

Web Appendix for
**ON THE ORIGINS OF GENDER ROLES: WOMEN AND THE
PLOUGH**

ALBERTO ALESINA

Harvard University, NBER, CEPR

PAOLA GIULIANO

University of California Los Angeles, NBER, CEPR, IZA

NATHAN NUNN

Harvard University, NBER, BREAD

(NOT FOR PUBLICATION)

January 2013

A1. Introduction

This appendix accompanies “On the Origins of Gender Roles: Women and the Plough” by Alberto Alesina, Paola Giuliano, and Nathan Nunn. Section A2 provides further details of the data used in the paper, as well as their sources. Sections A3 and A4 report additional figures and tables that were discussed in the body of the paper, but not reported there explicitly. Section A5 includes the detailed analysis of the relationship between traditional plough use and female labor force participation from 1950–1970. The analysis was mentioned in the paper, but not reported in detail.

A2. Data and Their Sources

Dependent variables

The individual-level data on female labor force participation and measures of gender roles are taken from the most recent four waves of the *World Value Survey* (WVS), a compilation of national surveys on values and norms on a wide variety of topics, carried out five times (in 1981–1984, 1990–1993, 1995–1997, 1999–2004, and 2005–2007). The coverage varies depending on the wave, starting with 22 countries in 1980 and covering 81 countries in the fourth wave. The fifth wave has been carried out in 57 countries in the world. The questionnaires contain information on different types of attitudes, religions and preferences, as well as information on standard demographic characteristics, such as sex, age, education, labor market status, and income.

Our analysis uses the last four waves of the WVS as the first wave does not contain information on the district of origin of the respondent which is essential for our subnational estimates. Because district classifications often vary by wave, we use the wave with the most finely defined districts.

We examine two questions that quantify individuals’ attitudes about gender roles. In the first question respondents are given the following statement: “When jobs are scarce, men should have more right to a job than women”. The respondents are then asked to choose between: ‘agree’, ‘neither’, and ‘disagree’. We drop the observations in which the respondents answer ‘neither’, and code ‘disagree’ as 0 and ‘agree’ as 1. In the second question, respondents are given the following statement “On the whole, men make better political leaders than women do”, and asked to choose between ‘strongly disagree’, ‘disagree’, ‘agree’, ‘agree strongly’, or ‘don’t know’. We omit observations in which the respondent answered ‘don’t know’ and create a variable that takes on the value of 1 for ‘strongly disagree’, 2 for ‘disagree’, 3 for ‘agree’ and 4 for ‘agree

strongly’.

Female labor force participation measured at the country level is taken from the World Bank’s *World Development Indicators*. The variable is measured in the standard manner: the percentage of women aged 15 to 64 that are in the labor force. The variable is measured in 2000. The measures for the 1950s–1970s are taken from the ILO’s historical archive, accessible at: <http://laborsta.ilo.org/>.

Female labor force participation for the within-country analysis is taken from national Censuses. Data for our analysis have been obtained by *IPUMS International*. We select those countries reporting individual information about ethnicity. The ethnicity is then mapped with the ethnicity information provided by the *Ethnographic Atlas*. For the case of Cambodia and the Philippines, there was no information about ethnicity and the mapping was done using information on the individual’s mother tongue. The time period varies by country, and is as follows: Bolivia: 2001; Chile: 2002; Cambodia: 2008; Malaysia: 1970, 1980, 1991 and 2000; Mongolia: 1989 and 2000; Nepal: 2001; Philippines: 1990; and Uganda: 1991, 2002.

The share of a country’s firms with some female ownership is measured as the percentage of surveyed firms where a woman is among the principal owners. The data are from the World Bank *Enterprise Surveys*.

The proportion of seats in national parliament is measured as the percent of parliamentary seats, in a single or lower chamber, held by women. The variable, measured in 2000 and reported rounded to the nearest integer, is from the United Nations’ *Women’s Indicators and Statistics Database*. For the 1950s–1970s, the data are from Paxton, Green and Hughes (2008).

Information on female labor force participation among second generation U.S. immigrants is taken from the March Supplement of the *Current Population Survey* (CPS). This source is the only current source for the U.S. in which individuals are asked (starting from 1994) about their parents’ country of origin. We pool data from eighteen years (1994–2011) to obtain the largest possible sample size.

Information on gender role beliefs for children of immigrants is taken from the *European Social Survey* (ESS). The ESS is a biennial cross-sectional survey, administered across a large sample of mostly European nations. The survey has been conducted five times: in 2002/2003, 2004/2005, 2006/2007, 2008/2009, and 2010/2011. The number of countries surveyed varies by wave. There are 22 countries included in the first round, 26 in the second, 25 in the third, 29 in the fourth, and

20 in the fifth. We use all waves that report information on the parent's country of origin and the respondent's gender attitudes. This includes the second, fourth, and fifth waves. The sample size for a survey differs by country depending on its size. They range from 579 for Iceland to 2,870 for Germany.

Plough-positive and plough-negative climatic conditions

We construct our geo-climate instruments using information coming from the FAO's *Global Agro-Ecological Zones* (GAEZ) v3.0 database. The data are publicly available from:

<http://webarchive.iiasa.ac.at/Research/LUC/GAEZv3.0/>. The database reports the suitability for the cultivation of different crops for grid-cells 5 arc-minutes by 5 arc-minutes (approximately 56 km by 56 km) for the world. From the database we extract the raster files for sorghum, pearl millet, foxtail millet, wheat, barley, and rye. This information is used to construct our instrument, as described in the body of the text.

Historical Controls

Historical economic development: the measure comes from variable v30 of the *Ethnographic Atlas*. Each ethnic group is categorized into one of the following categories describing their pattern of settlement: nomadic or fully migratory, semi-nomadic, semi-sedentary, compact but temporary settlements, neighborhoods of dispersed family homes, separated hamlets forming a single community, compact and relatively permanent, complex settlements. The variable takes on the values of 1 to 8, with 1 indicating fully nomadic groups and 8 groups with complex settlement.

Political hierarchies: we use the number of jurisdictional hierarchies in the society to quantify the political sophistication of an ethnic group. The original measure, taken from variable v33 of the *Ethnographic Atlas*, measures the number of jurisdictional hierarchies beyond the local community. The variable takes on the values of 1 to 5, with 1 indicating no levels of hierarchy beyond the local community and 5 indicating four levels. Since the local community represents one level of authority, we interpret the variable as measuring the number of jurisdictional hierarchies in the society.

Domesticated animals: we measure the historical presence of large domesticated animals using variable v40 of the *Ethnographic Atlas*. The original variable groups the type of animal husbandry

practiced into seven categories: absence of large domesticated animals; pigs are the only large animals; presence of sheep and/or goats without any larger domesticated animals; presence of equine animals; presence of deer; presence of camels, alpacas or llamas; and presence of bovine animals. From the information, we create an indicator variable that equals zero if the society is coded in the first category and one if the society is coded in the second to seventh category.

Practice of intensive agriculture: the measure is constructed from variable v28 of the *Ethnographic Atlas*, which classifies societies based on their agricultural intensity. Ethnicities are grouped into one of the following categories: no agriculture, casual agriculture, extensive or shifting agriculture, horticulture, intensive agriculture and intensive irrigated agriculture. Our constructed indicator variable captures societies belonging to the last two categories.

Absence of private property: the measure uses variable v75 of the *Ethnographic Atlas* to identify ethnic groups for which there is an absence of inheritance rights of real property (land). The other categories in the original variable include: equal or relatively equal distribution, exclusively or predominantly to the one adjudged best qualified, ultimogeniture, and primogeniture.

Patrilocal and Matrilocal Societies: these are two variables that are constructed from variable v12 of the *Ethnographic Atlas*. Ethnicities are grouped into the following categories based on post-marital residence rules: avuncular, ambilocal, optionally uxorilocal or avunculocal, optionally patrilocal, matrilocal, neolocal, no common residence, patrilocal, uxorilocal or virilocal. We create an indicator for ethnic groups that are matrilocal and an indicator for ethnic groups that are patrilocal.

Nuclear and Extended Families: the information is taken from variable v8 of the *Ethnographic Atlas*, which classifies ethnic groups' family structures into the following categories: independent (monogamous) nuclear family, independent (polygynous) nuclear family, independent polyandrous families, polygynous (with co-wives), polygynous (without co-wives), minimal extended families, small extended families, large extended families. Using this information, we construct an indicator that equals one if the ethnic group has nuclear families (including independent monogamous and polygynous nuclear families) and an indicator for ethnic groups with extended families (including minimal, small and large extended families).

Hunting and herding of large animals as subsistence activities: we construct measures of the proportion

of all subsistence activities that are accounted for by hunting and by the herding of large animals. The information is taken from variables v2 and v4 of the *Ethnographic Atlas*. Each variable can take the following values for dependence on the activity: 0-5%, 6-15%, 16-25%, 26-35%, 36-45%, 46-55%, 56-65%, 66-75%, 76-85%, 86-100%. In constructing the variables for the two activities, we use the median value of each category.

Year in which the ethnicity was sampled: we construct a measure indicating the average date of observation of ancestors in a given country. This information is taken using the variable v102 of the *Ethnographic Atlas*. This variable indicates the year in which the ethnicity was sampled. The period of observation goes from 800BC to 2000.

Contemporary Controls

Natural log of real per capita GDP: the measure of the log of the per-capita GDP is taken from the World Bank's *World Development Indicators* and is measured in 2000.

Communism indicator variable: is an indicator variable that equals one if the country was formerly communist.

Polity: the variable, taken from variable polity2 of the *Polity IV* database, measures the level of democracy in a country in 2000. The original polity2 measure takes on integer values and ranges from -10 (high autocratic countries) to +10 (highly democratic countries). We define a measure for democracy taking the value of 1 if the polity2 score is greater than zero.

Proportion of the population belonging to five major religions: the five variables measure the proportion of a country's population that is: Catholic, Protestant, other Christian, Muslim, or Hindu. The underlying data are from McCleary and Barro's (2006) *Religion Adherence Dataset*.

Per capita oil production: the oil production data used to construct the measure are from BP Oil's (2006) *Statistical Review of World Energy*. The population data used to create a variable in per capita terms, are from the *World Development Indicators*. The variable is measured in barrels produced per person per day in 2000.

Share of GDP in agriculture, share of GDP in manufacturing, and share of GDP in services: the data used to construct the three measures are from the World Bank's *World Development Indicators*. All

three variables are measured in 2000.

Years of civil conflict, years of interstate conflict: both variables measure the number of years of conflict since 1816 (the first year with data) that each country was involved in. The data are from the *Correlates of War Database* version 4.

Fraction of population of European descent: measures the fraction of each country's population in 2000 whose ancestors came from Europe. The measure is taken from Nunn and Puga (2012) who construct the variable using Putterman and Weil's (2010) *World Migration Matrix*.

Geographic Controls

Proportion of land suitable for agriculture: the ethnographic controls that measure the historical geographic environment are constructed in the following manner. We first identify the centroid of each ethnic group, which is reported in the Atlas. We then identify land that is within 200 kilometers of the centroid. Using information on global geo-climatic conditions for crop cultivation from the FAO's *Global Agro-Ecological Zones* (GAEZ) v3.0 database, we calculate the fraction of this land that is suitable for the cultivation of barley, wheat, rye, sorghum, foxtail millet, or pearl millet. We use this measure to construct the average suitability of the land historically inhabited by a location's ancestors.

Proportion of land that is tropical or subtropical: the measure is constructed using the same procedure as for the agricultural suitability measure, but using the proportion of land within a 200 kilometer radius of an ethnic group's centroid that is classified as being either tropical or subtropical. The classification of thermal climates comes from the GAEZ 2002 database.

Terrain Ruggedness Index: is taken from Nunn and Puga (2012). It is the average across points on a grid 1 kilometer apart within a country of an index of terrain ruggedness. The index is defined as follows. Let $e_{r,c}$ denote elevation at the point located in row r and column c of a grid of elevation points. Then the Terrain Ruggedness Index for this point is calculated as $\sum_{i=r-1}^{i=r+1} \sum_{j=c-1}^{j=c+1} (e_{i,j} - e_{r,c})^2$.

Soil depth: is measured as the proportion of ancestor's land within a 200 kilometer radius of the group's centroid that has been identified as having 'no', 'few', or 'slight' soil depth constraints. The soil data are from the GAEZ 2002 database.

Terrain slope: is measured in percent (of rise over run). Soil depth and terrain slope are from the GAEZ 2002 database.

Average temperature: is measured as average daily temperature (in degrees Celsius), measured between 1950 and 1959. The underlying temperature data are from the *Terrestrial Air Temperature and Precipitation: 1900-2006 Gridded Monthly Time Series, Version 1.10*.

Average precipitation: is measured as the average rainfall each month (in millimeters) during the same time period. The underlying rainfall data are from the *Terrestrial Air Temperature and Precipitation: 1900-2006 Gridded Monthly Time Series, Version 1.10*.

