

Supplementary Material Table S1. Descriptive statistics of the independent variables

SLF Component	Variable		Mean	Min	Max
Human	Population density	Variable	681.97	25	5000
	Teacher/pupil ratio	Population density (people/km ²)	94.98	0	1212
	Illiteracy Rate	Teacher/pupil ratio	72.49	56.82	82.92
	Distance to primary school	Illiteracy rate (%)	3.39	0	230
Natural	% agricultural cover	Distance to primary school (km)	29.01	0	63
	% forest cover	Agricultural cover (% in 1km buffer)	15.48	3.26	95
	Average land size in community	Forest cover (% in community)	2.38	0	250
Financial	Main income activities (farmer (0)/ non-farmer (1))	Average land size in community (Acre)	0.16	0	1
	Distance to microfinance	Main income source (farmer/ non-farmer)	21.74	0	243
Physical	Distance to market	Distance to microfinance (km)	5.54	0	80
	Built settlements	Distance to market (km)	0.26	0.86	0
	Distance to urban centre	Built settlements (yes or no)	83.51	0	335
	Distance to bus stop	Distance to urban centre (km)	6.66	0	168
Vulnerability	Vulnerability (Index, 100 is very high)	Distance to bus stop (km)	55.39	27.58	87.77
	Poverty	Vulnerability Index (0-100, 100 is very high vulnerability)	0.60	0.06	0.91
Shocks	2015 flood	Poverty (proportion under \$1.25 a day)	0.19	0	1
	drought experience	2015 flood/drought experience (Yes or No)	0.52	0	1
	Price shock in 2013/14	Price shock in 2013/14 (Yes or No)	0.17	0	1
	Wettest Month	Wettest Month (mm)	246.81	175	357
	Mean Temperature during wettest quarter	Mean Temperature during wettest quarter (C ⁰)	23.58	19.6	28.5

Supplementary Material Table S2. Independent variables in each for each GWR model (selected via stepwise linear regression)

Model	
Bonding	Income, drought, distance to urban centre, mean temperature in wettest quarter, population density, forest cover, flood, land size, distance to school, vulnerability
Bridging	Income, illiteracy rate, distance to microfinance, mean temperature in wettest quarter, population density, forest cover, vulnerability, wettest month, distance to school, distance to market
Linking	Distance to school, distance to urban centre and drought

Supplementary Material Table S3. Stepwise linear regression for variable selection for the GWR with bonding social capital as the dependent variable. Final independent variables chosen in Model 10 (in blue text)

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	T-statistic	P-value
	B	Std. Error	Beta		
1 (Constant)	0.233	0.025		9.269	0.000
Distance to urban Centre	-0.063	0.006	-0.384	-10.227	0.000
2 (Constant)	0.069	0.034		2.048	0.041
Distance to urban Centre	-0.068	0.006	-0.418	-11.445	0.000
Forest cover	0.076	0.011	0.252	6.889	0.000
3 (Constant)	0.042	0.034		1.239	0.216
Distance to urban center	-0.072	0.006	-0.440	-12.085	0.000
Forest cover	0.076	0.011	0.251	6.978	0.000
Drought	0.078	0.018	0.154	4.274	0.000
4 (Constant)	-0.053	0.040		-1.337	0.182
Distance to urban center	-0.052	0.007	-0.321	-7.138	0.000
Forest cover	0.074	0.011	0.245	6.907	0.000
Drought	0.087	0.018	0.172	4.803	0.000
Income	0.135	0.031	0.197	4.387	0.000
5 (Constant)	-0.237	0.083		-2.854	0.004
Distance to urban center	-0.043	0.008	-0.264	-5.290	0.000
Forest cover	0.077	0.011	0.255	7.162	0.000
Drought	0.089	0.018	0.176	4.942	0.000
Income	0.111	0.032	0.162	3.459	0.001
Population density	0.026	0.010	0.122	2.518	0.012
6 (Constant)	-0.272	0.084		-3.255	0.001
Distance to urban center	-0.047	0.008	-0.287	-5.678	0.000
Forest cover	0.075	0.011	0.247	6.968	0.000

