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Socioeconomic Impact of Mining Activity: Effects of Gold Mining on Local Communities in Tanzania and Mali

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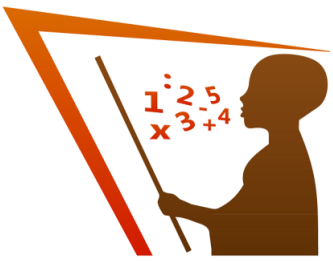

Summary

The effect of extractive activity on economic growth and development is a long debated issue in economics literature. While most of the existing literature focuses on the macroeconomic impacts of natural resource abundance, there is a rather limited but growing strand of literature that studies the local economy impact of extractive activity using micro data. This paper aims to contribute to this literature by providing new evidence on the effects of gold mining in two resource-rich African countries: Tanzania and Mali.

We utilize a rich dataset collected from various sources and apply a differences-in-differences estimation strategy to see whether individuals/households geographically close to mines, are affected differently from the opening of mines. We look at a number of outcome variables including various measures of children's health indicators, households' access to facilities, and women and men's employment status. The first part of the analysis is at the household/individual level where the data is kept and treatment is defined at. As a second attempt, we aggregate the data up to the district level by using the appropriate poverty mapping techniques and apply Abadie et al. (2010)'s Synthetic Control Group method to study whether mining districts behave differently from non-mining districts after mines start operation.

We reach different conclusions for the two case countries. In the case of Tanzania, we show that households in the immediate mining catchment area are negatively affected from extractive activity whereas this effect becomes positive when we consider households that are located in neighboring and further away catchment areas. In the case of Mali, any significant positive impact of mining activity is on those households who are located closer to the mines. Those households, who are still in the catchment area but further away from the mine, are either not affected or negatively affected from mining activity.

Keywords: Economic Development, Local Economy, Extractive Industries, Poverty, Poverty Mapping, Gold Mining, Africa, Tanzania, Mali, Differences-in-Differences, Synthetic Control Group.
JEL Classification Numbers: I31, I32, Q32

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1. Introduction

The effect of the existence of natural resources on economic outcomes is a long-debated issue in economics literature (Sachs and Warner (1995), Lederman and Maloney (2008)). Although natural resource abundance has the potential of creating economic growth through fiscal and other channels, its impact on economic development is not so straightforward.

Most studies in the existing literature focus on the macroeconomic impact of natural resource abundance (See Stevens (2003) and Van der Ploeg (2011) for a review of the literature). There are relatively fewer studies that look at the microeconomic or local economy impacts of extractive activity. This paper aims to contribute to this growing but rather limited literature by looking at the impact of gold mining on children's nutrition and households' wellbeing indicators in two African countries: Tanzania and Mali. We utilize a rich micro dataset collected from various household surveys and population censuses. We aim to evaluate the effects of extractive activity on the local economy. Our identification strategy relies on the assumption that the effect of extractive activity will decline with distance. This enables us to assign units of observations to treatment and comparison groups based on their distance to the closest mine in operation. By defining treatment as the opening of a mine and applying differences-in-differences estimation strategy, we aim to come up with an unbiased estimate of the impact of mining activity.

Although limited, there is an existing literature that provides us with a number of studies that are closely related to our work. A number of studies focus on the case of developed countries and the impact of extractive industries and natural resources. Reeson et al (2012), use cross-sectional 2006 census data for Australia to find that levels of employment in mining are associated with greater regional income inequality. However this relationship is not linear. Income inequality tends to rise first with increases in mining employment before it starts to decrease. In a study on the US, Papyrakis and Gerlagh (2007) show that the resource curse holds at the state level. They find that natural resource abundance decreases investment, schooling, and R&D expenditure and increases

corruption. James and Aaland (2010) show that the resource curse also exists at county level.

For developing countries there are a number of studies that look at the impact of extractive industries on local populations. Aragon and Rud (2013a) use household data from 1997 to 2006 to examine the local economic impact of a large mine in Northern Peru. They find that mine expansion is associated with an increase in real incomes and consumption as well as a reduction in poverty for the households located close to the mine compared to households that are further away. The impact of the mine declines with distance and becomes insignificant beyond 100 kilometers away from the mine. Another study regarding Peru comes up with more mixed results. Loayza, Teran, and Rigolini (2013) investigate the socioeconomic impact of mining activity using a district-level dataset for Peru. They find that mining districts have better living standards compared to non-mining districts, such as higher literacy rates and lower poverty rates. However, district level consumption inequality is found to increase in districts belonging to a mining province. A study about Brazil shows that mining revenues do not trickle down to the local population as much as expected. Caselli and Michaels (2013) look at the variation in oil output among Brazilian municipalities to examine the effects of oil windfalls. They find that oil-rich municipalities experience significant increases in revenues. However the livelihoods of the local population do not increase as much as expected given the revenue increases.

A similar body of empirical work for Africa is, by comparison rather scarce. One of the exceptions is the study by Aragon and Rud (2013b), which examines pollution externalities of gold mining on local agriculture in Ghana. Using household data, they find that mining has reduced crop yields and agricultural productivity, while it increased air pollution and poverty. They find that the effect declines with distance and it extends to areas within 20 kilometers from the mine sites. In another study on Ghana, Kotsadam and Tolonen (2014) use geocoded Demographic and Health Surveys similar to our analysis and investigate the impact of mining activity on a wide range of outcome variables, including employment status of individuals and health outcomes of children. They find women are more likely to be employed in the services sector and less likely to be employed in the agriculture in the vicinity of the mines (20km). Furthermore they find children's anthropometric outcomes to deteriorate in the vicinity of the

mines. In another study concerning cases on the African continent, Vicente (2010) looks at the changes in perceived corruption after the oil discovery announcements in Sao Tome and Principe, and shows signs of a political resource curse. The paper compares the perceptions of a sample from Sao Tome and Principe with another sample taken from Cape Verde, a country where no oil discovery has been made. Results show that there is an increase in perceived corruption especially in areas related to vote buying, education and customs.

The body of this paper is structured as follows: in the next section, we define the empirical methodology; section 3 provides data description and some summary statistics; section 4 shows our results; and section 5 concludes.

2. Empirical Methodology

In this paper, we aim to answer the question of whether local communities benefit from mining activity in terms of better household welfare and children's nutrition indicators. Treatment is defined as "opening of a mine"[1]. One important decision here is to determine units of observations exposed to "treatment" (i.e. the treatment group) and those who are not affected from "treatment" (i.e. the comparison group).

Our identification strategy relies on the assumption that units of observations (households, individuals or districts) located further away from the closest mine in operation will be less exposed to the positive or negative impacts of extractive activity. Hence, distance to the closest mine will be used to construct the treatment and comparison groups. More specifically, units of observations will be assigned to comparison and treatment groups depending on their distance to the closest mine in operation.

A simple post-treatment comparison of the comparison and treatment groups may produce biased estimates of the treatment effect due to selection bias. If there are systematic

[1] We have data on the `first year of production` of each mine. We assume that construction and development phase starts two years before the first year of production. There are studies that document the fact that local economy effects of mining are realized during the construction and development phase. (See: Larsen et al, 2006 and Lange, 2006 among many) We therefore lag the first year of production by two years and take these lagged years as the `treatment year`.

differences between the two groups before the mine opens, a simple post-treatment comparison will attribute these differences to the treatment itself and will over- or underestimate the treatment effect.

In order to overcome this issue, we apply differences-in-differences (DID) estimation strategy using pooled cross section data. We aim to identify the treatment effect by looking at the change in the difference between the treatment group and the comparison group from the pre- to post-treatment period. The main assumption of the empirical strategy is that the treatment and comparison groups would follow a similar time-trend in terms of outcome indicators in the absence of the mines.

2.1. Individual/Household Level Analysis

We start with an individual/household level analysis. Households are assigned to comparison and treatment groups depending on how far away they are from the closest mine. Ideally, one would like to know the exact distance between an individual or a household and the mines. However, Demographic and Health Surveys (DHS) do not contain information on the exact location of the individuals/households surveyed. In DHS, we have information on the location of the survey clusters that each individual/household belongs to, which serves as a good proxy for the exact distance of the surveyed unit to the mines in operation. Units of observations are assigned to treatment group if the cluster that they belong to is at most $\boldsymbol{K}$ kms away from the closest mine. We then estimate the following equation:

$$Y_{irt} = \alpha_0 + \alpha_1 T_i + \alpha_2 D_t + \alpha_3 T_i * D_t + \gamma_r + \varepsilon_{irt} \qquad \text{(Eq. 1)}$$

$\boldsymbol{Y_{irt}}$ is the value of the outcome variable for household **i**, residing in region **r**, at time **t**. $\boldsymbol{T_i}$ is a variable measuring treatment and is equal to 1 if household **i** is in the treatment group (as defined above) and 0 otherwise. We estimate this equation using a pooled cross section of two years. One year is the "pre-treatment year" and the other one is the "post-treatment year". There are multiple mines that started operation in both countries during the period of our analysis and not all these mines started production in the same year (See: Figure 1 for the opening dates of mines in the two countries). Hence, the "treatment year" is in fact different for different households, depending on the mine they are being "treated by". This does not however, create a problem in our

specification due to two reasons: first, in the year we selected as the pre-treatment year, none of the mines were in operation. Secondly, in the year selected as the post-treatment year, all the mines were in operation. Hence a single dummy variable $\boldsymbol{D_t}$, which is equal to 1 if **t** is the post-treatment year and 0 otherwise, is sufficient to correctly specify the DID estimation equation.

This, of course, raises the question of whether all households are affected the same way from the pre- to the post-treatment year as the number of years of treatment is different for each of them. In order to check the robustness of our results, we use "years since mine has been active" or "total amount produced" as a measure of intensity of treatment and interact these two variables with the treatment dummy as shown in Equation 2:

$$Y_{irt} = \alpha_0 + \alpha_1 T_i + \alpha_2 D_t + \alpha_3 T_i * INT_i * D_t + \gamma_r + \varepsilon_{irt} \qquad \text{(Eq. 2)}$$

$\boldsymbol{\alpha_1}$ captures differences between the control and the treatment groups before the mines were opened (pre-treatment). We do not interact this treatment variable with the variable measuring intensity of mining activity as otherwise we would be controlling for future intensity of mining activity before the treatment occurs. Interaction of the treatment variable with the intensity variable makes more sense after production starts, and which is post-treatment.

In both specifications, we also include region dummies ($\boldsymbol{\gamma_r}$) to control for any region specific fixed effects. We check the robustness of our results by assigning different values to **K**. Our coefficient of interest in each case is $\boldsymbol{\alpha_3}$, which is the coefficient of the interaction variable $\boldsymbol{T_i * D_t}$ or $\boldsymbol{T_i * INT_i * D_t}$. This coefficient is a DID estimate of the impact of mining activity on the outcome variable, $\boldsymbol{Y_{irt}}$.

One critical issue here is the choice of the comparison group. The comparison group may consist of all individuals/households who are not located close enough to any mine. Alternatively, one may limit the comparison group to consist of those who are not in the treatment group, but who are geographically close to those who are **in** the treatment group. Each method has its own pros and cons. In the first case, estimations are conducted using a larger sample to give more power to the analysis. On the other hand, if certain characteristics are assumed to be spatially correlated, dropping

those observations very far away from the mines (and the treated units) can produce a comparison group that is more similar to the treatment group. Also, this could potentially control for the effects of geographically targeted policies and region specific conditions such as weather, artisanal and small-scale mining, etc. We try both options to ensure the robustness of our results.

DID relies very much on the assumption that the change in the outcome variable from the baseline to the post-treatment period would be the same for all units of observations if there were no mine openings. This assumption is likely to be violated if certain household characteristics are significantly different between the control and the treatment groups in the baseline and if these characteristics are also correlated with the dynamics of the outcome variable.

In order to control for these differences, we estimate a third equation where:

$$Y_{irt} = \alpha_0 + \alpha_1 T_i + \alpha_2 D_t + \alpha_3 T_i * D_t + \beta' X_{it} + \gamma_r + \varepsilon_{irt} \quad \text{(Eq. 3)}$$

Ideally, $\boldsymbol{X_{it}}$ would be pre-treatment measures of household characteristics to avoid endogeneity. This is not possible in our case since we have a pooled cross section and hence cannot follow individuals/households over time. Controls were measured at the baseline for the baseline sample and at the post-treatment period for the post-treatment sample. We need to pay special attention when selecting household characteristics to be included in the X matrix not to introduce further endogeneity into the model. X should include only those variables that are not potentially affected by treatment.

We also try all of the specification above with two treatment variables. The idea is to divide the treatment area into two as the immediate effect area and the neighbouring area. We estimate the following equation:

$$Y_{irt} = \alpha_0 + \alpha_1 T_{1i} + \alpha_2 T_{2i} + \alpha_3 D_t + \alpha_4 T_{1i} * D_t + \alpha_5 T_{2i} * D_t + \beta' X_{it} + \gamma_r + \varepsilon_{irt} \quad \text{(Eq. 4)}$$

where $\boldsymbol{T_{1i}}$ is a variable measuring treatment and is equal to 1 if household **i** is within 0-K_1kms of the closest mine (immediate area); 0 otherwise and $\boldsymbol{T_{2i}}$ is equal to 1 if household $\boldsymbol{i}$ is within K_1-K_2kms of the closest mine (neighbouring area); 0 otherwise. We interact both treatment variables with the time dummy to

see how these two groups were affected from the opening of a mine as compared to the comparison group.

Figure 3 summarizes our empirical specification using the maps of the two countries, Tanzania and Mali. Concentric circles with a radius of 20kms and 50kms are drawn around the gold mines (denoted by the triangles). The circles around the mines are catchment areas for different values of K. Survey clusters, which fall within these catchment areas, are assigned to the treatment group and those who are outside the catchment area of any mine are in the comparison group. In other words, we compare households who are within 20kms or 50kms vicinity of a mine with the rest.

As discussed above, we also draw concentric circles with a radius of 250kms around the mines (dashed areas on the map). Households not within 250kms vicinity of any of the mines, are dropped from the analysis with the aim of creating more comparable comparison and treatment groups. Under this specification, we compare households within a 20kms *(50kms)* vicinity of a mine with those within 20-250kms *(50-250kms)* vicinity of the closest mine. The remaining households, i.e. households whose distance to the closest mine is more than 250kms, are excluded from the analysis.

Finally, to estimate Equation 4, we construct two treatment groups. The first treatment group consists of households within the first concentric circle, i.e. the one with a radius of 20kms. The second treatment group consists of households who fall in between the first and the second concentric circles, i.e. who are within 20-50kms vicinity of the closest mine. The comparison group in this case consists of the remaining households or those who are at most 250kms away from the closest mine. This last empirical specification allows us to compare those who are within the first circle with those who are within the second but not the first circle enabling us to see whether mining has differing effects on the immediate versus neighbouring areas.

2.2. District Level Analysis

The second part of the analysis is at the district level. The analysis consists of two steps. In the first step of the analysis, we use census data along with the survey data to construct measures of the outcome variables at the district level. Some outcome variables, such as those measuring households' access to facilities and variables about employment of individuals

already exist in the census. Hence for those, we simply aggregate census data up to the district level. The rest are not in the census but are in the DHS and Household Budget Surveys (HBS). By using household and individual characteristics that exist both in the census and the surveys as predictors, we estimate a model for each and every outcome variable using survey data[2]. We use the coefficients of the predictors to impute the values of these outcome variables in the census. And finally, we aggregate this data up to the district level.

In the second step of the analysis, we start with a simple differences-in-differences estimation where the unit of observation is a district.

$$Y_{drt} = \alpha_0 + \alpha_1 T_d + \alpha_2 D_t + \alpha_3 T_d * D_t + \varepsilon_{drt} \qquad \text{(Eq. 5)}$$

Districts are assigned to comparison and treatment groups depending on whether (or not) there is a mine in the district and whether (or not) a district is neighbouring a mining district. Figure 4 is a map of Tanzania and Mali at the district level. Districts with a mine within their borders are highlighted in the two maps. We use this information to construct the treatment and the comparison groups.

Three empirical specifications are constructed depending on how we define the "catchment area". Under the first specification, only mining districts are assigned to the treatment group and the comparison group consists of the remaining districts. Under the second specification, mining and neighbouring districts are assigned to the treatment groups and the comparison group consists of all the rest. Lastly, we keep the mining districts and the neighbouring districts separate as two treatment areas and estimate the following equation:

$$Y_{drt} = \alpha_0 + \alpha_1 T_{1d} + \alpha_2 T_{2d} + \alpha_3 D_t + \alpha_4 T_{1d} * D_t + \alpha_5 T_{2d} * D_t + \gamma_r + \varepsilon_{drt} \qquad \text{(Eq.6)}$$

where $\boldsymbol{T_{1d}}$ is equal to 1 is district **d** is a mining district and 0 otherwise and $\boldsymbol{T_{2d}}$ is equal to 1 if district **d** is a neighbouring district and 0 otherwise. The reference group consists of the remaining districts. This specification allows us to compare the two treatment groups with the reference group, and the first treatment group with the second treatment group to discover

[2] See Table 1 for the variables that have been used in mapping (imputing).

whether there are differing impacts on mining and neighbouring districts.

This simple differences-in-differences estimation is not expected to provide us with precise estimates of the impact of mining activity since there are very few observations in the treatment group (four districts in the case of Tanzania out of 103 districts and five districts in the case of Mali out of 257 districts). As shown in Figure 1, mines in both countries are clustered. Hence, when we do the analysis at the district level, we do not have too many districts that are in the catchment area of a mine. Also, we are not able to control for other district level characteristics due to data availability issues.

In order to overcome these issues, we apply the synthetic control group method (following Abadie et al (2010)). Synthetic control group method is especially useful when there are one or very few observations in the treatment group. By assigning weights to the observations in the control group, a synthetic control group that is most similar to the treated unit in the pre-treatment period is constructed. In order to achieve this, predictor variables and lagged values of the outcome variable are used for matching[3]. In our analysis, all of the outcome variables of the analysis are used as predictor variables as well. Using more matching variables increases the quality of a match and results with a more comparable synthetic control group. In order to maximize the quality of the match, we use district level data from the census as well as DHS and HBS and we do this for as many years as the data permits.

There is one main issue with our district level analysis that comes up when we apply the synthetic control group method. Existing studies in the literature stress the importance of matching treated units with the control units for a number of pre-treatment periods to get a good synthetic control group, which is able to act as a valid counterfactual. In our case, we didn't have data for too many pre-treatment periods. In the case of Tanzania, we do the matching for a single year (1988). And in the case of Mali we do the matching for two years (1987 and 1998). However, in our opinion, this reduces the quality of the match significantly and is a major issue.

