Online Appendix for

Customary Norms, Inheritance, and Human Capital: Evidence from a Reform of the Matrilineal System in Ghana

Eliana La Ferrara
Bocconi University, IGIER and LEAP

Annamaria Milazzo
The World Bank

A.1 Robustness analysis

In this section we discuss alternative interpretations of our results and run some robustness checks to assess whether the mechanism that we suggest for linking the passage of the reform to educational outcomes is plausible and finds support in the data.

Region-specific shocks. Our first robustness check addresses the fact that the Akan are concentrated in the Southern and Western regions of Ghana. Although all our regressions include region fixed effects and region-specific linear trends, one may conjecture that shocks affecting Southern and Western Ghana after 1974 may have generated the effects we find. In Panel A of Appendix Table A4 we estimate our regression excluding from the sample Northern regions. We find that for males the coefficient on $Akan * Post$ is significant and very similar in magnitude to the benchmark estimate in Table 2 (-0.886 compared to -0.919). As before, we find no significant effect on the subsample of females. This evidence suggests that our results are not driven by omitted time-varying factors that are specific to the regions where the Akan are spatially concentrated.

Returns to education. We next check whether our results are due to differential changes in the returns to education for Akan compared to non-Akan males in the post-reform period. Such changes may have originated, for example, from technological changes in the occupational sectors where Akans are concentrated.

First of all, the Akan are spatially concentrated in regions where certain types of crops are grown (Appendix Table A3 reports summary statistics for the major crops grown in the village). It should be noted that in all our regressions we already control for dummies indicating the nine main crops grown in the community and for interactions between these crop dummies and the post-reform dummy. This accounts for crop-specific shocks occurring in the post-reform period, although it treats ethnic groups symmetrically in terms of the effects of these shocks. We now consider the possibility that there may have been crop-specific shocks that impacted Akans differentially from other groups.

In particular, the Akan are highly represented among cocoa producers. In fact, cocoa is mainly grown in the Southern and Western parts of Ghana, the regions where the Akan are concentrated. If returns to education in cocoa farming for Akans specifically changed over this period, or if Akans switched into or out of cocoa farming differentially from other groups (and this changed their returns to education), this may generate a pattern of results like the one we find. We thus define an

indicator variable '*cocoa major crop*' taking value one for villages where cocoa is listed as being one of the nine major crops, and zero otherwise. In Panel B of Appendix Table A4 we re-estimate our main regression introducing a triple interaction term $Akan^{*}Post^{*}$*cocoa major crop*. If our results were driven by changes in the returns to education associated with cocoa farming for Akans, we would expect a negative and significant coefficient on this triple interaction, and an insignificant coefficient on $Akan^{*}Post$. Instead we find that for the male sample (column 1) the coefficient on $Akan^{*}Post$ is negative and significant, and close to our benchmark estimates. On the other hand the coefficient on $Akan^{*}post^{*}$*cocoa major crop*, is insignificant. No significant effect is found for females (column 2). Overall, we interpret these findings as evidence that our results are not driven by changes in returns to education for Akan cocoa farmers or by reallocation of Akans in or out of the cocoa sector in the post-reform period.

Another robustness check relates to changes in returns to education due to shocks to specific sectors in which Akans and non-Akans are differentially employed. We construct dummies for the type of mother's and father's occupation including: farmer, sales, clerical job, and professional. We also interact these dummies with the post-reform dummy and augment our benchmark specification to include these terms. The results are reported in Panel C of Appendix Table A4 and show that the inclusion of these variables does not affect our coefficient of interest.

A.2 School attendance

To estimate the impact of the reform on school attendance, we select individuals aged 6 to 17 from each of the five rounds of the GLSS and compare attendance rates for those observed in the first two waves (GLSS 1987/88 and 1988/89) to those observed in later rounds of the survey (GLSS 1991/92, 1998/99 and 2005/2006).[1] Ideally we would like to have information on attendance rates before 1985, but this data is not available in the GLSS. However, it likely took some time before the reform was fully operative, so we hypothesize that parents internalized the effects of the reform more in rounds 3 to 5 of the GLSS. If the reform led to a sudden reduction in attendance levels in 1985, which is somewhat unlikely, our results would underestimate the true effect.

We estimate a regression similar to equation (1) in the main text, where edu_{itr} is an indicator

[1] We restrict the sample to children of the household head. We define the attendance rate as the ratio of the number of children currently attending school over those who are supposed to be in a particular school level given their age.

variable taking value one if the individual is currently attending school and zero otherwise.[2] $Post_{it}$ is equal to one if the individual was observed in GLSS wave 3, 4 or 5, and zero otherwise. In these regressions we cluster standard errors by (ethnic group $\times$ wave), adjusting for the small number of clusters using wild bootstrap.[3]

Regarding the summary statistics for this sample of younger cohorts, attendance rates for Akan and non-Akan boys aged 6-17 are 86 and 64 percent, respectively. The percentage of girls going to school is lower than that of boys, at 82 and 59 percent, respectively.

