Online Appendix
Gold mining and education: a long-run resource curse in Africa?

A.1 Extensions

A.1 Transition to higher educational stages

As indicated in Section 5.1, while the specifications reported in Table 1 estimate an average effect across all educational stages, gold mines presumably affect some stages more adversely than others. In particular, if the adverse effect of gold on educational attainment is due to the employment opportunities in artisanal mining, it is unlikely that the presence of gold mines dissuades someone who has already acquired secondary education from entering tertiary education or deters university graduates from pursuing post-graduate studies. The economic opportunities that gold mines offer may be more attractive for children and their parents at lower stages of education, and thus gold mines may have a more adverse effect on transition probabilities at these stages.

We hence estimate the following variants of Equation 1. Rather than a count variable, we specify a binary dependent variable that is one if a respondent has achieved a certain level of education and 0 else. First, we construct a dummy that is 1 if a respondent has at least some informal (e. g. Koranic) schooling and 0 else and re-estimate Equation 1 with this dummy as dependent variable. Next, we construct a dummy that is one if a respondent has at least some formal primary education and 0 else and again re-estimate Equation 1 with this dummy as dependent variable. We adopt this approach for all further stages of education. These models allow us to asses at which educational stages gold mining matters most.[1]

The results are collected in Figure A.1. They indicate that gold mining matters most during the period between primary and secondary education. Specifically, gold mines have the most adverse effect on the likelihood that a respondent attempts to pursue or completes secondary education: the probability is about 6 percent lower. Gold mines have, however, also large negative effects on the likelihood that primary education is completed or that post-secondary

[1] It is possible that sample selection issues may bias the estimated treatment effect for later educational stages. In particular, if gold mines incentivize in particular bad students to drop out, then only relatively good students will remain in these districts in later stages. This effect, however, will tend to attenuate the adverse effect of gold mines for these stages.

(but not university) education is taken up. On the other hand, gold mines do not affect the propensity of transitioning to university or post-graduate education, presumably because these students are from a socio-economic stratum where employment in (artisanal) gold mining is not a serious consideration. There are also no effects on acquiring informal or some formal primary education, which likely reflects the fact that there are fewer employment opportunities in gold mining for very young children.

A.2 Gender-specific effects of gold mines

As discussed in Section 2.2, gold mines may adversely affect the educational attainment of men and women in a similar fashion given that mining is not exclusively a male activity. On the other hand, while the gap is narrowing, educational attainment of women is generally lower in Africa. Thus, gold mining might carry relatively smaller educational costs for women: i. e., they may receive less education anyway and working in gold mining may overall be preferable to, for example, agricultural employment.[2]

To explore possible gender-specific effects, we append Equation 1 with a dummy for female respondents and an interaction between the female dummy and the gold mines dummy. The sign and significance of the interaction effect indicates whether the education of men or women is affected more adversely by gold mines during adolescence. The results are collected in Model (I) of Table A.3. We find that the dummy for female respondents is significantly negative, reflecting the fact that there still remains a gender gap in educational attainment in Africa. However, the interaction effect is insignificant, which suggests that the educational cost of gold mining affects men and women similarly.

[2]In fact, Tolonen (2014) finds that gold mines improve gender equality in Africa. Kotsadam and Tolonen (2016) also show that mine openings cause a shift in the employment patterns, with women switching from the agricultural to the service sector (which allows them to earn a more stable (cash) income). While overall female employment declines in response to mine openings, it is likely that gross household income increases since the reduction in female employment is presumably voluntary as male partners, too, appear to earn higher incomes in mining districts, either in the mining sector itself or due to a switch to skilled manual labor.