A3. Additional Figures

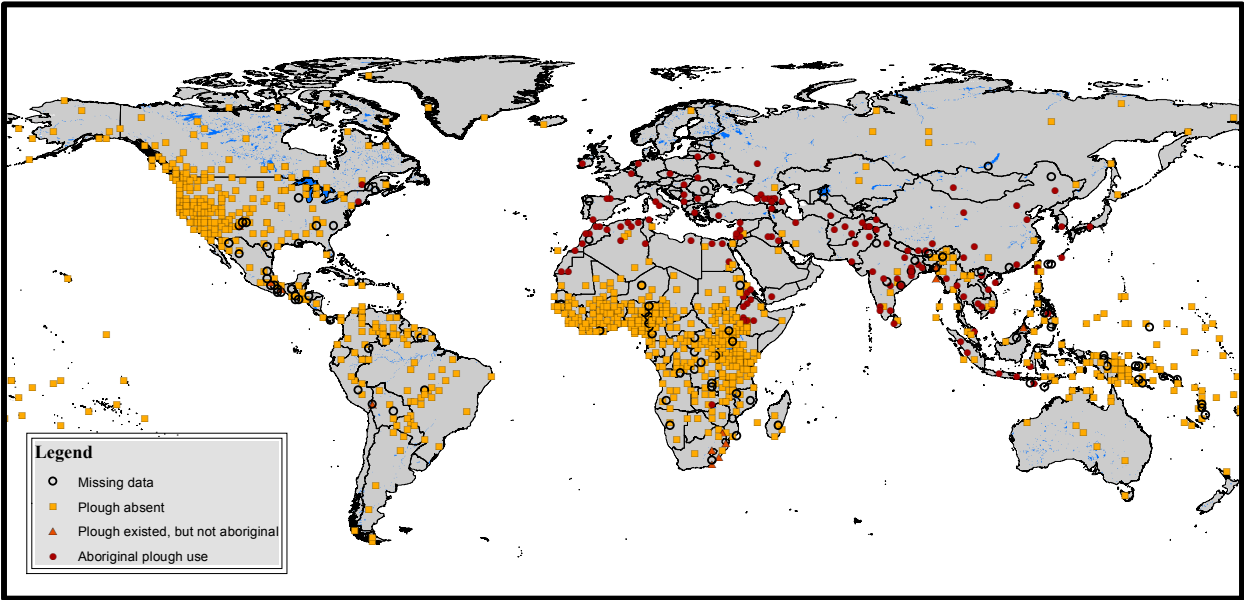
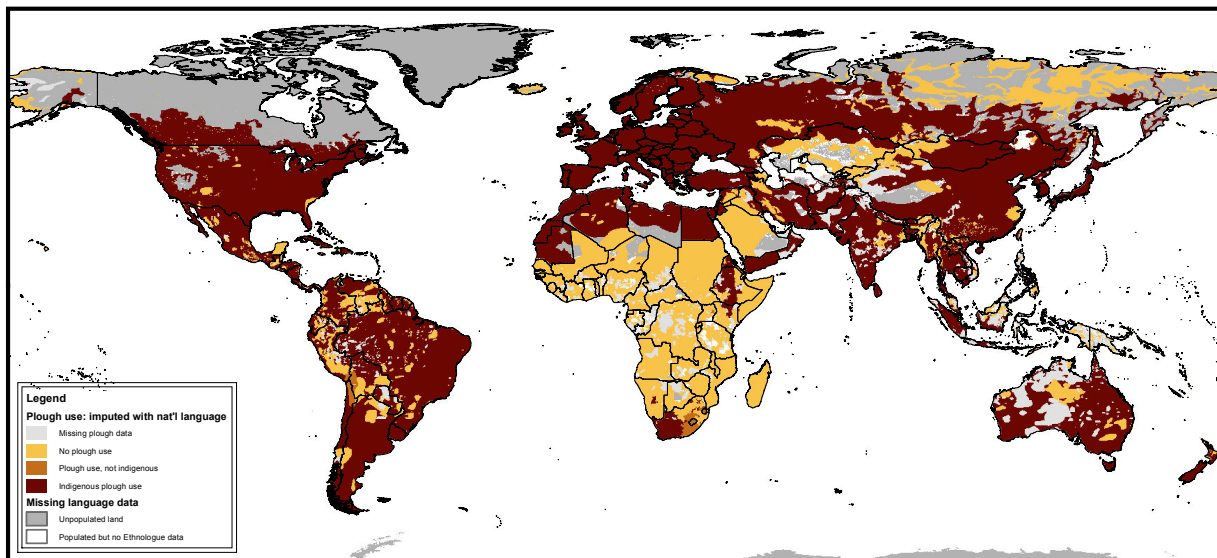
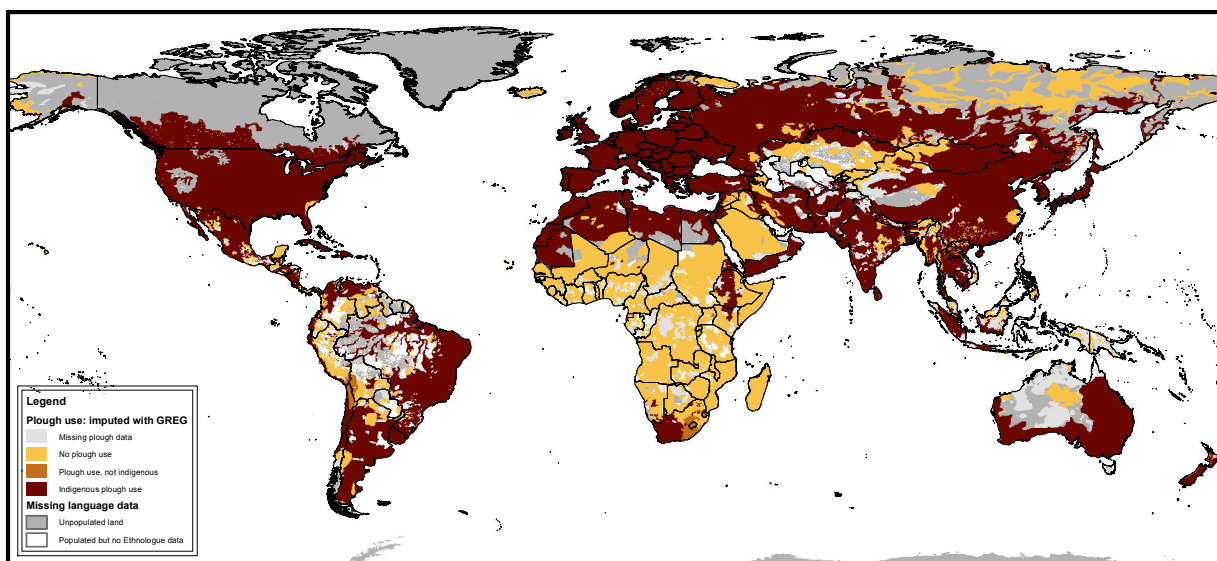


Figure A1: Centroid locations and traditional plough use of ethnic groups within the Ethnographic Atlas.

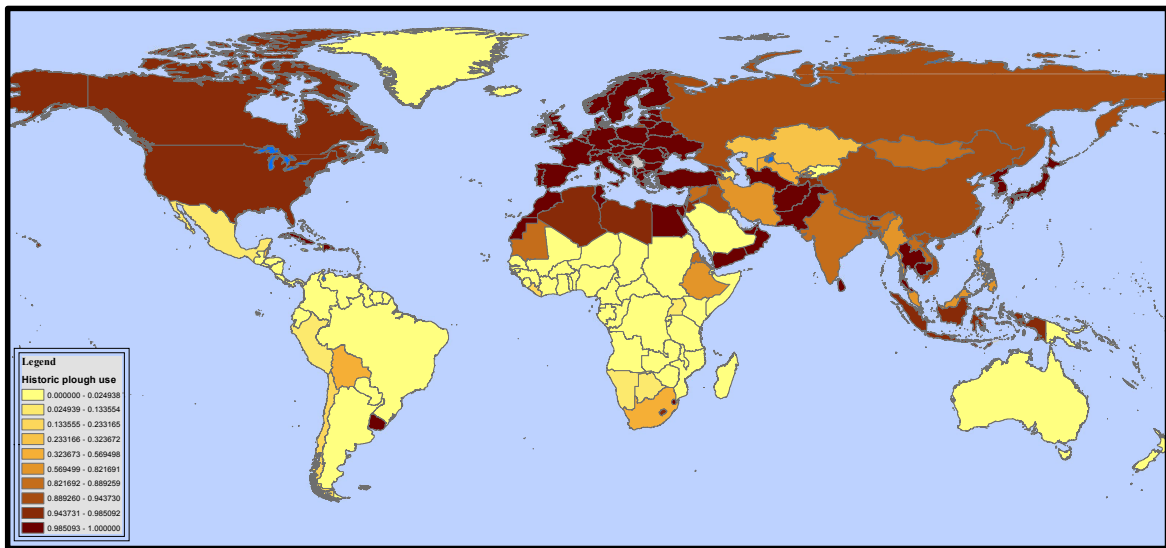


(a) Missing language information imputed using the country's official language

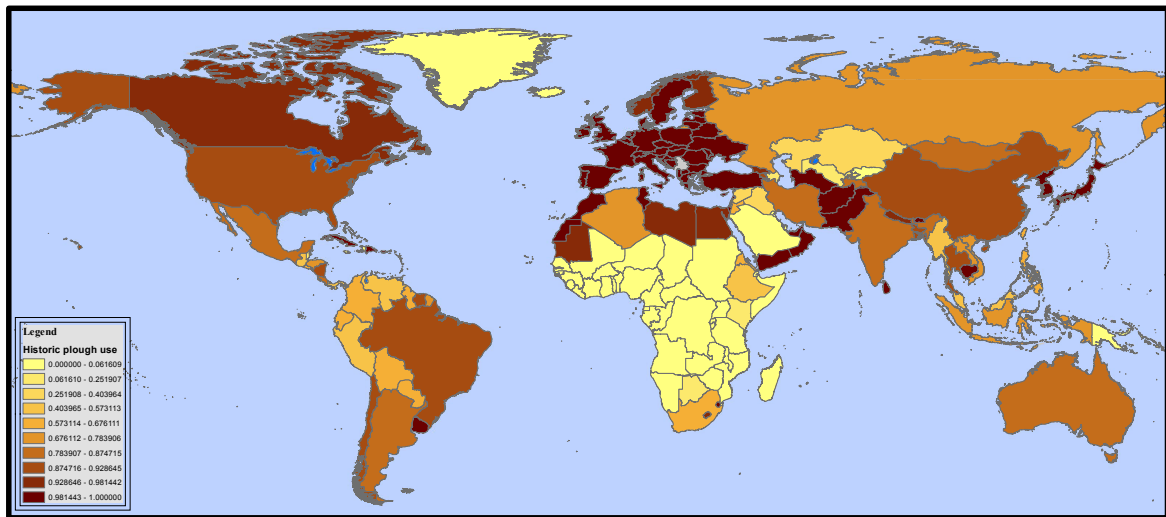


(b) Missing language information imputed using GREG ethnic groups

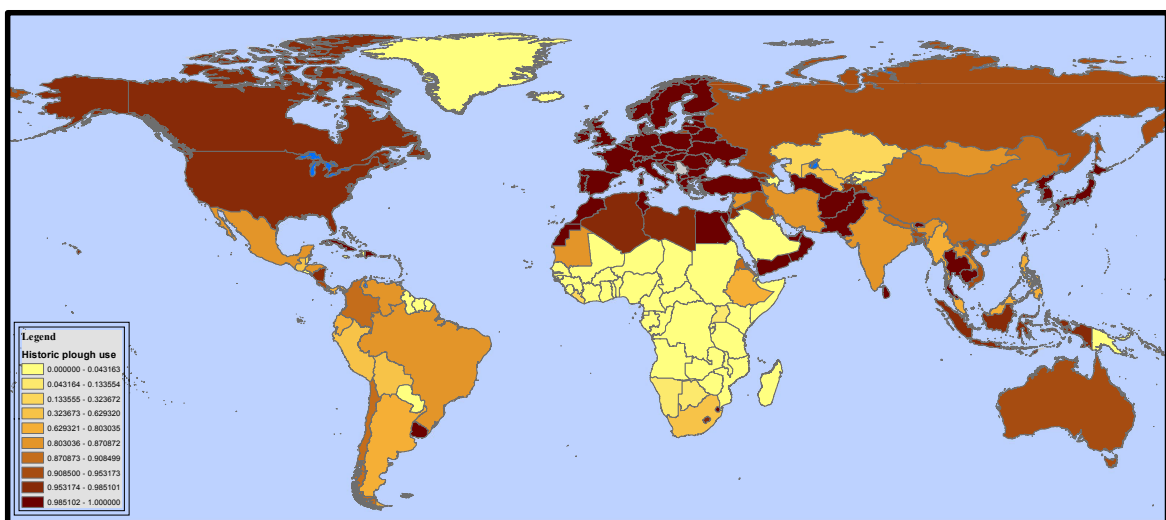
Figure A2: Historical plough use among the ethnic/language groups globally.



(a) Missing language information not imputed

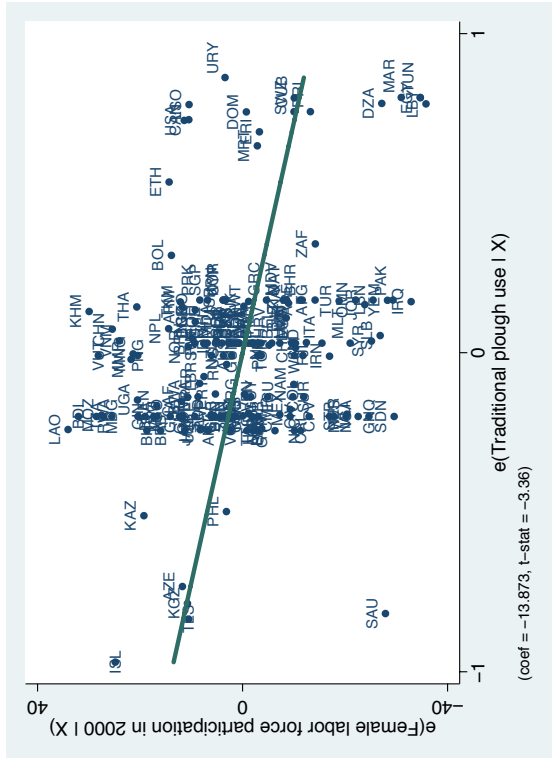


(b) Missing language information imputed using the country's official language

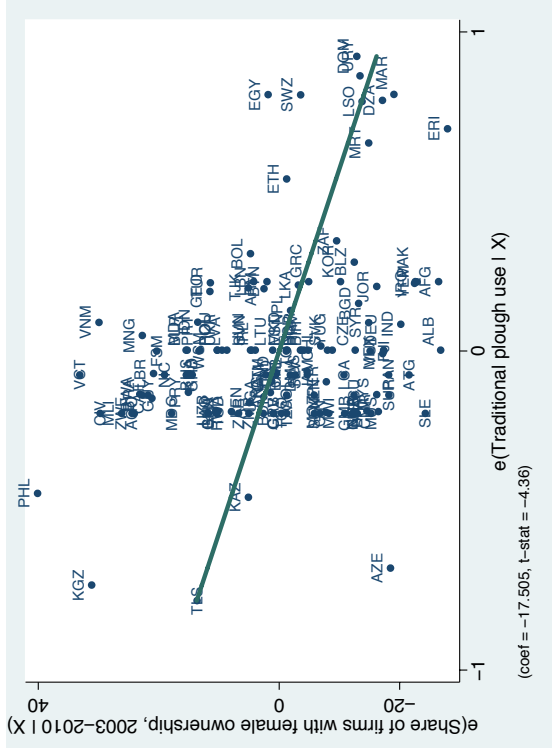


(c) Missing language information imputed using GREG ethnic groups

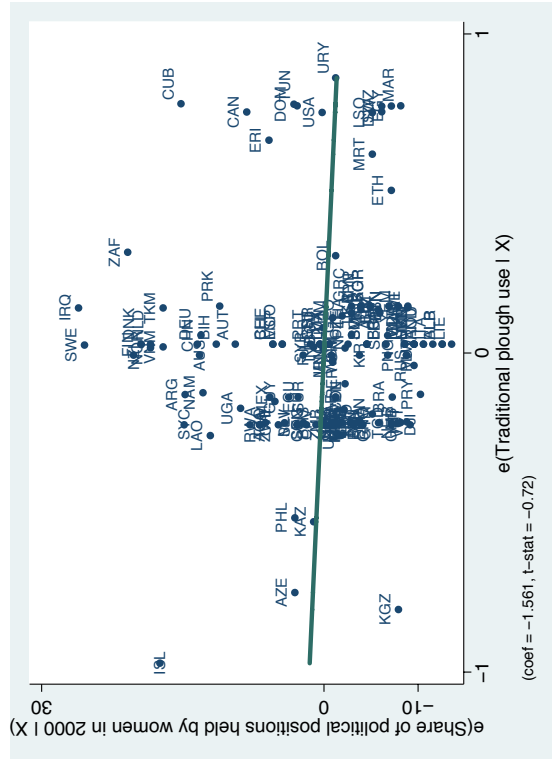
Figure A3: Average historical plough use among the ancestors of each country.