Appendix Table A5 shows our results. The main regressor of interest in columns 1 and 5 is the interaction term $Akan * Post$, where the dummy "Post" takes value one for individuals interviewed in rounds 3 to 5 of the GLSS. For the male sample (column 1) the coefficient of $Akan^{*}post$ is negative and significant at the 5 percent level. The estimated effect is -0.112, which means that the probability of currently attending in school decreased by 11.2 percentage points for Akan males in the post-reform period. The effect for females is also negative and significant (column 5).[4]

Appendix Table A9 shows that the negative effect on attendance is driven by households that currently own land, i.e., where the children may in the future inherit paternal land. Landed households are defined as households who answer in the affirmative to the question "Does any member of the household own any land?"[5] In this case the contemporaneous land ownership status of the household is the appropriate measure because the population under study is that of children who are living with their father in the household being interviewed. Table A9 shows that the point estimates are very similar if, instead of current land ownership, we split the sample according to whether the father of the child was a farmer or not. The closeness in the estimates increases our confidence that "father farmer" (the proxy for land ownership that we used in the attainment regressions) was reliable.

We next test whether the effects of the ISL on attendance vary with the number of siblings living in the household. If bequests are to be divided among all children of the head, the reform

[2]Other control variables are the same as in (1), except that we include wave fixed effects but not birth year fixed effects, due to the smaller sample size. Moreover, we also include the log of distances to primary, secondary and tertiary school. We cannot analyze changes at the intensive margin, i.e. hours of school attended, because hours attended are not consistently defined or available across waves.

[3]We use the the wild bootstrap procedure proposed by Webb (2014), which is an adaptation of Cameron et al. (2008) for cases where the number of clusters is particularly low.

[4]The lower attendance of girls is not necessarily inconsistent with our previous finding that the female primary completion rate was weakly positively affected: Akan girls might be attending less in the post-reform period but still completing primary school.

[5]68 percent of Akan and 59 percent of non-Akan men live in a household in which at least one member owns land.

should imply smaller gains (in terms of land inheritance) for children with more siblings. Hence we expect that, after the reform, disinvestment in education should be lower for boys who have more siblings. Column 2 of Appendix Table A5 shows that the reduction in attendance for the cohorts affected by the reform is 22 percentage points for Akan males with no siblings (coefficient on $Akan * post$). The coefficient on the triple interaction term ($Akan^{*}post^{*}\#siblings$) is positive and significant at the 1 percent level, indicating that the negative effect on attendance is attenuated by 2.7 percentage points for each additional sibling. This pattern is not found among girls (column 6).

In columns 3 and 7 we explore whether this "attenuation effect" varies according to the age composition of the siblings. We expect that the attenuation effect should be mainly driven by those who have older siblings. In fact, the order of inheritance according to traditional matrilineal rules is such that 'if more than one person qualifies to inherit the property of the deceased, age and achievement become other important criteria' (Awusabo-Asare, 1990, p. 7). Column 3 shows that the coefficient on ($Akan^{*}post^{*}\#$ *older siblings*) is positive with a p-value of 0.109, while that on ($Akan^{*}post^{*}\#$ *younger siblings*) is zero.

Some caution should be exerted in interpreting the above results in a causal way, because the number of siblings may be endogenous. However, even if we do not make any causal claim, the above evidence is consistent with the fact that when paternal land should be shared among more heirs, leading to lower land per child, parents disinvest less in education.

We repeated the same set of robustness checks using attendance, instead of years of completed education, as a dependent variable and our estimates are robust. Is worth highlighting a test that we can perform in the attendance analysis (and we could not perform in the attainment one) to deal specifically with shocks to public employment. Between 1987 and 1990 many civil servants were laid off as part of the redeployment program. Since Akans were relatively more employed in the public sector, one may conjecture that the redeployment program could have lowered investment in secondary education due to reduced access to public sector jobs. We use as a proxy for the expected lower returns to education the dummy '*Government job*', which takes value one if at least one member of the household works for the government. Since we have information on the type of employer *only for resident members*, we can do this check only for the attendance regressions where we use the sample of younger cohorts, and not for the attainment regressions. Column 4 of Appendix Table A5 shows that the coefficient of $Akan^{*}Post$ is -0.12 and significant at the 5

percent level, while that of ($Akan^{*}Government\ job{*}Post$) is zero. This indicates that the reduction in school attendance is not driven by households in which someone works in the public sector.

A.3 Supporting evidence

Our interpretation of the results is that the ISL relaxed the matrilineal constraint leading to a higher share of land devolved on children and a downward adjustment in their human capital investment. In this section we use available data on land ownership, inheritance and land inputs to empirically corroborate the hypothesized mechanism and some of its implications.