A.3 The size of gold mines

One important question is whether the educational cost of gold mines is mostly confined to smaller mines. Answering this question is important because it helps us to understand further why gold mines have adverse educational effects (it is thus related to the mechanisms that are responsible for the baseline results). Specifically, given the importance of artisanal mining for the excavation of gold and the relatively low level of governmental monitoring of these activities, children and young adults may easily find employment in smaller gold mines as artisanal miners. Larger gold mines, in contrast, are likely exploited by corporations, which may be scrutinized more heavily; the corporations themselves may also prefer to hire a better trained and older workforce. If the susceptibility of gold to small-scale mining is the reason for why gold mines have adverse educational effects, this would validate the interpretation that the direct employment opportunities offered by gold mines are an important reason for their adverse effect on educational attainment.

To explore whether the educational impact of gold mining varies according to the size of a mine, we first report in Model (II) of Table A.3 estimates for dummy variables indicating "smaller" (mines that are classified either as minor or moderate) and "larger" gold mines (mines that are classified as either major, giant, or supergiant).[3] We generally find that the adverse effect of gold mining is particularly pronounced for smaller mines. This result suggests that the amenability of gold to artisanal small-scale mining is an important reason why gold mines affect educational attainment negatively. We also observe a negative, albeit smaller and insignificant, coefficient estimate for larger mines.

To explore the effect of small and large mines further, we report in Table A.4 separate estimates for the effect of small and large gold mines. We find that only small gold mines have a negative effect on educational attainment while large gold mines have no effect. This is also confirmed in Table A.5, where we replace the gold mine dummy with variables that capture the number of small and large mines that were present in a respondent's district during

[3] Note that since a district can have multiple mines, both dummies can simultaneously be one for a given respondent.

her adolescence. In line with the previous results, we find that an increase in the number of small mines has adverse effects for educational attainment while the number of large mines is irrelevant. Overall, these results confirm that it is the amenability of gold mining to small-scale activities, and correspondingly the presence of small mines, that primarily has negative effects for educational attainment.

A.4 The price of gold, frictions in educational choices, and income and substitution effects

To further understand the relationship between gold mining and educational outcomes, we explore the impact of the price of gold on educational attainment. If the gold price is high, gold mining should become more attractive relative to going to school in mining districts. Wages in the mining sector should increase and artisanal miners should be able to sell their produce for a higher price. Yet, the income effect may also outweigh the substitution effect. That is, an increase in the price of gold may raise household income sufficiently for parents to be able to forgo the extra income from sending their children to work, allowing them instead to send their children to school. This argument is the reason why e. g. Fenske and Zurimendi (2015) focus on variation in resource prices to explore the long-run consequences of natural resource income. Alternatively, educational choices may be subject to frictions. Once parents have decided to send their children to work rather than to school, the current price of gold, and thus any variation in the returns to gold mining, may not matter much at the margin.

We explore this question by extending Equation 1 with a continuous variable measuring the price of gold when a respondent was in adolescence[4] and an interaction effect between gold mines and the price of gold. The results are collected in Model (III) of Table A.3 and suggest that the contemporaneous price of gold is unimportant for educational attainment. That is, the interaction effect between gold mines and the price of gold is insignificant. The main effect for the presence of gold mines continues to be negative and of the same order of magnitude as in

[4]The data is from the World Bank's Commodity Price Data Database, Feb. 04, 2016.

the baseline regressions.[5] These results suggest that educational choices are subject to some frictions or that the income effect following an increase in gold prices does not outweigh the substitution effect.

A.2 Long-run effect of gold mines on economic outcomes

To complement our findings regarding educational attainment, we explore in this section whether respondents in mining-districts are economically better off in the long-run than respondents in non-mining districts even if they have lower educational attainment. If the income from gold mining is sufficiently large or persistent, working in the mining sector or related sectors rather than acquiring further education may be the financially dominant strategy even in the long-run.

In order to explore this issue, we relate the dummy for gold mines during adolescence to contemporaneous economic conditions of a respondent. Specifically, we explore how an Afrobarometer respondent who had gold mines in her district during adolescence (i) assesses her current living conditions relative to other co-nationals, (ii) how she assesses her living conditions as such, and (iii) how she assesses the present economic conditions in her country. The results are collected in Table A.6. Note that we omit the district fixed effects in these regressions. Within-district comparisons of contemporaneous economic conditions are likely not meaningful given that mines change the development trajectory of the entire district.

