Appendix - Legal Origins and Female HIV
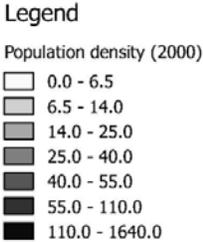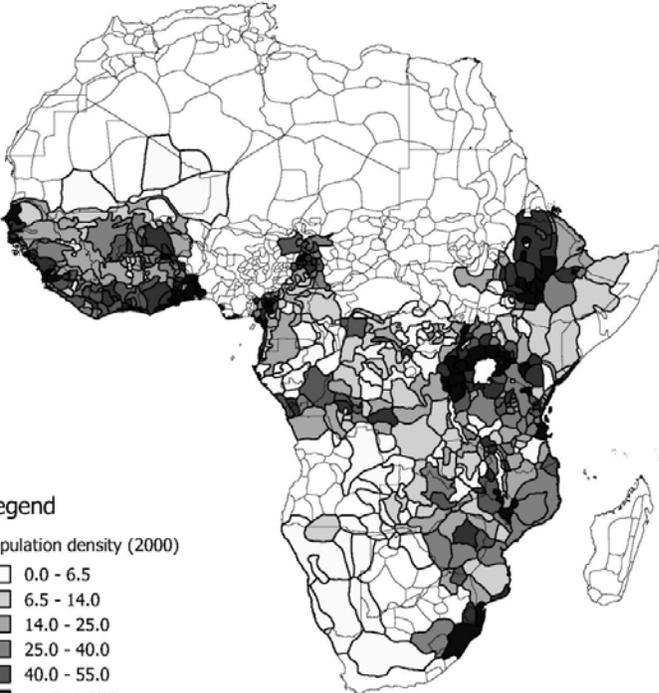
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A1. Figures

Figure A1 – Population Density (people/square km) by Ethnic Group

Population density: Ethnic homelands - HIV (Women) sample

Legend

Population density (2000)

- [ ] 0.0 - 6.5
- [ ] 6.5 - 14.0
- [ ] 14.0 - 25.0
- [ ] 25.0 - 40.0
- [ ] 40.0 - 55.0
- [ ] 55.0 - 110.0
- [ ] 110.0 - 1640.0

Population density: Ethnic groups that cross country borders - HIV (Women) sample

Population density: Ethnic groups that cross country borders with different legal systems

A2. Data Sources

A2.1 Individual-level Data

The source for the individual level variables are the Demographic Health Surveys from Sub-Saharan African countries which include both HIV and GPS information. Based on this selection criterion, the country surveys used include: Burkino Faso (2003, 2010); Burundi (2010); Democratic Republic of the Congo (2007, 2013); Cote d'Ivoire (2012); Cameroon (2004, 2011); Ethiopia (2005, 2010); Gabon (2012); Ghana (2003); Guinea (2005, 2012); Kenya (2008); Liberia (2007, 2013); Lesotho (2004, 2009); Mali (2006, 2012); Malawi (2004, 2010); Mozambique (2009); Namibia (2013); Rwanada (2005, 2010); Sierra Leone (2008, 2013); Senegal (2005, 2010); Swaziland (2006); Tanzania (2003, 2012); Togo (2013); Uganda (2011); Zambia (2007, 2013); and Zimbabwe (2005, 2012).

Of these 25 countries, only one (Lesotho) does not border another country included in the sample. As a result, there are no partitioned ethinc groups for Lesotho in our sample. There are an additional four countries (Cameroon, Gabon, Mali, and Senegal) which do not share a border with another country in our sample of different legal origin. As a result, for these four countries, there are no partitioned ethinc groups with different legal origins in our sample. The country pairs that share a common border with different legal origins are as follows:

∘ Burkino Faso (Civil Law) - Ghana (Common Law)
∘ Democratic Republic of the Congo (Civil Law) - Tanzania (Common Law)
∘ Democratic Republic of the Congo (Civil Law) - Zambia (Common Law)
∘ Democratic Republic of the Congo (Civil Law) - Uganda (Common Law)
∘ Cote d'Ivoire (Civil Law) - Ghana (Common Law)
∘ Cote d'Ivoire (Civil Law) - Liberia (Common Law)
∘ Ethiopia (Civil Law) - Kenya (Common Law)
∘ Guinea (Civil Law) - Liberia (Common Law)
∘ Guinea (Civil Law) - Sierre Leone (Common Law)
∘ Mozambique (Civil Law) - Zimbabwe (Common Law)
∘ Mozambique (Civil Law) - Malawi (Common Law)
∘ Mozambique (Civil Law) -Swaziland (Common Law)
∘ Mozambique (Civil Law) - Zambia (Common Law)
∘ Namibia (Civil Law) - Zambia (Common Law)
∘ Namibia (Civil Law) - - Zimbabwe (Common Law)
∘ Rwanda (Civil Law) - Uganda (Common Law)
∘ Rwanda (Civil Law) - Tanzania (Common Law)
∘ Togo (Civil Law) - Ghana (Common Law)
∘ Burundi (Civil Law) - Tanzania (Common Law)