(a) Female labor force participation in 2000

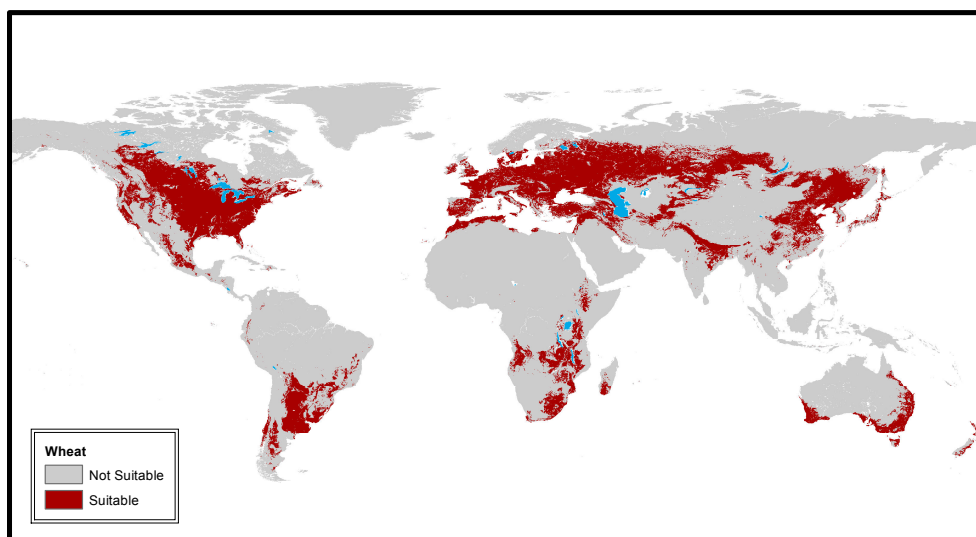


(b) Female firm ownership, 2005-2011

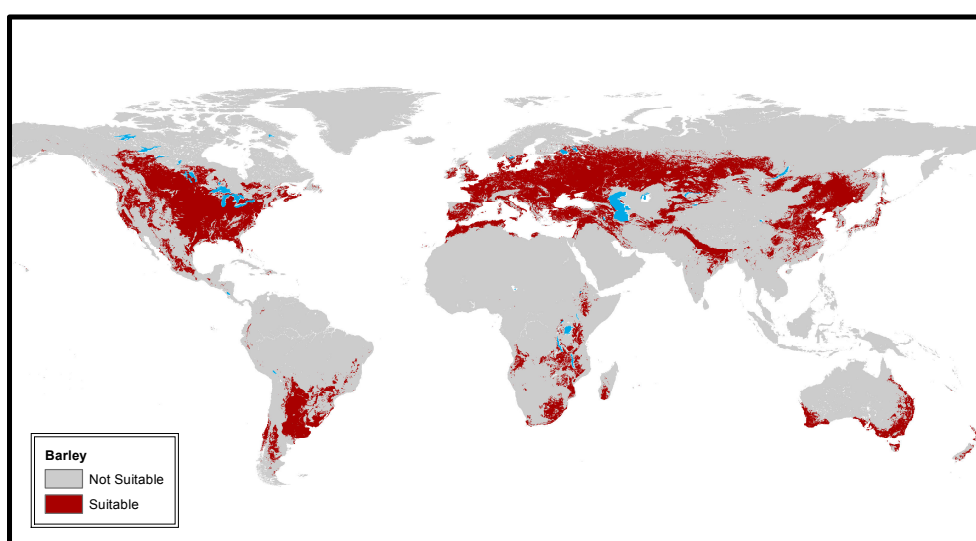


(c) Female participation in politics in 2000

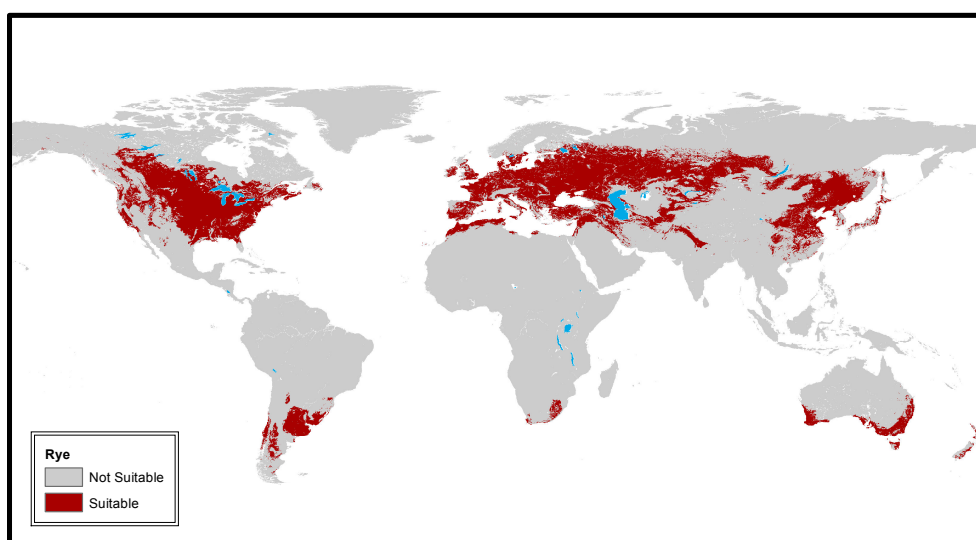
Figure A4: Correlations with traditional plough use, conditioning on continent fixed effects.



(a) Wheat suitability

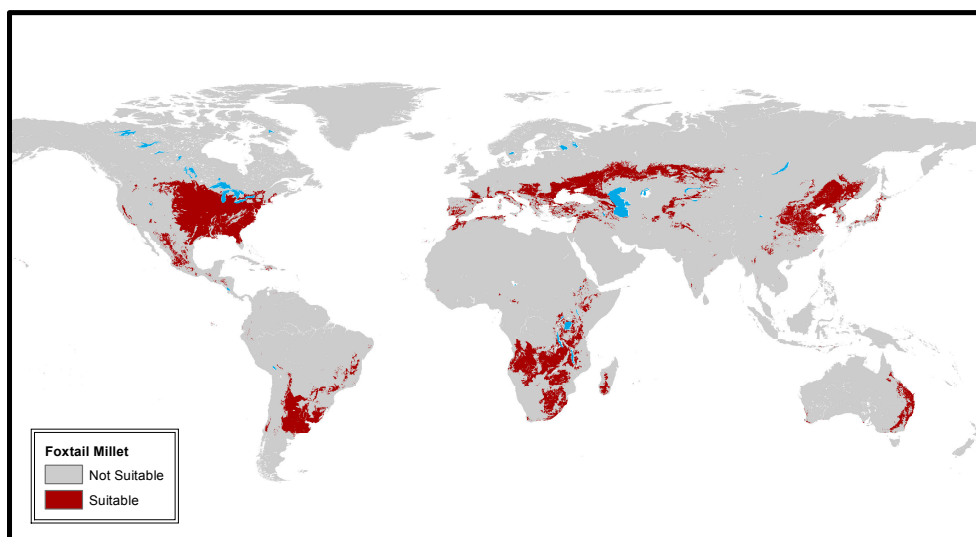


(b) Barley suitability

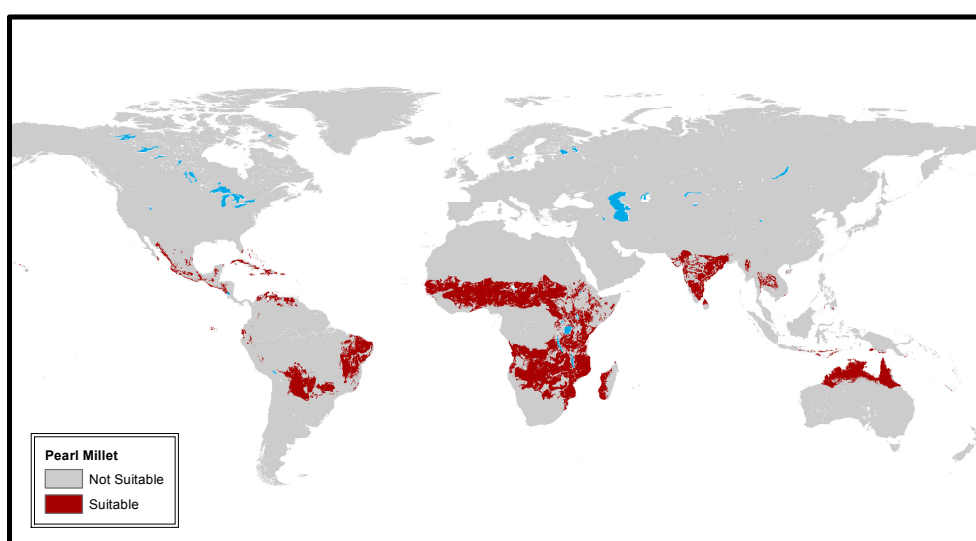


(c) Rye suitability

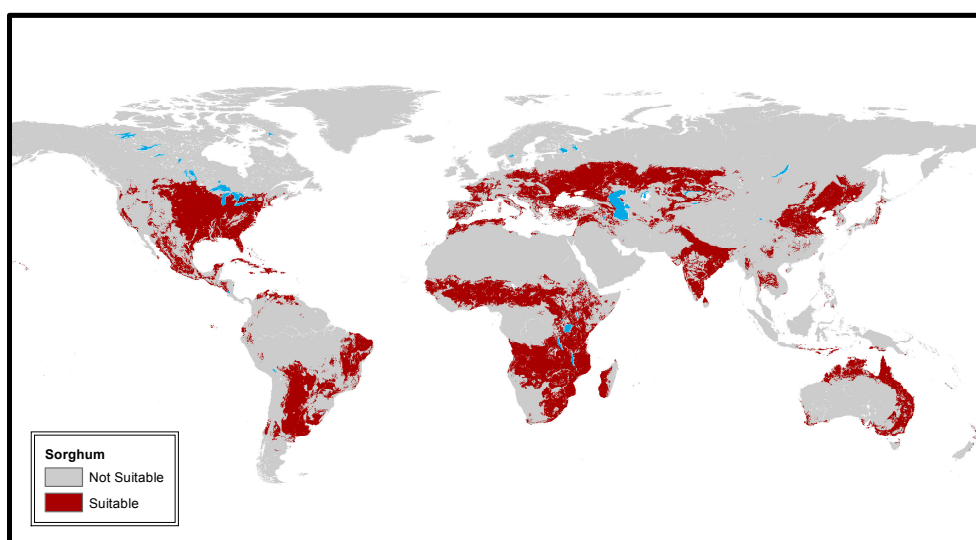
Figure A5: Maps displaying the global suitability of plough-positive crops, wheat, barley and rye.



(a) Foxtail millet suitability



(b) Pearl millet suitability



(c) Sorghum suitability

Figure A6: Maps displaying the global suitability of plough-negative crops, millet and sorghum.

A4. Additional Tables

Table A1: Descriptive statistics.