We find that respondents with mines during adolescence do not view their living conditions as worse than that of other co-nationals (Model I). However, it is likely that respondents think of their immediate neighborhood, i. e. other inhabitants of their district, when asked to compare their living conditions to co-nationals. If mines have, as discussed above, district-wide effects, this comparison may not be informative even if the district fixed effects are omitted. Their assessment of their absolute living conditions is therefore more informative. Indeed, we find

[5]The significance levels on the main effect by themselves are not informative about whether gold mines have a significant effect as the marginal effect of gold mines and the associated standard errors change with the value of the gold price.

in Model (II) that respondents with mines during adolescence are more likely to assess their current living conditions as unsatisfactory; the estimate is negative and significant.

In line with this result, we also find that respondents who had mines in their districts during their adolescence perceive the current economic conditions in their country as worse than other respondents in the same country (Model III). The estimate is not significant, but has a reasonably large z-statistic. While the Afrobarometer question explored in Model (III) relates to country-level developments, the response is presumably informed by what respondents experience in their neighborhood. Overall, these results suggest that in the long-run, respondents with gold mines in their youth do not fare better economically than generic respondents. In fact, the long-run effects of gold mines may be negative, suggesting that having gold mines nearby during adolescence can turn into a "curse" during adulthood. The lower level of educational attainment and any broader long-run costs that insufficient education may have is not compensated by better economic conditions during adulthood. This finding is in line with recent evidence showing that education has a positive causal effect on income in Africa (Wantchekon et al., 2015).

A.3 Discussion of further mechanisms

A.1 Mineral resources, conflicts, and education

A large literature argues that mineral resources facilitate civil wars and other forms of violent conflicts (Collier and Hoeffler, 2004, 2005; Berman et al., 2017). Resources may be a tempting target for predatory political groups. They may also enable rebels or the state to fund violent campaigns. In turn, it is likely that violent conflicts cause disruptions to the education of children. Hence, any negative relationship between gold mining and educational attainment may not come about because children prefer to work in sectors related to mining, but because the presence of gold deposits facilitates conflicts.

To explore this channel, we match geocoded data on violent conflicts to the Afrobarometer data. We use the 6th version of the ACLED (Armed Conflict Location and Event Data Project) dataset. This dataset provides information on “the dates and locations of all reported political violence and protest events in over 60 developing countries” from 1997 to 2015. We project all battles and the number of fatalities recorded in the dataset on a district-level shapefile covering the countries in our sample.[6] We then note whether the district of a given respondent experienced at least one battle when she was in adolescence (aged 12) as well as the total number of fatalities in that year.

We next explore the relationship between gold mining, conflicts, and educational attainment by estimating variants of Equation 1. The results are collected in Table A.7. Since the ACLED data begins only in 1997, we have no information on conflicts for respondent who were in adolescence before this year. Hence, older respondents are dropped in the regressions reported in Table A.7 and the final sample is substantially smaller than in the baseline regressions. Consequently, we omit the district fixed effects in these regressions.

In Model (I), we explore whether respondents were more likely to experience a conflict in their district during their adolescence when there was at this time a gold mine. The purpose of this model is to establish whether conflicts are more likely in districts with gold mines. In Model (II), we explore, as in the baseline regressions, the relationship between gold mines during adolescence and educational attainment, but additionally control for any conflicts in the year of adolescence. If the negative effect of gold mines on educational attainment is in effect due to the higher propensity of conflicts in mining districts, the effect of gold mines on education should become insignificant once we explicitly control for conflicts. In Model (III), we extend Model (II) and additionally control for the intensity of a conflict by including the number of fatalities in a respondent’s year of adolescence.