A.3.1 Land holdings

The first exercise would ideally test whether the ISL led to an increase in the land that Akan males inherited from their fathers. Unfortunately, data limitations and inconsistencies in the questionnaires across the five rounds of the GLSS do not allow us to consider land inherited by single individuals.[6] The best feasible alternative is to test whether patterns in land ownership changed in a direction consistent with the ISL. In particular, we expect the amount of land owned to be higher for Akan households after the reform.

In our analysis of education attainment we used a cohort strategy because there were sharp defining moments when children transitioned between school cycles and because the effect of the reform was expected almost immediately due to changes in expectations driven by the ISL. On the other hand, changes in land ownership are envisaged to occur later, when Akan men start inheriting land from their fathers and there is no defining age at which this is expected to occur. For this reason, we experiment with different definitions of the post-reform period. The first definition is the same variable '*Post*' we used in our attendance regressions, i.e., a dummy variable equal to one if the household is interviewed in the last three rounds of the GLSS. The second definition, '*Post2*', allows for more time to elapse before individuals start inheriting and takes value one if the household is interviewed in the last two survey rounds. We conduct the analysis both at the extensive and at the intensive margin, using OLS. Both specifications include the same controls as our benchmark specification, equation (1). Appendix Table A7 reports the results.

[6] First, land ownership is recorded only at the household level. Second, we do not have consistent information across waves on how the land was acquired (e.g., through inheritance, purchase, etc.).

The first two specifications report the effect of the ISL on the probability of owning land. Compared to non-Akan households, Akan households are 6.6 (column 1) or 10.4 (column 2) percentage points more likely to own land after the reform, where only the latter is statistically significant at the 10 percent level. In the last two columns of Appendix Table A7 we consider the intensive margin, using as dependent variable the natural logarithm of the acres of land owned by the household. In these regressions the effect is positive with both definitions of post-reform, but statistically significant only with '*Post2*'.

A.3.2 Fathers and maternal uncles

The GLSS does not distinguish between different sources of inheritance, hence it does not allow us to analyze more in depth the role played by maternal uncles. To bring suggestive evidence on this point, we rely on a different data source – a survey collected by Goldstein and Udry (2011) in the Central region of Ghana.[7] These data cover 21 communities located very close to two urban centres, Accra and Kasoa. As such, the sample is not quite comparable to the rural households in our main analysis, but this is the only data source we could find that explicitly identifies land inherited from fathers and from maternal uncles. Also, because the data was collected in 2011, every respondent was affected by the reform when it comes to the possibility of inheriting (or having inherited) from their father.

The "family history" module of the survey asks respondents whether they have inherited, or anticipate inheriting, land from different sources, including the father and the maternal uncle. 246 Akan males and 494 non-Akan males answered this question. Table 5 reports some summary statistics.

About 43 percent of Akans and 47 percent of non-Akans report that they inherited or will inherit land from their fathers. This suggests that twenty-six years after the passage of the ISL, the likelihood of inheriting from one's father for Akan men is virtually the same as that of patrilineal groups. Interestingly, though, the matrilineal custom has not disappeared completely as Akan men are more than twice as likely to inherit from their maternal uncles (the fractions for Akans and non-Akans are 8.4 and 3.6 percent, respectively, and the difference is statistically significant with a p-value of .013).

When we turn to the amount of land inherited or to be inherited, on average Akans and

[7] We thank Markus Goldstein and Chris Udry for sharing their data.

non-Akans inherited from their fathers 6 and 4.2 acres, respectively. Again, a significant difference emerges for land inherited from maternal uncles (0.6 versus 0.2 acres). While these averages include zeroes for those who did not inherit at all, when we condition on receiving a positive inheritance the pattern remains qualitatively similar, but the differences are no longer statistically significant.

We interpret the evidence in Table 5 as suggestive of the fact that, while the ISL allowed Akan men to inherit from their fathers with the same probability as non-Akan men, it did not completely crowd out inheritance from maternal uncles, as Akans remained more likely to inherit from their uncles compared to patrilineal groups.

A.3.3 Land inputs

If Akan parents know that the land is going to their children rather than to other relatives, and if children themselves anticipate inheriting their father's land, we may expect to see more land-related investment and increased use of inputs such as family labor. We test these hypotheses in Appendix Table A8.

The GLSS asks households that own or operate a farm which inputs were used over the past 12 months. In Panel A of Appendix Table A8 we restrict the sample to landed households and consider the agricultural inputs that are consistently available across all five rounds of the GLSS.[8] We employ a difference-in-differences strategy and estimate an OLS model for the probability that the household used a specific agricultural input in the past year. In Panel A of Table A8, we find no significant effect on most agricultural inputs, except for manure (column 2). Compared to non-Akan households, Akans are 4.8 percentage points more likely to use manure, consistent with the practice of using manure to improve the quality of the soil at the time of preparing a cocoa plantation site.