Variable	Obs.	Mean	Std. Dev.	Variable	Obs.	Mean	Std. Dev.
<i>Ethnicity-level sample: Ethnographic Atlas</i>				<i>Country-level sample</i>			
Female participation in agriculture	660	3.036	1.018	Share of Catholics	140	0.287	0.330
Traditional plough use	660	0.186	0.390	Share of Protestants	140	0.110	0.172
Presence of large animals	660	0.835	0.372	Share of other Christians	140	0.086	0.119
Economic complexity	660	5.877	1.691	Share of Muslims	140	0.242	0.338
Political complexity	660	2.111	1.108	Share of Hindus	140	0.025	0.105
Tropical land area	660	0.917	0.266	Oil production	140	0.036	0.139
Overall suitability	660	0.469	0.384	Trade/GDP	140	68.086	41.010
<i>Ethnicity-level sample: Standard Cross Cultural Sample (SCCS)</i>				Value added agric./GDP	140	17.018	15.190
Traditional plough use	124	0.234	0.425	Value added manuf./ GDP	140	15.356	7.582
Presence of large animals	124	0.815	0.390	Value added service/GDP	140	52.253	14.340
Economic complexity	124	5.801	1.838	Fraction European descent	140	33.732	42.339
Political complexity	124	2.339	1.324	Ruggedness	140	1.335	1.279
Tropical land area	124	0.880	0.308	Terrain slope	165	15.160	8.289
Overall suitability	124	0.409	0.366	Soil depth	165	0.799	0.166
Female part. in agriculture	124	2.831	1.087	Average temperature	165	18.418	6.942
Female part. in land clearance	120	1.483	0.778	Average precipitation	165	93.087	61.518
Female part. in soil preparation	124	2.145	1.348	Years of civil conflicts (1816-2007)	140	7.736	13.889
Female part. in planting	131	2.863	1.317	Years of interstate conflicts (1816-2007)	140	4.564	8.247
Female part. in crop tending	122	3.164	1.434	Year ethnicity sampled	140	1803.688	572.378
Female part. in harvesting	131	3.229	1.231	<i>Individual-level sample: World Value Survey (WVS)</i>			
Female part. in care of small animals	88	3.534	1.611	Labor force participation indicator	47,587	0.549	0.498
Female part. in care of large animals	95	1.726	1.005	"When jobs are scarce..." attitudes	87,528	0.465	0.499
Female part. in milking	48	3.250	1.756	"Men political leaders..." attitudes	72,152	2.635	0.965
Female part. in cooking	173	4.653	0.489	Traditional plough use	47,587	0.746	0.415
Female part. in fuel gathering	159	3.899	1.506	Male indicator	87,528	0.471	0.499
Female part. in water fetching	154	4.643	0.891	Primary school only achievement	47,587	0.362	0.481
Female part. in burden carrying	135	3.467	1.269	Secondary school only achievement	47,587	0.435	0.496
Female part. in handicrafts	51	2.745	0.821	Age	47,587	37.425	12.741
Female part. in trade	59	2.475	1.104	<i>Immigrant-level sample: Current Population Survey (CPS)</i>			
Relative women height	119	0.932	0.012	Labor force participation indicator	48,910	0.628	0.483
<i>Country-level sample</i>				Traditional plough use	48,910	0.573	0.455
Female labor force participation, FLFP	165	51.347	15.583	Age	48,910	33.882	14.694
Firms with female ownership	123	35.168	14.993	Single	48,910	0.444	0.497
Female participation in politics	144	11.840	8.924	Less than high school education	48,910	0.260	0.438
Traditional plough use	165	0.525	0.472	High school education	48,910	0.241	0.427
Plough use (imputed with nat. language)	165	0.615	0.442	Central city	48,910	0.345	0.475
Plough use (imputed with GREG)	165	0.598	0.450	Outside central city	48,910	0.432	0.495
Economic complexity	165	6.265	1.404	Age of husband	9,505	42.391	13.519
Political complexity	165	3.264	1.068	Husband: less than high school ed.	9,505	0.225	0.418
Presence of large animals	165	0.938	0.188	Husband: high school education	9,505	0.274	0.446
Tropical land area	165	0.749	0.416	Log income of husband	9,505	11.046	0.463
Plough negative crops	160	0.450	0.216	<i>Immigrant-level sample: European Social Survey (ESS)</i>			
Plough positive crops	160	0.494	0.407	"When jobs are scarce..." attitudes (1-5)	15,260	2.533	1.259
Agricultural suitability	165	0.530	0.327	"When jobs are scarce..." attitudes (0-1)	12,788	0.321	0.467
Communist dummy	140	0.286	0.453	Plough use	15,260	0.875	0.291
Log income	165	7.535	1.622	Age	15,260	42.623	17.840
Intensity of agriculture	140	0.577	0.433	Male	15,260	0.449	0.497
Absence of private property	140	0.123	0.258	Married	15,260	0.543	0.498
Hunting	140	0.061	0.049	Years of education	15,260	12.440	4.067
Herding	140	0.267	0.154	Big city	15,260	0.468	0.499
Nuclear family	140	0.272	0.352	Small city	15,260	0.302	0.459
Extended family	140	0.583	0.386				
Matrilocal	140	0.034	0.118				
Patrilocal	140	0.692	0.402				

Table A2: Distribution of ethnicities across continents in the ethnographic datasets.

Ethnographic Atlas		
Continent	Number	Percent
Africa	535	42.29
Antarctica	1	0.08
Asia	219	17.31
Australia	13	1.03
Europe	31	2.45
North America	306	24.19
Oceania	71	5.61
South America	89	7.04
Total	1,265	100

Standard Cross Cultural Sample		
Continent	Number	Percent
Africa	43	23.12
Asia	53	28.49
Australia	2	1.08
Europe	7	3.76
North America	39	20.97
Oceania	16	8.6
South America	26	13.98
Total	186	100

Table A3: List of ethnicities (by continent) in the Standard Cross Cultural Sample.

Africa
Amhara, Ashanti, Azande, Bambara, Banen, Bemba, Bogo, Egyptians, Fon, Fur (Darfur), Ganda, Hadza, Hausa, Ibo, Kaffa (Kafa), Kikuyu, Konso, Kung Bushmen, Lozi, Luguru, Mao, Masai, Massa (Masa), Mbundu, Mbuti, Mende, Nama Hottentot, Nkundo Mongo, Nyakyusa, Otoro Nuba, Pastoral Fulani, Riffians, Shilluk, Somali, Songhai, Suku, Tallensi, Tanala, Teda, Thonga, Tiv, Tuareg, Wolof
Asia
Abkhaz, Ainu, Alorese, Andamanese, Armenians, Atayal, Babylonians, Badjau, Balinese, Basseri, Burmese, Burusho, Chinese, Chukchee, Garo, Gilyak, Gond, Hebrews, Iban, Ifugao, Japanese, Javanese, Kapauku, Kazak, Kenuzi Nubians, Khalka Mongols, Khmer, Kimam, Koreans, Kurd, Kwoma, Lakher, Lamet, Lepcha, Lolo, Manchu, Negri Sembilan, Nicobarese, Orokaiva, Punjabi (West), Rhade, Rwala Bedouin, Santal, Semang, Siamese, Tobelorese, Toda, Toradja, Turks, Uttar Pradesh, Vedda, Vietnamese, Yukaghir
Oceania
Ajie, Aranda, Gilbertese, Manus, Maori, Marquesans, Marshallese, Mbau Fijians, New Ireland, Palauans, Pentecost, Siuai, Tikopia, Tiwi, Trobrianders, Trukese, Western Samoans, Yapese.
Europe
Basques, Ghag Albanians, Irish, Lapps, Romans, Russians, Yurak Samoyed
North America
Aleut, Aztec, Bellacoola, Bribri, Callinago, Chiricahua, Comanche, Copper Eskimo, Creek, Cuna (Tule), Eyak, Gros Ventre, Haida, Haitians, Havasupai, Hidatsa, Huichol, Huron, Ingalik, Kaska, Klamath, Kutenai, Micmac, Miskito, Montagnais, Natchez, Omaha, Paiute (North.), Papago, Pawnee, Pomo (Eastern), Popoluca, Quiche, Saulteaux, Slave, Twana, Yokuts (Lake), Yurok, Zuni
South America
Abipon, Amahuaca, Aweikoma, Aymara, Botocudo, Carib (Barama), Cayapa, Cayua, Cubeo (Tucano), Goajiro, Inca, Jivaro, Lengua, Mapuche, Mundurucu, Nambicuara, Saramacca, Shavante, Siriono, Tehuelche, Timbira, Trumai, Tupinamba, Warrau, Yahgan, Yanomamo

Table A4: Part 1: List of countries in the country-level analysis.

Isocode	Country name	Female labor force participation in 2000	Share of firms with female ownership, 2003-2010	Share of political positions held by women in 2000
AGO	Angola	75.2	56.6	16
ALB	Albania	50.2	10.8	5
ARE	United Arab Emirates	34.2		0
ARG	Argentina	45.6	38.0	28
ARM	Armenia	57.2	31.8	3
ATG	Antigua and Barbuda		21.3	
AUS	Australia	54.6		22
AUT	Austria	48.9		27
AZE	Azerbaijan	57.2	10.8	12
BDI	Burundi	90.5	34.8	6
BEL	Belgium	43.5		23
BEN	Benin	63.9	43.9	6
BFA	Burkina Faso	77.5	19.2	8
BGD	Bangladesh	54.7	16.1	9
BGR	Bulgaria	47.7	33.9	11
BHR	Bahrain	33.8		
BHS	Bahamas, The	66.8	58.3	15
BIH	Bosnia and Herzegovina	56.1	32.8	29
BLR	Belarus	53.1	52.9	5
BLZ	Belize	39.6	30.4	7
BOL	Bolivia	59.9	41.3	12
BRA	Brazil	54.7	59.3	6
BRN	Brunei Darussalam	55.2		
BTN	Bhutan	36.9	31.3	2
BWA	Botswana	69.2	55.3	
CAF	Central African Republic	70.4	53.3	7
CAN	Canada	58.6		21
CHE	Switzerland	57.7		23
CHL	Chile	35.7	29.6	11
CHN	China	70.9		22
CIV	Cote d'Ivoire	49.2	61.9	
CMR	Cameroon	51.2	15.7	6
COG	Congo, Rep.	61.1		12
COL	Colombia	36.2	35.3	12
COM	Comoros	70.1		
CPV	Cape Verde	45.5	33.1	11
CRI	Costa Rica	36.8	43.5	19
CYP	Cyprus	48.8		5
CZE	Czech Republic	51.5	25.0	15
DEU	Germany	49.1	20.3	31
DJI	Djibouti	56.6		0
DMA	Dominica		41.0	9
DNK	Denmark	60.1		37
DOM	Dominican Republic	47.4	30.0	16
DZA	Algeria	31.3	15.0	3
ECU	Ecuador	41.1	24.1	17
EGY	Egypt, Arab Rep.	23.8	34.0	2
ERI	Eritrea	55.2	4.2	15
ESP	Spain	40.5	34.1	22
EST	Estonia	51.7	36.3	18
ETH	Ethiopia	72.8	30.9	2
FIN	Finland	58.3		37
FJI	Fiji	39.1	49.1	11
FRA	France	48.3		11
GAB	Gabon	64.6	33.1	8
GBR	United Kingdom	53.5		18
GEO	Georgia	54.7	40.8	7
GHA	Ghana	72.6	44.0	9
GIN	Guinea	78.9	25.4	9
GMB	Gambia, The	70.8	21.3	2
GNB	Guinea-Bissau	59.8	19.9	
GNQ	Equatorial Guinea	33.8		5
GRC	Greece	40.8	24.4	6
GRD	Grenada		57.3	
GTM	Guatemala	41.8	44.2	7
GUY	Guyana	44.4	58.3	19
HND	Honduras	44.4	43.3	9
HRV	Croatia	45.1	33.5	
HTI	Haiti	56.4		4
HUN	Hungary	41.1	42.4	8
IDN	Indonesia	50.6	42.8	
IND	India	33.0	9.1	9
IRL	Ireland	47.2	41.6	9
IRN	Iran, Islamic Rep.	28.5		8
ISL	Iceland	75.6		35
ISR	Israel	49.3		5
ITA	Italy	35.3		6
JAM	Jamaica	59.4	38.2	12
JOR	Jordan	21.6	13.1	
JPN	Japan	49.2		5
KAZ	Kazakhstan	64.7	34.4	10
KEN	Kenya	75.2	37.1	4
KGZ	Kyrgyz Republic	56.2	60.4	1
KHM	Cambodia	75.4		8
KNA	St. Kitts and Nevis		57.8	13

Notes: The table reports the value of each dependent variable for each country with data.

Table A4: Part 2: List of countries in the country-level analysis.

Isocode	Country name	Female labor force participation in 2000	Share of firms with female ownership, 2003-2010	Share of political positions held by women in 2000
KOR	Korea, Rep.	48.9	19.1	4
KWT	Kuwait	44.3		0
LAO	Lao PDR	79.5	39.4	21
LBN	Lebanon	20.0	33.5	2
LBR	Liberia	66.0	53.0	
LBY	Libya	22.7		
LCA	St. Lucia	45.4	32.1	11
LKA	Sri Lanka	36.5	26.1	5
LSO	Lesotho	68.9	18.4	4
LTU	Lithuania	54.8	38.7	18
LUX	Luxembourg	41.2		17
LVA	Latvia	48.7	46.3	17
MAR	Morocco	27.5	13.1	1
MDA	Moldova	55.5	53.1	9
MDG	Madagascar	84.0	50.0	8
MDV	Maldives	37.5		
MEX	Mexico	38.8	25.7	18
MKD	Macedonia, FYR	40.8	36.4	8
MLI	Mali	35.9	58.3	12
MLT	Malta	29.8		9
MNG	Mongolia	66.8	52.0	8
MOZ	Mozambique	86.0	24.4	
MRT	Mauritania	55.6	17.3	4
MUS	Mauritius	40.6	16.9	8
MWI	Malawi	75.8	23.9	8
MYS	Malaysia	44.3	13.1	
NAM	Namibia	48.5	33.4	22
NCL	New Caledonia	45.7		
NER	Niger	38.1	17.6	1
NGA	Nigeria	38.3	20.0	
NIC	Nicaragua	38.0	61.9	10
NLD	Netherlands	53.2		36
NOR	Norway	61.4		36
NPL	Nepal	59.9	27.4	6
NZL	New Zealand	56.9		29
OMN	Oman	23.4		
PAK	Pakistan	16.1	6.7	
PAN	Panama	45.2	24.7	
PER	Peru	54.4	28.7	11
PHL	Philippines	48.6	69.4	12
PNG	Papua New Guinea	71.3		2
POL	Poland	49.6	47.9	13
PRI	Puerto Rico	34.9		
PRT	Portugal	52.8	50.8	19
PRY	Paraguay	51.3	51.6	3
ROU	Romania	58.3	47.9	7
RUS	Russian Federation	53.9	33.0	8
RWA	Rwanda	85.6	42.5	17
SAU	Saudi Arabia	17.6		
SDN	Sudan	28.9		
SEN	Senegal	62.8	26.3	12
SGP	Singapore	52.3		4
SLB	Solomon Islands	24.0		2
SLE	Sierra Leone	67.8	7.9	9
SLV	El Salvador	45.1	40.2	17
SUR	Suriname	34.1	18.3	16
SVK	Slovak Republic	52.3	29.6	13
SVN	Slovenia	51.4	42.2	8
SWE	Sweden	58.2		43
SWZ	Swaziland	48.4	28.6	3
SYC	Seychelles			24
SYR	Syrian Arab Republic	20.3	14.4	10
TCO	Chad	64.6	40.1	2
TGO	Togo	60.0	31.8	
THA	Thailand	66.1		6
TJK	Tajikistan	45.2	34.4	3
TKM	Turkmenistan	57.6		26
TTO	Trinidad and Tobago	47.3	45.1	11
TUN	Tunisia	23.8		12
TUR	Turkey	26.6	40.7	4
TZA	Tanzania	87.0	30.9	16
UGA	Uganda	79.0	34.7	18
UKR	Ukraine	51.8	47.1	8
URY	Uruguay	49.4	23.1	12
USA	United States	59.5		13
UZB	Uzbekistan	53.5	39.8	7
VCT	St. Vincent and the Grenadines	50.5	76.0	5
VEN	Venezuela, RB	45.2	30.7	12
VNM	Vietnam	69.5	59.2	26
VUT	Vanuatu	79.0	51.4	0
YEM	Yemen, Rep.	17.2	6.4	1
ZAF	South Africa	44.3	22.6	30
ZAR	Congo, Dem. Rep.	55.5	38.9	
ZMB	Zambia	62.1	37.2	10
ZWE	Zimbabwe	64.0	56.2	14

Notes: The table reports the value of each dependent variable for each country with data.