The results indicate that there is a significantly negative correlation between gold mines and the incidence of conflicts (Model I). Conflicts are hence less likely in districts that have gold mines, which may indicate that, in the countries included in our sample, economic opportu-

[6] As noted in the description of the dataset, the ACLED also collects information on conflict-related events other than battles, for example protests, the setting up of bases by warring parties, etc. We omit these non-battle related events when defining the conflict variable.

nities on average dissuade individuals from engaging in political violence.[7] In line with this conclusion, we find that the effect of gold mines on educational attainment remains negative if we control for conflicts (Model II) and their intensity (Model III). We also observe a positive and significant correlation between the incidence and educational attainment. This may indicate that conflicts are more likely in areas with a more educated and thus politically active populace (i. e. the causality likely runs from a more educated population to conflicts rather than the other way around).

A.2 Gold mining and the incidence of child labor

As discussed, prior evidence such as Santos (2018) and Zabsonre et al. (2018) as well as the results in Section 7 indicate that one main reason for why gold mining may adversely affect educational attainment is that households opt to send their children to work in the mining sector. Unfortunately, we cannot directly test this interpretation with our Afrobarometer sample as there is no information in the Afrobarometer surveys on the whether the respondents who had gold mines in their neighborhood during their adolescence actually worked in the gold mining sector (or connected sectors). More generally, there is no comprehensive data on the incidence of child labor available at a sufficiently low level of geography across the countries included in our main sample. However, we can match the prevalence of gold mines to the intensity of child labor using country-level data provided in the World Bank's World Development Indicators (WDI). While evidence based on purely cross-country variation is not ideal, we should expect a positive correlation between gold mines and child labor if the employment opportunities offered by gold mining are at least in part responsible for the negative effect of gold mines on educational attainment

[7]Note that this result appears to contradict the findings in Berman et al. (2017). However, there are a number of differences between our specification and theirs. First, while we focus on gold only, they relate 14 minerals to conflict events. Second, we focus on the existence of mines while they emphasize changes in mineral world prices. Our sample also contains districts from only a subset of African countries while they use a grid of the entire continent. Finally, their sample contains mainly large-scale mines, while our sample also contains a substantial share of smaller mines. While a more thorough analysis of the differences in our and their approach and their implications for the results would be desirable, this is outside of the scope of the current paper.

For the subsequent analysis, we rely on two WDI indicators: the average weekly working hours of children who, despite their employment, still attend school and the average weekly working hours of children who only work. We calculate country-level averages using all available years with data on the two outcomes and match them to the number of gold mines in a country (during the years covered by the sample used for our main analysis with the Afrobarometer data). We interpret the number of gold mines as a proxy for the prevalence of gold mining in a country and the average weekly working hours of children as a proxy for the intensity of child labor.

The results are collected in Figure A.2. We plot the country-level averages for all countries with data on average working hours against the number of gold mines and also calculate linear fits. We find a positive relationship between the number of gold mines and the average weekly working hours of children. This effect is observable for both outcomes, i. e. for children who are engaged both in study and employment and for children who only work. While these results are arguably only suggestive, they indicate that child labor is more prevalent in countries where gold mining is more common.