In Panel B we test whether there are significant effects on labor inputs, e.g. if there is a substitution of hired labor with other types of labor, such as that provided by family members. This would be consistent with our proposed mechanism for the impact of the ISL. To test this hypothesis, we use data on time use available in the GLSS, where an individual is classified as currently working if she/he did any work in the past week. We consider the main occupation reported by each respondent. Panel B of Appendix Table A8 shows the estimated coefficient for

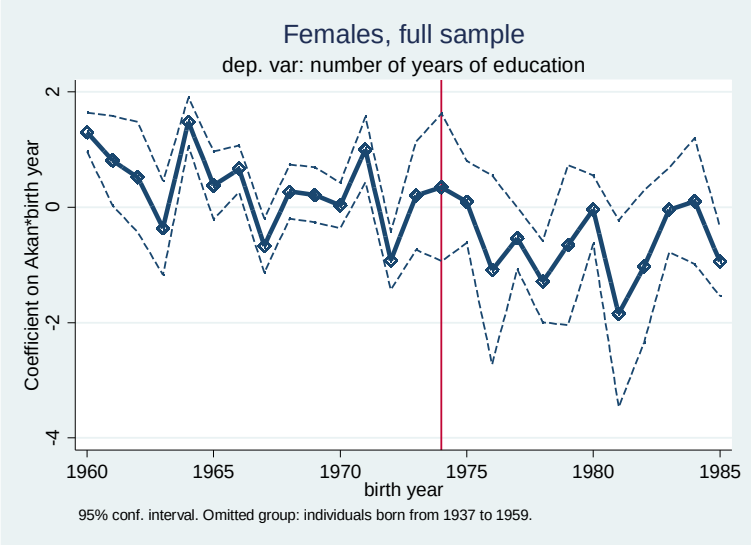
[8]Planting cocoa trees is an important form of long-term investment. Unfortunately, changes in the questionnaires and in the units of measurement across waves do not allow us to directly test for increased investment in cocoa plantations by Akans after the ISL.

working as unpaid agricultural worker in a family farm (columns 7-9) and the number of hours worked in this job (columns 10-12) for Akans versus non-Akans, by gender. We restrict our sample to individuals who are not household heads, to possibly capture the incentive effects on children who may expect to inherit their father's land after the ISL. The results show an increase of about 8 percentage points in the probability of working without pay on family land for the Akan post- reform (column 7). On the other hand, when we take as dependent variable the number of hours worked in the family farm during the past week (columns 10-12), the estimated coefficients for Akans are positive but statistically insignificant. The effects are substantially larger for Akan males, although not statistically significant. Overall, these results suggest an increased use of family male labor by Akan households, consistent with higher incentives for Akan men to work on a family farm that they can inherit thanks to the reform.

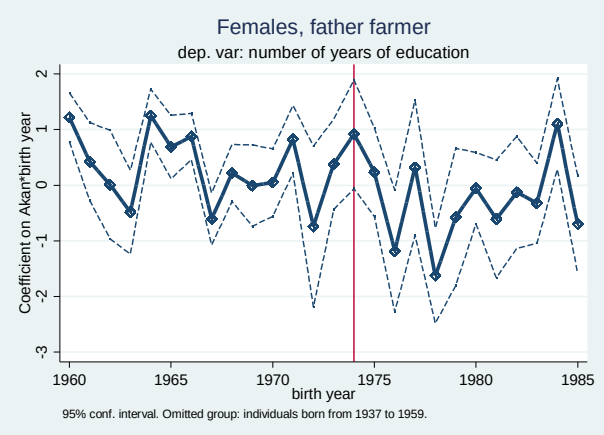
Online Appendix Figures and Tables

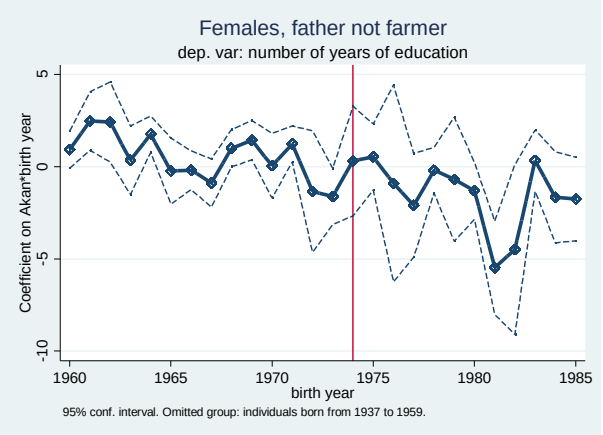
Appendix Figure A1. Cohort-specific effects, females

Panel A: Full sample



Panel B: By father's farmer status





Note: Estimated coefficients on the interaction of Akan and birth year dummies with 95 percent confidence bands (standard errors clustered at the ethnic group*birth year level). The dependent variable is the number of years of education and the controls are those listed in the note to Figure 1.