Table A5: Country-level estimates, only controlling for geographical controls.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dependent variable:							
	Female labor force participation in 2000		Share of firms with female ownership, 2003-2010		Share of political positions held by women in 2000		Average effect size (AES)	
Mean of dep. var.	51.03		34.77		12.11		2.31	
Traditional plough use	-14.608*** (2.756)	-14.673*** (3.829)	-13.711*** (3.264)	-16.785*** (4.024)	-1.872 (1.765)	-1.809 (2.194)	-0.597*** (0.082)	-0.826*** (0.090)
<i>Historical controls:</i>								
Agricultural suitability	9.534*** (3.572)	10.304*** (3.897)	4.893 (4.640)	5.902 (5.238)	2.546 (2.367)	0.662 (2.795)	0.480*** (0.100)	0.429*** (0.109)
Tropical climate	-8.610*** (2.709)	-11.457*** (3.229)	-10.239*** (3.458)	-3.199 (5.137)	-7.400*** (2.482)	-4.861** (2.210)	-0.297*** (0.085)	0.028 (0.111)
Continent fixed effects	no	yes	no	yes	no	yes	no	yes
Observations	177	177	128	128	153	153	153	153
Adjusted R-squared	0.20	0.24	0.13	0.18	0.11	0.14	0.22	0.26
R-squared	0.21	0.27	0.15	0.23	0.13	0.18	0.23	0.28

Notes: OLS estimates are reported with robust standard errors in brackets. The unit of observation is a country. "Traditional plough use" is the estimated proportion of citizens with ancestors that used the plough in pre-industrial agriculture. The variable ranges from 0 to 1. "Female labor force participation" is the percentage of women in the labor force and ranges from 0 to 100. "Share of firms with female ownership" is the percentage of firms in the World Bank Enterprise Surveys with some female ownership. The surveys were conducted between 2003 and 2010, depending on the country. "Share of political positions held by women" is the proportion of seats in parliament held by women. Both share measures range from 0 to 100. The number of observations reported for the AES is the average number of observations in the regressions for the three outcomes. ***, ** and * indicate significance at the 1, 5 and 10% levels.

Table A6: Robustness of OLS estimates to imputation of missing language information.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dependent variable:							
	Female labor force participation in 2000		Share of firms with female ownership, 2003-2010		Share of political positions held by women in 2000		Average effect size (AES)	
Panel A. Missing language groups imputed using national language								
Mean of dep. var.	51.35		35.17		11.83		2.36	
Traditional plough use	-13.794*** (3.105)	-13.412*** (3.239)	-15.651*** (4.387)	-16.003*** (4.957)	-3.122 (1.901)	-2.805 (1.962)	-0.715*** (0.090)	-0.807*** (0.091)
Observations	165	165	123	123	144	144	144	144
Adjusted R-squared	0.38	0.37	0.09	0.13	0.26	0.27	0.23	0.28
R-squared	0.41	0.42	0.15	0.22	0.30	0.33	0.25	0.31
Panel B. Missing language groups imputed using GREG ethnic groups								
Mean of dep. var.	51.35		35.17		11.83		2.33	
Traditional plough use	-14.319*** (3.077)	-14.277*** (3.234)	-15.605*** (4.418)	-16.532*** (5.023)	-2.425 (1.948)	-2.395 (2.015)	-0.728*** (0.087)	-0.794*** (0.087)
Observations	165	165	123	123	144	144	144	144
Adjusted R-squared	0.39	0.37	0.09	0.13	0.26	0.27	0.24	0.29
R-squared	0.42	0.42	0.15	0.22	0.30	0.33	0.26	0.32

Notes: OLS estimates are reported with robust standard errors in brackets. The unit of observation is a country. "Traditional plough use" is the estimated proportion of citizens with ancestors that used the plough in pre-industrial agriculture. The variable ranges from 0 to 1. "Female labor force participation" is the percentage of women in the labor force, measured in 2000. The variable ranges from 0 to 100. "Share of firms with female ownership" is the percentage of firms in the World Bank Enterprise Surveys with some female ownership. The surveys were conducted between 2003 and 2010, depending on the country. The variable ranges from 0 to 100. "Share of political positions held by women" is the proportion of seats in parliament held by women, measured in 2000. The variable ranges from 0 to 100. The number of observations reported for the AES is the average number of observations in the regressions for the three outcomes. ***, ** and * indicate significance at the 1, 5 and 10% levels.

Table A7: Robustness of OLS estimates to an alternatively defined plough-use measure.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dependent variable:							
	Female labor force participation in 2000		Share of firms with female ownership, 2003-2010		Share of political positions held by women in 2000		Average effect size (AES)	
Mean of dep. var.	51.35		35.17		11.83		2.34	
Traditional plough use (indigenous only)	-13.575*** (2.807)	-14.710*** (3.489)	-13.636*** (4.111)	-15.952*** (5.265)	-4.478** (1.787)	-4.789** (2.151)	-0.704*** (0.084)	-0.866*** (0.100)
<i>Historical controls:</i>								
Agricultural suitability	4.995 (3.652)	6.254 (4.137)	0.279 (5.614)	3.355 (6.184)	2.001 (2.649)	0.781 (2.573)	0.206 (0.146)	0.264* (0.148)
Tropical climate	-10.710*** (2.496)	-11.163*** (3.104)	-10.649** (4.100)	-4.042 (5.696)	-6.201*** (2.132)	-4.195* (2.392)	-0.408*** (0.093)	-0.076 (0.102)
Presence of large animals	-2.031 (5.397)	-2.677 (6.206)	2.595 (9.770)	5.578 (10.664)	-5.812 (3.578)	-4.858 (4.155)	-0.005 (0.124)	0.199 (0.158)
Political hierarchies	0.966 (1.475)	1.25 (1.439)	0.563 (1.899)	-0.312 (1.848)	0.624 (0.814)	0.519 (0.806)	0.080** (0.040)	0.047 (0.044)
Economic complexity	1.227 (0.791)	1.442* (0.825)	1.785 (1.122)	0.792 (1.371)	0.473 (0.483)	0.330 (0.499)	0.070*** (0.023)	0.029 (0.026)
<i>Contemporary controls:</i>								
ln income in 2000	-35.384*** (6.570)	-33.658*** (7.034)	8.932 (10.100)	3.812 (10.374)	-6.803* (4.070)	-7.062 (4.345)	-0.876*** (0.235)	-0.958*** (0.242)
ln income in 2000 squared	2.093*** (0.409)	1.999*** (0.432)	-0.582 (0.697)	-0.359 (0.700)	0.556** (0.272)	0.562** (0.282)	0.058*** (0.016)	0.060*** (0.016)
Continent fixed effects	no	yes	no	yes	no	yes	no	yes
Observations	165	165	123	123	144	144	144	144
Adjusted R-squared	0.38	0.37	0.08	0.11	0.27	0.27	0.23	0.29
R-squared	0.41	0.42	0.14	0.21	0.31	0.34	0.25	0.32

Notes: OLS estimates are reported with robust standard errors in brackets. The unit of observation is a country. "Traditional plough use (indigenous only)" is the estimated proportion of citizens with ancestors that used the plough in pre-industrial agriculture (not including pre-industrial plough adoption following European contact). The variable refers to the presence of aboriginal plough use. "Female labor force participation" is the percentage of women in the labor force and ranges from 0 to 100. "Share of firms with female ownership" is the percentage of firms in the World Bank Enterprise Surveys with some female ownership. The surveys were conducted between 2003 and 2010, depending on the country. "Share of political positions held by women" is the proportion of seats in parliament held by women. Both share measures range from 0 to 100. The number of observations reported for the AES is the average number of observations in the regressions for the four outcomes. ***, ** and * indicate significance at the 1, 5 and 10% levels.

Table A8: Robustness of OLS estimates to alternative samples.

	(1)	(2)	(3)	(4)
Dependent variable:				
	Female labor force participation in 2000	Share of firms with female ownership, 2003-2010	Share of political positions held by women in 2000	Average effect size (AES)
Panel A: Omitting countries with missing language data				
Mean of dep. var.	51.97	34.66	11.65	2.31
Traditional plough use	-13.447*** (3.280)	-18.589*** (4.441)	-3.764* (1.953)	-0.775*** (0.089)
Observations	148	108	128	128
Adjusted R-squared	0.37	0.14	0.27	0.27
R-squared	0.41	0.20	0.32	0.29
Panel B: Omitting Europe, USA, Canada, Australia, and New Zealand				
Mean of dep. var.	51.32	34.55	9.33	2.28
Traditional plough use	-12.141*** (3.350)	-17.037*** (3.969)	-4.518*** (1.628)	-0.853*** (0.080)
Observations	125	101	105	110
Adjusted R-squared	0.37	0.15	0.05	0.30
R-squared	0.41	0.22	0.12	0.33
Panel C: Omitting sub-Saharan African countries				
Mean of dep. var.	47.25	36.21	12.44	2.24
Traditional plough use	-13.329*** (2.998)	-18.868*** (4.420)	-4.970** (2.153)	-0.890*** (0.10)
Observations	121	83	109	104
Adjusted R-squared	0.28	0.18	0.29	0.29
R-squared	0.33	0.26	0.34	0.32
Panel D: Including sub-Saharan Africa (& North Africa) indicator variables				
Mean of dep. var.	51.35	35.17	11.83	2.31
Traditional plough use	-10.119*** (3.571)	-17.895*** (5.121)	-4.318* (2.283)	-0.730*** (0.086)
Observations	165	123	144	144
Adjusted R-squared	0.37	0.12	0.27	0.32
R-squared	0.43	0.22	0.35	0.35

Notes: OLS estimates are reported with robust standard errors in brackets. The unit of observation is a country. Each regression includes the full set of control variables (historical and contemporary) from the baseline specification. The countries with missing language data (in Panel A) are: Australia, New Zealand, Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, and Venezuela. Panel D controls for continent fixed effects, with the African continent further divided between sub-Saharan Africa and Northern Africa. ***, ** and * indicate significance at the 1, 5 and 10% levels.

Table A9: Part 1: List of countries in the individual-level analysis.

Country isocode	Country name	Female labor force participation, 1995-2007	When jobs are scarce, 1995-2007	Men better political leaders, 1995-2007	Traditional plough use	
		Number of observations			Mean	Std. dev.
AND	Andorra	464	942	983	1.00	0.00
ARG	Argentina	143	285	287	0.00	0.00
ARM	Armenia	951	1,776	1,906	0.98	0.47
AUS	Australia	422	744	935	0.00	0.00
AUT	Austria	712	1,207	0	1.00	0.02
AZE	Azerbaijan	313	588	615	0.10	0.00
BEL	Belgium	760	1,748	0	1.00	0.50
BFA	Burkina Faso	614	1,204	1,314	0.00	0.00
BGD	Bangladesh	444	881	1,067	0.90	0.06
BGR	Bulgaria	444	737	927	1.00	0.00
BIH	Bosnia and Herzegovina	572	876	1,174	1.00	0.21
BLR	Belarus	432	838	0	1.00	0.50
BRA	Brazil	745	1,223	1,403	0.00	0.00
CAN	Canada	921	1,763	1,848	0.97	0.02
CHE	Switzerland	487	984	0	1.00	0.00
CHN	China	477	820	925	0.90	0.22
COL	Colombia	1,246	846	2,562	0.00	0.00
CYP	Cyprus	470	844	1,032	1.00	0.00
CZE	Czech Republic	729	1,582	0	1.00	0.00
DEU	Germany	832	1,602	0	1.00	0.00
DNK	Denmark	388	895	0	1.00	0.00
DOM	Dominican Republic	225	313	359	1.00	0.00
DZA	Algeria	603	1,079	1,188	0.97	0.11
EGY	Egypt	1,741	2,830	3,046	1.00	0.01
ESP	Spain	458	1,078	1,121	1.00	0.00
EST	Estonia	437	847	0	1.00	0.00
FRA	France	630	1,388	0	1.00	0.00
GBR	United Kingdom	402	919	920	1.00	0.00
GEO	Georgia	0	1,791	1,942	0.97	0.00
GHA	Ghana	729	1,389	1,490	0.00	0.50
GRC	Greece	128	221	0	1.00	0.00
HKG	Hong Kong	537	789	1,186	1.00	0.00
HRV	Croatia	503	850	0	1.00	0.00
HUN	Hungary	352	880	0	1.00	0.00
IDN	Indonesia	936	1,799	1,939	0.92	0.21
IND	India	752	1,552	1,715	0.88	0.24
IRN	Iran (Islamic Republic of)	1,281	2,233	2,594	0.83	0.29

Notes: The table reports the number of observations for the samples for the different dependent variables. The reported summary statistics for the traditional plough use variable correspond to the sample when female labor force participation is the dependent variable.

Table A9: Part 2: List of countries in the individual-level analysis.