[3] For Mali, where we have two pre-treatment years in the dataset, an average of the values on these years are taken in order to produce the predictor variables used in matching.

3. Data and Summary Statistics

We utilize a rich dataset that is coming from various data sources. (See: Table 2) Data on households/individuals are coming from three main sources: Demographic and Health Surveys (DHS), Household Budget Surveys (HBS) and Censuses of Population.

The DHS are nationally representative household surveys that collect data on marriage, fertility, family planning, reproductive health, child health and HIV/AIDS. It has been collected since 1984 in about 70 countries. Surveys are standardized across years and countries, and most countries collect data every five years to establish trend data. In some countries interim datasets are also available. Women of reproductive age (15-49) are the focus of the surveys. And apart from women's questionnaires, household questionnaires and occasionally men's questionnaires are also available. Child health data regarding health outcomes of children and their mothers are also collected, and include information about anthropometric measures, recent illnesses, vaccinations etc.

Household Budget Surveys are nationally representative surveys that are used to track changes in consumption levels of the households. They include information about household characteristics as well as yearly/monthly household expenditures and in some cases income levels.

Censuses collect information about a range of household and individual characteristics. Household characteristics include household size and access to electricity, water, and toilet facilities. Individual characteristics like occupation, education, age, marital status are also included in the censuses. Most of the censuses like the ones used for this analysis do not contain information about individuals' income or consumption levels.

For the household level analysis we use DHS from years 1995 and 2006 for Mali, and 1999 and 2010 for Tanzania. DHS data for these years include information on the location of the cluster of the household[4]. This makes it possible for us to

[4] Coordinates of the cluster of the household is included in the dataset with a random displacement of 2 to 10kms.

calculate a proxy for the distance between households/individuals and the mines[5].

For the district level analysis we make use of HBSs and censuses for Tanzania and Mali in addition to the DHSs.

In addition, we also utilize a dataset including information on the location, first year of production and yearly amount of production of gold mines in Tanzania and in Mali. Data on the location of the mines were derived from online sources; mine-atlas.com and google.maps[6]. Data on latitudes and longitudes of the mines enabled us to calculate the distances of the individuals/households to the mines and assign them to the treatment or the comparison groups.

As explained in Section 2, we apply a differences-in-differences estimation strategy using a pooled cross section of two years, one being the pre-treatment year and one being the post-treatment year. In order to decide which mines should be regarded as the treatment units, we took into consideration the pre- and post-treatment datasets available for the two countries and the opening dates of the mines. In principle, we excluded all mines from the analysis that were open before the pre-treatment data year and all mines that were opened more than two years later than the post-treatment data year. For the household level analysis of Tanzania, households closer to the mines already in operation or in construction phase at the time of the pre-treatment year (1999) are excluded from the sample. These mines are Golden Pride and Geita. Hence the household level analysis includes the mines Bulyanhulu, Buzwagi, North Mara and Tulawaka. On the other hand, for Mali, we include the mines Yatela, Sadiolo, Loulo, Tabakoto, Morila and Kalana. The mines Gounkoto and Syama are not

[5] Using HBS for household level analysis was not possible since neither the district nor the latitude and longitude coordinates of the households is available in these datasets.

[6] In mine-atlas.com, it is possible to see the location of the mine in a satellite view; however the exact coordinates are not reported. Hence we made use of google.maps to find the exact coordinates of the mines, after checking the location from mine-atlas. All the mines can be seen with naked eye in google.maps, except for two mines. For the mine Tulawaka of Tanzania, in google.maps a mine is not visible. Despite this we assumed the location in mine-atlas to be correct. For the mine Gounkoto in Mali, the location is drawn on a simple map in the website of the mine company (http://www.randgoldresources.com/randgold/content/en/randgold/randgold-loulo-gounkoto-complex). This location is then found on google.maps to determine the coordinates of the mine.

regarded as treatment units since their opening dates are more than 2 years after the post-treatment data year (2006).

A number of outcome variables coming from these datasets are used in our analysis. Table 3 gives the list of the outcome variables along with their definitions and sources. We have four groups of outcome variables that are used in the analysis coming from DHS: measures of malnutrition and health for children, household access to infrastructure, educational enrolment and employment. Measures of malnutrition consist of four variables measuring stunting, severe stunting, wasting and underweight prevalence as well as prevalence of fever, cough and diarrhea. These variables are calculated using data on children under the age of 3 for Mali and under the age of 5 for Tanzania[7]. The second group of variables measuring household access to infrastructure is at household level and includes measures of access to safe drinking water, access to electricity and toilet facilities. The third group consists of a single variable that measures whether children between the ages 6 and 15 are enrolled in school or not. The final group of the outcome variables is related to employment. The outcome variables measure whether the respondent has worked during the previous 12 months and their occupation if so. Occupation types include agricultural worker, being in the services sector, being a professional, managerial or clerical worker and being skilled/unskilled manual worker.

For the district level analysis, in addition to malnutrition outcome variables from the DHS, variables measuring consumption per capita, inequality and income distribution were calculated using HBS and then the variables were mapped into district level using the censuses. Some other district level variables like access to infrastructure and employment outcomes were calculated directly from the census.

Since the post-treatment period for the district level analysis was 2002 (determined by the census availability) for Tanzania, which is the last year of the census available, the treatment group of districts only includes the districts that have a mine in operation by the year 2002. On the other hand, we did not need to exclude any district from the sample as we did in the

[7] For Mali, DHS 1995 has a sample for children aged 0-3. Other samples include older children as well. But since we need to use the lowest common denominator for the consistency in the analysis, we have only included children younger than 3 years old for all the samples in the analysis for Mali.

household analysis because pre-treatment year in this case is 1988. Hence, we are left with a set of mining districts consisting of Nzega, Geita, Tarime and Kahama (Mines are Golden Pride, Geita, North Mara and Bulyanhulu). Neighbouring districts of the mining districts, on the other hand, consist of Igunga, Uyui, Urambo, Tabora urban, Shinyanga rural, Biharamulo, Sengerema, Serengeti, Musoma rural[8].

For Mali on the other hand, the census years are 1987, 1998 and 2009. Hence all the mines except Gounkoto (Loulo Permit), which started operation in 2011 were used in the analysis to determine mining districts. Mining districts are Sadiola, Kenieba central, Sanso, Fourou, Kalana, and neighbouring districts are Diadioumera/Diamou, Lontou, Same, Kayes, Mahina, Dombia, Faraba, Kassama, Districts under 20,000 population in Kenieba Province[9], Massigui, Blendio, Lobougoula, Niena, Dogo-Bougouni, Koumantou, Zantiebougou, Kadiolo Central, Loulouni, Misseni, Kadiona, Yanfolila Central, Doussoudiana/Filamana andYorobougoula

Table 5 and Table 6 report some household level summary statistics for the pre- and post-treatment years of Tanzania and Mali, respectively. These simple summary statistics are hard to interpret on their own and also inconclusive without proper statistical analysis. However, they still provide us useful information on what the treatment and the comparison groups looked like in pre- and post-treatment periods. In these tables, we define two types of treatment, first one being in the 0-20kms vicinity of the mine and the second one being in 20-50 kms vicinity of the closest mine (as in the buffer zones in Figure 3). Comparison group consists of the remaining districts. The most important message of these summary tables is that the treatment and the comparison groups are different

[8] The district sample only includes the districts of mainland Tanzania and hence districts of Zanzibar and Pemba are not included in the analysis. The main reason behind this was that in HBS these districts were not sampled in the surveys, hence for the sake of consistency we did not include them in the analysis of other outcome variables as well.

[9] When several districts that are not adjacent to each other do not meet confidentiality requirements, they are grouped together as "Districts under 20,000 population" in the census dataset. For Kenieba province, all other districts are neighbouring the mining district Kenieba Central; hence they are taken as neighbouring districts in the analysis. Throughout the years they are the same bunch of districts in the censuses.

in terms of several characteristics, and were so even before the treatment. This supports our argument in Section 2 of including a set of control characteristics that aim to control for such differences.

4. Results

In this section of the paper, we present results from the regression analysis. In the next subsection, we show the individual/household level regressions where the data is kept and the treatment is defined at the individual/household level. In the second subsection, we proceed with the district level analysis. Our main focus will be on the individual/household level analysis, which we believe is a better way to identify the treatment effect.

4.1. Individual/Household Level Regressions

4.1.1. Tanzania

We start with the estimation of Equation 3 which is our baseline specification[10]. Table 7 reports estimated coefficients of the interaction variable between the treatment dummy and the year dummy for different values of **K** (distance of the household to the mine). This coefficient is a DID estimate of the effect of a mine opening where households, who are within K kms vicinity of the closest mine, are compared to the rest.

Column 1 of Table 7 reports coefficients of the interaction variable when **K** is set to 20kms[11]. Stunting and underweight increase and households' access to electricity and sanitation decrease as a result of a mine opening, implying mining activity has a negative impact on these outcomes.

When we look at the changes in the sign and significance of these coefficients as **K** changes, we see that effect of mining changes both qualitatively and quantitatively as **K** increases from 20kms to 150kms. For instance, stunting and underweight goes up in areas that are in 20 to 75kms vicinity of the closest mine. In other words, mining activity has a negative impact in terms of children's nutrition variables when treatment is defined as being in a 75kms vicinity of the closest mine.

[10] We also estimate Equation 1 where we do not control for any household/individual characteristics. Results are robust.
[11] 20 kms defines our main specification. We also try 10 kms, 30 kms and 40kms and results are robust to changing the distance variable. (Available upon request)

However, this negative effect of mining activity disappears when the distance defining treatment increases to 150kms. There is a similar story when we look at households' access to electricity or to sanitation — households' access to these facilities is reduced in areas that are close to mines, but the negative effect of mining activity vanishes as the distance defining treatment increases. On the other hand, the effect of mining remains insignificant regardless of the distance defining treatment when we look at variables such as households' access to water or antenatal care.

The last two panels of Table 7 report coefficients of the employment regressions for women and men separately. Opening a mine seems to have a positive impact on women's employment status and this impact remains positive and significant even when we change the value of **K**. Men, on the other hand, do not seem to be benefiting from mine openings. Change in the occupational structure is also different for men and women.

Results reported in Table 7 use all households that are more than **K** kms further away from the closest mine as the comparison group. We control for certain household characteristics and also include regional dummies to control for any region specific fixed effects. However, as discussed in section 2, it is also worth limiting the comparison group to those individuals/households who are more than **K** kms further away from the closest mine but not too far away such that the regional effects are similar. More specifically, we drop all individuals/households, who are more than 250kms away from the closest mine, from the analysis. Results are fairly robust to changing the comparison group. (See Table A1)

As discussed in Section 2, Equation 1 treats all "treated units" as the same regardless of the intensity of treatment that they are subject to. In order to check whether our results are robust to controlling for intensity of treatment, we estimate Equation 2 by taking $\boldsymbol{T_i}$ being in 20 kms vicinity of a mine. Results are reported in Table 8. First column of Table 8 reports coefficients of the interaction variable when intensity of treatment is measured by "years since mine has been active", whereas the second column reports coefficients of the interaction variable when intensity of treatment is measured by "total production". Coefficients of the interaction variables are mostly insignificant in each case. Access to sanitation and electricity is lower in areas that are more "intensely treated" and this difference is significant at the 5% confidence interval.

We also see some significant differences in women's employment status; women are more likely to work in agriculture and as a professional worker in areas where the intensity of mining activity is higher.

The lack of significant coefficients when we control for the intensity of treatment, may be due to the so-called "attenuation bias". Measures of intensity of treatment are more likely to be subject to measurement error than the treatment dummy itself. Measurement error leads to attenuation bias.

Table 9 looks at the immediate area versus neighbouring area effects. In line with the specification defined in Equation 4, we define two treatment variables. The first treatment variable is equal to 1 if the individual/household is in 0-20kms vicinity of the closest mine and the second treatment variable is equal to 1 if the individual/household is in a vicinity of 20-50 kms from the closest mine. The comparison group consists of all individuals/households who are outside the two catchment areas. Once again we control for certain household characteristics and include region fixed effects.

We are mainly interested in the interaction of these two treatment variables with the year dummy. Panel A reports coefficients from the regressions where the outcome variables are measures of children's health. We see that children within the first buffer zone (20kms radius) are affected more negatively from mine openings compared to those who are in the second buffer zone (20-50kms). Stunting and underweight prevalence increases in the first group, whereas we see some improvements in the second group such as a decrease of 15% in the occurrence of diarrhea. There is a similar story when we look at column 12 in Panel B; the net enrolment rate goes up in the neighbouring areas, whereas there is no significant change in the immediate effect area.

Panel C and Panel D report coefficients of the regressions for women's and men's employment status respectively. Once again, results differ for the two treatment areas: women in the immediate effect area are more likely to be employed in the past 12 months as compared to the women in the neighbouring areas and also those in the comparison group. There are no such differences when we look at column 18 in Panel D; mining activity does not increase men's chance of being employed either in the immediate or the neighbouring areas. When we look at columns 14-17 in Panel C, we see that changes in the occupational structure of women are symmetrical in the

immediate and neighbouring areas—the probability of working in the agriculture sector and as a professional increase, whereas those working in services and as a manual worker decrease in both of the buffer zones.

The next obvious question to ask is to whether such effects differ when the catchment areas are defined using larger distance measures. Results from Table 7 suggest that the negative impacts of mining activity seem to disappear after a certain distance. In order to check this hypothesis, we run the same specification of Table 9 and define immediate catchment area as one that is within a 0-75kms vicinity of a mine, and the neighbouring catchment area as one that is within 75-150kms vicinity of a mine. Results are reported in Table 10.

There is one very interesting conclusion drawn from Table 10. Individuals/households, who are within the immediate catchment area, are negatively affected from the opening of a mine whereas those, who are within the neighbouring catchment area, benefit from the opening of a mine. Stunting and wasting goes down, whereas access to facilities and net enrolment rate goes up. Women's employment goes up in both areas but it goes up by more in the neighbouring areas. Occupational structure seems to move in the same direction, i.e. share of agriculture goes up in the two areas, etc.

All in all, results so far suggest that individuals/households, who are at most 50kms away from the closest mine in operation are negatively affected from the mine opening. However, when we compare individuals/households, who are at most 75kms away from the closest mine, with those who are within 75-150kms vicinity of the closest mine, we reach the conclusion that those who are in the second treatment group (75-150 kms) actually benefit from mining activity. This result is in line with the hypothesis that agricultural activity in immediate catchment areas are negatively affected from mining activity (soil fertility goes down, etc.). This may translate into worse children's nutrition and households' welfare indicators. Neighbouring areas, on the other hand, are more likely to benefit from local economy impacts of mining activity in the form of increased employment, etc. without being exposed to such negative impacts.

4.1.2. Mali

Table 11 reports the regression results where treatment is defined using different values of distance. Unlike the Tanzanian

case, we do not see a negative impact of mining activity on local areas. Stunting and diarrhea goes down in households in 0-20kms vicinity of the closest mine. With regards to stunting, the effect becomes insignificant in the next column where treatment is defined as being in 50kms vicinity of the closest mine. For the prevalence of diarrhea, the effect remains negative and significant, but once again, contrary to the Tanzanian case, households located further away from the mines benefit less from the mining activity.

When we proceed to the coefficients of the regressions that look at women's and men's employment status, once again we see a story that is just the opposite of Tanzania. Mining does not seem to have a significant impact on the likelihood of women being employed or their occupational structure; most of the coefficients in the second panel of Table 11 are insignificant. Men, on the other hand, are more likely to be employed if they are within 50kms vicinity of a mine as compared to the rest. They are more likely to work in the agriculture sector and less likely to work as a manual worker if the treatment group is defined as those in the 75kms vicinity of a mine. These results are fairly robust to changing the comparison group by limiting the sample to individuals/households who are at most 250kms vicinity of the closest mine. (See: Table A2)

Table 12 reports coefficients from the regressions where treatment is interacted with intensity of the mining activity. According to column 1, children between the age of 0 and 3 are less likely to be stunted, wasted, have coughs, a fever or diarrhea in areas that are in the 20kms vicinity and this positive impact of mining activity increases as the number of years the mine has been operating increases. A similar story holds when we measure the intensity of treatment with total production. (See: Column 2 of Table 12) Access to antenatal care services and electricity are also positively affected by an increase in the intensity of mining. The only result that is different from Table 11 is regarding the employment of men. Men are less likely to be employed if they are located close to a mine that has been operating for longer or has higher production. This is just the opposite of results shown in Table 11 where the intensity of treatment was not taken into consideration. Women, on the other hand, are still less likely to be employed in the past 12 months in areas where there is more intense mining activity.

Table 13 provides us with the results of the regression analysis where there are two treatment variables. The first one is being in 0-20kms vicinity of the closest mine and the second one is being within 20-50kms vicinity of the closest mine. Once again, the results are in contradiction with those of Tanzania. Any positive and significant impact of the mining activity is within the immediate catchment area (see stunting, underweight, severely stunted, cough and diarrhea for instance), whereas the impact of mining activity on neighbouring catchment areas is either insignificant or negative (except for fever).

Panel B provides us with a rather mixed story. Access to antenatal care services goes up in the immediate catchment areas, whereas access to sanitation goes down as compared to those in the neighbouring area and those in the comparison group. There are no significant changes in terms of access to electricity and the net enrolment rates in the immediate catchment area, whereas those in the neighbouring areas seem to be suffering from mine openings since both coefficients are negative and significant.

Panel C and Panel D of Table 12 report coefficients from the regressions with women's and men's employment status as the outcome variables. Women in neighbouring areas seem to be less likely to be employed in the services sector and more likely to be employed as a professional. Men, on the other hand, have better employment opportunities if they are located in the neighbouring areas as told by the positive and significant coefficient of the second interaction variable in column 18 of Panel D.

We see a different story when we look at Table 14, where the definitions of the immediate and neighbouring catchment areas have changed to 0-75kms and 75-150kms, respectively. Unlike Tanzania, most of the coefficients are insignificant and those that are significant do not provide us with a story that is parallel to that of Tanzania. We do not see striking differences in terms of the effect of mining on the immediate catchment and neighbouring areas.

4.2. District Level Regressions

4.2.1. Tanzania

For the district level analysis we made use of DHSs, HBSs and censuses for Tanzania (See Table 3). Following a mapping (imputing) of the outcome variables that don't exist in the

censuses (See Table 2 for the list of variables used in mapping), which are malnutrition outcomes of children and per capita expenditure, we calculated the averages of all the outcome variables for each district. We did a simple DID analysis and a synthetic control group analysis using district level averages. The district level analysis includes the districts of Tanzania that are on the mainland, hence excluding districts of Pemba and Zanzibar.