Appendix Table A1: Characteristics of ethnic groups in Ghana, Ethnographic Atlas

	AKAN			NON-AKAN			
	AKYEM	ASHANTI	FANTI	DAGOMBA	EWE	GA	ADANGME
	Marriage and social organization						
Mode of Marriage	Bride price			Bride price			
Marital Composition: Monogamy and Polygamy	Non-sororal, cowives in separate dwellings		Non-sororal, cowives in same dwelling	_	Non-sororal, cowives in same dwelling		
Transfer of Residence at Marriage: After First Years	_	Husband to wife's group	Couple to either group or neolocal	_	Wife to husband's group	No common residence	Wife to husband's group
Inheritance Rule for Real Property (Land)	Other matrilineal heirs (e.g., younger brothers)			_	Patrilineal (sons)	Other patrilineal heirs (e.g., younger brothers)	_
Class stratification	_	Dual (hereditary aristocracy)		Dual (hereditary aristocracy)		_	_
	Economic organization						
Intensity of Agriculture	Extensive or shifting agriculture, long fallow, and new fields cleared			Extensive or shifting agriculture, long fallow, and new fields cleared			
Major Crop Type	Tree fruits	Roots or tubers	Roots or tubers	Cereal grains	Roots or tubers	Cereal grains	Roots or tubers
Predominant Type of Animal Husbandry	Sheep and/or goats without larger domestic animals			Sheep and/or goats without larger domestic animals			
Age or Occupational Specialization: Agriculture	_	Task absent or age/occupational specialization absent		_	Task absent or age/occupational specialization absent		_
Gathering	0-5%	0-5%	0-5%	0-5%	0-5%	0-5%	0-5%
Hunting	6-15%	6-15%	6-15%	0-5%	6-15%	6-15%	6-15%
Fishing	0-5%	16-25%	6-15%	0-5%	16-25%	36-45%	0-5%
Animal Husbandry	6-15%	0-5%	6-15%	16-25%	6-15%	6-15%	6-15%
Agriculture	76-85%	66-75%	66-75%	76-85%	56-65%	36-45%	76-85%

Notes: _ refers to missing data. Source: compiled by authors from Murdock's (1967) Ethnographic Atlas.

Appendix Table A2: Impact of the ISL on educational attainment, unweighted regression

Dependent variable: Years of education						
		Males			Females	
	Full sample	Father farmer	Father not farmer	Full sample	Father farmer	Father not farmer
	(1)	(2)	(3)	(4)	(5)	(6)
Akan*Post	-0.926	-1.094	-0.087	-0.054	0.034	-0.724
	(0.325)	(0.356)	(0.576)	(0.305)	(0.335)	(0.617)
Akan	1.609	1.806	0.662	0.964	1.058	0.500
	(0.152)	(0.171)	(0.328)	(0.127)	(0.139)	(0.290)
Observations	8337	6700	1460	10285	8481	1726
R-squared	0.390	0.384	0.294	0.373	0.334	0.334

Notes: See notes to Table 2 in main text. These regressions are estimated without sampling weights.