Country isocode	Country name	Female labor force participation, 1995-2007	When jobs are scarce, 1995-2007	Men better political leaders, 1995-2007	Traditional plough use	
		Number of observations			Mean	Std. dev.
IRQ	Iraq	1,291	2,609	2,600	1.00	0.02
ISL	Iceland	367	927	0	0.00	0.00
ISR	Israel	520	0	0	1.00	0.00
ITA	Italy	838	1,638	0	1.00	0.00
JOR	Jordan	608	1,140	1,199	0.96	0.10
JPN	Japan	547	649	917	1.00	0.00
KGZ	Kyrgyzstan	454	777	882	0.07	0.11
KOR	Republic of Korea	491	703	1,124	1.00	0.00
LTU	Lithuania	442	853	0	1.00	0.00
LUX	Luxembourg	517	986	0	1.00	0.00
LVA	Latvia	411	865	0	1.00	0.00
MDA	Republic of Moldova	492	812	927	1.00	0.00
MEX	Mexico	714	1,342	1,439	0.10	0.07
MKD	Fmr Yugoslav Republic of Macedonia	438	803	1,012	1.00	0.00
MLI	Mali	507	915	1,021	0.00	0.50
MLT	Malta	427	911	0	1.00	0.00
MYS	Malaysia	601	771	1,193	0.68	0.30
NLD	Netherlands	412	938	949	1.00	0.00
NZL	New Zealand	0	315	358	0.00	0.00
PAK	Pakistan	945	1,665	1,943	1.00	0.00
PER	Peru	687	1,273	1,402	0.03	0.47
PHL	Philippines	550	1,002	1,188	0.58	0.41
POL	Poland	452	885	0	1.00	0.00
ROU	Romania	720	1,261	1,557	1.00	0.00
RUS	Russian Federation	1,138	2,124	0	0.94	0.07
RWA	Rwanda	467	1,247	1,347	0.00	0.00
SAU	Saudi Arabia	739	1,160	1,425	0.02	0.04
SLV	El Salvador	577	389	1,075	0.00	0.00
SVK	Slovakia	559	1,004	0	1.00	0.00
SVN	Slovenia	444	832	0	1.00	0.00
THA	Thailand	655	1,093	1,504	0.98	0.02
TTO	Trinidad and Tobago	479	912	941	0.00	0.00
TUR	Turkey	587	1,139	0	1.00	0.00
TWN	Taiwan	533	975	1,221	0.98	0.02
UKR	Ukraine	616	1,018	0	1.00	0.00
URY	Uruguay	498	276	917	1.00	0.00
USA	United States of America	602	1,092	1,135	0.97	0.05
VEN	Venezuela	181	316	394	0.00	0.00
VNM	Viet Nam	270	887	931	0.86	0.24
YUG	Yugoslavia	961	1,910	1,947	1.00	0.00
ZAF	South Africa	1,380	2,617	2,766	0.61	0.30
ZMB	Zambia	715	1,212	1,418	0.00	0.00
ZWE	Zimbabwe	475	942	942	0.00	0.00

Notes: The table reports the number of observations for the samples for the different dependent variables. The reported summary statistics for the traditional plough use variable correspond to the sample when female labor force participation is the dependent variable.

Table A10: Individual-level OLS estimates using WVS data, restricted country samples.

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable:					
	Female labor force participation, 1995-2007		When jobs are scarce, 1995-2007		Men better political leaders, 1995-2007	
Mean of dep. var.	0.55	0.55	0.46	0.47	2.62	2.64
Traditional plough use	-0.177*** (0.035)	-0.002 (0.031)	0.193*** (0.033)	0.100* (0.059)	0.224*** (0.069)	0.304*** (0.117)
Individual & district controls	yes	yes	yes	yes	yes	yes
Contemporary country controls	yes	n/a	yes	n/a	yes	n/a
Fixed effects	continent	country	continent	country	continent	country
Number of countries	73	78	74	79	50	55
Number of districts	672	698	674	700	453	479
Observations	43,801	47,587	80,303	87,528	64,215	72,152
Adjusted R-squared	0.17	0.27	0.21	0.28	0.19	0.26
R-squared	0.17	0.27	0.21	0.28	0.19	0.26

Notes: The table reports OLS estimates, with standard errors clustered at the district level. The unit of observation is an individual. In columns 1 and 2, the sample includes women only and the dependent variable is an indicator variable that equals one if she is in the labor force. The estimates in columns 3-6 include men and women. The dependent variables measure respondents' self-report attitudes regarding gender roles. A higher value indicates beliefs about greater inequality between men and women. "When jobs are scarce" takes on the value of zero or one, while "men better political leaders" takes on integer values between 1 and 4. "Individual controls" are: age, age squared, dummies for primary and secondary education (the excluded group is tertiary education), gender (for gender attitude dependent variables only) and an indicator variable for marital status. "Traditional plough use" is the estimated proportion of individuals living in a district with ancestors that used the plough in pre-industrial agriculture. The mean (and standard deviation) of this variable is 0.724 (0.425); this corresponds to the sample from column 1. "District controls" include district level measures of: ancestral suitability for agriculture, fraction of ancestral land that was tropical or subtropical, ancestral domestication of large animals, ancestral settlement patterns, and ancestral political complexity. "Contemporary country controls" include: the natural log of real per capita GDP, and its square, measured in the same year as the dependent variable. ***, ** and * indicate significance at the 1, 5 and 10% levels.

Table A11: Robustness of OLS estimates to additional covariates.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dependent variable: Female labor force participation in 2000							
Mean of dep. var.	51.35	51.55	51.35	51.48	51.26	52.09	51.48	52.13
Traditional plough use	-10.892*** (3.848)	-12.714*** (3.255)	-12.356*** (2.993)	-12.336*** (3.019)	-12.721*** (3.364)	-14.618*** (3.482)	-9.913*** (3.160)	-9.234** (4.301)
<i>Historical controls:</i>								
Practices intensive agriculture	2.761 (3.590)							0.490 (4.390)
Prop. of subsist. from herding	-17.726 (12.558)							-10.883 (11.815)
Prop. of subsist. from hunting	66.843** (33.658)							6.050 (44.139)
Absence of private property		-4.290 (4.519)						-3.68 (5.213)
Patrilocal marriages		0.315 (2.987)						0.099 (3.446)
Matrilocal marriages		-0.493 (8.015)						-0.606 (9.132)
Nuclear family structure		-5.652 (5.115)						-0.792 (5.450)
Extended family structure		-11.678** (4.760)						-7.132 (5.561)
Year ethnicity sampled			0.0004 (0.001)					0.001 (0.002)
<i>Contemporary controls:</i>								
Years of civil conflicts (1816-2007)				-0.018 (0.110)				-0.042 (0.093)
Years of interstate conflicts (1816-2007)				0.03 (0.156)				-0.063 (0.134)
Ruggedness				0.012 (0.770)				-0.369 (0.801)
Communism indicator					7.084** (2.974)			2.296 (3.092)
Fraction of European descent					-0.052 (0.032)			-0.071 (0.044)
Oil production per capita						-0.051 (7.728)		2.847 (10.062)
Agricultural share of GDP						-0.18 (0.190)		-0.092 (0.162)
Manufacturing share of GDP						0.002 (0.174)		-0.039 (0.142)
Services share of GDP						-0.086 (0.132)		-0.097 (0.102)
Fraction of pop. Catholic							-14.830*** (3.901)	-9.852* (5.176)
Fraction of pop. Protestant							0.401 (7.943)	6.336 (6.338)
Fraction of pop. Christian (other)							-7.993 (8.207)	-12.995 (9.861)
Fraction of pop. Muslim							-23.882*** (4.311)	-22.822*** (5.631)
Fraction of pop. Hindu							-29.451*** (8.306)	-23.824** (10.649)
Baseline controls	yes	yes	yes	yes	yes	yes	yes	yes
Observations	165	163	165	163	153	154	163	142
R-squared	0.43	0.43	0.40	0.40	0.46	0.40	0.55	0.64

Notes: OLS estimates are reported with robust standard errors in brackets. The unit of observation is a country. "Traditional plough use" is the estimated proportion of citizens with ancestors that used the plough in pre-industrial agriculture. "Female labor force participation" is the percentage of women in the labor force. The variable ranges from 0 to 100. Each regression includes the full set of control variables (historical and contemporary). The historical controls include: ancestral suitability for agriculture, fraction of ancestral land that was tropical or subtropical, ancestral domestication of large animals, ancestral settlement patterns, and ancestral political complexity. The contemporary controls include the natural log of real per capita GDP and its square, measured in the same year as the dependent variable. The coefficients and standard errors for the control variables are reported in the paper's online appendix. ***, ** and * indicate significance at the 1, 5 and 10% levels.

Table A12: Country-level IV estimates, without contemporaneous income controls.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A. First stage 2SLS estimates. Dependent variable: Traditional plough use								
Mean of dependent variable	0.53		0.45		0.55		0.48	
Plough-positive environment	0.756*** (0.070)	0.675*** (0.075)	0.851*** (0.074)	0.701*** (0.092)	0.800*** (0.074)	0.695*** (0.088)	0.850*** (0.047)	0.721*** (0.057)
Plough-negative environment	0.121 (0.098)	0.167 (0.106)	0.106 (0.144)	0.110 (0.146)	0.093 (0.098)	0.127 (0.105)	0.110 (0.087)	0.107 (0.087)
Equality of coefficients (<i>p</i> -value)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>F</i> -stat (plough variables)	59.38	40.07	67.06	29.41	58.70	30.98	163.41	79.82
Dependent variable (panels B & C):								
	Female labor force participation in 2000		Share of firms with female ownership, 2005-2011		Share of political positions held by women in 2000		Average effect size (AES)	
Panel B. Reduced-form estimates								
Mean of dependent variable	50.80		34.64		12.14		2.31	
Plough-positive environment	-15.851*** (4.082)	-16.444*** (4.313)	-13.042** (5.251)	-13.288** (5.432)	-4.004 (2.691)	-3.741 (3.000)	-0.696*** (0.124)	-0.909*** (0.155)
Plough-negative environment	18.281*** (6.623)	16.490** (6.430)	8.178 (9.326)	13.972 (10.100)	-10.063 (6.282)	-9.432 (6.623)	0.344* (0.191)	0.432** (0.197)
Equality of coefficients (<i>p</i> -value)	0.00	0.00	0.01	0.00	0.23	0.31	0.00	0.00
<i>F</i> -stat (plough variables)	21.60	16.68	6.98	7.23	1.46	1.17	24.60	25.30
Panel C. Second-stage 2SLS estimates								
Traditional plough use	-29.589*** (5.985)	-32.101*** (7.309)	-18.380*** (5.270)	-24.414*** (6.862)	-1.551 (2.566)	-2.449 (3.596)	-0.953*** (0.140)	-1.446*** (0.222)
Hausman test (<i>p</i> -value)	0.00	0.00	0.54	0.28	0.93	0.62	0.04	0.00
Hansen <i>J</i>	0.00	0.00	0.26	0.13	0.12	0.16	0.01	0.02
Historical controls	yes	yes	yes	yes	yes	yes	yes	yes
Continent FEs	no	yes	no	yes	no	yes	no	yes
Observations	172	172	127	127	149	149	149	149

Notes: Two stage least squares estimates are reported with robust standard errors in brackets. The unit of observation is a country. "Traditional plough use" is the estimated proportion of citizens with ancestors that used the plough in pre-industrial agriculture. The variable ranges from 1 to 1. "Female labor force participation" is the percentage of women in the labor force and ranges from 0 to 100. "Share of firms with female ownership" is the percentage of firms in the World Bank Enterprise Surveys with some female ownership. The surveys were conducted between 2003 and 2010, depending on the country. "Share of political positions held by women" is the proportion of seats in parliament held by women. Both share measures range from 0 to 100. ***, ** and * indicate significance at the 1, 5 and 10% levels. The number of observations reported for the AES is the average number of observations in the regressions for the three outcomes.

Table A13: Cross-ethnicity correlates of traditional plough use.

	(1)	(2)	(3)	(4)	(5)
	Dependent variable: Traditional plough use				
Mean of dep. var.	0.14	0.13	0.17	0.14	0.18
Agricultural suitability	-0.001 (0.025)	-0.111*** (0.024)	-0.121*** (0.030)	-0.157*** (0.041)	-0.181*** (0.046)
Tropical climate	-0.042 (0.031)	-0.107*** (0.027)	-0.141*** (0.033)	0.072** (0.035)	-0.012 (0.043)
Presence of large animals		0.065*** (0.016)	0.006 (0.024)	0.157*** (0.023)	0.074** (0.032)
Economic complexity		0.009** (0.005)	0.010 (0.008)	0.019*** (0.005)	0.011 (0.008)
Political hierarchies		0.151*** (0.012)	0.098*** (0.015)	0.133*** (0.013)	0.083*** (0.015)
Practices intensive agriculture			0.283*** (0.033)		0.193*** (0.033)
Absence of private property			-0.005 (0.030)		-0.059* (0.033)
Patrilocal marriages			0.0003 (0.030)		0.012 (0.032)
Matrilocal marriages			0.011 (0.052)		0.016 (0.063)
Nuclear family structure			0.124*** (0.032)		0.107*** (0.035)
Extended family structure			0.112*** (0.024)		0.107*** (0.026)
Prop. of subsist. from hunting			-0.002 (0.007)		-0.022** (0.009)
Prop. of subsist. from herding			0.026*** (0.009)		0.024** (0.010)
Year ethnicity sampled			-0.00004 (0.0001)		-0.00003 (0.0001)
Plough-positive environment				0.340*** (0.042)	0.404*** (0.049)
Plough-negative environment				-0.017 (0.078)	0.067 (0.089)
Observations	1117	1086	716	898	599
R-squared	0.00	0.27	0.43	0.36	0.51

Notes: OLS estimates are reported with robust standard errors in brackets. The unit of observation is an ethnicity from the Ethnographic Atlas. "Traditional plough use" is an indicator variable that equals one if the society used the plough in pre-industrial agriculture.

Table A14: Robustness of IV estimates to geographical controls.

	Dependent variable: Female labor force participation in 2000						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Mean dep. var.	51.35						
Traditional plough use	-26.681*** (5.989)	-19.889*** (6.009)	-27.023*** (6.283)	-17.992*** (6.563)	-27.800*** (7.801)	-27.092*** (8.209)	-28.516*** (7.559)
Terrain slope	yes				yes	yes	yes
Soil depth		yes			yes	yes	yes
Average temperature			yes		yes	yes	yes
Average precipitation				yes	yes	yes	yes
Quadratic terms						yes	
Linear interactions							yes
Baseline controls	yes	yes	yes	yes	yes	yes	yes
Observations	160	160	160	160	160	160	160

Notes: 2SLS estimates are reported with robust standard errors in brackets. The unit of observation is a country. "Traditional plough use" is the estimated proportion of citizens with ancestors that used the plough in pre-industrial agriculture. "Female labor force participation" is the percentage of women in the labor force. The variable ranges from 0 to 100. Each regression includes the full set of control variables (historical and contemporary). The historical controls include: ancestral suitability for agriculture, fraction of ancestral land that was tropical or subtropical, ancestral domestication of large animals, ancestral settlement patterns, and ancestral political complexity. The contemporary controls include the natural log of real per capita GDP and its square, measured in the same year as the dependent variable. ***, ** and * indicate significance at the 1, 5 and 10% levels.