A2.1 Pixel-level Data

Light Density: Average luminosity in 2013. Source: National Center for Environmental Information, National Oceanic and Atmospheric Administration (NOAA).

Available at: http://ngdc.noaa.gov/eog/dmsp/downloadV4composites.html.

Population Density: Population density in 2000.Source: Nelson, Andy, 2004. African Population Database Documentation, UNEP GRID Sioux Falls.
Available at: http://na.unep.net/siouxfalls/datasets/datalist.php.

Water Area: Indicator variable that equals one if there is some body of water. Source: Inland water area features dataset from Global Mapping International.

Elevation: Average elevation in km. Source: National Oceanic and Atmospheric Administration (NOAA) and U.S. National Geophysical Data Center, TerrainBase, release 1.0 (CD-ROM), Boulder, Colorado. Available at: http://www.sage.wisc.edu/atlas/data.php?incdataset=Topography.

Soil Suitability: Average land quality for cultivation. Source: Center for Sustainability and the Global Environment (SAGE), University of Wisconsin. Global Land Use Database.
Available at: http://www.sage.wisc.edu/iamdata/grid_data_sel.php.

Petroleum: Indicator variable that equals one if there is an oil field in the pixel. Source: The Petroleum Dataset v.1.2 contains information on all known on-shore oil and gas deposits throughout the world. Updated version from Fighting over Oil: Introducing a New Dataset (Lujala et al, 2007). Available at: https://www.prio.org/Data/Geographical-and-Resource-Datasets/Petroleum-Dataset/Petroleum-Dataset-v-12/.

Diamonds: Indicator variable that equals one if there is a diamond mine.Source: Map of Diamond Resources. Available at: https://www.prio.org/Data/Geographical-and-Resource-Datasets/Diamond-Resources/.

Malaria Index: Malaria Stability Index from: Kiszewski, Mellinger, Spielman, Malaney, Sachs and Sachs (2004).

Distance to Border: Distance (in 1000s of kilometers) from the pixel centroid to the border of the nearest contiguous neighboring country (based on Gleditsch and Ward system membership list). Constructed using the PRIO-GRID dataset from Tollefsen, Andreas Forø; Håvard Strand & Halvard Buhaug (2012) "PRIO-GRID: A unified spatial data structure", *Journal of Peace Research* 49(2): 363-374. Available at https://www.prio.org/Data/PRIO-GRID/.

Distance to Coast: Measures the shortest straight-line distance (in 1000s of kilometers) to the nearest coast from the pixel centroid. Constructed using the PRIO-GRID dataset from Tollefsen, Andreas Forø; Håvard Strand & Halvard Buhaug (2012) "PRIO-GRID: A unified spatial data structure", *Journal of Peace Research* 49(2): 363-374. Available at https://www.prio.org/Data/PRIO-GRID/.

Distance to Capital: Distance (in 1000s of kilometers) from the pixel centroid to the national capital city in the corresponding country. Geographical coordinates for the capital cities were derived from the cShapes dataset (Weidmann et al. 2008). Constructed using the PRIO-GRID dataset from Tollefsen, Andreas Forø; Håvard Strand & Halvard Buhaug (2012) "PRIO-GRID: A unified spatial data structure", *Journal of Peace Research* 49(2): 363-374. Available at https://www.prio.org/Data/PRIO-GRID/.

A3. Summary Statistics

Table A1 - Summary Statistics - Individual Data - Females aged 15-49

Variable	Mean (Standard Deviation)
HIV positive	0.068 (0.25)
Currently using protective contraception	0.062 (0.24)
Muslim	0.27 (0.73)
Polygynous	0.27 (0.44)
Age	28.8 (9.9)
No education	0.31 (0.46)
Own property (previously married women)	0.56 (0.50)
Wives justified to ask for condom if husband has STI	0.76 (0.43)
Wife decides family visits	0.67 (0.47)
Wife decides large purchases	0.58 (0.49)
Wife decides own health care	0.58 (0.49)
Observations	307907

Notes: Data Source: Demographic Health Surveys. Polygynous is defined conditional on being married. The sample size of previously married women for the "Own Property" variable is 5355.