Appendix Table A3: Summary statistics

	All			Male						Female					
				Akan			non-Akan			Akan			non-Akan		
	mean	s.dev.	n	mean	s.dev.	n	mean	s.dev.	n	mean	s.dev.	n	mean	s.dev.	n
Akan	0.41	0.49	18622	1	0	3225	0	0	5112	1	0	4125	0	0	6160
Years of education	4.75	4.96	18622	8.61	4.15	3225	4.84	5.17	5112	5.02	4.49	4125	2.26	3.93	6160
No education	0.44	0.5	18606	0.1	0.29	3216	0.45	0.5	5107	0.34	0.48	4125	0.69	0.46	6158
Incomplete primary	0.1	0.29	18606	0.07	0.26	3216	0.09	0.28	5107	0.14	0.34	4125	0.09	0.28	6158
Primary or higher	0.47	0.5	18606	0.83	0.37	3216	0.46	0.5	5107	0.52	0.5	4125	0.22	0.42	6158
Jun sec/middle or higher	0.33	0.47	18606	0.67	0.47	3216	0.34	0.48	5107	0.32	0.47	4125	0.14	0.34	6158
Senior sec/sec or higher	0.05	0.22	18622	0.11	0.31	3225	0.07	0.26	5112	0.02	0.15	4125	0.02	0.13	6160
Female	0.55	0.5	18622	0	0	3225	0	0	5112	1	0	4125	1	0	6160
Age	33.24	8.93	18622	33.22	8.98	3225	33.11	9.01	5112	33.46	9	4125	33.21	8.77	6160
Own land (hh)	0.6	0.49	17865	0.62	0.49	3083	0.56	0.5	4942	0.64	0.48	3926	0.58	0.49	5914
Household size	6.03	3.46	18622	5.16	3	3225	6.04	3.62	5112	5.51	2.73	4125	6.89	3.84	6160
Female head	0.15	0.36	18622	0.1	0.3	3225	0.05	0.22	5112	0.33	0.47	4125	0.14	0.34	6160
Age head	42.86	13.07	18622	40.48	12.04	3225	41.82	13.2	5112	43.16	12.87	4125	44.88	13.35	6160
Durables index	-0.4	0.96	18622	-0.16	1.11	3225	-0.53	0.84	5112	-0.22	1.05	4125	-0.55	0.84	6160
Catholic (head)	0.16	0.36	18622	0.17	0.37	3225	0.16	0.37	5112	0.16	0.37	4125	0.15	0.35	6160
Protestant (head)	0.15	0.36	18622	0.2	0.4	3225	0.12	0.32	5112	0.22	0.41	4125	0.11	0.31	6160
Other Christian (head)	0.28	0.45	18622	0.42	0.49	3225	0.19	0.39	5112	0.42	0.49	4125	0.18	0.38	6160
Muslim (head)	0.15	0.36	18622	0.06	0.24	3225	0.21	0.41	5112	0.06	0.24	4125	0.22	0.41	6160
Animist (head)	0.18	0.39	18622	0.05	0.22	3225	0.25	0.43	5112	0.06	0.24	4125	0.29	0.45	6160
Mother's education (yrs)	0.85	2.73	18622	1.38	3.26	3225	0.55	2.24	5112	1.29	3.3	4125	0.49	2.15	6160
Father's education (yrs)	2.36	4.58	18622	3.9	5.33	3225	1.49	3.78	5112	3.47	5.2	4125	1.39	3.73	6160
Father farmer	0.81	0.39	18367	0.74	0.44	3210	0.85	0.36	4950	0.74	0.44	4100	0.87	0.34	6107
Cocoa major crop	0.37	0.48	18622	0.63	0.48	3225	0.19	0.39	5112	0.62	0.49	4125	0.18	0.38	6160
Cassava major crop	0.79	0.41	18622	0.95	0.22	3225	0.69	0.46	5112	0.95	0.21	4125	0.67	0.47	6160
Maize major crop	0.89	0.32	18622	0.89	0.31	3225	0.88	0.33	5112	0.89	0.31	4125	0.88	0.32	6160
Yam major crop	0.43	0.5	18622	0.34	0.47	3225	0.51	0.5	5112	0.33	0.47	4125	0.5	0.5	6160
Tomato major crop	0.36	0.48	18622	0.42	0.49	3225	0.31	0.46	5112	0.42	0.49	4125	0.32	0.46	6160
Plantains major crop	0.44	0.5	18622	0.73	0.44	3225	0.24	0.43	5112	0.72	0.45	4125	0.22	0.42	6160
Nuts major crop	0.41	0.49	18622	0.12	0.32	3225	0.6	0.49	5112	0.12	0.32	4125	0.62	0.49	6160
Pepper major crop	0.4	0.49	18622	0.43	0.49	3225	0.38	0.49	5112	0.43	0.49	4125	0.37	0.48	6160
Beans/peas major crop	0.38	0.49	18622	0.13	0.33	3225	0.56	0.5	5112	0.12	0.33	4125	0.58	0.49	6160

Note: Authors' calculations on GLSS1-5. Rural sample of individuals aged 20-50. Using survey weights.

Appendix Table A4: Robustness checks

Dependent variable: Years of education		
	Males	Females
	(1)	(2)
Panel A. No northern regions		
Akan*Post	-0.886	0.203
	(0.303)	(0.329)
Akan	1.656	0.941
	(0.147)	(0.135)
Observations	5914	7151
R-squared	0.24	0.284
Panel B. Cocoa villages		
Akan*Post	-0.776	0.346
	(0.447)	(0.406)
Akan*Cocoa major crop*Post	-0.292	-0.403
	(0.594)	(0.472)
Akan*Cocoa major crop	-0.730	-0.426
	(0.268)	(0.261)
Cocoa major crop*Post	0.369	0.064
	(0.477)	(0.422)
Cocoa major crop	0.146	0.269
	(0.254)	(0.219)
Akan	2.007	1.194
	(0.225)	(0.19)
Observations	8337	10285
R-squared	0.394	0.373
Panel C. Parental occupations		
Akan*Post	-0.928	0.210
	(0.316)	(0.314)
Akan	1.677	0.989
	(0.153)	(0.14)
Observations	7893	10061
R-squared	0.394	0.379

Notes: OLS estimates. Standard errors in parentheses adjusted for clustering at the (ethnic group X birth year) level. *Post* is a dummy equal to one if the individual was born in 1974 or after. Each regression also includes the controls listed in the note to Table 2. Panel A excludes from the sample Northern regions, i.e., Northern, Upper East and Upper West. Panel C in addition includes dummies for the type of mother's and father's occupation (i.e., farmer, sales, clerical job and professional) and interactions of these dummies with Post.

