
ig1507a0	Day LST mean
iget41mx	EARSNL Actual Evapotranspiration maximum
igep42mx	EARSNL Potential Evapotranspiration maximum
ig1514p1	NDVI phase1
ig0535mn	Evapotranspiration minimum
iget41a3	EARSNL Actual Evapotranspiration amp3
ig1508p3	Night LST phase3

Category	Description	% Correct	% Correct (+/-1 cat.)	% Correct (+/-2 cat.)	% Producer's Accuracy	% Consumer's Accuracy
Cat. 1	-3.0 to -0.8	60.3	72.2	88.7	60.3	45.7
Cat. 2	-0.8 to -0.7	34	78.6	91.8	34	32.9
Cat. 3	-0.7 to -0.6	45.6	69.8	83.9	45.6	33.7
Cat. 4	-0.6 to -0.5	29.1	49.3	75.7	29.1	30.7
Cat. 5	-0.5 to -0.4	27.7	55.5	78.1	27.7	50.6
Cat. 6	-0.4 to -0.2	35.1	64.2	76.2	35.1	35.6
Cat. 7	-0.2 to 0.2	49.7	67.5	77.5	49.7	35.5
Cat. 8	0.2 to 0.8	20.4	59.2	80.3	20.4	44.9
Cat. 9	0.8 to 1.4	31.1	69.6	81.8	31.1	46.5
Cat. 10	1.4 to 3.1	77.3	85.3	88	77.3	59.2

Table A 7. Modelled WI by individual household (Model 2) details. Predictor variables and their mean values are shown in the upper two tables. Model accuracy by category is shown in the lower table.

WI_REG	hum foot	ig1515a0	ig0535p2	igpp51a0	ig1508a2	iget41a1	igep42mx	iget41mx	ig1507p3	iget41a2	n (Sample)
Cat. 1	26.25	0.25	2.56	223.83	1.09	63.72	453.64	267.52	1.71	50.66	4713
Cat. 2	26.17	0.21	2.37	191.86	1.33	68.69	457.23	270.29	1.63	54.19	4463
Cat. 3	28.66	0.26	2.59	232.18	1.2	66.34	452.48	268.62	1.74	52.5	2876
Cat. 4	28.65	0.25	2.53	216.76	1.17	62.54	443.74	263.56	1.62	53.58	2797
Cat. 5	31.9	0.36	3.3	307.37	0.73	46.09	444.7	259.59	1.87	41.81	3957
Cat. 6	33.4	0.35	3.14	294.8	0.83	48.18	453.85	259.76	1.8	43.28	3462
Cat. 7	35.8	0.34	3.06	288	0.79	45.59	452.99	255.34	1.78	43.56	3761
Cat. 8	42.3	0.31	2.95	274.16	0.76	39.2	451.31	247.2	1.65	45.99	3675
Cat. 9	51.09	0.27	2.81	261.57	0.74	34.29	448.85	235.96	1.56	47.89	3687
Cat. 10	59.41	0.23	2.82	237.23	0.74	34.99	448.88	229.82	1.45	53.43	3587

Name	Variable Name
humfoot	Human Footprint
ig1515a0	EVI mean
ig0535p2	ETR phase2
igpp51a0	EARSNL Precipitation mean
ig1508a2	Night LST amp2
iget41a1	EARSNL Actual Evapotranspiration amp1
igep42mx	EARSNL Potential Evapotranspiration maximum
iget41mx	EARSNL Actual Evapotranspiration maximum
ig1507p3	Day LST phase3
iget41a2	EARSNL Actual Evapotranspiration amp2