For the DID analysis, there are a total of 103 districts, 4 of which are mining districts and 9 are neighbouring districts[12]. Results from this analysis show that there are significant improvements in some of the malnutrition outcome variables for children both for mining, and mining and neighbouring districts. While the impact seems to be stronger when both mining and neighbouring districts are taken together as treatments units (See column 1 & 2 in Table 15)[13], being in a mining district has a significantly negative impact on average levels of severe stunting and being underweight. When neighbouring districts are further added to the treatment group there is also a significant negative impact for being wasted as well. The last specification proves that being in a neighbouring district has a larger impact on average malnutrition outcomes compared to being in a mining district (See column 3 in Table 15). While there are improvements regarding child malnutrition, there is a decline in employment rate of men in mining districts compared to non-mining districts. However when neighbouring districts to the mining districts are included in the treatment group, the negative impact on men's employment rate loses its significance. In the last specification where we use being in a mining district and neighbouring

[12] Mining districts are: Nzega, Geita, Tarime, Kahama. Neighbouring districts are: Igunga, Uyui, Urambo, Tabora urban, Shinyanga rural, Biharamulo, Sengerema, Serengeti, Musoma rural. Districts Bukombe and Misungwi do not exist separately in Census 1988, hence they are excluded from the analysis. Lastly, since Tulawaka mine started operation in 2005, which is 3 years after the post-treatment census, the district that it is located in is not included in the analysis as a mining district but instead as a neighbouring district since it is next to the mining district Geita.

[13] In Table 15, specification (1) compares mining districts with all other non-mining districts, specification (2) compares mining districts and neighbouring districts together with the remaining districts, specification (3) has two treatment variables one of which is being a mining district and the other is being a neighbouring district. Hence first column and second column of specification (3) have the control group as all districts which are non-mining and non-neighbouring districts.

district as separate treatment variables, results show that men's employment has decreased in the mining districts while there is no significant effect on neighbouring districts. Lastly, in the simple DID analysis results regarding other outcome variables about employment turn out to be insignificant.

In the synthetic control analysis we took an average of the outcomes of the mining districts and average of the outcomes of neighbouring districts, which gave us one representative mining district and one representative neighbouring district. Then synthetic control method gives weights to the remaining districts to come up with the most representative control district (See Tables A3 and A4 in Appendix for the weights given to the control districts for a number of outcome variables). Following Abadie et al (2010) we used placebo tests to find out the significance of these results. In order to achieve this, they offer a method to see if the same results could be found by chance. Hence they try to find out if a district is randomly assigned to be the treatment district, does it differ significantly from its synthetic control district or not in the post-treatment period and how often the difference between the outcomes of real treatment district and its synthetic counterpart stands out. In the ideal case it must be that the outcome of the real treatment district should be significantly different than the outcome of its synthetic control district while for other districts that are randomly assigned to be the treatment district the difference should not be as high.

In Table 17 the significance of the difference of the treatment group versus the synthetic control group are listed. (See Table 16-A and B for the resulting outcomes for the treatment groups, their synthetic control groups and a basic average of the control group). To calculate these significance levels we first calculate the pre-treatment and post-treatment mean square prediction error (MSPE) of the outcome variable (MSPE is the average of the squared discrepancies between the outcome variable in the average mining district and in its synthetic counterpart). Then we take post-treatment to pre-treatment MSPE ratio. Lastly, for each of the districts we compare these ratios and determine if the ratio of the real treatment district stands out—i.e. if it is in the first 10% among the ratios, in descending order—among the other districts, then it is assumed to be significant. To have a large post/pre-MSPE ratio, pre-MSPE of the outcome variable for the district must be small, hence the synthetic control group must represent the treated district as well as possible and post-

MSPE must be large, hence the difference between the treated district and its synthetic control district must be as large as possible.

For the average mining district only per capita real expenditures are significantly different compared to its synthetic counterpart, hence the post/pre-MSPE ratio stands out among the ratios of placebo districts. For the average neighbouring district, again a small number of outcome variables turn out to be significantly different form the synthetic control group. These variables are the changes in the per cent of own-account and unpaid women workers as well as malnutrition outcome variables of severe stunting and underweight and lastly net enrolment rate for children aged 6-15. For the own-account working women, the decrease is higher in neighbouring districts while for unpaid working women the decrease is lower compared to the synthetic group. Regarding the average levels of severe stunting and underweight children, there is an improvement in the neighbouring districts compared to the synthetic control group (See Table 16-A). In Figure 5, the gap between prevalence of underweight children in the treated and synthetic control districts are graphed together with the gap coming from placebo runs. Although there seems to be an improvement in the average mining district, this improvement does not stand out when the post/pre-MSPE ratio is compared with other districts' ratios. Average neighbouring district on the other hand shows an improvement and this improvement stands out in the placebo tests as well. Lastly, enrolment rates of children aged 6-15 seems to have increased in the neighbouring districts but the increase is larger for the synthetic control group.

Among the outcome variables used in the analysis that are associated with income levels, a significant difference over time between treatment and control units could be found for only the average real per capita expenditure in the districts. In the DID analysis, there is a significant decrease in the per capita expenditure level for mining & neighbouring districts compared to the other districts. There seems to be a decrease as well when we only take mining districts as treatment units, however the coefficient is not significant. In the synthetic control analysis we found that for the average mining district change in average per capita expenditure is significantly different than its synthetic counterpart. This amount has decreased more in the average mining district compared to the synthetic control group. Regarding income share of the bottom 40 per cent and

income share of upper 5 per cent in the districts or Gini coefficient of the district, no significant result could be found in either analysis for Tanzania.

Overall, district level analysis shows that there is an improvement in malnutrition outcomes of children in mining and neighbouring districts. Basic differences and differences analysis shows an improvement both in mining and neighbouring districts regarding these variables, while the improvement in neighbouring districts are significant in synthetic control analysis as well. There is a decrease in average real per capita expenditure when the mining districts and neighbouring districts are taken together as treated units in the DID analysis, however the decrease turns out to be significant for mining districts only in the synthetic control analysis. Lastly, mining activity does not seem to have positive impacts on employment as one might guess, employment rate of men decreases in mining districts compared to control districts according to the DID results and synthetic control analysis do not give any significant result regarding employment rate of men or women.

4.2.2. Mali

After mapping the outcome variables regarding income of households and malnutrition outcomes of children into the census for Mali, we repeated the same analysis that was done for Tanzania.

For the DID analysis, there are a total of 257 districts, 5 of which are mining districts and 23 of which are neighbouring districts[14]. Similar to the case of Tanzania, there are improvements regarding malnutrition outcomes for the mining

[14] Mining districts are: Sadiola, Kenieba Central, Sanso, Fourou, Kalana. Neighbouring districts are: Diadioumera and Diamou, Lontou, Same, Kayes, Mahina, Dombia, Faraba, Kassama, Districts under 20,000 population in Kenieba Province, Massigui, Blendio, Lobougoula, Niena, Dogo-Bougouni, Koumantou, Zantiebougou, Kadiolo Central, Loulouni, Misseni, Kadiona, Yanfolila Central, Doussoudiana and Filamana, Yorobougoula While in the map more districts can be counted as neighbouring, these districts do not exist in the census by their names since they are possibly combined together under the "Districts with population less than 20,000" title. Hence these districts were not included in the analysis.

and neighbouring districts. However the coefficients are larger for mining districts in this case as can be seen in column (3) of Table 18. This is the reverse of the results that was found for Tanzania where neighbouring districts showed higher improvements in malnutrition outcomes. DID results point to significant decreases in employment rate of women and the effect is higher for mining districts (See first and second columns in part (3) of Table 18). This decrease is possibly due to the decreases in employment in agriculture sector, for which again there is a larger drop for women living in mining districts compared to control districts. There is a slight but significant increase in the employment rate of women working in mining sector both in mining and neighbouring districts. The increase is 2.28 percentage points compared to control districts. However this increase is very small compared to the decrease in agricultural employment in which employment rate of women has decreased by 35.14 percentage points in mining districts between years 1987 and 2009 compared to control districts. While for men, no significant increase in the overall employment rate can be seen, in mining or neighbouring districts compared to control districts, there are significant increases in employment in manufacturing sector and in mining[15]. Employment in manufacturing for men is 10.17 percentage points higher in mining districts compared to control districts while employment in mining is 9.67 percentage points higher in mining districts compared to control districts. Despite having a lower effect compared to being in a mining district, being in a neighbouring district still has a significantly positive impact for men to be employed in these sectors (See first and second columns in part (3) of Table 18).

For synthetic control analysis, for Mali as well there is a representative mining district, which is constructed by taking an average of all five mining districts, and a representative neighbouring district constructed by taking an average of 23 neighbouring districts. Following this, weights are given to the remaining districts to come up with the synthetic control district (See Tables A5 and A6 in Appendix for the weights given to the controlling districts for a number of outcome variables). Placebo tests show significant results almost only for outcome variables regarding employment rates for the

[15] This sectoral analysis was not possible for Tanzania, since the industry that the individual is working in was not asked in the censuses.

mining districts and for a few other outcome variables for neighbouring districts. In line with the DID results, placebo test results point to a significant improvement in underweight child prevalence in synthetic control analysis as well. However this improvement is actually quite small in the average neighbouring district compared to its synthetic control district, although its post/pre MSPE ratio is very high. The large post/pre-MSPE ratio is largely due to the fact that pre-MSPE is almost zero, meaning that the fit of the synthetic control district with the neighbouring district is almost perfect (See Figure 6). Although there is an improvement regarding underweight prevalence in mining districts as well, the improvement does not stand out in the placebo tests, hence does not have a large enough post/pre-MSPE ratio. Other malnutrition outcome variables do not stand out in the placebo tests as well and hence the changes in the treated districts are insignificant (See Table 20 for the placebo tests significance results).

Similar to the DID results, synthetic control method also shows a significant increase in employment in manufacturing and mining sectors for men in the neighbouring districts compared to its synthetic control group. While there is an increase in mining districts as well, this increase does not stand out in placebo tests. Another significant increase is for men and women living in mining and neighbouring districts working as a craftsmen or machine operators. The increase is especially higher for men in mining districts compared to the district's synthetic counterpart. Regarding agricultural employment for men, contrary to what was found in DID analysis, there has been a significant decrease in mining districts and neighbouring districts compared to the synthetic control group. The decrease in women's employment that was found in DID analysis does not turn out to be significant in this analysis when we compare it with its synthetic counterpart.

One last outcome variable that turns out to give significant results is the household's access to sanitation. In the average neighbouring district access to sanitation has increased however this increase is significantly smaller than the increase in the synthetic control group.

Among the outcome variables about income levels in the districts, there are no significant results coming from synthetic control analysis except for the gini coefficient. Gini for the average neighbouring district is significantly higher in

neighbouring districts compared to the synthetic control group, hence the post/pre-MSPE ratio of the average neighbouring district stands out among the ratios of placebo districts. Furthermore, DID analysis presents some significant results pointing to an increase in income inequality in the mining and neighbouring districts as well. When mining and neighbouring districts are taken together as treatment units, there is an increase in gini coefficient compared to control districts. In line with this result income share of the bottom 40 per cent decreases in mining and neighbouring districts compared to control districts.

Hence, the overall picture for Mali from the district level analysis is that there are improvements in mining and neighbouring districts regarding children's malnutrition. There is an increase in income inequality in mining and neighbouring districts compared to control districts. There is no significant result pointing to a positive impact of mines on overall employment rates of men or women. However there are increases in employment rates of men and women working in manufacturing sector while there are considerable decreases in agricultural employment for women.

5. Conclusion

This paper studies local economy impacts of mining activity by utilizing a rich dataset from the two African countries, Tanzania and Mali. We have reached a number of conclusions, which are different for the two case countries. In the case of Tanzania, we show that households in the immediate catchment area of a mine are negatively affected from extractive activity whereas this effect becomes positive when we consider households that are located in neighbouring catchment areas. This result holds for a number of our outcome variables and is robust to changing the comparison group. Supporting the household level analysis, the district level analysis also shows that regarding some of the malnutrition outcome variables there are higher improvements in the neighbouring districts compared to mining districts.

On the other hand, we reach a different conclusion when we look at the Mali case. More specifically, any significant positive impact of mining activity occurs in households located closer to the mines. Households still in the catchment area, but further away from the mine are either not affected or negatively affected.

The striking differences between the conclusions drawn from the two case countries are worth considering. These two countries are unlike each other on many dimensions. Related to our study are the GDP per capita and the population densities. Mali has lower GDP per capita as compared to Tanzania and also population density rates are lower in Mali[16]. The opening of mines in a specific region is known to lead to migration, which is something we are not able to control for due to data availability issues. The differences between the two countries in terms of its richness (measured by GDP per capita) and population densities may have led to different migration dynamics after mines started operating. That may be the reason behind the differences between the conclusions of the two countries. This hypothesis cannot be tested in this paper but is a good avenue for future research.

Our study contributes to a growing but rather limited literature by providing new evidence on the local economy impacts of mining activity from two countries where gold mining is a significant component of the economy. We utilize a very rich dataset and we come up with a clear identification strategy where we try various things to overcome any endogeneity issues. There are two main weaknesses of our analysis, one of which has been mentioned above. The fact that we cannot control for migration is a huge source of concern and may be the reason behind the differences between the conclusions of the two countries. Secondly, all the mines considered in this study are the large scale, foreign owned mines that are professionally managed and operated. It is a well-documented fact that in both countries, artisanal and small-scale mining is an important component of the sector (Jul-Larsen et al (2006), Lange (2006)). Unfortunately, we do not have any data on the location and intensity of these small scale and artisanal mines and this is something we wish to explore in the future.

[16] As of 2010 population density equals 50.8 people per square meter in Tanzania whereas in Mali population density as of 2010 is 11.5 (World Development Indicators, World Bank). GDP per capita based on PPP is $1,393 in Tanzania and $1,109 in Mali (IMF World Economic Outlook Database). Mali has the rank 182 in HDI whereas Tanzania ranks relatively better with 152 (Human Development Indicators, UNDP).