Appendix Table A5: School attendance

Dependent variable: =1 if currently attending school								
	Males				Females			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Akan*Post	-0.112	-0.217	-0.214	-0.120	-0.091	-0.078	-0.084	-0.085
	[0.047]	[0.007]	[0.007]	[0.035]	[0.059]	[0.174]	[0.158]	[0.060]
Akan*Post*# siblings		0.027				-0.002		
		[0.000]				[0.747]		
Akan*Post*# younger siblings			0.007				-0.016	
			[0.701]				[0.142]	
Akan*Post*# older siblings			0.053				0.019	
			[0.109]				[0.314]	
Akan*Government job*Post				0.034				-0.057
				[0.533]				[0.479]
Akan*Government job				-0.141				0.016
				[0.075]				[0.730]
Government job*post				-0.064				0.071
				[0.233]				[0.390]
Government job				0.179				-0.016
				[0.004]				[0.767]
Akan	0.111	0.202	0.200	0.132	0.122	0.089	0.094	0.120
	[0.017]	[0.010]	[0.009]	[0.005]	[0.007]	[0.011]	[0.018]	[0.005]
Observations	8063	8063	8063	7925	6799	6799	6799	6685
R-squared	0.266	0.268	0.269	0.270	0.299	0.299	0.301	0.299

Notes: OLS estimates. P-values in square brackets correspond to clustering at the (ethnic group X survey wave) level adjusted for the small number of clusters using the wild bootstrap procedure proposed by Webb (2014), which is an adaptation of Cameron et al. (2008) for cases where the number of clusters is particularly small. *Post* is a dummy equal to one for respondents from rounds 3 to 5 of the GLSS. Each regression also includes the following controls: region and survey round fixed effects, region-specific time trends, log of distances to primary, junior and senior secondary school, age (and its square), dummies for the 9 main crops grown in the community, other individual controls (durables, female headed, household size, mother's and father's education, age of the head, dummies for religion of the household head), interactions of other individual controls with *Post,* interactions of community crop dummies with *Post.*

Appendix Table A6: Robustness checks, completion rates

Panel A. *Dependent variable =1 if completed primary school or higher*

	Akan vs Ewe		No Northern regions		Cocoa villages		Parental occupations	
	male	female	male	female	male	female	male	female
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Akan*Post	-0.083	0.021	-0.070	0.059	-0.055	0.083	-0.088	0.063
	(0.034)	(0.048)	(0.032)	(0.033)	(0.038)	(0.042)	(0.033)	(0.033)
Akan	0.089	0.098	0.18	0.105	0.211	0.119	0.181	0.111
	(0.022)	(0.021)	(0.016)	(0.015)	(0.021)	(0.020)	(0.016)	(0.015)
Akan*Cocoa major crop*Post					-0.042	-0.052		
					(0.056)	(0.055)		
Cocoa major crop	-0.025	-0.008	-0.014	-0.001	0.030	0.014	-0.004	0.005
	(0.017)	(0.019)	(0.016)	(0.016)	(0.024)	(0.025)	(0.016)	(0.015)
Cocoa major crop*Post	-0.004	-0.031	-0.007	-0.006	0.023	0.023	-0.014	-0.009
	(0.033)	(0.039)	(0.030)	(0.037)	(0.049)	(0.055)	(0.032)	(0.037)
Akan*Cocoa major crop					-0.063	-0.019		
					(0.024)	(0.028)		
Observations	4397	5432	5901	7149	8323	10283	7879	10059
R-squared	0.132	0.219	0.193	0.237	0.376	0.326	0.374	0.331

Panel B. *Dependent variable =1 if completed secondary school or higher*

	male	female	male	female	male	female	male	female
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Akan*Post	-0.085	0.026	-0.087	0.034	-0.085	0.089	-0.104	0.044
	(0.043)	(0.047)	(0.035)	(0.032)	(0.050)	(0.046)	(0.036)	(0.032)
Akan	0.093	0.069	0.154	0.061	0.204	0.08	0.157	0.064
	(0.025)	(0.022)	(0.016)	(0.014)	(0.023)	(0.019)	(0.016)	(0.014)
Akan*Cocoa major crop*Post					-0.010	-0.102*		
					(0.063)	(0.060)		
Cocoa major crop	-0.041	-0.003	-0.023	0.008	0.038	0.030	-0.018	0.012
	(0.022)	(0.019)	(0.020)	(0.016)	(0.029)	(0.020)	(0.020)	(0.016)
Cocoa major crop*Post	0.034	-0.021	0.035	-0.016	0.049	0.044	0.039	-0.014
	(0.038)	(0.041)	(0.033)	(0.034)	(0.050)	(0.043)	(0.036)	(0.033)
Akan*Cocoa major crop					-0.094	-0.032		
					(0.030)	(0.026)		
Observations	4397	5432	5901	7149	8323	10283	7879	10059
R-squared	0.133	0.195	0.163	0.199	0.288	0.245	0.283	0.249

Notes: OLS estimates. Standard errors in parentheses adjusted for clustering at the (ethnic group X birth year) level. *Post* is a dummy equal to one if the individual was born in 1974 or after. Each regression also includes the controls listed in the note to Table 2. Columns 3-4 excludes from the sample Northern regions, i.e., Northern, Upper East and Upper West. Columns 7-8 in addition includes dummies for the type of mother's and father's occupation (i.e., farmer, sales, clerical job and professional) and interactions of these dummies with Post.