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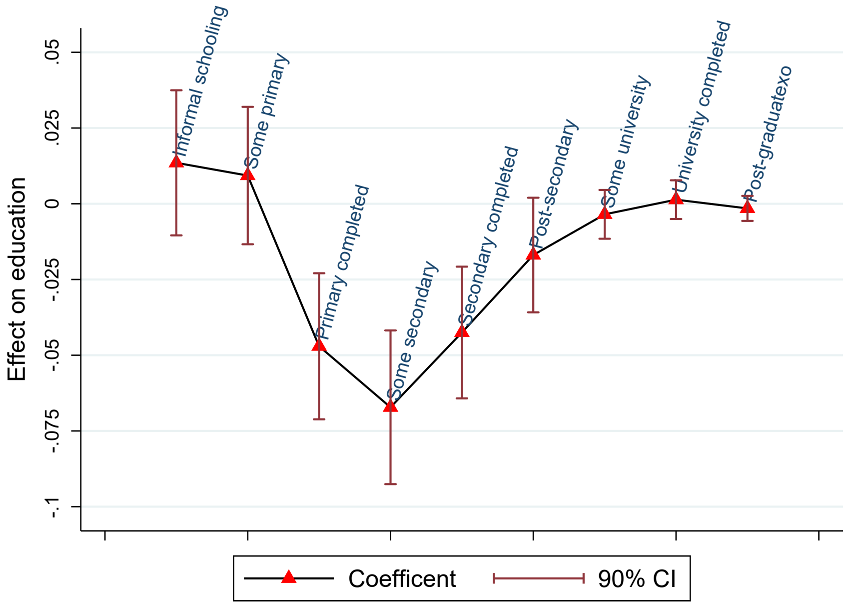
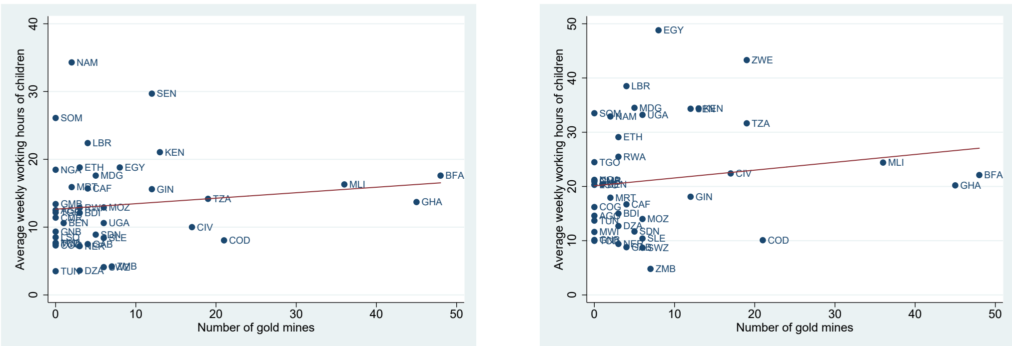


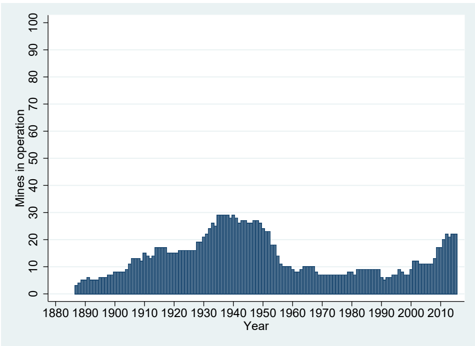
Figure A.1: Effect on different educational stages. This figure shows estimates for the effect of gold mines on the probability of transition from one educational stage on the next.



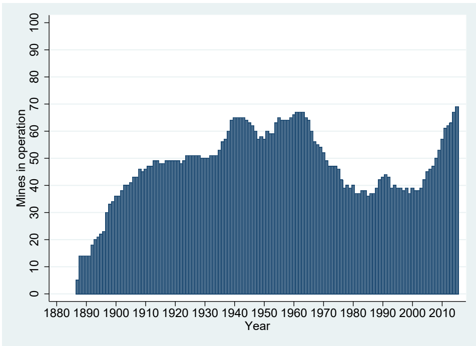
(a) Children who study and work

(b) Children who only work

Figure A.2: Average working hours of children, 7-14 years. These figures relate the average weekly working hour of children in a country to the number of gold mines. Subfigure (a) plots the average working hour of children who still attend school. Subfigure (b) plots average working hours for children who work exclusively. Data source: World Development Indicators.



(a) Small mines



(b) Large mines

Figure A.3: Gold mines in operation over time. These figures shows the number of small (subfigure a) and large (subfigure b) mines that are in operation in the countries included in our sample over time according to the MinEx data. We aggregate all mines classified by MinEx as minor or moderate into the "small" category and all mines classified as major, giant, or supergiant into the "large" category for the subfigures.