Table A2 - Summary Statistics - Individual Data - Males aged 15-60

Variable	Mean (Standard Deviation)
HIV positive	0.046 (0.21)
Age	30.6 (11.8)
No education	0.22 (0.41)
Muslim	0.27 (0.44)
Polygynous	0.13 (0.33)
Used condom last time had sex with wife	0.20 (0.40)
Observations	190706

Notes: Data Source: Demographic Health Surveys.

Table A3 - Summary Statistics - Country Level Data

Variable	Mean (Standard Deviation)
Common Law	0.45 (0.50)
GDP/capita	1452.3 (1286.4)
Latitude	10.4 (7.3)
Longitude	18.8 (17.6)
Rainfall	8.9 (13.2)
Humidity	70.8 (10.9)
Temperature	8.4 (6.6)
Southern Africa	0.24 (0.43)
Central Africa	0.14 (0.34)
Eastern Africa	0.32 (0.47)
Western Africa	0.33 (0.47)
Observations	307907

Notes: Data Sources: Legal Origins Information comes from the dataset for the paper "The Economic Consequences of Legal Origins" (La Porta, Lopez-de-Silanes, and Shleifer 2008). GDP per capita in purchasing power terms comes from the World Bank's World Development Indicators, estimate is for the year 2004. Geography measures come from the datasets for the papers by Nunn and Puga (2012) and Nunn (2008).

Table A4 - Summary Statistics - Pixel Level Data

Variable	Mean (Standard Deviation)
Population Density	361.7 (1177.7)
Light Density	3.8 (10.5)
Water Area	0.18 (0.39)
Elevation	0.76 (0.61)
Soil Suitability	0.48 (0.22)
Malaria Index	0.69 (0.30)
Petroleum	0.06 (0.24)
Diamonds	0.24 (0.43)
Distance to Capital	0.38 (0.36)
Distance to Coast	0.48 (0.37)
Distance to Border	0.11 (0.11)
Observations	307907

5

A4. Alternative Estimations

Table A5 - Estimations of Control Variables (≤ 100 km)

Variable	Coefficient on Common Law
Wife age	-1.34 (0.87)
Wife no education	-0.15 (0.03)***
Population Density	-72.2 (57.5)
Luminosity	-0.89 (0.70)
Water Area	-0.02 (0.02)
Elevation	-0.09 (0.05)*
Soil Suitability	-0.001 (0.01)
Malaria Index	-0.02 (0.01)**
Diamonds	0.04 (0.04)
Distance to Capital	-0.04 (0.03)
Distance to Coast	0.02 (0.02)
Distance to Colonial Railways	8.4 (11.3)
Distance to Protestant Mission	-2.2 (7.2)
Distance to Catholic Mission	-2.9 (8.5)
Distance to Trade Route	-3.9 (10.4)
Public Health Facility - Condoms	0.03 (0.03)
Public Health Factility - HIV Testing	0.03 (0.07)
Observations	831015

Notes: *** and ** indicate statistical significance at the 1% and 5% level respectively. Standard errors are clustered at the ethnic and country level using the approach of Cameron, Gelbach, and Miller (2011). Estimations include ethnic fixed effects and 2nd-order RD polynomial of distance to national border. Distance to Catholic and Protestant missions and colonia Railways come from Nunn and Wantchekon (2011) and Distance to trade routes come from Ciolek (2001).

Table A6 - HIV Positive (Females aged 15-49) - Different Age Groups

Variable	Age 15 to 25			Age 25 to 45		
	≤ 200 km	≤ 150 km	≤ 100 km	≤ 200 km	≤ 150 km	≤ 100 km
Common Law	0.012**	0.016***	0.013***	0.019**	0.020***	0.021***
	(0.006)	(0.005)	(0.006)	(0.008)	(0.008)	(0.009)
Observations	52661	44098	34353	63398	53204	41294

Notes: *** indicates statistical significance at the 1% level. Standard errors are clustered at the ethnic and country level using the approach of Cameron, Gelbach, and Miller (2011). All estimations include: country, individual, and pixel controls; region fixed effects; ethnic fixed effects; 2nd-order RD polynomial of distance to national border; and the year of the survey.