Figure 1: Location and Opening Dates of Mines

Tanzania

Mali

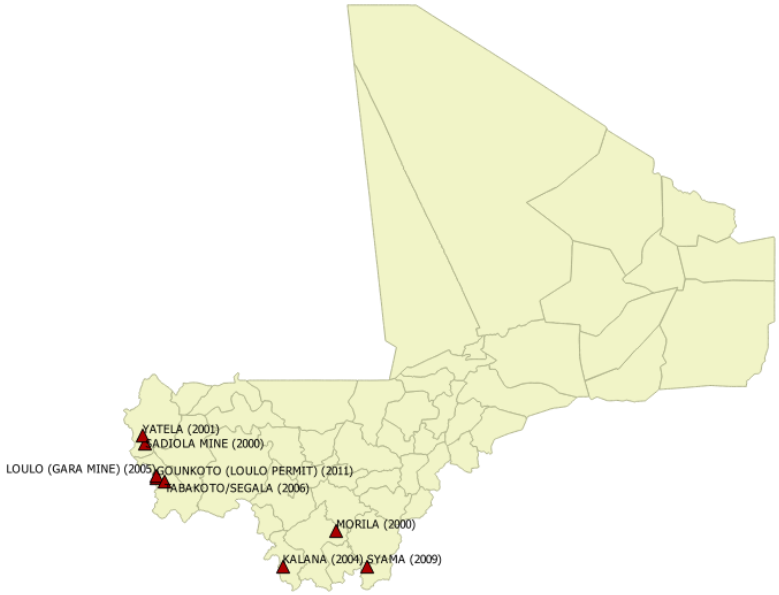


Figure 2: Annual Production of Gold for Mali and Tanzania

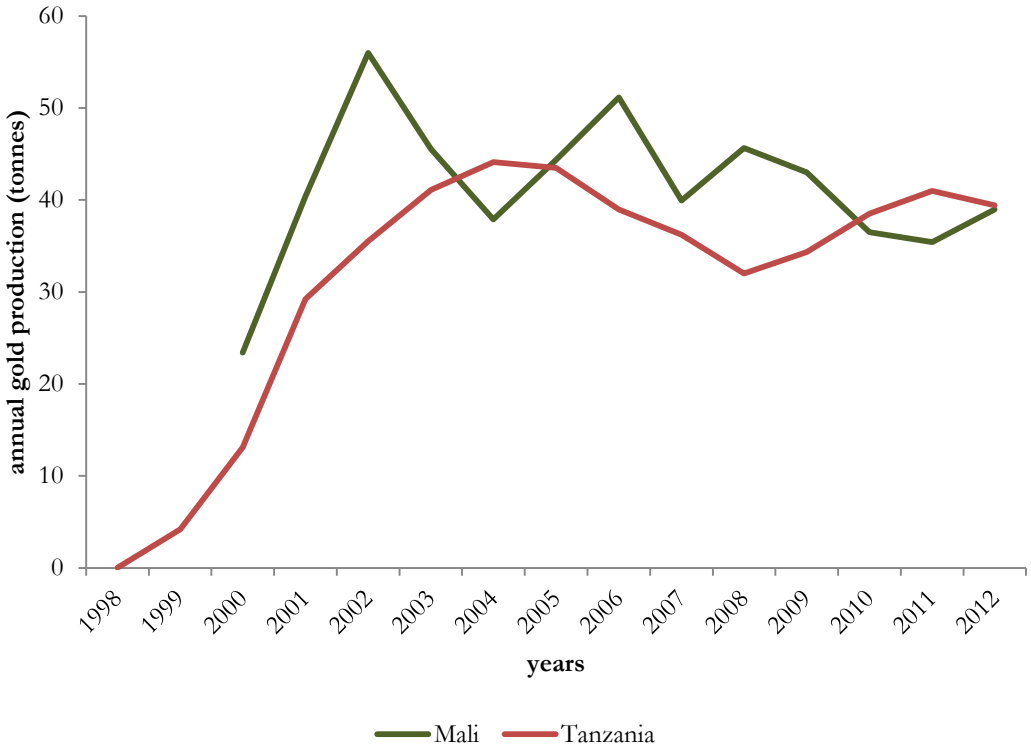


Figure 3: Gold mines in Mali and Tanzania with 20, 50 and 250kms of buffer zones

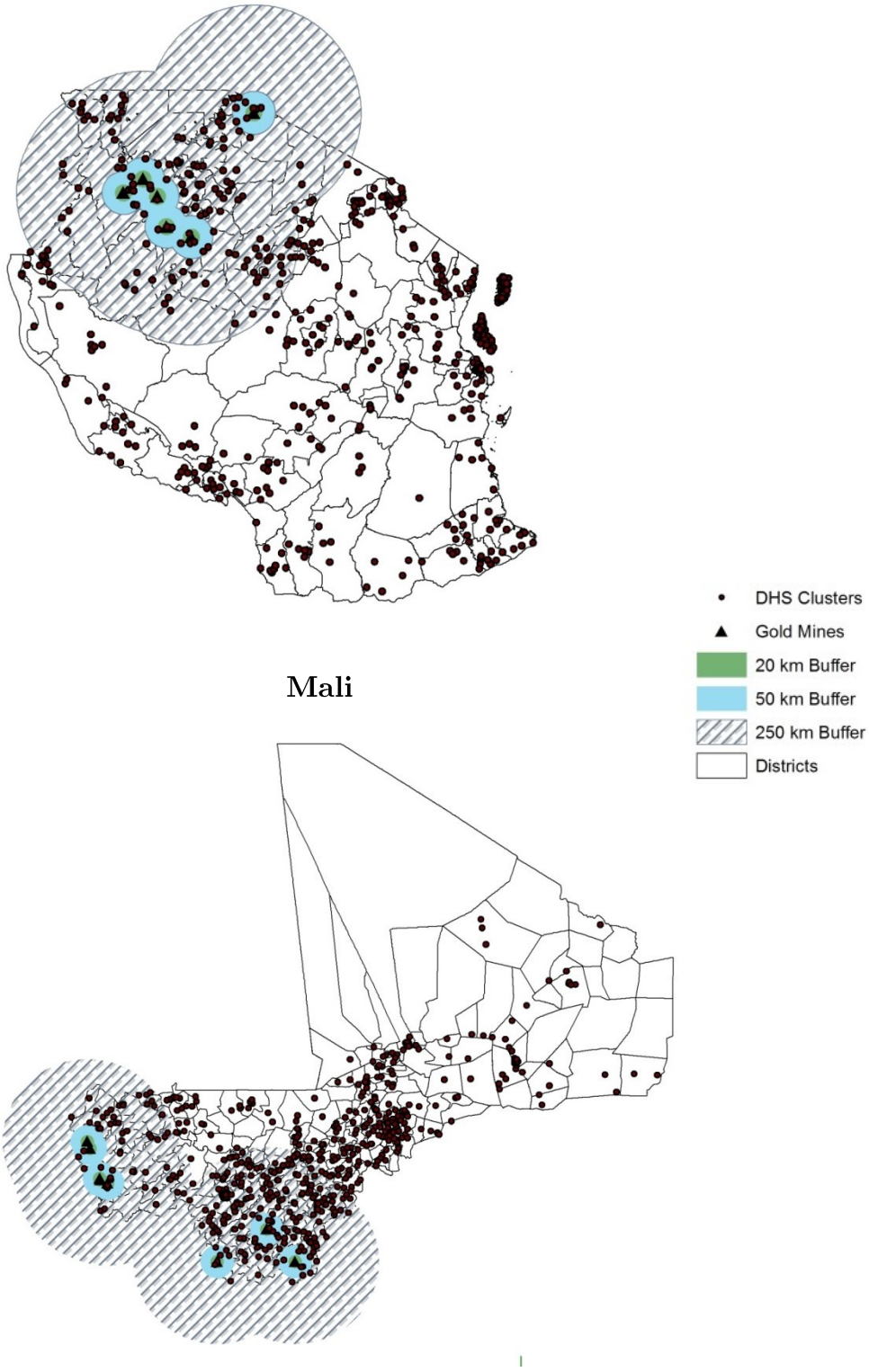
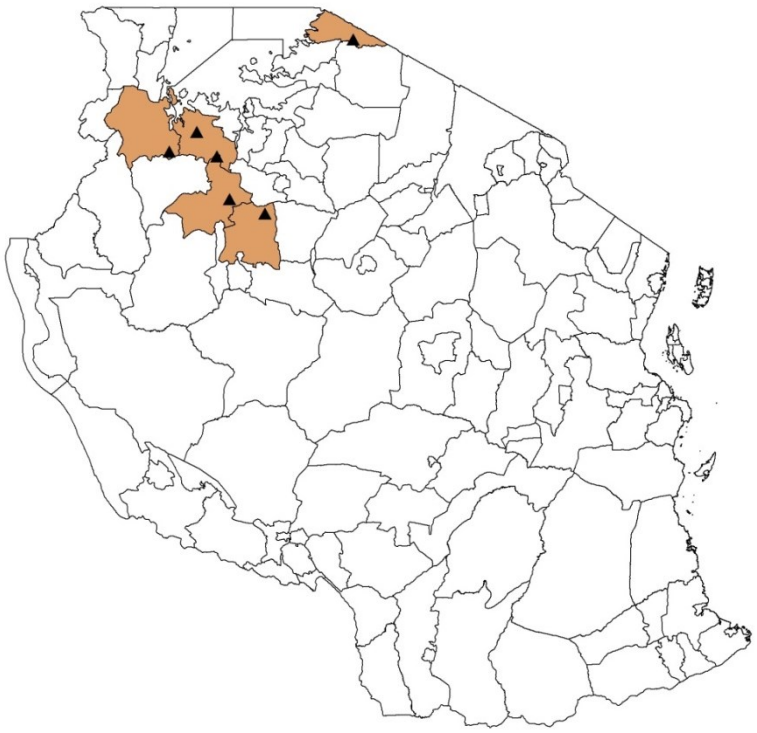


Figure 4: Mining Districts

Tanzania



Mali

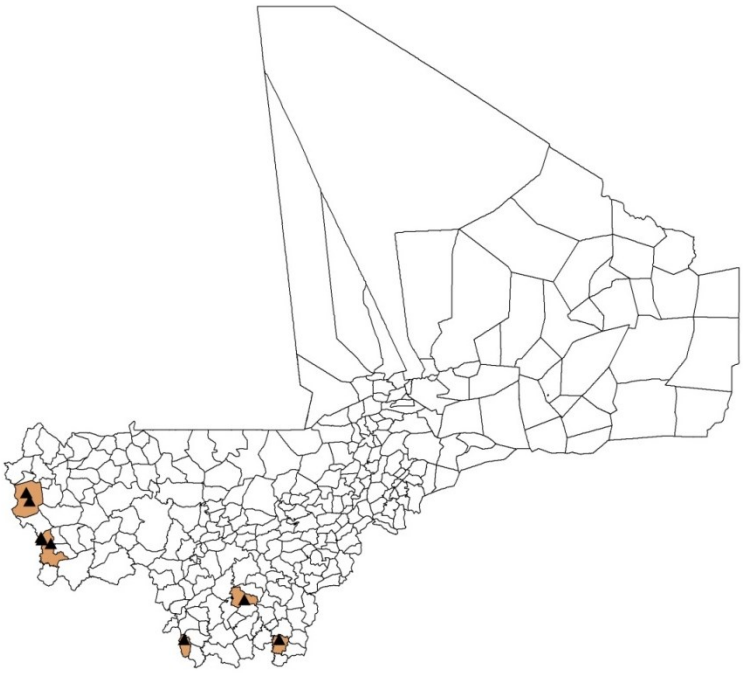
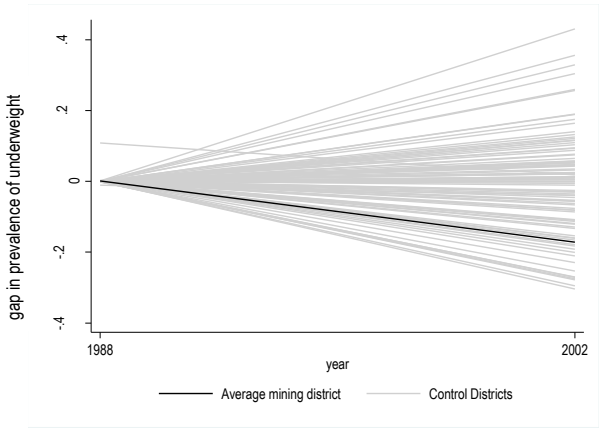


Figure 5. Underweight prevalence gap in average mining and neighbouring districts and placebo gaps - Tanzania



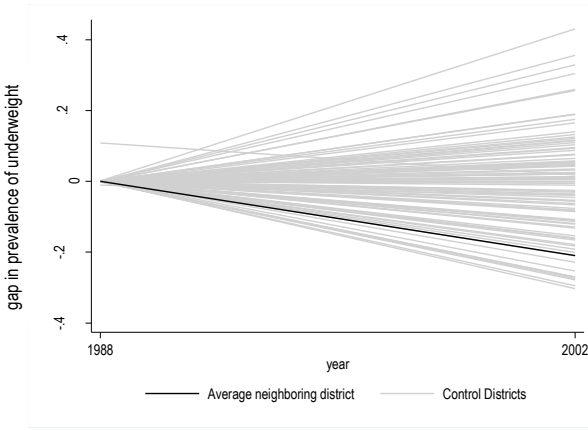
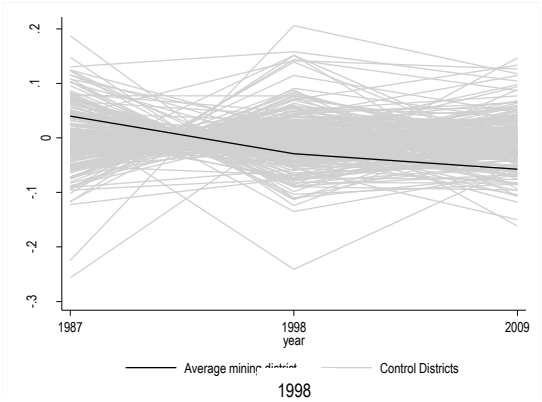


Figure 6. Underweight prevalence gap in average mining and neighbouring districts and placebo gaps - Mali



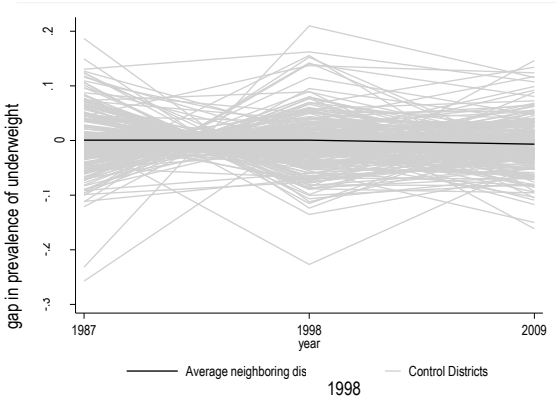


Table 1: Variables Used in Mapping

Mapped survey	Number of variables used	Variables used in mapping as independent variables
Tanzania DHS	24	Child's gender, child's age, household size, access to piped water, access to electricity, access to flush toilet, household head's sex, age and education level, mother's marital status, education level, age and employment, number of children aged 0-15, number of elderly, number of individuals with higher education in the household, number of individuals with secondary education in the household, floor*, wall*, roof* of the house, number of bedrooms in the household*, phone and radio availability in the household*, urbanity of the household*
Tanzania HBS	23	Access to piped water, access to electricity, access to flush toilet, marital status, sex, age, employment status and education of head, household size, number of employed in the household, number of children aged 0-15 in the household, number of elderly in the household, floor*, wall*, roof* of the house, phone and radio availability in the household*, urbanity of the household*
Mali DHS	20	Child's gender, child's age, household size, access to piped water**, access to electricity, access to flush toilet, floor, household head's sex***, age and education level, mother's marital status, education level, age and employment, number of children aged 0-15, number of elderly, number of individuals with higher education in the household***, number of individuals with secondary education in the household***, floor, urbanity of the household***
Mali HBS	15	Access to piped water**, access to electricity, access to flush toilet***, sex, age, employment status and education** of head, if the head works in agriculture sector or not, household size, number of children aged 0-15 in the household, number of elderly in the household, floor*** and roof*** of the household, cooking fuel*** used in the household*, urbanity of the household***

Notes: Variables with * are included only for mapping for census 2002 for Tanzania. Variables with ** are included only for mapping census 2009 for Mali. Variables with *** were not used for mapping for census 1987 for Mali because of data restrictions.

Table 2: Data Sources

	Mali	Tanzania
Demographics and Health Survey (DHS)	1987, 1995, 2001, 2006	1991, 1999, 2004, 2010
Household Budget Survey (HBS)	1989, 2001, 2010	1992, 2001
Census of population	1987, 1998, 2009	1988, 2002

Table 3: List of outcome variables

Malnutrition	**Definition**	**Source**
Stunting	Is equal to 1 if the child is "stunted", i.e. has a Z score below -2 Standard Deviations (SD) of median score (according to WHO), used to express low height for age; 0 otherwise	DHS
Severe Stunting	Is equal to 1 if the child is "severely stunted", i.e. has a Z score below -3 SD of median score (according to WHO), used to express low height for age; 0 otherwise	
Wasting	Is equal to 1 if the child is "wasted", i.e. has a Z score below -2 SD of median score (according to WHO), used to express low weight for height; 0 otherwise	DHS
Underweight	Is equal to 1 if the child is "underweight", i.e. has a Z score below -2 SD of median score (according to WHO), used to express low weight for age; 0 otherwise	DHS
Fever	Is equal to 1 if the child had fever in the last two weeks	
Cough	Is equal to 1 if the child had cough in the last two weeks	
Diarrhea	Is equal to 1 if the child had diarrhea in the last two weeks	
Antenatal care	Is equal to 1 if mother has received any antenatal care during pregnancy for the child	
Households' Access to Facilities		
Access to water	Is equal to 1 if source of drinking water is safe, i.e. household has access to piped water; 0 otherwise	DHS and Census
Access to electricity	Is equal to 1 if household has electricity; 0 otherwise	DHS and Census
Access to sanitation	Is equal to 1 if household has access to flush toilet; 0 otherwise	DHS and Census
Children's Education		
Net enrolment rate	Is equal to 1 if children aged 6-15 are currently attending a school; 0 otherwise	DHS and Census
Employment outcomes		
Employment rate	Is equal to one if the respondent is aged 15-64 and working[17]	DHS and Census

[17] For DHS we make use of one variable regarding the time frame of working which is whether the respondent has worked in the previous 12 months or not. While for census of Tanzania for 1988 there is no time frame specified and for census 2002, time frame is the

Types of occupation		
Working as a professional	Is equal to 1 if the respondent is aged 15-64 and working as a professional, technical, managerial or clerical worker	DHS and Census
Working as an agricultural worker	Is equal to 1 if the respondent is aged 15-64 and is an agricultural worker (Defined as skilled agricultural worker and fishery workers in the censuses)	DHS and Census
Working as a services worker	Is equal to 1 if the respondent is aged 15-64 and working in services and sales (includes household and domestic workers for DHS)	DHS and Census
Working as a manual worker	Is equal to 1 if respondent is aged 15-64 and working as a skilled or unskilled manual worker	DHS
Working as craftsmen	Is equal to 1 if respondent is aged 15-64 and working as a craftsmen or machine operator	Census
Working in elementary jobs	Is equal to 1 if respondent is aged 15-64 and working in elementary jobs	Census
Class of worker		
Working as an employer	Is equal to 1 if respondent is aged 15-64 and working as an employer	Census
Working as an own-account worker	Is equal to 1 if respondent is aged 15-64 and working as an own-account worker (self-employed)	Census
Working as wage worker	Is equal to 1 if respondent is aged 15-64 and working as a wage worker	Census
Working as unpaid worker	Is equal to 1 if respondent is aged 15-64 and working as unpaid worker	Census
Industry of the worker[18]		
Working in agriculture sector	Is equal to 1 if respondent is aged 15-64 and working in agriculture	Census
Working in manufacturing sector	Is equal to 1 if respondent is aged 15-64 and working in manufacturing	Census
Working in mining sector	Is equal to 1 if respondent is aged 15-64 and working in mining	Census
Working in construction sector	Is equal to 1 if respondent is aged 15-64 and working in construction	Census
Working in services sector	Is equal to 1 if respondent is aged 15-64 and working in services	Census

previous week. For Mali censuses, the reference period in all samples is the month prior to the census. For the 1987 and 1998 samples, the reference period for agricultural workers is the year prior to the census.

[18] Note that industry of worker was collected only for Mali censuses.

Household Consumption		
Per capita real expenditure	Real total expenditure of the household divided by household size (Average in the district)	HBS
Gini	Gini coefficient for the district, calculated using per capita household expenditure	HBS
Income share of bottom 40%	Income share of bottom 40% in the district, calculated using per capita household expenditure	HBS
Income share of upper 5%	Income share of upper 5 % in the district, calculated using per capita household expenditure	HBS

Table 4: Amount of gold production in the mines (reported as kg.)