Table A.1: DEFINITION OF VARIABLES

Label	Description	Source
Education	Educational attainment, 10 distinct stages, ranges from none (0) to post-graduate (9).	Afrobarometer 3-5th wave.
Gold mine	Dummy = 1 if least one gold mine in one's district at age 12.	Own construction based on data from MinEx.
Gold mine in neighboring district	Dummy = 1 if gold mine in at least one neighboring district at age 12 & no gold mine in one's own district.	Own construction based on data from MinEx.
Only non-gold mines	Dummy = 1 if only non-gold mines in one's district at age 12	Own construction based on data from MinEx.
At least one non-gold mine	Dummy = 1 if at least one non-gold mine in one's district at age 12	Own construction based on data from MinEx.
Exclusively gold mine	Dummy = 1 if only gold mines one's district at age 12	Own construction based on data from MinEx.
Current gold mine	Gold mine shortly before the relevant wave of the Afrobarometer survey was conducted (2004 for wave 3, 2007 for wave 4, 2010 for wave 5).	Own construction based on data from MinEx.
Small mine	Dummy=1 if gold mine is classified either as minor ($\geq$ 0.03 Moz Au) or moderate ($\geq$ 0.32 Moz Au & $<$2.24 Moz Au)	Own construction based on data form MinEx.
At least major mine	Dummy=1 if mine is at least classified as major ($\geq$ 2.24 Moz Au)	Own construction based on data form MinEx.
Gold Price	Price of gold in year t.	World Bank commodity price data (The Pink Sheet, February 2016).
Female	Dummy=1 if female respondent.	Afrobarometer 3-5th wave.
Ethnic homeland	Dummy=1 if district of a respondent overlaps with the traditional settlement area of the respondent's ethnic group.	Own construction using data from Afrobarometer 4th wave, Murdock (1959), Nunn and Wantchekon (2011), and Deconinck and Verpoorten (2013).
School	Dummy=1 if there is a school in the sampling unit / enumeration area of a respondent.	Afrobarometer 3-5th wave.

Table A.2: SUMMARY STATISTICS

Variable	Obs	Mean	SD	Min	Max
Education	91062	3.202	2.082	0.000	9.000
Gold mine	91062	0.038	0.191	0.000	1.000
Gold mine in neighboring district	91062	0.107	0.309	0.000	1.000
Only non-gold mines	91062	0.054	0.225	0.000	1.000
At least one non-gold mine	91062	0.063	0.243	0.000	1.000
Exclusively gold mine	91062	0.029	0.167	0.000	1.000
Current gold mine	91062	0.063	0.244	0.000	1.000
Small mine	91062	0.017	0.130	0.000	1.000
At least major mine	91062	0.024	0.153	0.000	1.000
Gold Price	84898	0.159	0.849	0.000	9.320
Female	91062	0.498	0.500	0.000	1.000
Ethnic homeland	24382	0.556	0.497	0.000	1.000
School	90677	0.867	0.340	0.000	1.000

This table provixodes summary statistics on the Afrobarometer respondents included in the sample.

Table A.3: GOLD MINES DURING ADOLESCENCE AND EDUCATIONAL OUTCOMES, HETEROGENEOUS EFFECTS

	(I)	(II)	(III)
Dep. Var.	Education	Education	Education
Gold mine	-0.157**		-0.256**
	(0.068)		(0.116)
Female	-0.629***		
	(0.015)		
Gold mine × Female	0.081		
	(0.063)		
Small mine		-0.196**	
		(0.084)	
At least major mine		-0.074	
		(0.058)	
Gold mine × Price			0.024
			(0.023)
Cohort FE	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
District FE	Yes	Yes	Yes
Ethnic group FE	Yes	Yes	Yes
Countries	30	30	30
Districts	4950	4950	4950
N	91062	91062	84898

Notes: This table shows OLS regressions that relate a categorical variable measuring educational outcomes of an Afrobarometer respondent to a dummy variable for whether there was a gold mine in the respondent's district when she was in adolescence. We allow for heterogeneous effects of mines according to whether a respondent is a woman or a man (Model I), according to the size of a mine (Model II), and according to the price of gold (Model III). Standard errors in parentheses. Standard errors are clustered at the district-wave level and robust to heteroscedasticity. Stars indicate significance levels at 10% (*), 5% (**) and 1%(***).