Table A7 - HIV Positive (Females aged 15-49) - Robustness Checks

Variable	No Ethnic FE (≤ 100 km)	Linear RD (≤ 100 km)	3rd-order RD Polynomial (≤ 100 km)	Additional Controls (≤ 100 km)	Month FE (≤ 100 km)
Common Law	0.016***	0.019***	0.019***	0.021***	0.021**
	(0.007)	(0.007)	(0.008)	(0.006)	(0.01)
Observations	77336	77336	77336	77336	77336

Notes: *** indicates statistical significance at the 1% level. Standard errors are clustered at the ethnic and country level using the approach of Cameron, Gelbach, and Miller (2011). All estimations include: country, individual, and pixel controls; region fixed effects; ethnic fixed effects; and the year of the survey, except for the first estimation which excluded the ethnic fixed effects. The first and last two estimations also include 2nd-order RD polynomial of distance to national border. The fourth estimation includes distance to explorer trade routes, distance to colonial railways and distance to protestant and catholic missionaires as additional controls. The last estimation include month fixed effects capturing the date of the household interview and excludes ethnic fixed effects.

Table A8 - HIV Positive (Females aged 15-49) - Robustness Checks

Variable	GREG Ethnic Groups ≤ 200 km	≤ 150 km	≤ 100 km	Conley Standard Errors ≤ 200 km	≤ 150 km	≤ 100 km
Common Law	0.018***	0.016***	0.017**	0.016***	0.018***	0.017***
	(0.005)	(0.006)	(0.008)	(0.005)	(0.005)	(0.005)
Observations	117474	98343	76221	118903	99511	77336

Notes: *** indicates statistical significance at the 1% level. Standard errors are clustered at the ethnic and country level using the approach of Cameron, Gelbach, and Miller (2011) in the first three estimations. Conley (1999) standard errors are used in the last three estimations. The first three estimations include: country, individual, and pixel controls; region fixed effects; ethnic fixed effects; 2nd-order RD polynomial of distance to national border; and the year of the survey. The last three estimations include ethnic fixed effects and 2nd-order RD polynomial of distance to national border. The Geo-Referencing of Ethnic Groups (GREG) is the digitized version of the *Soviet Atlas Narodov Mira* (Weidman, Rod, and Cederman 2010).

Table A9 - HIV Positive (Females aged 15-49) - Robustness Checks

Variable	Year 2013-2014 (≤ 100 km)	Year 2011-2012 (≤ 100 km)	Year 2009-2010 (≤ 100 km)	Year 2007-2008 (≤ 100 km)	Year 2005-2006 (≤ 100 km)
Common Law	0.07***	0.09***	0.06***	0.14***	0.09***
	(0.03)	(0.03)	(0.02)	(0.01)	(0.02)
Observations	20286	8281	20051	9303	11915

Notes: *** indicates statistical significance at the 1% level. Standard errors are clustered at the ethnic and country level using the approach of Cameron, Gelbach, and Miller (2011). All estimations include: country, individual, and pixel controls; region fixed effects; and a 2nd-order RD polynomial of distance to national border.

Table A10 - Protective Contraception (Females aged 15-49) - Alternative Measure

Variable	Whole Sample ≤ 200 km	≤ 150 km	≤ 100 km	Non-Muslim/ Non-Polygynous ≤ 100 km	Muslim/ Polygynous ≤ 100 km
Common Law	-0.019***	-0.019***	-0.020***	-0.024***	-0.008
	(0.006)	(0.006)	(0.007)	(0.009)	(0.006)
Observations	117263	97285	76698	55261	21437

Notes: *** indicates statistical significance at the 1% level. Standard errors are clustered at the ethnic and country level using the approach of Cameron, Gelbach, and Miller (2011). All estimations include: country, individual, and pixel controls; region fixed effects; ethnic fixed effects; 2nd-order RD polynomial of distance to national border; and the year of the survey..

Table A11 - Components of Female Bargaining Power (Females aged 15-49)

		Safe Sex (≤100 km)	Visits (≤100 km)	Purchases (≤100 km)	Health (≤100 km)
Non-Muslim/ Non-Polygynous :	Common Law	-0.07**	-0.09***	-0.17**	-0.14***
		(0.03)	(0.03)	(0.05)	(0.05)
	Obs.	42737	23882	23880	23882
Muslim/ Polygynous :	Common Law	-0.08	-0.004	0.0005	0.03
		(0.08)	(0.04)	(0.06)	(0.06)
	Obs.	17584	14171	14170	14173

Notes: *** indicates statistical significance at the 1% level. Standard errors are clustered at the ethnic and country level using the approach of Cameron, Gelbach, and Miller (2011). All estimations include: country, individual, and pixel controls; region fixed effects; ethnic fixed effects; 2nd-order RD polynomial of distance to national border; and the year of the survey.