	Region	District	Mine	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mali	Kayes	Kenieba	Gounkoto (Loulo Permit)	0	0	0	0	0	0	0	0	0	0	0	0	0	4292	8834
	Kayes	Kenieba	Loulo (Gara Mine)	0	0	0	0	0	0	0	2115	7527	8243	8025	10949	9860	6470	6843
	Kayes	Kenieba	Tabakoto/Segala	0	0	0	0	0	0	0	0	311	311	311	1773	2737	2799	3421
	Kayes	Sadiola	Sadiola Mine	0	0	19005	16703	14899	14059	14277	13748	15552	11477	14090	11011	8958	9176	7589
	Kayes	Sadiola	Yatela	0	0	0	4044	8336	6781	7527	7652	10949	5132	9362	6905	4635	2240	2240
	Sikasso	Sanso	Morila	0	0	4417	19658	32753	24697	15863	20373	16081	13997	13219	10638	7434	7558	6314
	Sikasso	Fourou	Syama	0	0	1555	0	0	0	0	0	0	0	0	1213	2519	2613	3421
	Sikasso	Kalana	Kalana	0	0	0	0	0	0	218	467	715	778	653	529	342	280	311
	Region	**District**	**Mine**	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Tanzania	Shinyanga	Kahama	Bulyanhulu	0	0	0	6592	11196	9209	11026	9169	9305	8640	6346	7774	8195	8016	6945
	Shinyanga	Kahama	Buzwagi	0	0	0	0	0	0	0	0	0	0	0	4744	6214	6267	4651
	Mwanza	Geita	Geita Gold Mine	0	0	5347	17052	17923	20882	21533	18854	9538	10156	8144	8344	11147	14984	16798
	Mara	Tarime	North Mara	0	0	0	0	1907	5844	6737	7626	11016	7476	6272	6350	6957	5322	5848
	Tabora	Nzega	Golden Pride	20	4188	7768	5572	4508	5168	4824	4705	4229	4456	4641	4217	3995	3808	3760
	Kagera	Biharamulo	Tulawaka	0	0	0	0	0	0	0	3142	4882	5477	6609	2907	1997	2587	1420

Table 5: Summary Statistics – Tanzania

	1999				2010			
	All	0-20 kms	20-50 kms	>50 kms	All	0-20 kms	20-50 kms	>50 kms
Stunted	0.479	0.349	0.500	0.482	0.414	0.461	0.496	0.409
Severely stunted	0.219	0.109	0.300	0.220	0.160	0.094	0.137	0.160
Wasted	0.053	0.043	0.033	0.055	0.048	0.036	0.045	0.050
Underweight	0.243	0.065	0.200	0.247	0.156	0.095	0.130	0.160
Cough	0.373	0.278	0.300	0.379	0.227	0.187	0.159	0.229
Fever	0.370	0.417	0.367	0.367	0.236	0.247	0.268	0.232
Diarrhea	0.130	0.099	0.167	0.131	0.149	0.066	0.057	0.153
Antenatal care	0.972	0.981	0.970	0.971	0.986	0.990	0.977	0.985
Net enrolment rate	0.496	0.624	0.137	0.503	0.772	0.732	0.749	0.779
Access to water	0.375	0.025	0.105	0.391	0.331	0.000	0.007	0.350
Access to sanitation	0.015	0.000	0.053	0.015	0.104	0.003	0.005	0.110
Access to electricity	0.080	0.000	0.000	0.083	0.148	0.000	0.000	0.156
Urban	0.262	0.000	0.000	0.273	0.261	0.000	0.000	0.276
Years of education of HH head	4.267	4.404	2.579	4.312	5.255	4.317	4.551	5.321
<u>Men</u>								
Working in the past 12 months	0.902	0.835	1.000	0.900	0.854	0.890	0.814	0.858
Working as agricultural worker	0.618	0.690	0.905	0.608	0.532	0.757	0.730	0.524
Working as a services worker	0.025	0.000	0.000	0.027	0.050	0.016	0.048	0.052
Working as a professional	0.040	0.042	0.000	0.041	0.041	0.000	0.037	0.042
Working as a manual worker	0.206	0.104	0.095	0.210	0.224	0.117	0.000	0.233
<u>Women</u>								
Working in the past 12 months	0.804	0.826	0.938	0.798	0.803	0.948	0.924	0.795
Working as agricultural worker	0.561	0.708	0.719	0.550	0.550	0.890	0.842	0.531
Working as a services worker	0.022	0.000	0.031	0.022	0.053	0.014	0.012	0.056
Working as a professional	0.020	0.000	0.000	0.021	0.024	0.011	0.022	0.025
Working as a manual worker	0.180	0.117	0.156	0.182	0.174	0.033	0.048	0.180

Source: DHS 1999 and 2010 of Tanzania. Sample weights are used to weigh the observations. See Table 3 for variable definitions.

Table 6: Summary Statistics – Mali

	1995				2006			
	All	0-20 kms	20-50 kms	>50 kms	All	0-20 kms	20-50 kms	>50 kms
Stunted	0.358	0.593	0.426	0.352	0.355	0.310	0.411	0.354
Severely stunted	0.186	0.290	0.248	0.181	0.176	0.170	0.210	0.175
Wasted	0.267	0.275	0.254	0.268	0.196	0.149	0.180	0.197
Underweight	0.358	0.513	0.396	0.354	0.270	0.261	0.294	0.269
Cough	0.292	0.462	0.273	0.290	0.160	0.193	0.089	0.161
Fever	0.393	0.506	0.469	0.388	0.211	0.196	0.184	0.212
Diarrhea	0.256	0.368	0.368	0.250	0.168	0.163	0.170	0.168
Antenatal care	0.474	0.298	0.288	0.485	0.735	0.928	0.706	0.734
Net enrolment rate	0.259	0.304	0.194	0.260	0.395	0.548	0.243	0.397
Access to water	0.156	0.009	0.026	0.163	0.106	0.000	0.005	0.109
Access to sanitation	0.009	0.000	0.000	0.009	0.024	0.000	0.008	0.025
Access to electricity	0.062	0.000	0.000	0.065	0.167	0.105	0.004	0.171
Urban	0.275	0.207	0.000	0.286	0.305	0.000	0.000	0.315
Years of education of HH head	1.130	0.964	0.637	1.150	1.434	1.786	0.256	1.452
<u>Men</u>								
Working in the past 12 months	0.873	0.890	0.923	0.870	0.751	0.765	0.968	0.745
Working as agricultural worker	0.547	0.512	0.755	0.540	0.394	0.330	0.925	0.384
Working as a services worker	0.202	0.151	0.076	0.208	0.136	0.140	0.010	0.139
Working as a professional	0.039	0.022	0.010	0.041	0.044	0.031	0.023	0.045
Working as a manual worker	0.083	0.205	0.082	0.080	0.117	0.098	0.010	0.119
<u>Women</u>								
Working in the past 12 months	0.547	0.791	0.787	0.534	0.624	0.822	0.819	0.617
Working as agricultural worker	0.206	0.315	0.572	0.190	0.302	0.436	0.750	0.290
Working as a services worker	0.245	0.174	0.174	0.249	0.223	0.233	0.056	0.227
Working as a professional	0.012	0.014	0.000	0.012	0.010	0.000	0.003	0.011
Working as a manual worker	0.083	0.288	0.034	0.082	0.070	0.064	0.003	0.072

Source: DHS 1995 and 2006 of Mali. Sample weights are used to weigh the observations. See Table 3 for variable definitions.

Table 7: Local Area Effects – Tanzania

	(1) 20 kms	(2) 50 kms	(3) 75 kms	(4) 100 kms	(5) 150 kms
Stunted	0.1232*	0.1251**	0.1468***	0.0703*	-0.0653
	(0.0677)	(0.0554)	(0.0405)	(0.0408)	(0.0763)
Wasted	0.0044	0.0057	0.0425*	0.0108	-0.0329
	(0.0216)	(0.0164)	(0.0231)	(0.0274)	(0.0215)
Underweight	0.1129***	0.0995***	0.0998***	0.0779	0.0124
	(0.0321)	(0.0370)	(0.0324)	(0.0517)	(0.0699)
Severely stunted	0.0172	0.0104	0.1120***	0.0608*	0.0003
	(0.0283)	(0.0483)	(0.0352)	(0.0314)	(0.0351)
Cough	0.1026	0.0813	-0.0269	0.0249	-0.0408
	(0.0747)	(0.0556)	(0.0321)	(0.0419)	(0.0510)
Fever	0.0735	0.0447	-0.0169	0.0754	-0.0004
	(0.0744)	(0.0562)	(0.0528)	(0.0645)	(0.0465)
Diarrhea	-0.0017	-0.0534	0.0585**	0.0784***	0.0279
	(0.0233)	(0.0411)	(0.0260)	(0.0262)	(0.0272)
Antenatal care	0.0065	0.0069	-0.0230	0.0080	-0.0046
	(0.0175)	(0.0129)	(0.0153)	(0.0119)	(0.0092)
Access to electricity	-0.0476**	-0.0673***	-0.0514*	0.0266	0.0008
	(0.0190)	(0.0258)	(0.0294)	(0.0580)	(0.0374)
Access to water	0.0186	0.0109	-0.0239	0.0464	0.1081
	(0.0388)	(0.0408)	(0.0709)	(0.0983)	(0.0961)
Access to sanitation	-0.0606***	-0.0943***	-0.1049***	0.0124	0.0457
	(0.0204)	(0.0270)	(0.0265)	(0.0469)	(0.0492)
Net enrolment rate	-0.1466	0.0326	-0.1231**	-0.0971*	0.0112
	(0.1037)	(0.1304)	(0.0594)	(0.0507)	(0.0565)
Women					
	0.1241**	0.0640	0.1047**	0.1162**	0.2820***
Working in the past 12 months	(0.0534)	(0.0532)	(0.0449)	(0.0575)	(0.0466)
Working as agricultural worker	0.1727***	0.1490***	0.1757***	0.1705***	0.4097***
	(0.0622)	(0.0508)	(0.0673)	(0.0643)	(0.0591)
Working as services worker	-0.0174	-0.0368**	-0.0423***	0.0022	-0.0073
	(0.0127)	(0.0156)	(0.0095)	(0.0170)	(0.0173)
	0.0227***	0.0287***	0.0202**	0.0111	0.0182**
Working as a professional	(0.0075)	(0.0079)	(0.0085)	(0.0126)	(0.0072)
	-0.0707**	-0.0815***	-0.0637**	-0.0884***	-0.1623***
Working as a manual worker	(0.0300)	(0.0293)	(0.0316)	(0.0259)	(0.0424)
Men					
	0.0486	-0.0273	0.0423	-0.0684	-0.0459
Working in the past 12 months	(0.0633)	(0.0621)	(0.0567)	(0.0542)	(0.0556)
Working as agricultural worker	0.1025	0.0248	0.1246*	0.0278	-0.0407
	(0.1173)	(0.0864)	(0.0662)	(0.0619)	(0.0800)
Working as services worker	-0.0148	0.0073	-0.0046	0.0156	0.0231
	(0.0205)	(0.0263)	(0.0263)	(0.0183)	(0.0201)
	-0.0112	0.0052	0.0051	-0.0073	0.0246
Working as a professional	(0.0100)	(0.0198)	(0.0161)	(0.0178)	(0.0195)
	-0.0291	-0.0650	-0.0845**	-0.1144***	-0.0608
Working as a manual worker	(0.0608)	(0.0429)	(0.0427)	(0.0417)	(0.0550)

Notes: Reported coefficients are the coefficients of the interaction variable between the treatment dummy (defined as 'being in K kms vicinity of the closest mine' where K takes values of 20, 50, 75, 100 and 150) and the year dummy. Unreported coefficients include coefficients of the treatment dummy, year dummy and the control variables. Standard errors are in parentheses. Sample weights are used to weigh the observations. Error terms are clustered at the sample cluster level. See Table 3 for variable definitions. * p<0.05, ** p<0.01, *** p<0.001

Table 8: Intensity of Treatment - Tanzania

	(1) Intensity measured by "years since mine has been active"	(2) Intensity measured by "total production"
Stunted	-0.0063	-0.0000
	(0.0104)	(0.0000)
Wasted	-0.0018	-0.0000
	(0.0023)	(0.0000)
Underweight	0.0071	0.0000
	(0.0053)	(0.0000)
Severely stunted	0.0025	0.0000
	(0.0037)	(0.0000)
Cough	0.0031	0.0000
	(0.0082)	(0.0000)
Fever	0.0075	0.0000
	(0.0064)	(0.0000)
Diarrhea	0.0028	0.0000
	(0.0025)	(0.0000)
Antenatal care	0.0004	0.0000
	(0.0019)	(0.0000)
Access to electricity	-0.0042*	-0.0000**
	(0.0024)	(0.0000)
Access to water	0.0006	0.0000
	(0.0032)	(0.0000)
Access to sanitation	-0.0052*	-0.0000**
	(0.0029)	(0.0000)
Net enrolment rate	0.0061	0.0000
	(0.0135)	(0.0000)
Women		
Working in the past 12 months	0.0064	0.0000
	(0.0075)	(0.0000)
Working as agricultural worker	0.0174**	0.0000*
	(0.0069)	(0.0000)
Working as services worker	-0.0040***	-0.0000***
	(0.0011)	(0.0000)
Working as a professional	0.0026**	0.0000***
	(0.0010)	(0.0000)
Working as a manual worker	-0.0109***	-0.0000***
	(0.0022)	(0.0000)
Men		
Working in the past 12 months	0.0018	-0.0000
	(0.0071)	(0.0000)
Working as agricultural worker	0.0084	0.0000
	(0.0133)	(0.0000)
Working as services worker	-0.0009	-0.0000
	(0.0032)	(0.0000)
Working as a professional	-0.0013	-0.0000
	(0.0012)	(0.0000)
Working as a manual worker	-0.0045	-0.0000
	(0.0065)	(0.0000)

Notes: Reported coefficients are the coefficients of the interaction variable between the treatment dummy (defined as 'being in 20 kms vicinity of the closest mine'), intensity of treatment and the year dummy. Unreported coefficients include coefficients of the treatment dummy, year dummy and the control variables. Standard errors are in parentheses. Sample weights are used to weigh the observations. Error terms are clustered at the sample cluster level. See Table 3 for variable definitions. * $p<0.05$, ** $p<0.01$, *** $p<0.001$.

Table 9: Immediate Area versus Neighbouring Area Effects - Tanzania

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PANEL A: CHILDREN`S HEALTH	**Stunted**	**Wasted**	**Underweight**	**Severely Stunted**	**Cough**	**Fever**	**Diarrhea**
Treatment Dummy 1 - 0-20 kms	-0.0560*	-0.0005	-0.1240***	-0.0444**	-0.0814	-0.0167	-0.0352*
	(0.0330)	(0.0157)	(0.0213)	(0.0224)	(0.0622)	(0.0727)	(0.0205)
Treatment Dummy 2 - 20-50 kms	0.0632***	-0.0137	-0.0378	0.0949***	-0.0432	0.0174	0.0959***
	(0.0232)	(0.0121)	(0.0253)	(0.0240)	(0.0272)	(0.0305)	(0.0174)
Year Dummy	-0.0771***	0.0011	-0.0798***	-0.0585***	-0.1495***	-0.1328***	0.0177*
	(0.0163)	(0.0069)	(0.0140)	(0.0149)	(0.0165)	(0.0180)	(0.0106)
Treatment 1 x Year	0.1257*	0.0046	0.1131***	0.0206	0.1093	0.0793	0.0004
	(0.0664)	(0.0217)	(0.0316)	(0.0278)	(0.0751)	(0.0753)	(0.0228)
Treatment 2 x year	0.0773	0.0187	0.0649*	-0.0574	0.0236	0.0057	-0.1508***
	(0.0513)	(0.0215)	(0.0382)	(0.0381)	(0.0587)	(0.0507)	(0.0308)
Number of Observations	9,049	9,049	9,049	9,049	9,535	9,533	9,538

	(8)	(9)	(10)	(11)	(12)
PANEL B: ACCESS TO FACILITIES	**Antenatal Care**	**Access to Electricity**	**Access to Water**	**Access to Sanitation**	**Net Enrolment**
Treatment Dummy 1 - 0-20 kms	-0.0044	-0.0024	-0.1186**	-0.0160	0.1593***
	(0.0144)	(0.0274)	(0.0542)	(0.0291)	(0.0427)
Treatment Dummy 2 - 20-50 kms	-0.0161**	0.0377	-0.1275*	0.0381	-0.2577***
	(0.0066)	(0.0384)	(0.0710)	(0.0469)	(0.0275)
Year Dummy	0.0012	0.0466***	-0.0299	0.0785***	0.2528***
	(0.0053)	(0.0139)	(0.0338)	(0.0115)	(0.0180)
Treatment 1 x Year	0.0058	-0.0475**	0.0228	-0.0606***	-0.1438
	(0.0175)	(0.0190)	(0.0405)	(0.0217)	(0.1032)
Treatment 2 x year	0.0077	-0.0956*	0.0158	-0.1328**	0.2674***
	(0.0138)	(0.0532)	(0.0868)	(0.0631)	(0.0622)
Number of Observations	9,648	12,874	12,880	12,878	13,346

PANEL C: WOMEN`S EMPLOYMENT	(13) Working in the Past 12 Months	(14) Working as agricultural worker	(15) Working as services worker	(16) Working as a Professional	(17) Working as a Manual Worker
Treatment Dummy 1 - 0-20 kms	-0.0600	-0.0944	0.0062	-0.0061	0.0443**
	(0.0485)	(0.0614)	(0.0083)	(0.0037)	(0.0203)
Treatment Dummy 2 - 20-50 kms	0.0736**	-0.0940**	0.0512***	-0.0134	0.1025***
	(0.0285)	(0.0463)	(0.0107)	(0.0111)	(0.0249)
Year Dummy	-0.0119	-0.0153	0.0344***	-0.0132***	-0.0004
	(0.0184)	(0.0209)	(0.0051)	(0.0038)	(0.0132)
Treatment 1 x Year	0.1223**	0.1723***	-0.0188	0.0228***	-0.0713**
	(0.0530)	(0.0618)	(0.0128)	(0.0075)	(0.0301)
Treatment 2 x year	-0.0256	0.1484**	-0.0686***	0.0347**	-0.1199***
	(0.0447)	(0.0735)	(0.0179)	(0.0143)	(0.0400)
Number of Observations	13,823	13,825	13,825	13,825	13,826

PANEL D: MEN`S EMPLOYMENT	(18) Working in the Past 12 Months	(19) Working as agricultural worker	(20) Working as services worker	(21) Working as a Professional	(22) Working as a Manual Worker
Treatment Dummy 1 - 0-20 kms	-0.0285	-0.0496	-0.0018	0.0093	0.0135
	(0.0516)	(0.0841)	(0.0074)	(0.0095)	(0.0398)
Treatment Dummy 2 - 20-50 kms	0.0846***	0.0751**	-0.0125	-0.0214*	0.0338
	(0.0241)	(0.0328)	(0.0208)	(0.0114)	(0.0310)
Year Dummy	0.0115	-0.0339*	0.0324***	-0.0197***	0.0368**
	(0.0111)	(0.0187)	(0.0079)	(0.0057)	(0.0173)
Treatment 1 x Year	0.0424	0.0957	-0.0155	-0.0090	-0.0301
	(0.0637)	(0.1174)	(0.0207)	(0.0099)	(0.0601)
Treatment 2 x year	-0.1165	-0.0304	0.0301	0.0374	-0.1480***
	(0.0849)	(0.0923)	(0.0448)	(0.0344)	(0.0421)
Number of Observations	5,893	5,893	5,893	5,893	5,894

Notes: Unreported coefficients include coefficients of the control variables. Standard errors are in parentheses. Sample weights are used to weigh the observations. Regressions control for regional fixed effects. Error terms are clustered at the sample cluster level. See Table 3 for variable definitions. * $p<0.05$, ** $p<0.01$, *** $p<0.001$.