Table A.4: GOLD MINES DURING ADOLESCENCE AND EDUCATIONAL OUTCOMES, REPLICATION OF BASELINE RESULTS WITH SEPARATE EFFECTS OF SMALL AND LARGE GOLD MINES

	(I)	(II)	(III)
Dep. Var.	Education	Education	Education
Small gold mine	-0.333***	-0.198**	-0.196**
	(0.101)	(0.099)	(0.084)
Large gold mine	-0.041	-0.068	-0.074
	(0.073)	(0.057)	(0.058)
Estimation method	OLS	OLS	OLS
Cohort FE	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
District FE	No	Yes	Yes
Ethnic group FE	No	No	Yes
Countries	30	30	30
Districts	4950	4950	4950
N	91062	91062	91062

Notes: This table shows OLS regression results that relate a categorical variable measuring educational outcomes of an Afrobarometer respondent to a dummy for whether there was a minor or moderate (i. e. small) gold mine in the respondent's district when she was in adolescence. Standard errors in parentheses. Standard errors are clustered at the district-wave level and robust to heteroscedasticity. Stars indicate significance levels at 10% (*), 5% (**) and 1%(***).

Table A.5: GOLD MINES DURING ADOLESCENCE AND EDUCATIONAL OUTCOMES, NUMBER OF MINES

	(I)	(II)	(III)	(VI)
Dep. Var.	Education	Education	Education	Education
Number of gold mines	-0.017			
	(0.027)			
Number of small gold mines		-0.136***		-0.130**
		(0.048)		(0.051)
Number of large gold mines			0.023	0.028
			(0.033)	(0.034)
Estimation method	OLS	OLS	OLS	OLS
Cohort FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes
Ethnic group FE	Yes	Yes	Yes	Yes
Countries	30	30	30	30
Districts	4826	4950	4826	4826
N	86169	91062	86169	86169

Notes: This table shows OLS regression results that relate a categorical variable measuring educational outcomes of an Afrobarometer respondent to the number of gold mines in the respondent's district when she was in adolescence. Model (II) to (IV) distinguish between small (minor or moderate) and large (all mines that are not noted as minor or moderate). Standard errors in parentheses. Standard errors are clustered at the district-wave level and robust to heteroscedasticity. Stars indicate significance levels at 10% (*), 5% (**) and 1%(***).

Table A.6: MINERAL RESOURCES DURING ADOLESCENCE AND CONTEMPORANEOUS ECONOMIC OUTCOMES

	(I)	(II)	(III)
Dep. Var.	Relative LC	Absolute LC	Present EC
Gold mine	-0.009	-0.062*	-0.033
	(0.030)	(0.032)	(0.032)
Cohort FE	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
District FE	No	No	No
Ethnic group FE	Yes	Yes	Yes
Countries	30	30	30
Districts	4950	4950	4950
N	88393	90951	89701

Notes: This table shows OLS regressions that relate categorical variables for the economic conditions of a respondent against a dummy for whether there was a gold mine in the respondent's district when she was in adolescence. Specifically, we explore how a respondent perceives her own living conditions relative to other co-nationals (Model I), her own living conditions in aboslute terms (Model II), and the present economic conditions in the country (Model III). Standard errors in parentheses. Standard errors are clustered at the district-wave level and robust to heteroscedasticity. Stars indicate significance levels at 10% (*), 5% (**) and 1%(***).