Table A15: Robustness of IV estimates to additional covariates.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dependent variable: Female labor force participation in 2000							
Mean of dep. var.	51.10	51.31	51.10	51.24	51.37	51.85	51.24	52.26
Traditional plough use	-25.539*** (8.026)	-23.329*** (5.932)	-21.985*** (5.290)	-22.636*** (5.699)	-25.333*** (6.295)	-26.769*** (5.939)	-18.281*** (5.704)	-30.369** (14.331)
<i>Historical controls:</i>								
Practices intensive agriculture	11.106** (5.164)							11.842 (8.021)
Prop. of subsist. from herding	-13.38 (13.237)							-4.843 (13.339)
Prop. of subsist. from hunting	61.341 (37.913)							23.296 (41.246)
Absence of private property		-9.229 (6.118)						-7.374 (6.297)
Patrilocal marriages		-1.199 (3.030)						-2.678 (3.532)
Matrilocal marriages		-0.851 (7.972)						-2.307 (8.691)
Nuclear family structure		-1.695 (5.514)						5.891 (6.010)
Extended family structure		-9.369** (4.706)						-0.137 (6.165)
Year ethnicity sampled			-0.001 (0.001)					0.001 (0.002)
<i>Contemporary controls:</i>								
Years of civil conflicts (1816-2007)				-0.038 (0.102)				-0.100 (0.090)
Years of interstate conflicts (1816-2007)				0.13 (0.162)				0.039 (0.120)
Ruggedness				0.439 (0.803)				0.781 (1.042)
Communism indicator					8.540*** (3.157)			1.699 (2.801)
Fraction of European descent					-0.040 (0.034)			-0.044 (0.043)
Oil production per capita						-1.727 (7.274)		2.293 (9.938)
Agricultural share of GDP						-0.243 (0.176)		-0.19 (0.154)
Manufacturing share of GDP						0.119 (0.182)		-0.032 (0.166)
Services share of GDP						-0.238** (0.105)		-0.216** (0.098)
Fraction of pop. Catholic							-16.368*** (4.502)	-12.428** (5.563)
Fraction of pop. Protestant							-7.613 (8.352)	2.993 (5.768)
Fraction of pop. Christian (other)							-7.943 (8.278)	-4.265 (9.368)
Fraction of pop. Muslim							-23.856*** (4.140)	-20.020*** (5.229)
Fraction of pop. Hindu							-27.600*** (8.753)	-24.773** (9.861)
Hansen <i>J</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.24
Baseline controls	yes	yes	yes	yes	yes	yes	yes	yes
Observations	160	158	160	158	151	149	158	140

Notes: 2SLS estimates are reported with robust standard errors in brackets. The unit of observation is a country. "Traditional plough use" is the estimated proportion of citizens with ancestors that used the plough in pre-industrial agriculture. "Female labor force participation" is the percentage of women in the labor force. The variable ranges from 0 to 100. Each regression includes the full set of control variables (historical and contemporary). The historical controls include: ancestral suitability for agriculture, fraction of ancestral land that was tropical or subtropical, ancestral domestication of large animals, ancestral settlement patterns, and ancestral political complexity. The contemporary controls include the natural log of real per capita GDP and its square, measured in the same year as the dependent variable. ***, ** and * indicate significance at the 1, 5 and 10% levels.

Table A16: Part 1: List of origin-countries in children-of-immigrant regressions.

Country isocode	Country name	Number of Observations		
		Europe	United States	
		Men and women	All women	Married women
AGO	Angola	78	0	0
ALB	Albania	157	3	1
ARE	United Arab Emirates	1	0	0
ARG	Argentina	74	146	34
ARM	Armenia	33	51	9
ATG	Antigua and Barbuda	2	10	1
AUS	Australia	18	131	13
AUT	Austria	219	232	46
AZE	Azerbaijan	44	2	2
BDI	Burundi	4	0	0
BEL	Belgium	148	116	16
BEN	Benin	1	0	0
BFA	Burkina Faso	1	0	0
BGD	Bangladesh	19	29	1
BGR	Bulgaria	144	3	1
BHS	Bahamas	0	32	0
BIH	Bosnia and Herzegovina	381	1	0
BLR	Belarus	311	7	0
BLZ	Belize	1	58	6
BOL	Bolivia	27	54	4
BRA	Brazil	154	141	21
BRN	Brunei Darussalam	2	0	0
CAF	Central African Republic	2	0	0
CAN	Canada	36	3,920	439
CHE	Switzerland	40	110	17
CHL	Chile	39	113	14
CHN	China	54	1,064	221
CIV	Côte d'Ivoire	10	0	0
CMR	Cameroon	12	4	0
COG	Congo	41	0	0
COL	Colombia	45	599	72
COM	Comoros	4	0	0
CPV	Cape Verde	68	32	1
CRI	Costa Rica	1	104	6
CYP	Cyprus	16	0	0
CZE	Czech Republic	214	97	15
DEU	Germany	916	3,113	339
DMA	Dominica	3	37	4
DNK	Denmark	98	88	11
DOM	Dominican Republic	21	1,118	147
DZA	Algeria	204	2	0
ECU	Ecuador	52	382	42
EGY	Egypt	87	90	14
ERI	Eritrea	16	11	0
ESP	Spain	226	237	31
EST	Estonia	32	0	0
ETH	Ethiopia	64	12	1
FIN	Finland	288	60	5
FJI	Fiji	0	14	2
FRA	France	433	417	48
GAB	Gabon	2	0	0
GBR	United Kingdom	237	2,304	197
GEO	Georgia	83	14	0
GHA	Ghana	21	26	0
GIN	Guinea	13	0	0
GMB	Gambia	4	0	0
GNB	Guinea-Bissau	9	0	0
GRC	Greece	112	418	96
GRD	Grenada	2	13	0
GTM	Guatemala	5	416	47
GUY	Guyana	5	144	12
HND	Honduras	4	256	27
HRV	Croatia	193	15	5
HTI	Haiti	5	426	36
HUN	Hungary	175	317	67
IDN	Indonesia	108	56	2
IND	India	213	765	116
IRL	Ireland	145	1,176	208
IRN	Iran (Islamic Republic of)	176	131	13
ISL	Iceland	21	0	0
ISR	Israel	7	120	40
ITA	Italy	652	2,567	516
JAM	Jamaica	36	522	36
JOR	Jordan	7	40	10
JPN	Japan	12	963	143
KAZ	Kazakhstan	107	0	0
KEN	Kenya	15	18	0
KGZ	Kyrgyzstan	11	0	0
KHM	Cambodia	6	172	10

Table A16: Part 2: List of origin-countries in children-of-immigrant regressions.

Country isocode	Country name	Number of Observations		
		Europe	United States	
		Men and women	All women	Married women
KNA	Saint Kitts and Nevis	1	6	0
KOR	Republic of Korea	9	442	30
KWT	Kuwait	2	3	0
LAO	Lao People's Democratic Republic	4	298	47
LBN	Lebanon	46	109	25
LBR	Liberia	2	5	0
LBY	Libya	66	0	0
LCA	Saint Lucia	4	0	0
LKA	Sri Lanka	50	2	2
LSO	Lesotho	1	0	0
LTU	Lithuania	96	119	35
LUX	Luxembourg	14	0	0
LVA	Latvia	49	77	11
MAR	Morocco	683	40	9
MDA	Republic of Moldova	78	0	0
MDG	Madagascar	13	0	0
MDV	Maldives	1	0	0
MEX	Mexico	11	16,130	3647
MKD	Fmr Yugoslav Republic of Macedonia	70	0	0
MLI	Mali	7	0	0
MLT	Malta	5	0	0
MNG	Mongolia	1	0	0
MOZ	Mozambique	23	0	0
MRT	Mauritania	2	0	0
MUS	Mauritius	18	0	0
MYS	Malaysia	8	20	5
NAM	Namibia	3	0	0
NGA	Nigeria	40	109	10
NIC	Nicaragua	2	237	28
NLD	Netherlands	195	344	44
NOR	Norway	79	211	25
NPL	Nepal	3	2	0
NZL	New Zealand	7	31	1
OMN	Oman	1	0	0
PAK	Pakistan	116	90	14
PAN	Panama	2	221	14
PER	Peru	36	268	33
PHL	Philippines	62	2,381	266
POL	Poland	747	1,062	223
PRI	Puerto Rico	0	5,518	1341
PRT	Portugal	394	485	99
PRY	Paraguay	10	1	0
ROU	Romania	453	118	18
RUS	Russian Federation	2056	475	118
RWA	Rwanda	9	0	0
SAU	Saudi Arabia	2	4	0
SDN	Sudan	4	7	0
SEN	Senegal	23	0	0
SGP	Singapore	6	17	1
SLE	Sierra Leone	3	4	0
SLV	El Salvador	0	1,153	88
SUR	Suriname	61	0	0
SVK	Slovakia	273	168	31
SVN	Slovenia	32	0	0
SWE	Sweden	93	206	17
SWZ	Swaziland	2	0	0
SYC	Seychelles	3	0	0
SYR	Syrian Arab Republic	69	46	8
TGO	Togo	9	0	0
THA	Thailand	38	208	21
TJK	Tajikistan	14	0	0
TKM	Turkmenistan	5	0	0
TTO	Trinidad and Tobago	3	213	20
TUN	Tunisia	155	0	0
TUR	Turkey	629	71	9
TZA	United Republic of Tanzania	4	0	0
UGA	Uganda	5	14	1
UKR	Ukraine	594	142	21
URY	Uruguay	20	50	4
USA	United States of America	182	0	0
UZB	Uzbekistan	53	0	0
VCT	Saint Vincent and the Grenadines	1	6	0
VEN	Venezuela	15	88	14
VNM	Viet Nam	46	590	57
YEM	Yemen	151	3	2
ZAF	South Africa	38	25	2
ZMB	Zambia	5	0	0
ZWE	Zimbabwe	16	3	2
	Total	15,260	55,341	9,508

Table A17: Determinants of female labor force participation for U.S. children of immigrants, without origin-country income controls.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Dependent variable: Labor force participation indicator								
	All women			Married women					
	Woman's ancestry			Woman's ancestry			Husband's ancestry		
	Father's country	Mother's country	Parents same country	Father's country	Mother's country	Parents same country	Father's country	Mother's country	Parents same country
Mean dependent variable	0.63	0.63	0.60	0.68	0.70	0.69	0.70	0.71	0.70
Traditional plough use	-0.031*	-0.033**	-0.059***	-0.106**	-0.097**	-0.143***	-0.063***	-0.044**	-0.063***
	(0.017)	(0.015)	(0.021)	(0.046)	(0.037)	(0.046)	(0.022)	(0.019)	(0.022)
Individual controls	yes	yes	yes	yes	yes	yes	yes	yes	yes
Husband controls	n/a	n/a	n/a	yes	yes	yes	yes	yes	yes
Historical country controls	yes	yes	yes	yes	yes	yes	yes	yes	yes
Contemporary country controls	yes	yes	yes	yes	yes	yes	yes	yes	yes
State fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	59,667	57,782	34,348	10,671	9,949	7,195	36,781	36,543	24,161
Adjusted R-squared	0.23	0.23	0.26	0.10	0.10	0.11	0.08	0.08	0.08
R-squared	0.23	0.23	0.26	0.11	0.11	0.12	0.09	0.08	0.09

Notes: OLS estimates are reported with standard errors clustered at the country level. An observation is a daughter of an immigrant to the US. "Individual controls" include age, age squared, education dummies (a dummy for less than high school, one for high school, with the excluded group given by individuals with more than high school), a dummy for being single, year of survey fixed effects, and metropolitan fixed effects (one dummy for central city, one for outside central city, with the excluded group given by people not living in a metropolitan area). "Husband controls" include husband's age, age squared, education dummies (a dummy for less than high school, one for high school, with the excluded group given by husbands with more than high school) and wage income (measured by the log of real wage income). "Historical country controls" include: ancestral suitability for agriculture, fraction of ancestral land that was tropical or subtropical, ancestral domestication of large animals, ancestral settlement patterns, and ancestral political complexity. All regressions also control for state fixed effects. ***, ** and * indicate significance at the 1, 5 and 10% levels.

Table A18: Determinants of female labor force participation for U.S. children of immigrants, without state fixed effects.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Dependent variable: Labor force participation indicator								
	All women			Married women					
	Woman's ancestry			Woman's ancestry			Husband's ancestry		
	Father's country	Mother's country	Parents same country	Father's country	Mother's country	Parents same country	Father's country	Mother's country	Parents same country
Mean of dep. var.	0.63	0.63	0.60	0.68	0.69	0.69	0.70	0.71	0.70
Traditional plough use	-0.041**	-0.038*	-0.056**	-0.107**	-0.130***	-0.157***	-0.067***	-0.047**	-0.062**
	(0.016)	(0.019)	(0.022)	(0.046)	(0.043)	(0.052)	(0.024)	(0.022)	(0.024)
Individual controls	yes	yes	yes	yes	yes	yes	yes	yes	yes
Husband controls	n/a	n/a	n/a	yes	yes	yes	yes	yes	yes
Historical country controls	yes	yes	yes	yes	yes	yes	yes	yes	yes
Contemporary country controls	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	57,138	55,341	32,776	10,206	9,508	6,835	35,393	35,158	23,124
Adjusted R-squared	0.22	0.22	0.25	0.09	0.09	0.10	0.08	0.07	0.08
R-squared	0.22	0.22	0.25	0.10	0.09	0.10	0.08	0.07	0.08

Notes: OLS estimates are reported with standard errors clustered at the country level. An observation is a daughter of an immigrant to the US. All regressions include: individual controls (age, age squared, educational attainment fixed effects for less than high school, high school, more than high school, an indicator variable for being single, year of survey fixed effects, and metropolitan fixed effects for within metropolitan central city, outside of metropolitan central city, and not living in a metropolitan area), historical country controls (ancestral suitability for agriculture, fraction of ancestral land that was tropical or subtropical, ancestral domestication of large animals, ancestral settlement patterns, and ancestral political complexity), and contemporaneous country controls (the natural log of real per capita GDP and its square, measured in the same year as the dependent variable). Columns 4-9 also include husband controls (husband's age, age squared, husband's educational attainment fixed effects for less than high school, high school, and more than high school, and husband's natural log of real wage income. ***, ** and * indicate significance at the 1, 5 and 10% levels.