Drought	0.087	0.018	0.172	4.837	0.000
Income	0.124	0.032	0.180	3.832	0.000
Population density	0.028	0.010	0.133	2.734	0.006
Land Size	0.046	0.018	0.101	2.576	0.010
7 (Constant)	-0.281	0.083		-3.369	0.001
Distance to urban center	-0.049	0.008	-0.297	-5.888	0.000
Forest cover	0.073	0.011	0.242	6.829	0.000
Drought	0.085	0.018	0.168	4.767	0.000
Income	0.126	0.032	0.185	3.936	0.000
Population density	0.029	0.010	0.136	2.823	0.005
Land Size	0.050	0.018	0.110	2.803	0.005
Flood	0.059	0.023	0.091	2.585	0.010
8 (Constant)	-0.319	0.085		-3.760	0.000
Distance to urban center	-0.050	0.008	-0.303	-6.024	0.000
Forest cover	0.071	0.011	0.235	6.633	0.000
Drought	0.089	0.018	0.177	4.995	0.000
Income	0.122	0.032	0.178	3.802	0.000
Population density	0.032	0.010	0.152	3.125	0.002
Land Size	0.050	0.018	0.111	2.823	0.005
Flood	0.060	0.023	0.093	2.653	0.008
Distance to School	0.026	0.012	0.080	2.233	0.026
9 (Constant)	-1.572	0.690		-2.278	0.023
Distance to urban center	-0.053	0.008	-0.326	-6.297	0.000
Forest cover	0.069	0.011	0.226	6.345	0.000
Drought	0.086	0.018	0.170	4.788	0.000
Income	0.115	0.032	0.168	3.572	0.000
Population density	0.034	0.010	0.161	3.291	0.001
Land Size	0.051	0.018	0.114	2.914	0.004
Flood	0.047	0.024	0.072	1.961	0.050

Distance to School	0.028	0.012	0.085	2.380	0.018
Temperature	0.232	0.127	0.073	1.830	0.068
10 (Constant)	-2.959	0.846		-3.499	0.001
Distance to urban center	-0.043	0.009	-0.266	-4.777	0.000
Forest cover	0.068	0.011	0.225	6.334	0.000
Drought	0.084	0.018	0.166	4.700	0.000
Income	0.105	0.032	0.154	3.274	0.001
Population density	0.033	0.010	0.156	3.221	0.001
Land Size	0.045	0.018	0.101	2.578	0.010
Flood	0.052	0.024	0.081	2.210	0.027
Distance to School	0.029	0.012	0.088	2.477	0.014
Temperature	0.512	0.161	0.161	3.186	0.002
Vulnerability	-0.003	0.001	-0.162	-2.806	0.005

Supplementary Material Table S4. Stepwise linear regression for variable selection for the GWR with bridging social capital as the dependent variable. Final independent variables chosen in Model 10 (in blue text)