Table 10: Immediate Area versus Neighbouring Area Effects – Tanzania

PANEL A: CHILDREN`S HEALTH	Stunted	Wasted	Underweight	Severely Stunted	Cough	Fever	Diarrhea
Treatment Dummy 1 - 0-75 kms	-0.0696	-0.0126	-0.0331	-0.0484	-0.0103	-0.0056	-0.1019***
	(0.0581)	(0.0276)	(0.0447)	(0.0469)	(0.0378)	(0.0610)	(0.0243)
Treatment Dummy 2 - 75-150 kms	0.1925**	0.0449	0.0954	0.0687	0.0579	-0.0592	-0.0954***
	(0.0873)	(0.0273)	(0.0830)	(0.0506)	(0.0629)	(0.0557)	(0.0274)
Year Dummy	-0.0773***	0.0029	-0.0845***	-0.0642***	-0.1513***	-0.1364***	0.0149
	(0.0188)	(0.0085)	(0.0165)	(0.0183)	(0.0178)	(0.0219)	(0.0115)
Treatment 1 x Year	0.1560***	0.0382	0.1033***	0.1220***	-0.0290	-0.0314	0.0479*
	(0.0438)	(0.0243)	(0.0348)	(0.0405)	(0.0314)	(0.0505)	(0.0254)
Treatment 2 x year	-0.1451*	-0.0512**	-0.0653	-0.0379	-0.0244	0.0467	0.0147
	(0.0741)	(0.0250)	(0.0788)	(0.0428)	(0.0637)	(0.0600)	(0.0330)
Number of Observations	7,900	7,900	7,900	7,900	8,336	8,335	8,337

	(8)	(9)	(10)	(11)	(12)
PANEL B: ACCESS TO FACILITIES	**Antenatal Care**	**Access to Electricity**	**Access to Water**	**Access to Sanitation**	**Net Enrolment**
Treatment Dummy 1 - 0-75 kms	0.0153	0.0424	0.0456	0.0222	0.0291
	(0.0235)	(0.0294)	(0.0779)	(0.0347)	(0.0397)
Treatment Dummy 2 - 75-150 kms	0.0039	0.0069	0.0087	-0.0977*	-0.1945***
	(0.0136)	(0.0466)	(0.1148)	(0.0563)	(0.0559)
Year Dummy	0.0043	0.0409***	-0.0453	0.0717***	0.2568***
	(0.0059)	(0.0151)	(0.0391)	(0.0109)	(0.0207)
Treatment 1 x Year	-0.0254	-0.0495*	-0.0490	-0.1186***	-0.1626***
	(0.0183)	(0.0254)	(0.0646)	(0.0350)	(0.0540)
Treatment 2 x year	-0.0129*	0.0282	0.2348*	0.1203*	0.0892**
	(0.0077)	(0.0476)	(0.1285)	(0.0638)	(0.0453)
Number of Observations	8,420	11,768	11,772	11,770	11,985

PANEL C: WOMEN`S EMPLOYMENT	(13) Working in the Past 12 Months	(14) Working as agricultural worker	(15) Working as services worker	(16) Working as a Professional	(17) Working as a Manual Worker
Treatment Dummy 1 - 0-75 kms	0.0649	0.0652	0.0064	0.0033	0.0044
	(0.0577)	(0.0696)	(0.0159)	(0.0062)	(0.0265)
Treatment Dummy 2 - 75-150 kms	-0.1401*	-0.2379***	-0.0039	-0.0049	0.1268***
	(0.0817)	(0.0844)	(0.0194)	(0.0060)	(0.0489)
Year Dummy	-0.0244	-0.0335	0.0345***	-0.0155***	0.0114
	(0.0206)	(0.0223)	(0.0057)	(0.0046)	(0.0152)
Treatment 1 x Year	0.1127**	0.1811***	-0.0343**	0.0159**	-0.0685**
	(0.0453)	(0.0665)	(0.0149)	(0.0078)	(0.0301)
Treatment 2 x year	0.2639***	0.3605***	0.0164	0.0116	-0.1496***
	(0.0550)	(0.0579)	(0.0242)	(0.0071)	(0.0492)
Number of Observations	12,409	12,411	12,411	12,411	12,412

PANEL D: MEN`S EMPLOYMENT	(18) Working in the Past 12 Months	(19) Working as agricultural worker	(20) Working as services worker	(21) Working as a Professional	(22) Working as a Manual Worker
Treatment Dummy 1 - 0-75 kms	0.0650	-0.0408	0.0258	-0.0282	0.1003***
	(0.0404)	(0.0439)	(0.0255)	(0.0242)	(0.0236)
Treatment Dummy 2 - 75-150 kms	0.1692***	0.1418***	-0.0106	-0.0418*	0.0817**
	(0.0321)	(0.0368)	(0.0163)	(0.0245)	(0.0348)
Year Dummy	0.0262**	-0.0198	0.0296***	-0.0254***	0.0471**
	(0.0124)	(0.0206)	(0.0085)	(0.0062)	(0.0191)
Treatment 1 x Year	0.0437	0.1293**	-0.0065	0.0110	-0.0921**
	(0.0519)	(0.0581)	(0.0257)	(0.0173)	(0.0409)
Treatment 2 x year	-0.1624***	-0.2178***	0.0209	0.0546**	-0.0291
	(0.0484)	(0.0645)	(0.0283)	(0.0265)	(0.0663)
Number of Observations	5,270	5,270	5,270	5,270	5,271

Notes: Unreported coefficients include coefficients of the control variables. Standard errors are in parentheses. Sample weights are used to weigh the observations. Regressions control for regional fixed effects. Error terms are clustered at the sample cluster level. See Table 3 for variable definitions.
* p<0.05, ** p<0.01, *** p<0.001.

Table 11: Local Area Effects – Mali

	(2) 20 kms	(3) 50 kms	(4) 75 kms	(5) 100 kms	(6) 150 kms
Stunted	-0.2738***	-0.0496	-0.0372	-0.0211	0.0092
	(0.0660)	(0.0466)	(0.0330)	(0.0261)	(0.0229)
Wasted	-0.0625	-0.0264	0.0076	0.0239	0.0430*
	(0.0562)	(0.0465)	(0.0401)	(0.0283)	(0.0228)
Underweight	-0.1598***	-0.0364	-0.0193	-0.0132	0.0321
	(0.0598)	(0.0522)	(0.0400)	(0.0307)	(0.0250)
Severely stunted	-0.0967**	-0.0295	0.0034	-0.0045	0.0079
	(0.0485)	(0.0443)	(0.0338)	(0.0257)	(0.0214)
Cough	-0.1954*	-0.0722	-0.0449	-0.0581*	-0.0662***
	(0.1039)	(0.0547)	(0.0401)	(0.0340)	(0.0245)
Fever	-0.1543	-0.1019**	-0.0532	-0.0408	-0.0027
	(0.1018)	(0.0470)	(0.0357)	(0.0296)	(0.0242)
Diarrhea	-0.1644**	-0.1155**	-0.0659*	-0.0234	-0.0114
	(0.0648)	(0.0555)	(0.0353)	(0.0308)	(0.0227)
Antenatal care	0.3982***	0.2350**	0.0487	0.0409	0.0206
	(0.0858)	(0.0954)	(0.0823)	(0.0614)	(0.0444)
Access to electricity	0.0441	-0.0401	-0.0377	-0.0404	-0.0551**
	(0.1037)	(0.0387)	(0.0367)	(0.0266)	(0.0229)
Access to water	0.1015	0.0701**	-0.0248	-0.0242	0.0096
	(0.0715)	(0.0316)	(0.0592)	(0.0420)	(0.0308)
Access to sanitation	-0.0150**	-0.0086	-0.0112	-0.0083	-0.0125**
	(0.0072)	(0.0060)	(0.0079)	(0.0062)	(0.0056)
Net enrolment rate	0.1525	-0.0246	-0.0246	-0.0458	-0.0115
	(0.1020)	(0.0710)	(0.0488)	(0.0395)	(0.0327)
<u>Women</u>					
	-0.1408	-0.0870	-0.0363	0.0075	0.0226
Working in the past 12 months	(0.1134)	(0.0772)	(0.0556)	(0.0411)	(0.0382)
Working as agricultural worker	-0.1367	0.0152	0.1065	0.1352**	0.1510***
	(0.2317)	(0.1407)	(0.1004)	(0.0683)	(0.0537)
Working as services worker	0.1598	-0.0379	-0.1009**	-0.1141***	-0.1337***
	(0.1274)	(0.0683)	(0.0485)	(0.0358)	(0.0319)
Working as a professional	-0.0103	0.0019	0.0008	0.0024	0.0020
	(0.0067)	(0.0038)	(0.0032)	(0.0029)	(0.0028)
Working as a manual worker	-0.2274***	-0.0764	-0.0473	-0.0130	0.0006
	(0.0857)	(0.0467)	(0.0313)	(0.0243)	(0.0200)
<u>Men</u>					
Working in the past 12 months	-0.0234	0.0939**	0.0844**	0.1241***	0.0601*
	(0.0689)	(0.0469)	(0.0429)	(0.0335)	(0.0312)
Working as agricultural worker	-0.1248	0.1188	0.1468*	0.2011***	0.0762
	(0.1641)	(0.1171)	(0.0766)	(0.0559)	(0.0465)
Working as services worker	0.1107	0.0521	0.0239	0.0256	0.0611**
	(0.0737)	(0.0479)	(0.0385)	(0.0289)	(0.0258)
Working as a professional	-0.0035	0.0096	0.0051	-0.0046	-0.0080
	(0.0107)	(0.0124)	(0.0149)	(0.0140)	(0.0108)
Working as a manual worker	-0.1166	-0.1043**	-0.0935***	-0.0849***	-0.0553***
	(0.0914)	(0.0458)	(0.0332)	(0.0255)	(0.0206)

Notes: Reported coefficients are the coefficients of the interaction variable between the treatment dummy (defined as 'being in K kms vicinity of the closest mine' where K takes values of 20, 50, 75, 100 and 150) and the year dummy. Unreported coefficients include coefficients of the treatment dummy, year dummy and the control variables. Standard errors are in parentheses. Sample weights are used to weigh the observations. Error terms are clustered at the sample cluster level. See Table 3 for variable definitions. * p<0.05, ** p<0.01, *** p<0.001.

Table 12: Intensity of Treatment – Mali

	(1) Intensity measured by "years since mine has been active"	(2) Intensity measured by "total production"
Stunted	-0.0850**	-0.0002**
	(0.0344)	(0.0001)
Wasted	-0.0504***	-0.0001***
	(0.0179)	(0.0001)
Underweight	-0.0135	-0.0000
	(0.0247)	(0.0001)
Severely stunted	0.0058	0.0000
	(0.0197)	(0.0001)
Cough	-0.0878**	-0.0003**
	(0.0346)	(0.0001)
Fever	-0.0672**	-0.0002**
	(0.0341)	(0.0001)
Diarrhea	-0.0988***	-0.0003***
	(0.0285)	(0.0001)
Antenatal care	0.0933*	0.0003*
	(0.0538)	(0.0002)
Access to electricity	0.2251***	0.0007***
	(0.0173)	(0.0001)
Access to water	0.0261	0.0001
	(0.0210)	(0.0001)
Access to sanitation	-0.0062**	-0.0000**
	(0.0027)	(0.0000)
Net enrolment rate	0.0471	0.0001
	(0.0369)	(0.0001)
Women		
	-0.2863***	-0.0008***
Working in the past 12 months	(0.0164)	(0.0000)
Working as agricultural worker	-0.1662**	-0.0005**
	(0.0694)	(0.0002)
Working as services worker	-0.0256	-0.0001
	(0.0428)	(0.0001)
Working as a professional	-0.0062***	-0.0000***
	(0.0022)	(0.0000)
Working as a manual worker	-0.0583*	-0.0002*
	(0.0316)	(0.0001)
Men		
	-0.1240***	-0.0004***
Working in the past 12 months	(0.0194)	(0.0001)
Working as agricultural worker	-0.1999***	-0.0006***
	(0.0505)	(0.0001)
Working as services worker	-0.0224	-0.0001
	(0.0273)	(0.0001)
Working as a professional	0.0160***	0.0000***
	(0.0040)	(0.0000)
Working as a manual worker	-0.0169	-0.0000
	(0.0246)	(0.0001)

Notes: Reported coefficients are the coefficients of the interaction variable between the treatment dummy (defined as 'being in 20 kms vicinity of the closest mine'), intensity of treatment and the year dummy. Unreported coefficients include coefficients of the treatment dummy, year dummy and the control variables. Standard errors are in parentheses. Sample weights are used to weigh the observations. Error terms are clustered at the sample cluster level. See Table 3 for variable definitions. * $p<0.05$, ** $p<0.01$, *** $p<0.001$.

Table 13: Immediate Area versus Neighbouring Area Effects – Mali

PANEL A: CHILDREN`S HEALTH	(1) Stunted	(2) Wasted	(3) Underweight	(4) Severely Stunted	(5) Cough	(6) Fever	(7) Diarrhea
Treatment Dummy 1 - 0-20 kms	0.2318***	0.0332	0.1543***	0.0951***	0.1291	0.0605	0.0995***
	(0.0642)	(0.0394)	(0.0440)	(0.0141)	(0.0974)	(0.0831)	(0.0379)
Treatment Dummy 2 - 20-50 kms	0.0042	-0.0044	-0.0075	0.0210	-0.0484	0.0257	0.1010***
	(0.0351)	(0.0500)	(0.0466)	(0.0432)	(0.0498)	(0.0409)	(0.0358)
Year Dummy	-0.0032	-0.0671***	-0.0879***	-0.0113	-0.1262***	-0.1747***	-0.0774***
	(0.0105)	(0.0110)	(0.0131)	(0.0098)	(0.0121)	(0.0127)	(0.0106)
Treatment 1 x Year	-0.2733***	-0.0627	-0.1595***	-0.0974**	-0.1951*	-0.1566	-0.1685***
	(0.0661)	(0.0563)	(0.0599)	(0.0485)	(0.1047)	(0.1020)	(0.0650)
Treatment 2 x year	0.0275	-0.0139	0.0043	-0.0064	-0.0323	-0.0816*	-0.0937
	(0.0437)	(0.0583)	(0.0596)	(0.0542)	(0.0572)	(0.0493)	(0.0707)
Number of Observations	11,327	11,327	11,327	11,327	12,550	12,539	12,541

PANEL B: ACCESS TO FACILITIES	(8) Antenatal Care	(9) Access to Electricity	(10) Access to Water	(11) Access to Sanitation	(12) Net Enrolment
Treatment Dummy 1 - 0-20 kms	-0.1626**	-0.0291	-0.1343*	-0.0012	0.0480
	(0.0751)	(0.0564)	(0.0704)	(0.0063)	(0.0416)
Treatment Dummy 2 - 20-50 kms	-0.1512	0.0285***	-0.0483**	0.0045	0.0439
	(0.0954)	(0.0102)	(0.0228)	(0.0028)	(0.0593)
Year Dummy	0.2568***	0.0943***	-0.0734***	0.0142***	0.1442***
	(0.0207)	(0.0124)	(0.0164)	(0.0039)	(0.0164)
Treatment 1 x Year	0.4049***	0.0421	0.1035	-0.0151**	0.1487
	(0.0865)	(0.1034)	(0.0715)	(0.0073)	(0.1020)
Treatment 2 x year	0.1649	-0.0814***	0.0615**	-0.0041	-0.1203*
	(0.1152)	(0.0143)	(0.0260)	(0.0066)	(0.0619)
Number of Observations	12,368	21,248	21,292	21,262	26,773

	(13)	(14)	(15)	(16)	(17)

PANEL C: WOMEN`S EMPLOYMENT	Working in the Past 12 Months	Working as agricultural worker	Working as services worker	Working as a Professional	Working as a Manual Worker
Treatment Dummy 1 - 0-20 kms	0.1264***	-0.0960	-0.0204	0.0034	0.2393***
	(0.0362)	(0.0833)	(0.0323)	(0.0064)	(0.0811)
Treatment Dummy 2 - 20-50 kms	0.1166***	0.1168*	0.0080	-0.0050***	-0.0141
	(0.0354)	(0.0693)	(0.0339)	(0.0017)	(0.0264)
Year Dummy	0.1161***	0.1318***	-0.0100	-0.0051***	-0.0165
	(0.0193)	(0.0201)	(0.0146)	(0.0018)	(0.0124)
Treatment 1 x Year	-0.1433	-0.1356	0.1567	-0.0101	-0.2275***
	(0.1127)	(0.2323)	(0.1278)	(0.0067)	(0.0860)
Treatment 2 x year	-0.0616	0.0869	-0.1260***	0.0072**	-0.0112
	(0.0950)	(0.1270)	(0.0482)	(0.0037)	(0.0275)
Number of Observations	24,199	24,204	24,204	24,204	24,210
	(18)	**(19)**	**(20)**	**(21)**	**(22)**
PANEL D: MEN`S EMPLOYMENT	**Working in the Past 12 Months**	**Working as agricultural worker**	**Working as services worker**	**Working as a Professional**	**Working as a Manual Worker**
Treatment Dummy 1 - 0-20 kms	0.0282	-0.1029	-0.0138	-0.0111	0.1561**
	(0.0191)	(0.0892)	(0.0428)	(0.0068)	(0.0785)
Treatment Dummy 2 - 20-50 kms	-0.0089	-0.0197	-0.0468	-0.0058	0.0505
	(0.0358)	(0.0635)	(0.0360)	(0.0101)	(0.0331)
Year Dummy	-0.0969***	-0.1176***	-0.0711***	-0.0036	0.0418***
	(0.0163)	(0.0222)	(0.0145)	(0.0061)	(0.0107)
Treatment 1 x Year	-0.0200	-0.1186	0.1115	-0.0030	-0.1195
	(0.0685)	(0.1646)	(0.0739)	(0.0107)	(0.0917)
Treatment 2 x year	0.1675***	0.3002***	0.0053	0.0192	-0.1063***
	(0.0415)	(0.0706)	(0.0414)	(0.0170)	(0.0360)
Number of Observations	6,618	6,651	6,651	6,651	6,657

Notes: Unreported coefficients include coefficients of the control variables. Standard errors are in parentheses. Sample weights are used to weigh the observations. Regresstions control for regional fixed effects. Error terms are clustered at the sample cluster level. See Table 3 for variable definitions.
* p<0.05, ** p<0.01, *** p<0.001.