.

Appendix Table A7: Impact of the ISL on household land holdings

Dependent variable:	*Own land (dummy)*		*(ln) Acres of land*	
	(1)	(2)	(3)	(4)
Akan*Post	0.066		0.224	
	[0.368]		[0.345]	
Akan*Post(2)		0.104		0.401
		[0.056]		[0.082]
Akan	0.120	0.108	0.113	0.052
	[0.102]	[0.011]	[0.571]	[0.778]
Observations	7152	7152	3954	3954
R-squared	0.238	0.238	0.463	0.457

Notes: OLS estimates. P-values in square brackets correspond to clustering at the (ethnic group X survey wave) level adjusted for the small number of clusters using the wild bootstrap procedure proposed by Webb (2014), which is an adaptation of Cameron et al. (2008) for cases where the number of clusters is particularly small. "Post" is a dummy equal to one for respondents from rounds 3 to 5 of the GLSS. *Post(2)* is a dummy equal to one for respondents from rounds 4 to 5 of the GLSS. Each regression also includes the controls listed in the footnote to Table 2.

Appendix Table A8: Impact of the ISL on land inputs

Panel A. *Dependent variables: =1 for use of agricultural input*						
	(1) Fertilizer	(2) Manure	(3) Insecticide	(4) Seeds	(5) Rent equipment	(6) Hired labor
Akan*Post	0.011	0.048	-0.014	-0.063	0.061	-0.097
	[0.860]	[0.067]	[0.753]	[0.424]	[0.201]	[0.137]
Akan	-0.005	-0.026	0.007	0.094	-0.069	0.094
	[0.889]	[0.284]	[0.893]	[0.132]	[0.107]	[0.072]
Observations	3903	3903	3903	3903	3903	3903
R-squared	0.154	0.133	0.244	0.114	0.168	0.155

Panel B. *Family labor*

Dependent variable:	*=1 if worked in family farm*			*# hours worked in family farm*		
	All (7)	Male (8)	Female (9)	All (10)	Male (11)	Female (12)
Akan*Post	0.084	0.145	0.053	1.807	7.300	0.987
	[0.082]	[0.124]	[0.289]	[0.709]	[0.557]	[0.832]
Akan	-0.108	-0.158	-0.092	-2.803	-4.844	-2.248
	[0.039]	[0.091]	[0.122]	[0.408]	[0.639]	[0.523]
Observations	6868	1526	5342	2604	505	2099
R-squared	0.107	0.156	0.116	0.176	0.497	0.175

Notes: OLS estimates. P-values in square brackets correspond to clustering at the (ethnic group X survey wave) level adjusted for the small number of clusters using the wild bootstrap procedure proposed by Webb (2014), which is an adaptation of Cameron et al. (2008) for cases where the number of clusters is particularly small. *Post* is a dummy equal to one for respondents from rounds 3 to 5 of the GLSS. Each regression also includes the controls listed in the footnote to Table 2.

Appendix Table A9: School attendance, land ownership and father farmer status

Dependent variable: =1 if currently attending school

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Males				Females			
	Owns land	No land	Father farmer	Father not farmer	Owns land	No land	Father farmer	Father not farmer
Akan*Post	-0.123	0.023	-0.161	-0.017	-0.14	0.145	-0.111	-0.002
	[0.095]	[0.855]	[0.003]	[0.757]	[0.023]	[0.364]	[0.049]	[0.961]
Akan	0.123	-0.027	0.170	0.023	0.132	-0.105	0.127	0.089
	[0.083]	[0.823]	[0.005]	[0.641]	[0.048]	[0.456]	[0.032]	[0.120]
Observations	5001	2788	5940	1805	4094	2484	4930	1596
R-squared	0.311	0.220	0.292	0.208	0.338	0.283	0.309	0.260

Notes: OLS estimates. P-values in square brackets correspond to clustering at the (ethnic group X survey wave) level adjusted for the small number of clusters using the wild bootstrap procedure proposed by Webb (2014), which is an adaptation of Cameron et al. (2008) for cases where the number of clusters is particularly small. *Post* is a dummy equal to one for respondents from rounds 3 to 5 of the GLSS. Each regression also includes the controls listed in the note to Table 5 in the main text.