Category	Description	% Correct	% Correct (+/-1 cat.)	% Correct (+/-2 cat.)	% Producer's Accuracy	% Consumer's Accuracy
Cat. 1	-3.0 to -0.8	47.3	70.9	72.8	47.3	30.7
Cat. 2	-0.8 to -0.8	44	76.9	81.6	44	32.3
Cat. 3	-0.8 to -0.6	4.6	36.1	86.3	4.6	19.4
Cat. 4	-0.6 to -0.6	8.9	31.5	66.2	8.9	21.2
Cat. 5	-0.6 to -0.4	39.5	54.6	60.1	39.5	22.9
Cat. 6	-0.4 to -0.3	17.3	53.2	65	17.3	20.6
Cat. 7	-0.3 to 0.1	8.1	32.9	65.3	8.1	24.2
Cat. 8	0.1 to 0.7	16	35.6	65.9	16	22.7
Cat. 9	0.7 to 1.5	16.7	70.9	75	16.7	28.1
Cat. 10	1.6 to 3.6	71.7	81.3	87.6	71.7	42.9

Table A 8. Modelled WI by household cluster, but using the category boundaries from Model 2 (Model 3) details. Predictor variables and their mean values are shown in the upper two tables. Model accuracy by category is shown in the lower table.

WI_REG	gmppop	dallrd	ig1514p2	ig1507p1	mktaces	ig1507p2	iget41a0	igpp51p2	Cattle	GLC2K	n (Sample)
Cat. 1	47.81	7.78	3.25	2.11	8.24	3.3	158.37	2.81	67.66	12.63	41
Cat. 2	53.72	7.78	2.88	3.13	8.9	3.55	135.02	2.52	37.51	13.88	109
Cat. 3	81.89	4.5	2.91	2.78	6.73	3.38	140.26	2.52	48.43	13.06	294
Cat. 4	110.07	4.7	2.96	2.77	6.32	3.24	147.78	2.62	62.81	13.09	69
Cat. 5	177.43	2.89	3.78	2.69	5.34	2.78	161.73	3	55.21	11.99	187
Cat. 6	243.91	1.52	4.09	2.85	3.53	2.57	174.64	3.31	61.2	12.76	130
Cat. 7	343.5	1.2	4.37	3.77	2.82	2.46	158.11	3.62	68.23	12.26	178
Cat. 8	1 155.95	0.5	4.31	4.16	2.35	2.66	157.04	3.57	46.49	12.97	144
Cat. 9	3 848.92	0.47	3.64	3.46	0.94	2.94	154.72	3.21	29.62	16.39	187
Cat. 10	7 062.34	0.58	3.79	5.1	0.73	3.05	138.27	3.18	24.12	20.27	127

Name	Variable Name
gmppop	GRUMP Population Density
dallrd	Distance to all roads
ig1514p2	NDVI phase2
ig1507p1	Day LST phase1
mktaces	Access to markets
ig1507p2	Day LST phase2
iget41a0	EARSNL Actual Evapotranspiration mean
igpp51p2	EARSNL Potential Evapotranspiration phase2
Cattle	Cattle Density
GLC2K	Global Land Cover 2000

Category	Description	% Correct	% Correct (+/-1 cat.)	% Correct (+/-2 cat.)	% Producer's Accuracy	% Consumer's Accuracy
Cat. 1	-3.0 to -0.8	14.6	36.6	95.1	14.6	42.9
Cat. 2	-0.8 to -0.8	31.2	92.7	92.7	31.2	41
Cat. 3	-0.8 to -0.6	74.8	86.1	92.2	74.8	43.4
Cat. 4	-0.6 to -0.6	2.9	75.4	94.2	2.9	12.5
Cat. 5	-0.6 to -0.4	21.4	40.6	94.1	21.4	36.7
Cat. 6	-0.4 to -0.3	40	76.2	80.8	40	33.1
Cat. 7	-0.3 to 0.1	44.4	69.1	81.5	44.4	38
Cat. 8	0.1 to 0.7	23.6	63.9	85.4	23.6	37.4
Cat. 9	0.7 to 1.6	48.1	78.6	90.9	48.1	61.6
Cat. 10	1.6 to 3.6	71.7	81.3	87.6	71.7	42.9