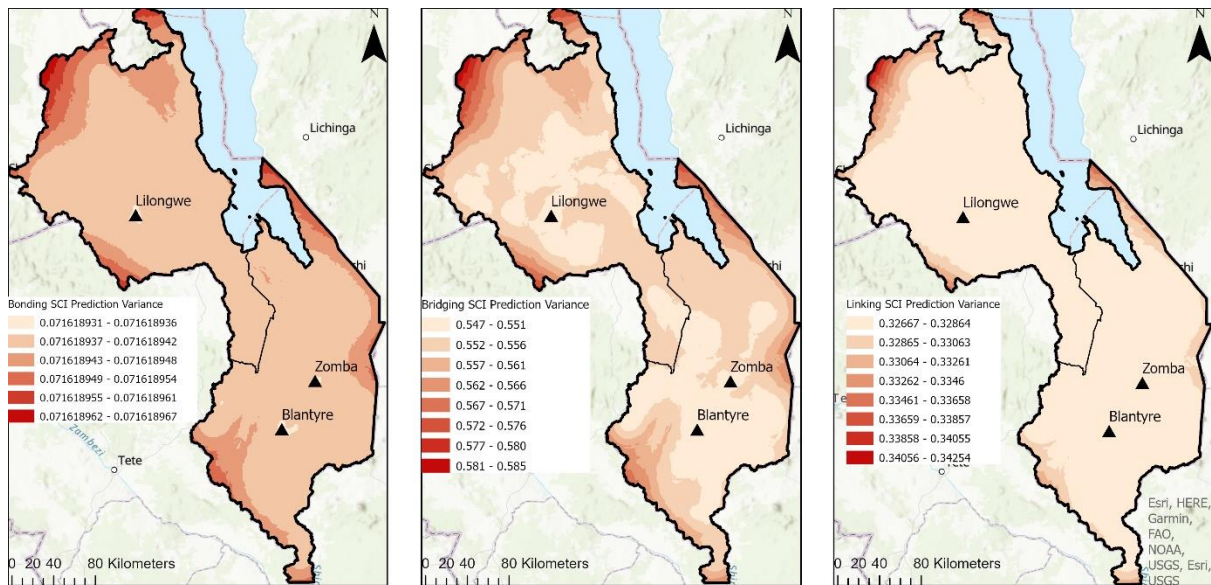
Coefficients					
	Unstandardized Coefficients		Standardized Coefficients Beta	T-statistic	P-value
	B	Std. Error			
1 (Constant)	0.068	0.033		2.061	0.040
Income	-0.420	0.082	-0.204	-5.126	0.000
2 (Constant)	0.246	0.060		4.107	0.000
Income	-0.493	0.084	-0.239	-5.881	0.000
Distance to microfinance	-0.072	0.020	-0.144	-3.546	0.000
3 (Constant)	0.569	0.128		4.431	0.000
Income	-0.496	0.083	-0.241	-5.951	0.000
Distance to microfinance	-0.061	0.021	-0.122	-2.952	0.003
Illiteracy	0.013	0.004	0.114	2.840	0.005

4	(Constant)	5.023	2.125		2.364	0.018
	Income	-0.520	0.084	-0.252	-6.201	0.000
	Distance to microfinance	-0.062	0.021	-0.123	-2.995	0.003
	Illiteracy	0.010	0.005	0.091	2.190	0.029
	Temperature	-0.827	0.394	-0.086	-2.100	0.036
5	(Constant)	9.919	2.769		3.583	0.000
	Income	-0.420	0.091	-0.204	-4.611	0.000
	Distance to microfinance	-0.061	0.020	-0.123	-3.007	0.003
	Illiteracy	0.015	0.005	0.137	3.078	0.002
	Temperature	-1.802	0.529	-0.188	-3.404	0.001
	Vulnerability	0.010	0.004	0.175	2.737	0.006
6	(Constant)	14.376	3.379		4.254	0.000
	Income	-0.400	0.091	-0.194	-4.393	0.000
	Distance to microfinance	-0.068	0.021	-0.136	-3.309	0.001
	Illiteracy	0.019	0.005	0.168	3.619	0.000
	Temperature	-2.056	0.539	-0.214	-3.813	0.000
	Vulnerability	0.012	0.004	0.205	3.151	0.002
	Precipitation (wettest month)	-0.556	0.243	-0.096	-2.285	0.023
7	(Constant)	14.537	3.375		4.307	0.000
	Income	-0.324	0.102	-0.157	-3.177	0.002
	Distance to microfinance	-0.077	0.021	-0.154	-3.631	0.000
	Illiteracy	0.018	0.005	0.164	3.530	0.000
	Temperature	-2.072	0.538	-0.216	-3.848	0.000
	Vulnerability	0.011	0.004	0.183	2.776	0.006
	Precipitation (wettest month)	-0.501	0.245	-0.087	-2.045	0.041
	population density	-0.055	0.033	-0.087	-1.679	0.094
8	(Constant)	14.037	3.379		4.154	0.000
	Income	-0.314	0.102	-0.152	-3.081	0.002
	Distance to microfinance	-0.075	0.021	-0.150	-3.543	0.000
	Illiteracy	0.019	0.005	0.170	3.656	0.000
	Temperature	-1.960	0.541	-0.204	-3.624	0.000
	Vulnerability	0.011	0.004	0.185	2.810	0.005