Table A19: Determinants of gender attitudes of European children of immigrants, without origin-country income controls.

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable: When jobs are scarce					
	Father's country		Mother's country		Same country	
	1-5 scale	Indicator	1-5 scale	Indicator	1-5 scale	Indicator
Mean of dep. var.	2.54	0.32	2.53	0.32	2.62	0.35
Traditional plough use	0.091 (0.103)	0.029 (0.039)	0.098 (0.097)	0.026 (0.037)	0.180 (0.110)	0.051 (0.042)
Individual controls	yes	yes	yes	yes	yes	yes
Historical origin-country controls	yes	yes	yes	yes	yes	yes
Destination-country fixed effects	yes	yes	yes	yes	yes	yes
Survey fixed effects	yes	yes	yes	yes	yes	yes
Observations	16,073	13,468	15,758	13,209	10,948	9,124
Adjusted R-squared	0.16	0.15	0.16	0.15	0.16	0.15
R-squared	0.16	0.15	0.16	0.15	0.16	0.15

Notes: The table reports OLS estimates, with standard errors clustered at the country level. An observation is the child of an immigrant. All regressions control for 33 country of destination fixed effects, two survey-year fixed effects for 3 different survey waves, individual controls (age, age squared, the number of years of education, a gender indicator variable, an indicator variable for being single, and two city size indicator variables), and historical origin-country controls (ancestral suitability for agriculture, fraction of ancestral land that was tropical or subtropical, ancestral domestication of large animals, ancestral settlement patterns, and ancestral political complexity). ***, ** and * indicate significance at the 1, 5 and 10% levels.

Table A20: Determinants of gender attitudes of European children of immigrants, without destination-country fixed effects.

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variables: When jobs are scarce					
	Father's country		Mother's country		Same country	
	1-5 scale	Indicator	1-5 scale	Indicator	1-5 scale	Indicator
Mean of dep. var.	2.54	0.32	2.53	0.32	2.62	0.35
Traditional plough use	0.231** (0.096)	0.079** (0.037)	0.230** (0.097)	0.081** (0.039)	0.294*** (0.093)	0.096** (0.039)
Individual controls	yes	yes	yes	yes	yes	yes
Contemporary origin-country controls	yes	yes	yes	yes	yes	yes
Historical origin-country controls	yes	yes	yes	yes	yes	yes
Survey fixed effects	yes	yes	yes	yes	yes	yes
Observations	15,545	13,024	15,260	12,788	10,535	8,780
Adjusted R-squared	0.15	0.14	0.14	0.13	0.14	0.14
R-squared	0.15	0.14	0.14	0.13	0.14	0.14

Notes: The table reports OLS estimates, with standard errors clustered at the country level. An observation is the child of an immigrant. All regressions control for two survey-year fixed effects for 3 different survey waves, individual controls (age, age squared, the number of years of education, a gender indicator variable, an indicator variable for being single, and two city size indicator variables), historical origin-country controls (ancestral suitability for agriculture, fraction of ancestral land that was tropical or subtropical, ancestral domestication of large animals, ancestral settlement patterns, and ancestral political complexity), and contemporaneous origin-country controls (the natural log of real per capita GDP and its square, measured in the same year as the dependent variable). ***, ** and * indicate significance at the 1, 5 and 10% levels.

A5. The impact of traditional plough agriculture in the mid-20th century

Estimates of equation (2), but examining earlier time periods, are reported in Table A21. Columns 1 and 2 report estimates for female labor force participation during two ten-year periods that correspond roughly to the 1950s (1952-1961) and 1960s (1962-1971). Our choice of time periods is driven by data availability. Early data are from the historical archive of the ILO and are only available for a limited number of countries and years, typically only one year in each decade. Data are most widely available for the years 1960/61, 1970/71. We therefore take these as our baseline measures for each country. For some countries that do not have data, we use data from earlier years. We examine the previous 10 years and use the most recent year for which data are available. In the end, we have at most one observation for each country, but with FLFP potentially measured in different years within the 10-year window. We measure the per capita GDP control variables in the same year as FLFP.

The 1952-1961 sample has 56 observations and the 1962-1971 sample has 72 observations, both considerably smaller than our baseline sample of 165 countries. Despite the smaller sample, we continue to observe a negative and statistically significant relationship between traditional plough use and female labor force participation. Interestingly, the magnitude of the coefficient estimates are actually larger in the historical sample than in the 2000 sample, particularly relative to the mean of the dependent variable (reported in the first row of the tables). This is explained by the fact that the sexual revolution of the 1960–1980s was concentrated in Western nations that have a tradition of plough agriculture, and therefore, Boserup’s hypothesis better explained cross-country patterns prior to the sexual revolution. These patterns are consistent with the influence of traditional values and beliefs arising from the plough fading over time due to other factors, such as the sexual revolution. The further back in time one observes, the stronger the association between past plough use and beliefs about gender inequality.

The small number of observations in our historical regressions is partially due to lack of data for per capita income during this period. When we estimate the regressions without controlling for contemporaneous income, reported in Table A22, the number of observations increases to 72 and 95, for the two periods respectively. The results remain robust in this alternative specification.

We next consider the share of political positions held by women. The data are from Paxton et

Table A21: Country-level OLS estimates: Evidence from before the women's liberation movement.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dependent variable:											
Female labor force participation, 1952-1961	Female labor force participation, 1962-1971	Share of political positions held by women, 1962-1971									
31.09	32.11	3.79	3.79	0.115	-0.455	0.059	-0.344	0.221	-0.277		
-16.874** (7.792)	-26.691*** (8.869)	-13.503*** (6.172)	-18.772** (7.742)	-0.121 (0.249)	-0.555 (0.345)	0.115 (0.266)	-0.455 (0.356)	0.059 (0.206)	-0.344 (0.281)	0.221 (0.217)	-0.277 (0.295)
Traditional plough use x Democracy indicator						-1.111*** (0.350)	-0.884** (0.397)		-0.969*** (0.263)	-0.687** (0.294)	
Baseline controls	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Democracy	no	no	no	no	no	yes	yes	no	no	yes	yes
Continent fixed effects	no	yes	no	yes	no	no	yes	no	yes	no	yes
Observations	56	56	72	72	83	83	83	102	102	102	102
Adjusted R-squared	0.13	0.12	0.18	0.21							
R-squared	0.24	0.31	0.26	0.34							

Notes: Columns 1–4 report OLS estimates, while columns 5–12 report Poisson maximum likelihood estimates. The unit of observation is a country. "Traditional plough use" is the estimated proportion of citizens with ancestors that traditionally used the plough in pre-industrial agriculture. "Female labor force participation" is the percentage of women in the labor force. The variable ranges from 0 to 100. "Share of political positions held by women" is the proportion of seats in parliament held by women. The measure also ranges from 0 to 100. The time period for both variables is a year between 1951 and 1962 (or between 1962 and 1971) depending on a country's data availability. "Baseline controls include both the historical control variables (ancestral suitability for agriculture, fraction of ancestral land that was tropical or subtropical, ancestral domestication of large animals, ancestral settlement patterns, and ancestral political complexity) as well as the contemporaneous control variables (the natural log of real per capita GDP and its square, measured in the same year as the dependent variable). "Democracy" is an indicator variable that equals one if the country's polity2 score is greater than zero. This variable is also measured in the same year as the dependent variable. ***, **, and * indicate significance at the 1, 5 and 10% levels.

Table A22: Historical country-level estimates, without contemporaneous income controls.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Dependent variable:											
	Female labor force participation, 1952-1961		Female labor force participation, 1962-1971		Share of political positions held by women, 1952-1961		Share of political positions held by women, 1952-1961		Share of political positions held by women, 1962-1971		Share of political positions held by women, 1962-1971	
Mean of dep. var.	31.11		33.18		3.60		3.73		4.41		4.46	
Traditional plough use	-9.820**	-20.839***	-8.463**	-13.884***	0.080	-0.490	-0.079	-0.848**	-0.127	-0.595***	-0.164	-0.872***
	(4.761)	(5.534)	(4.239)	(5.220)	(0.232)	(0.307)	(0.247)	(0.353)	(0.165)	(0.214)	(0.192)	(0.285)
Traditional plough use x democracy							-0.731***	-0.725***			-1.067***	-1.005***
							(0.142)	(0.142)			(0.128)	(0.128)
Historical controls	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Democracy	no	no	no	no	no	no	yes	yes	no	no	yes	yes
Continent fixed effects	no	yes	no	yes	no	yes	no	yes	no	yes	no	yes
Observations	72	72	95	95	90	90	86	86	113	113	106	106
Adjusted R-squared	0.05	0.11	0.12	0.12								
R-squared	0.13	0.25	0.18	0.22								

Notes: Columns 1-4 report OLS estimates, while columns 5-12 report Poisson maximum likelihood estimates. The unit of observation is a country. "Traditional plough use" is the estimated proportion of citizens with ancestors that traditionally used the plough in pre-industrial agriculture. "Female labor force participation" is the percentage of women in the labor force. The variable ranges from 0 to 100. "Share of political positions held by women" is the proportion of seats in parliament held by women. The measure also ranges from 0 to 100. The time period for both variables is a year between 1951 and 1962 (or between 1962 and 1971) depending on a country's data availability. "Historical controls" include: ancestral suitability for agriculture, fraction of ancestral land that was tropical or subtropical, ancestral domestication of large animals, ancestral settlement patterns, and ancestral political complexity. "Democracy" is an indicator variable that equals one if the country's polity2 score is greater than zero. This variable is also measured in the same year as the dependent variable. ***, ** and * indicate significance at the 1, 5 and 10% levels.

al. (2008). In choosing the time period, we followed the same approach as for female labor force participation.

When considering this outcome two potential problems arise. First, during this period it was very uncommon for women to hold seats in parliament (even more so than today). The mean of the dependent variable is only 3.8 and 4.4 during the two periods; the mean for the year 2000 is 11.83. In addition, the distribution is far from normal, with many zero observations. We address this by using a Poisson pseudo maximum likelihood estimator.

A second issue is that in the earlier periods democracies were much less common than today. Both time periods being examined are prior to the "Third Wave of Democratization", which began in the mid-1970s (Huntington, 1991). This is particularly problematic since it is likely that female participation in politics only reflects the broader preferences and values of a society when leaders are elected democratically rather than chosen by an autocratic leader. We address this by controlling for whether a country is democratic and allowing the impact of the plough on female participation in politics to differ for democracies and autocracies. An observation is defined as a democracy if its polity2 score, which ranges from -10 to 10, is greater than 0.

The estimates are reported in columns 5-12 of Table A21. Within the full sample, we find no statistically significant relationship between traditional plough use and female participation in politics. However, as shown in columns 7, 8, 11, and 12, this masks important heterogeneity between the relationship among autocracies and democracies. Although there is no relationship

Table A23: Historical country-level analysis, female participation politics in 1960 and 1970.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dependent variable							
	Share of political positions held by women, 1960		Share of political positions held by women, 1960		Share of political positions held by women, 1970		Share of political positions held by women, 1970	
Mean dep. var.	3.74		3.79		4.78		4.78	
Traditional plough use	0.323	-0.109	0.753**	0.132	-0.411*	-0.877***	-0.121	-0.742**
	(0.274)	(0.376)	(0.316)	(0.406)	(0.225)	(0.300)	(0.242)	(0.320)
Traditional plough use x Democracy indicator			-1.192***	-1.148***			-1.042***	-0.684**
			(0.381)	(0.446)			(0.262)	(0.295)
Historical controls	yes	yes	yes	yes	yes	yes	yes	yes
Contemporary controls	yes	yes	yes	yes	yes	yes	yes	yes
Democracy	no	no	yes	yes	no	no	yes	yes
Continent fixed effects	no	yes	no	yes	no	yes	no	yes
Observations	76	76	75	75	84	84	84	84

Notes: Poisson maximum likelihood estimates are reported with standard errors in brackets. The unit of observation is a country. "Traditional plough use" is the estimated proportion of citizens with ancestors that used the plough in pre-industrial agriculture. "Share of political positions held by women" is the proportion of seats in parliament held by women. The measure ranges from 0 to 100. The time period is 1960 or 1970. ***, ** and * indicate significance at the 1, 5 and 10% levels.

among autocracies, there is a negative and significant relationship among democracies. This is consistent with female participation in politics only reflecting the broader preferences and values of a society when leaders are democratically elected.

Since data on the share of political positions held by women are available on a yearly basis, we could have estimated the regression in specific years (rather than over a range of years); for example in 1960 or in 1970. Table A23 shows that the estimation results are similar in this case.

References

- BP Oil**, "Quantifying Energy," 2006. BP Statistical Review of World Energy, June 2006.
- Goldin, Claudia**, "The Quiet Revolution that Transformed Women's Employment Education and Family," *American Economic Review Papers and Proceedings*, 2006, 96 (2), 1–23.
- Huntington, Samuel P.**, *The Third Wave: Democratization in the Late Twentieth Century*, Norman: University of Oklahoma Press, 1991.
- McCleary, Rachel M. and Robert J. Barro**, "Religion and Economy," *Journal of Economic Perspectives*, 2006, 20 (2), 49–72.
- Nunn, Nathan and Diego Puga**, "Ruggedness: The Blessing of Bad Geography in Africa," *Review of Economics and Statistics*, 2012, 94 (1), 20–36.
- Paxton, Pamela, Jennifer Green, and Melanie Hughes**, "Women in Parliament, 1945–2003: Cross-National Dataset," 2008. ICPSR Study 24340.
- Putterman, Louis and David N. Weil**, "Post-1500 Population Flows and the Long-Run Determinants of Economic Growth and Inequality," *Quarterly Journal of Economics*, November 2010, 125 (4), 1627–1682.