Table A.7: GOLD MINES DURING ADOLESCENCE AND EDUCATIONAL OUTCOMES, CONFLICTS AS AN ALTERNATIVE TRANSMISSION CHANNEL

	(I)	(II)	(III)
Dep. Var.	Conflict	Education	Education
Gold mine	-0.057***	-0.307***	-0.307***
	(0.014)	(0.091)	(0.091)
Conflict		0.147**	0.150***
		(0.058)	(0.058)
Fatalities			-0.125
			(0.252)
Estimation method	OLS	OLS	OLS
Cohort FE	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
District FE	No	No	No
Ethnic group FE	Yes	Yes	Yes
Countries	30	30	30
Districts	4161	4161	4161
N	21364	21319	21319

Notes: This table shows OLS regression results that relate the incidence of conflicts (Model I) and educational attainment of an Afrobarometer respondent (Model II-III) against a dummy for whether there was a gold mine in the respondent's district when she was in adolescence. Model (II) controls for the incidence of conflicts and Model (III) additionally for fatalities. Standard errors in parentheses. Standard errors are clustered at the district-wave level and robust to heteroscedasticity. Stars indicate significance levels at 10% (*), 5% (**) and 1%(***).

Table A.8: GOLD MINES DURING ADOLESCENCE AND EDUCATIONAL OUTCOMES, TESTS WITH NEIGHBORING GOLD MINE DISTRICTS WITHIN THE SAME COUNTRY

	(I)	(II)	(III)
Dep. Var.	Education	Education	Education
Gold mine		-0.166***	-0.156**
		(0.062)	(0.071)
Gold mine in neighboring district	-0.015	-0.029	
	(0.048)	(0.045)	
Sample	Restricted	Full	Full
Estimation method	OLS	OLS	OLS
Cohort FE	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
District FE	Yes	Yes	No
Ethnic group FE	Yes	Yes	Yes
Countries	30	30	20
Districts	4860	4950	1004
N	87591	91062	12741

Notes: This table shows regressions that relates gold mines during adolescence in one's own and in neighboring districts within the same country to educational outcomes (mines in neighboring districts of other countries are ignored). All models are estimated with OLS. The dependent variable is always educational attainment of an Afrobarometer respondent. Model (I) includes a dummy that is one for respondents that had a gold mines in neighboring districts during their adolescence. Respondents that had a gold mine in their own district are dropped in this model. Model (II) is estimated with all observations and includes dummies for both gold mines in neighboring districts and one's own district. Model (III) limits the sample to only those respondents that had a gold mine in their own or in a neighboring district during their adolescence and includes both dummies. This model omits the district fixed effects. Standard errors in parentheses. Standard errors are clustered at the district-wave level and robust to heteroscedasticity. Stars indicate significance levels at 10% (*), 5% (**) and 1%(***).

Table A.9: GOLD MINES DURING ADOLESCENCE AND EDUCATIONAL OUTCOMES, WITHOUT LARGE MINING DISTRICTS

	(I: > 95th)	(II: > 90th)	(III: > 75th)
Dep. Var.	Education	Education	Education
Gold mine	-0.128**	-0.117*	-0.174**
	(0.061)	(0.067)	(0.070)
Estimation method	OLS	OLS	OLS
Cohort FE	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
District FE	Yes	Yes	Yes
Ethnic group FE	Yes	Yes	Yes
Countries	30	30	30
Districts	4950	4950	4934
N	90910	90685	90086

Notes: This table shows OLS regression results that relate a categorical variable measuring educational outcomes of an Afrobarometer respondent to a dummy for whether there was a gold mine in the respondent's district when she was in adolescence. We drop respondents who had a gold mine in their district during adolescence if their district was larger than the 95th (Model 1), 90th (Model 2), and 75th (Model III) percentile according to its area to account for the fact that districts differ in size and mines may affect educational attainment only for residents who live relatively closeby. Standard errors in parentheses. Standard errors are clustered at the district-wave level and robust to heteroscedasticity. Stars indicate significance levels at 10% (*), 5% (**) and 1%(***).