	Precipitation (wettest month)	-0.485	0.245	-0.084	-1.980	0.048
	population density	-0.062	0.033	-0.098	-1.869	0.062
	Forest cover	-0.067	0.036	-0.074	-1.852	0.065
9	(Constant)	14.307	3.377		4.237	0.000
	Income	-0.293	0.102	-0.142	-2.867	0.004
	Distance to microfinance	-0.069	0.021	-0.138	-3.223	0.001
	Illiteracy	0.019	0.005	0.174	3.747	0.000
	Temperature	-2.038	0.542	-0.212	-3.763	0.000
	Vulnerability	0.011	0.004	0.198	2.996	0.003
	Precipitation (wettest month)	-0.449	0.245	-0.078	-1.833	0.067
	population density	-0.067	0.033	-0.106	-2.029	0.043
	Forest cover	-0.065	0.036	-0.071	-1.792	0.074
	Distance to school	-0.051	0.029	-0.070	-1.753	0.080
10	(Constant)	13.963	3.378		4.133	0.000
	Income	-0.317	0.103	-0.154	-3.077	0.002
	Distance to microfinance	-0.073	0.022	-0.146	-3.391	0.001
	Illiteracy	0.018	0.005	0.166	3.565	0.000
	Temperature	-2.020	0.541	-0.211	-3.734	0.000
	Vulnerability	0.011	0.004	0.197	2.980	0.003
	Precipitation (wettest month)	-0.409	0.246	-0.071	-1.664	0.097
	population density	-0.071	0.033	-0.112	-2.132	0.033
	Forest cover	-0.073	0.036	-0.080	-1.992	0.047
	Distance to school	-0.053	0.029	-0.073	-1.827	0.068
	Distance to market	0.044	0.027	0.067	1.659	0.098

Supplementary Material Table S5. Stepwise linear regression for variable selection for the GWR with linking social capital as the dependent variable. Final independent variables chosen in Model 3 (in blue text)

Coefficients						
		Unstandardized Coefficients		Standardized Coefficients	T-statistic	P-value
		B	Std. Error	Beta		
1	(Constant)	0.096	0.042		2.272	0.023
	Distance to school	-0.095	0.033	-0.115	-2.846	0.005
2	(Constant)	-0.061	0.072		-0.855	0.393
	Distance to school	-0.109	0.034	-0.131	-3.231	0.001
	Distance to urban centre	0.045	0.017	0.111	2.719	0.007
3	(Constant)	-0.096	0.074		-1.296	0.196
	Distance to school	-0.103	0.034	-0.124	-3.044	0.002
	Distance to urban centre	0.041	0.017	0.100	2.431	0.015
	Drought	0.088	0.051	0.069	1.702	0.089



Supplementary Material Figure S1. Prediction Variance for bonding, bridging and linking social capital interpolation maps. Higher values indicate lower confidence in prediction.

The prediction variance is in the same values as the input data. Although the three SCIs are in z - scores, as the input bridging social capital indices had larger values, and a larger range in values, than the bonding SCI and linking SCI, the three prediction variance values cannot be compared. Areas with the lower variance values have a higher level of confidence in the prediction of values in areas with no data. We have lower confidence in the prediction of the values in the northwest, south west and eastern areas of the study area for all three maps. This is expected as these areas had less data points in them.