Table 14: Immediate Area versus Neighbouring Area Effects - Mali

PANEL A: CHILDREN`S HEALTH	(1) Stunted	(2) Wasted	(3) Underweight	(4) Severely Stunted	(5) Cough	(6) Fever	(7) Diarrhea
Treatment Dummy 1 - 0-75 kms	0.0404	-0.0399	-0.0096	0.0114	-0.0022	0.0131	0.0603**
	(0.0311)	(0.0372)	(0.0362)	(0.0262)	(0.0373)	(0.0300)	(0.0242)
Treatment Dummy 2 - 75-150 kms	-0.0261	-0.0670***	-0.0735***	-0.0206	0.0404	-0.0190	-0.0116
	(0.0176)	(0.0197)	(0.0222)	(0.0190)	(0.0247)	(0.0270)	(0.0202)
Year Dummy	-0.0090	-0.0822***	-0.1008***	-0.0158	-0.1097***	-0.1787***	-0.0800***
	(0.0128)	(0.0125)	(0.0155)	(0.0112)	(0.0135)	(0.0145)	(0.0124)
Treatment 1 x Year	-0.0310	0.0202	-0.0075	0.0055	-0.0597	-0.0488	-0.0632*
	(0.0341)	(0.0403)	(0.0406)	(0.0345)	(0.0400)	(0.0364)	(0.0351)
Treatment 2 x year	0.0266	0.0533**	0.0493*	0.0079	-0.0677**	0.0193	0.0118
	(0.0247)	(0.0254)	(0.0273)	(0.0234)	(0.0281)	(0.0282)	(0.0276)
Number of Observations	11,327	11,327	11,327	11,327	12,550	12,539	12,541

PANEL B: ACCESS TO FACILITIES	(8) Antenatal Care	(9) Access to Electricity	(10) Access to Water	(11) Access to Sanitation	(12) Net Enrolment
Treatment Dummy 1 - 0-75 kms	0.0271	0.0547**	0.0554	0.0117*	0.0622
	(0.0748)	(0.0241)	(0.0561)	(0.0066)	(0.0380)
Treatment Dummy 2 - 75-150 kms	0.0733*	0.0388**	-0.0261	0.0054	0.0025
	(0.0415)	(0.0162)	(0.0238)	(0.0034)	(0.0289)
Year Dummy	0.2646***	0.1069***	-0.0724***	0.0170***	0.1460***
	(0.0233)	(0.0150)	(0.0193)	(0.0049)	(0.0197)
Treatment 1 x Year	0.0493	-0.0489	-0.0207	-0.0135	-0.0260
	(0.0830)	(0.0375)	(0.0601)	(0.0084)	(0.0499)
Treatment 2 x year	0.0081	-0.0592**	0.0214	-0.0123**	-0.0061
	(0.0469)	(0.0246)	(0.0296)	(0.0055)	(0.0370)
Number of Observations	12,368	21,248	21,292	21,262	26,773

PANEL C: WOMEN`S EMPLOYMENT	(13) Working in the Past 12 Months	(14) Working as agricultural worker	(15) Working as services worker	(16) Working as a Professional	(17) Working as a Manual Worker
Treatment Dummy 1 - 0-75 kms	0.1773***	0.0779	0.0615*	-0.0030	0.0323
	(0.0329)	(0.0646)	(0.0335)	(0.0030)	(0.0299)
Treatment Dummy 2 - 75-150 kms	0.1273***	0.0619	0.0924***	-0.0044	-0.0296**
	(0.0372)	(0.0428)	(0.0335)	(0.0028)	(0.0135)
Year Dummy	0.1092***	0.0952***	0.0244	-0.0056***	-0.0206
	(0.0220)	(0.0203)	(0.0160)	(0.0021)	(0.0158)
Treatment 1 x Year	-0.0268	0.1373	-0.1271***	0.0012	-0.0433
	(0.0572)	(0.1016)	(0.0487)	(0.0034)	(0.0325)
Treatment 2 x year	0.0458	0.1574***	-0.1365***	0.0023	0.0210
	(0.0428)	(0.0567)	(0.0378)	(0.0032)	(0.0192)
Number of Observations	24,199	24,204	24,204	24,204	24,210
PANEL D: MEN`S EMPLOYMENT	**(18)** Working in the Past 12 Months	**(19)** Working as agricultural worker	**(20)** Working as services worker	**(21)** Working as a Professional	**(22)** Working as a Manual Worker
Treatment Dummy 1 - 0-75 kms	0.0085	-0.0320	-0.0316	-0.0089	0.0776***
	(0.0351)	(0.0537)	(0.0335)	(0.0121)	(0.0281)
Treatment Dummy 2 - 75-150 kms	0.0163	0.0266	-0.0617**	0.0049	0.0349*
	(0.0295)	(0.0406)	(0.0257)	(0.0096)	(0.0185)
Year Dummy	-0.1080***	-0.1314***	-0.0851***	-0.0011	0.0517***
	(0.0174)	(0.0253)	(0.0173)	(0.0074)	(0.0125)
Treatment 1 x Year	0.0927**	0.1538**	0.0379	0.0026	-0.0997***
	(0.0433)	(0.0776)	(0.0396)	(0.0153)	(0.0336)
Treatment 2 x year	0.0431	0.0358	0.0730**	-0.0134	-0.0322
	(0.0385)	(0.0524)	(0.0287)	(0.0122)	(0.0233)
Number of Observations	6,618	6,651	6,651	6,651	6,657

Notes: Unreported coefficients include coefficients of the control variables. Standard errors are in parentheses. Sample weights are used to weigh the observations. Regressions control for regional fixed effects. Error terms are clustered at the sample cluster level. See Table 3 for variable definitions.
* p<0.05, ** p<0.01, *** p<0.001.

Table 15: Differences and differences results for district level analysis – Tanzania

	(1)	(2)	(3)	
	TreatmentxYear Mining districts	TreatmentxYear Mining&Neighbouring districts	TreatmentxYear Mining districts	TreatmentxYear Neighbouring districts
Stunted	-0.0542	-0.0807	-0.0622	-0.0889
Severely stunted	-0.1792*	-0.2031***	-0.1978*	-0.2054***
Wasted	-0.1394	-0.1353**	-0.151	-0.1282*
Underweight	-0.1955*	-0.2322***	-0.2172*	-0.2389***
Access to electricity	-0.0482	-0.0491	-0.0525	-0.0475
Access to sanitation	-0.008	-0.0242	-0.0107	-0.0301
Access to water	-0.0965	-0.09	-0.1041	-0.0837
Net enrolment rate	-0.0757	-0.0817	-0.0831	-0.0811
Real per capita expenditures	-771.9851	-1.03e+03*	-871.7064	-1.10e+03*
Gini	0.0248	-0.0131	0.0222	-0.0288
Income share of bottom 40%	-0.0111	-0.0203	-0.0133	-0.0235
Income share of upper 5%	0.0083	-0.0084	0.007	-0.0152
Employment rate (men)	-0.0710*	-0.0336	-0.0725*	-0.0164
Employment rate (women)	-0.119	-0.0688	-0.123	-0.0447
Working as a Professional (men)	0.0163	0.0007	0.0158	-0.006
Working as a Professional (women)	0.0012	-0.0057	0.0004	-0.0085
Working as a services worker (men)	-0.0003	-0.0055	-0.001	-0.0075
Working as a services worker (women)	-0.0056	-0.0025	-0.0057	-0.001
Working as agricultural worker (men)	-0.0819	-0.0289	-0.0823	-0.0052
Working as agricultural worker (women)	-0.1064	-0.0593	-0.1098	-0.0369
Working as a craftsmen (men)	-0.0003	-0.0147	-0.0022	-0.0203
Working as a craftsmen (women)	0.0008	-0.002	0.0005	-0.0031
Working in elementary jobs (men)	-0.0045	0.0143	-0.0025	0.0217
Working in elementary jobs (women)	-0.0099	-0.0027	-0.0098	0.0005
Working as an employer (men)	0.0001	0.001	0.0002	0.0014
Working as an employer (women)	-0.0004	0.0007	-0.0003	0.0012
Working as own-account worker (men)	-0.1031	-0.0369	-0.1038	-0.0072
Working as own-account worker (women)	-0.1091	-0.0647	-0.113	-0.0432
Working as wage worker (men)	0.0282	-0.0005	0.0271	-0.0127
Working as wage worker (women)	-0.0068	-0.0078	-0.0075	-0.0079
Working as unpaid worker (men)	0.0079	0.0069	0.0085	0.0062
Working as unpaid worker (women)	-0.0014	0.0043	-0.0008	0.0066

Notes : In the regressions other control variables are year dummies and treatment dummies along with the constant. * p<0.05, ** p<0.01, *** p<0.001.

Table 16-A. Outcomes for variables from synthetic control analysis – Tanzania

	Mining districts	Synthetic control group - Mining districts	Neighbouring districts	Synthetic control group - Neighbouring districts	Control group
Stunted					
1988	0.415	0.417	0.405	0.406	0.397
2002	0.465	0.512	0.428	0.51	0.509
Severely stunted					.
1988	0.316	0.316	0.305	0.305	0.279
2002	0.112	0.26	0.093	0.267	0.272
Wasted					.
1988	0.231	0.229	0.21	0.208	0.209
2002	0.016	0.141	0.019	0.144	0.145
Underweight					
1988	0.328	0.326	0.315	0.315	0.292
2002	0.101	0.273	0.067	0.277	0.283
Access to electricity					
1988	0.055	0.055	0.059	0.059	0.075
2002	0.025	0.074	0.034	0.08	0.097
Access to sanitation					
1988	0.021	0.021	0.045	0.045	0.041
2002	0.005	0.017	0.01	0.04	0.036
Access to water					.
1988	0.153	0.152	0.205	0.206	0.380
2002	0.036	0.17	0.108	0.216	0.367
Net enrolment rate					.
1988	0.421	0.423	0.441	0.441	0.454
2002	0.544	0.605	0.566	0.64	0.661
Real per capita expenditures					.
1988	4,867.5	4,868.3	5,062.9	5,052.7	4,747.1
2002	2,231.4	3,058.6	2,201.6	3,172.2	2,982.7
Gini					.
1988	0.329	0.328	0.332	0.331	0.344
2002	0.371	0.362	0.323	0.362	0.364
Income share of bottom 40%					.
1988	0.189	0.188	0.198	0.198	0.184
2002	0.154	0.161	0.153	0.161	0.162
Income share of upper 5%					.
1988	0.178	0.178	0.184	0.182	0.182
2002	0.202	0.199	0.186	0.198	0.199

Notes: Reported outcomes for mining district is the average outcome of the mining districts and for neighbouring district it is the average outcome of the neighbouring districts. Control group is the average outcome of the districts except neighbouring districts and mining districts.

Table 16-B Outcomes for variables from synthetic control analysis - Tanzania

	Mining districts	Synthetic control group - Mining districts	Neighbouring districts	Synthetic control group - Neighbouring districts	Control group
Employment rate (men)					
1988	0.881	0.878	0.877	0.874	0.866
2002	0.758	0.827	0.81	0.821	0.816
Employment rate (women)					
1988	0.833	0.831	0.864	0.862	0.817
2002	0.612	0.734	0.721	0.768	0.719
Working as a Professional (men)					
1988	0.05	0.05	0.062	0.063	0.073
2002	0.053	0.043	0.044	0.052	0.060
Working as a Professional (women)					
1988	0.022	0.022	0.025	0.025	0.030
2002	0.028	0.028	0.022	0.031	0.035
Working as a services worker (men)					
1988	0.023	0.023	0.03	0.03	0.034
2002	0.024	0.026	0.024	0.032	0.035
Working as a services worker (women)					
1988	0.019	0.02	0.015	0.015	0.021
2002	0.015	0.021	0.015	0.017	0.023
Working as agricultural worker (men)					
1988	0.691	0.688	0.691	0.689	0.636
2002	0.544	0.624	0.621	0.625	0.571
Working as agricultural worker (women)					
1988	0.751	0.749	0.799	0.8	0.728
2002	0.494	0.606	0.614	0.666	0.581
Working as a craftsmen (men)					
1988	0.004	0.004	0.007	0.007	0.007
2002	0.051	0.041	0.036	0.056	0.056
Working as a craftsmen (women)					
1988	0.001	0.001	0.001	0.001	0.002
2002	0.012	0.01	0.009	0.01	0.012
Working in elementary jobs (men)					
1988	0.097	0.097	0.072	0.072	0.102
2002	0.076	0.08	0.075	0.066	0.083
Working in elementary jobs (women)					
1988	0.03	0.03	0.016	0.016	0.026
2002	0.057	0.067	0.054	0.049	0.063
Working as an employer					

(men)					
1988	0.007	0.006	0.005	0.005	0.007
2002	0.001	0.001	0.001	0.001	0.001
Working as an employer (women)					
1988	0.003	0.003	0.001	0.001	0.003
2002	0.001	0	0	0	0.000
Working as own-account worker (men)					
1988	0.733	0.736	0.705	0.704	0.680
2002	0.628	0.729	0.697	0.699	0.679
Working as own-account worker (women)					
1988	0.73	0.725	0.781	0.781	0.732
2002	0.536	0.645	0.656	0.699	0.651
Working as wage worker (men)					
1988	0.092	0.092	0.131	0.131	0.156
2002	0.076	0.07	0.075	0.094	0.112
Working as wage worker (women)					
1988	0.035	0.034	0.038	0.038	0.051
2002	0.023	0.034	0.027	0.036	0.047
Working as unpaid worker (men)					
1988	0.035	0.035	0.022	0.022	0.012
2002	0.048	0.028	0.032	0.022	0.017
Working as unpaid worker (women)					
1988	0.057	0.057	0.036	0.036	0.024
2002	0.05	0.031	0.036	0.022	0.017

Notes: Reported outcomes for mining district is the average outcome of the mining districts and for neighbouring district it is the average outcome of the neighbouring districts. Control group is the average outcome of the districts except neighbouring districts and mining districts.

Table 17: Placebo tests significance results - Tanzania[19]

	Significance - Mining Districts	Significance - Neighbouring Districts
Stunted	0.692	0.374
Severely stunted	0.363	0.055
Wasted	0.750	0.818
Underweight	0.527	0.022
Access to electricity	0.396	0.363
Access to sanitation	0.604	0.484
Access to water	0.538	0.516
Real per capita expenditures	0.066	0.451
Gini	0.824	0.615
Income share of bottom 40%	0.934	0.473
Income share of upper 5%	0.352	0.846
Employment rate (men)	0.352	0.813
Employment rate (women)	0.374	0.538
Working as a Professional (men)	0.604	0.758
Working as a Professional (women)	0.989	0.791
Working as a services worker (men)	0.396	0.615
Working as a services worker (women)	0.538	0.495
Working as agricultural worker (men)	0.560	0.989
Working as agricultural worker (women)	0.571	0.462
Working as a craftsmen (men)	0.264	0.648
Working as a craftsmen (women)	0.764	0.787
Working in elementary jobs (men)	0.462	0.593
Working in elementary jobs (women)	0.857	0.143
Working as an employer (men)	0.989	0.978
Working as an employer (women)	0.385	0.516
Working as own-account worker (men)	0.429	0.890
Working as own-account worker (women)	0.692	0.088
Working as wage worker (men)	0.451	0.571
Working as wage worker (women)	0.846	0.824
Working as unpaid worker (men)	0.275	0.308
Working as unpaid worker (women)	0.231	0.011
Net enrolment rate	0.670	0.077

Notes: Reported are the placebo test results. Districts are ranked according to their Post MSPE/Pre MSPE. The result is considered significant when the treated district's value is among the top 10%, hence smaller than 0.1 in the table above.

[19] For mining districts placebo test sample does not include neighbouring districts and for neighbouring districts it is vice-versa.

Table 18. Differences and differences results for district level analysis – Mali

	(1)	(2)	(3)	
	TreatmentxYear Mining districts	TreatmentxYear Mining&Neighbouring districts	TreatmentxYear Mining districts	TreatmentxYear Neighbouring districts
Stunted	-0.0907	-0.0773*	-0.0974	-0.0730*
Severely stunted	-0.1366**	-0.1072***	-0.1456***	-0.0988***
Wasted	-0.1165**	-0.0806***	-0.1230**	-0.0714***
Underweight	-0.1133	-0.0874**	-0.1206*	-0.0802**
Access to electricity	-0.0144	0.01	-0.013	0.015
Access to sanitation	-0.0046	-0.0122	-0.0058	-0.0136
Real per capita expenditures	-8.80E+03	-1.16E+04	-9.90E+03	-1.20E+04
Gini	0.0478	0.0315*	0.0503	0.0274
Income share of bottom 40%	-0.0452	-0.0386***	-0.0485*	-0.0364**
Income share of upper 5%	0.0113	0.0101	0.0122	0.0096
Employment rate (men)	0.0116	0.0006	0.0114	-0.0018
Employment rate (women)	-0.3114*	-0.2162***	-0.3289*	-0.1917**
Working as a Professional (men)	0.0072	-0.0023	0.0068	-0.0043
Working as a Professional (women)	-0.0029	-0.0005	-0.0029	0
Working as a services worker (men)	0.0198	0.0109	0.0206	0.0088
Working as a services worker (women)	-0.013	-0.0145	-0.0143	-0.0146
Working as agricultural worker (men)	-0.1219	-0.0628	-0.1264	-0.049
Working as agricultural worker (women)	-0.3520*	-0.2613***	-0.3736*	-0.2369**
Working as a craftsmen (men)	0.1016*	0.0519**	0.1052*	0.0403
Working as a craftsmen (women)	0.0609	0.0573	0.066	0.0554
Working in elementary jobs (men)	0.0043	0.0024	0.0044	0.0019
Working in elementary jobs (women)	0.0023	0.0039	0.0027	0.0041
Working as an employer (men)	0.0022	-0.0009	0.002	-0.0016
Working as an employer (women)	-0.0013	0.0001	-0.0013	0.0004
Working as own-account worker (men)	0.0169	0.0554	0.0226	0.0625*
Working as own-account worker (women)	-0.011	0.0029	-0.0105	0.0058
Working as wage worker (men)	0.0366	0.0101	0.037	0.0043

Working as wage worker (women)	0.0041	0.0012	0.0041	0.0005
Working as unpaid worker (men)	-0.0649	-0.0597**	-0.0701	-0.0575*
Working as unpaid worker (women)	-0.2987*	-0.2109***	-0.3159*	-0.1881**
Working in agriculture sector (men)	-0.1197	-0.0636	-0.1243	-0.0504
Working in agriculture sector (women)	-0.3514*	-0.2615***	-0.3731*	-0.2372**
Working in manufacturing sector (men)	0.1017***	0.0502***	0.1052***	0.0382***
Working in manufacturing sector (women)	0.0646	0.0608*	0.0699	0.0588
Working in mining sector (men)	0.0967***	0.0442***	0.0996***	0.0322***
Working in mining sector (women)	0.0228**	0.0154***	0.0241***	0.0136***
Working in construction sector (men)	-0.0116	-0.0004	-0.0114	0.002
Working in construction sector (women)	-0.0002	0	-0.0002	0
Working in services sector (men)	0.036	0.014	0.0368	0.0091
Working in services sector (women)	-0.0163	-0.0129	-0.0174	-0.0119

Notes : In the regressions other control variables are year dummies and treatment dummies along with the constant. * p<0.05, ** p<0.01, *** p<0.001.

Table 19-A. Outcomes for variables from synthetic control analysis – Mali

	Mining districts	Synthetic control group - Mining districts	Neighbouring districts	Synthetic control group - Neighbouring districts	Control group
Stunted					
1987	0.222	0.234	0.199	0.204	0.180
1998	0.396	0.385	0.390	0.384	0.328
2009	0.296	0.319	0.297	0.297	0.352
Severely stunted					
1987	0.156	0.123	0.116	0.119	0.042
1998	0.229	0.258	0.234	0.231	0.209
2009	0.028	0.068	0.035	0.038	0.060
Wasted					
1987	0.166	0.083	0.115	0.120	0.051
1998	0.165	0.248	0.166	0.162	0.192
2009	0.002	0.021	0.002	0.003	0.010
Underweight					
1987	0.209	0.169	0.177	0.177	0.142
1998	0.303	0.332	0.303	0.302	0.278
2009	0.056	0.114	0.065	0.072	0.110
Access to electricity					
1987	0.053	0.038	0.019	0.019	0.017
1998	0.037	0.049	0.027	0.028	0.027
2009	0.127	0.173	0.121	0.129	0.104
Access to sanitation					
1987	0.015	0.012	0.011	0.013	0.010
1998	0.058	0.060	0.051	0.049	0.045
2009	0.064	0.081	0.052	0.091	0.065
Real per capita expenditures					
1987	174,626	165,184	154,242	151,096	137,099
1998	133,798	137,750	121,767	125,681	122,919
2009	142,779	115,028	120,288	117,702	115,153
Gini					
1987	0.319	0.327	0.276	0.277	0.288
1998	0.382	0.371	0.333	0.333	0.348
2009	0.366	0.313	0.300	0.287	0.285
Income share of bottom 40%					
1987	0.218	0.208	0.231	0.229	0.205
1998	0.184	0.195	0.205	0.208	0.185
2009	0.194	0.223	0.219	0.233	0.229
Income share of upper 5%					
1987	0.182	0.173	0.147	0.150	0.149

1998	0.207	0.208	0.175	0.172	0.176
2009	0.201	0.176	0.164	0.161	0.156

Notes: Reported outcomes for mining district is the average outcome of the mining districts and for neighbouring district it is the average outcome of the neighbouring districts. Control group is the average outcome of the districts except neighbouring districts and mining districts.

Table 19-B. Outcomes for variables from synthetic control analysis – Mali

	Mining districts	Synthetic control group - Mining districts	Neighbouring districts	Synthetic control group - Neighbouring districts	Control group
Employment rate (men)					
1987	0.902	0.904	0.904	0.912	0.904
1998	0.888	0.886	0.877	0.871	0.887
2009	0.833	0.826	0.822	0.827	0.824
Employment rate (women)					
1987	0.721	0.666	0.672	0.703	0.491
1998	0.422	0.480	0.515	0.484	0.409
2009	0.325	0.389	0.413	0.504	0.424
Working as a Professional (men)					
1987	0.019	0.019	0.016	0.014	0.016
1998	0.022	0.022	0.016	0.019	0.018
2009	0.041	0.039	0.027	0.027	0.031
Working as a Professional (women)					
1987	0.007	0.004	0.003	0.004	0.004
1998	0.001	0.005	0.003	0.002	0.004
2009	0.009	0.012	0.008	0.007	0.009
Working as a services worker (men)					
1987	0.015	0.021	0.014	0.015	0.018
1998	0.033	0.027	0.026	0.025	0.031
2009	0.066	0.049	0.053	0.047	0.048
Working as a services worker (women)					
1987	0.018	0.021	0.026	0.018	0.021
1998	0.008	0.014	0.017	0.024	0.034
2009	0.013	0.028	0.020	0.017	0.030
Working as skilled agriculture or fishery worker (men)					
1987	0.779	0.772	0.812	0.818	0.801
1998	0.755	0.762	0.790	0.780	0.783
2009	0.524	0.664	0.635	0.673	0.673
Working as skilled agriculture or fishery worker (women)					
1987	0.659	0.585	0.616	0.647	0.377
1998	0.391	0.464	0.487	0.456	0.339
2009	0.246	0.419	0.340	0.463	0.338
Working as a craftsmen (men)					
1987	0.083	0.088	0.050	0.051	0.056
1998	0.036	0.029	0.027	0.025	0.030
2009	0.183	0.051	0.085	0.049	0.051

Working as a craftsmen (women)					
1987	0.013	0.016	0.011	0.010	0.066
1998	0.004	0.005	0.002	0.003	0.014
2009	0.030	0.004	0.017	0.004	0.016
Working in elementary jobs (men)					
1987	0.002	0.005	0.003	0.003	0.006
1998	0.010	0.008	0.008	0.008	0.012
2009	0.009	0.006	0.006	0.015	0.008
Working in elementary jobs (women)					
1987	0.019	0.014	0.013	0.012	0.020
1998	0.000	0.005	0.000	0.002	0.004
2009	0.009	0.006	0.004	0.003	0.006
Working as an employer (men)					
1987	0.001	0.001	0.003	0.002	0.002
1998	0.003	0.004	0.005	0.006	0.005
2009	0.007	0.006	0.005	0.006	0.006
Working as an employer (women)					
1987	0.002	0.001	0.000	0.001	0.001
1998	0.001	0.002	0.001	0.001	0.001
2009	0.002	0.002	0.002	0.002	0.002
Working as own-account worker (men)					
1987	0.491	0.542	0.483	0.513	0.541
1998	0.606	0.550	0.566	0.540	0.572
2009	0.568	0.592	0.599	0.574	0.594
Working as own-account worker (women)					
1987	0.074	0.073	0.063	0.075	0.083
1998	0.150	0.160	0.198	0.187	0.153
2009	0.061	0.142	0.066	0.075	0.080
Working as wage worker (men)					
1987	0.071	0.075	0.041	0.040	0.043
1998	0.053	0.045	0.027	0.029	0.031
2009	0.083	0.026	0.021	0.018	0.018
Working as wage worker (women)					
1987	0.007	0.007	0.005	0.005	0.008
1998	0.003	0.005	0.005	0.004	0.007
2009	0.010	0.003	0.003	0.004	0.006
Working as unpaid worker (men)					
1987	0.332	0.282	0.357	0.339	0.312
1998	0.219	0.275	0.272	0.291	0.271
2009	0.133	0.176	0.171	0.177	0.183
Working as unpaid worker (women)					
1987	0.636	0.512	0.596	0.639	0.397
1998	0.262	0.386	0.305	0.263	0.243
2009	0.237	0.300	0.324	0.479	0.314
Working in agriculture sector (men)					
1987	0.775	0.773	0.813	0.816	0.800

1998	0.754	0.755	0.784	0.781	0.779
2009	0.525	0.658	0.636	0.688	0.674
Working in agriculture sector (women)					
1987	0.658	0.594	0.617	0.647	0.378
1998	0.388	0.452	0.484	0.453	0.339
2009	0.246	0.392	0.340	0.460	0.339
Working in manufacturing sector (men)					
1987	0.041	0.050	0.019	0.019	0.027
1998	0.053	0.031	0.016	0.016	0.021
2009	0.145	0.037	0.057	0.028	0.026
Working in manufacturing sector (women)					
1987	0.010	0.016	0.007	0.006	0.066
1998	0.013	0.008	0.003	0.004	0.023
2009	0.030	0.003	0.016	0.004	0.016
Working in mining sector (men)					
1987	0.015	0.031	0.000	0.001	0.001
1998	0.037	0.020	0.001	0.001	0.001
2009	0.117	0.007	0.034	0.004	0.002
Working in mining sector (women)					
1987	0.004	0.007	0.000	0.000	0.000
1998	0.007	0.004	0.000	0.000	0.000
2009	0.028	0.001	0.014	0.001	0.001
Working in construction sector (men)					
1987	0.016	0.016	0.005	0.007	0.004
1998	0.006	0.007	0.010	0.008	0.006
2009	0.015	0.016	0.017	0.015	0.015
Working in construction sector (women)					
1987	0.000	0.000	0.000	0.000	0.000
1998	0.000	0.000	0.000	0.000	0.000
2009	0.000	0.000	0.000	0.000	0.000
Working in services sector (men)					
1987	0.067	0.077	0.060	0.064	0.069
1998	0.067	0.059	0.063	0.060	0.075
2009	0.159	0.134	0.123	0.108	0.123
Working in services sector (women)					
1987	0.048	0.040	0.045	0.038	0.045
1998	0.015	0.023	0.024	0.031	0.041
2009	0.044	0.061	0.046	0.039	0.058

Notes: Reported outcomes for mining district is the average outcome of the mining districts and for neighbouring district it is the average outcome of the neighbouring districts. Control group is the average outcome of the districts except neighbouring districts and mining districts.

Table 20. Placebo tests significance results - Mali[20]

	Significance - Mining Districts	Significance - Neighbouring Districts
Stunted	0.313	0.922
Severely stunted	0.322	0.435
Wasted	0.452	0.470
Underweight	0.257	0.017
Access to electricity	0.891	0.426
Access to sanitation	0.335	0.087
Real per capita expenditures	0.135	0.665
Gini	0.178	0.057
Income share of bottom 40%	0.278	0.104
Income share of upper 5%	0.239	0.657
Employment rate (men)	0.478	0.843
Employment rate (women)	0.600	0.313
Working as a Professional (men)	0.300	0.996
Working as a Professional (women)	0.835	0.774
Working as a services worker (men)	0.552	0.313
Working as a services worker (women)	0.291	0.765
Working as agricultural worker (men)	0.065	0.339
Working as agricultural worker (women)	0.404	0.265
Working as a craftsmen (men)	0.061	0.057
Working as a craftsmen (women)	0.044	0.087
Working in elementary jobs (men)	0.704	0.013
Working in elementary jobs (women)	0.735	0.678
Working as an employer (men)	0.587	0.822
Working as an employer (women)	0.965	0.719
Working as own-account worker (men)	0.857	0.691
Working as own-account worker (women)	0.083	0.648
Working as wage worker (men)	0.043	0.365
Working as wage worker (women)	0.109	0.596
Working as unpaid worker (men)	0.670	0.861
Working as unpaid worker (women)	0.809	0.226
Working in agriculture sector (men)	0.026	0.091
Working in agriculture sector (women)	0.413	0.270
Working in manufacturing sector (men)	0.130	0.004
Working in manufacturing sector (women)	0.157	0.074
Working in mining sector (men)	0.431	0.099
Working in mining sector (women)	0.250	0.048
Working in construction sector (men)	0.604	0.861
Working in construction sector (women)	0.626	0.840
Working in services sector (men)	0.500	0.348
Working in services sector (women)	0.452	0.643

Notes: Reported are the placebo test results. Districts are ranked according to their Post MSPE/Pre MSPE. The result is considered significant when the treated district's value is among the top 10%, hence smaller than 0.1 in the table above.

Appendix

[20] For mining districts placebo test sample does not include neighbouring districts and for neighbouring districts it is vice-versa.

Table A1: Local Area Effects – Tanzania (Robustness Checks)

	(1) 20 kms	(2) 50 kms	(3) 75 kms	(4) 100 kms	(5) 150 kms
Stunted	0.1165	0.1132*	0.1290***	0.0408	-0.0808
	(0.0712)	(0.0626)	(0.0479)	(0.0589)	(0.0803)
Wasted	0.0197	0.0197	0.0618**	0.0192	0.0051
	(0.0211)	(0.0167)	(0.0256)	(0.0323)	(0.0334)
Underweight	0.1092***	0.0816*	0.0743*	0.0487	-0.0077
	(0.0366)	(0.0435)	(0.0411)	(0.0630)	(0.0762)
Severely stunted	0.0040	-0.0117	0.0807**	0.0346	-0.0422
	(0.0267)	(0.0524)	(0.0379)	(0.0401)	(0.0470)
Cough	0.1021	0.0820	-0.0027	0.0383	-0.0328
	(0.0761)	(0.0603)	(0.0406)	(0.0577)	(0.0711)
Fever	0.0606	0.0368	-0.0057	0.0885	0.0079
	(0.0809)	(0.0608)	(0.0545)	(0.0687)	(0.0593)
Diarrhea	-0.0316	-0.0811*	0.0467	0.0583*	-0.0175
	(0.0278)	(0.0426)	(0.0342)	(0.0336)	(0.0424)
Antenatal care	0.0068	0.0068	-0.0263	0.0048	-0.0237
	(0.0184)	(0.0144)	(0.0190)	(0.0158)	(0.0163)
Access to electricity	-0.0757**	-0.1053**	-0.0985**	-0.0157	-0.0185
	(0.0317)	(0.0420)	(0.0467)	(0.0565)	(0.0284)
Access to water	-0.1002**	-0.1397***	-0.2371***	-0.1297	-0.0978
	(0.0479)	(0.0517)	(0.0769)	(0.1059)	(0.1165)
Access to sanitation	-0.0670**	-0.1116**	-0.1478***	0.0344	0.0909**
	(0.0338)	(0.0465)	(0.0448)	(0.0459)	(0.0431)
Net enrolment rate	-0.2103**	-0.0170	-0.1895***	-0.1770***	-0.1091
	(0.1040)	(0.1385)	(0.0705)	(0.0606)	(0.0760)
Women					
Working in the past 12 months	0.1128*	0.0499	0.0518	0.0692	0.2971***
	(0.0670)	(0.0628)	(0.0545)	(0.0731)	(0.0664)
Working as agricultural worker	0.1580*	0.1360**	0.1343*	0.1248	0.4555***
	(0.0803)	(0.0647)	(0.0732)	(0.0762)	(0.0666)
Working as services worker	-0.0111	-0.0337*	-0.0450***	0.0140	-0.0004
	(0.0152)	(0.0198)	(0.0157)	(0.0175)	(0.0207)
Working as a professional	0.0109	0.0193**	0.0069	-0.0044	0.0090
	(0.0077)	(0.0076)	(0.0081)	(0.0104)	(0.0091)
Working as a manual worker	-0.0478	-0.0633*	-0.0466	-0.0706**	-0.1738***
	(0.0336)	(0.0327)	(0.0338)	(0.0301)	(0.0468)
Men					
Working in the past 12 months	0.1034	0.0272	0.0907	-0.0233	-0.0269
	(0.0727)	(0.0682)	(0.0610)	(0.0625)	(0.0724)
Working as agricultural worker	0.1619	0.0914	0.1890***	0.0987	0.0213
	(0.1229)	(0.0922)	(0.0677)	(0.0613)	(0.0908)
Working as services worker	-0.0260	-0.0082	-0.0252	0.0030	0.0006
	(0.0253)	(0.0283)	(0.0308)	(0.0212)	(0.0337)
Working as a professional	-0.0351***	-0.0159	-0.0184	-0.0241	0.0070
	(0.0126)	(0.0228)	(0.0200)	(0.0191)	(0.0228)
Working as a manual worker	0.0033	-0.0391	-0.0581	-0.1037**	-0.0568
	(0.0595)	(0.0444)	(0.0469)	(0.0496)	(0.0686)

Notes: Reported coefficients are the coefficients of the interaction variable between the treatment dummy (defined as 'being in K kms vicinity of the closest mine' where K takes values of 10, 20, 50, 75, 100 and 150) and the year dummy. Unreported coefficients include coefficients of the treatment dummy, year dummy and the control variables. Standard errors are in parentheses. Sample weights are used to weigh the observations. Error terms are clustered at the sample cluster level. See Table 3 for variable definitions. Samples are limited to households that are in 250 kms vicinity of the closest mine.* p<0.05, ** p<0.01, *** p<0.001.

Table A2: Local Area Effects – Mali (Robustness Checks)

	(2) 20 kms	(3) 50 kms	(4) 75 kms	(5) 100 kms	(6) 150 kms
Stunted	-0.2806***	-0.0570	-0.0451	-0.0284	0.0046
	(0.0640)	(0.0464)	(0.0333)	(0.0265)	(0.0243)
Wasted	-0.0709	-0.0380	-0.0076	0.0100	0.0341
	(0.0586)	(0.0472)	(0.0406)	(0.0296)	(0.0257)
Underweight	-0.1687***	-0.0551	-0.0441	-0.0370	0.0114
	(0.0633)	(0.0525)	(0.0391)	(0.0299)	(0.0252)
Severely stunted	-0.1023**	-0.0379	-0.0041	-0.0120	0.0016
	(0.0487)	(0.0448)	(0.0337)	(0.0259)	(0.0219)
Cough	-0.2105**	-0.0878	-0.0619	-0.0806**	-0.1041***
	(0.1042)	(0.0559)	(0.0418)	(0.0357)	(0.0277)
Fever	-0.2092**	-0.1521***	-0.1045***	-0.0979***	-0.0776***
	(0.1010)	(0.0479)	(0.0376)	(0.0310)	(0.0260)
Diarrhea	-0.1968***	-0.1422**	-0.0924**	-0.0504	-0.0504**
	(0.0656)	(0.0562)	(0.0368)	(0.0320)	(0.0245)
Antenatal care	0.4710***	0.3134***	0.1356*	0.1326**	0.1454***
	(0.0835)	(0.0974)	(0.0822)	(0.0625)	(0.0472)
Access to electricity	0.0204	-0.0714*	-0.0734*	-0.0838***	-0.1196***
	(0.1117)	(0.0428)	(0.0374)	(0.0305)	(0.0306)
Access to water	0.1072	0.0836**	-0.0126	-0.0124	0.0298
	(0.0776)	(0.0375)	(0.0601)	(0.0455)	(0.0395)
Access to sanitation	-0.0171*	-0.0108	-0.0136	-0.0111	-0.0183**
	(0.0092)	(0.0075)	(0.0089)	(0.0080)	(0.0090)
Net enrolment rate	0.1513	-0.0268	-0.0242	-0.0520	-0.0142
	(0.1030)	(0.0725)	(0.0509)	(0.0418)	(0.0374)
<u>Women</u>					
Working in the past 12 months	-0.1880*	-0.1309*	-0.0790	-0.0408	-0.0378
	(0.1078)	(0.0757)	(0.0563)	(0.0427)	(0.0405)
Working as agricultural worker	-0.2112	-0.0254	0.0707	0.1081	0.1310**
	(0.2254)	(0.1401)	(0.0975)	(0.0675)	(0.0564)
Working as services worker	0.1861	-0.0234	-0.0859*	-0.1076***	-0.1385***
	(0.1250)	(0.0705)	(0.0490)	(0.0366)	(0.0335)
Working as a professional	-0.0085	0.0038	0.0030	0.0050	0.0050
	(0.0063)	(0.0041)	(0.0038)	(0.0036)	(0.0039)
Working as a manual worker	-0.2254***	-0.0931**	-0.0682**	-0.0389*	-0.0331**
	(0.0759)	(0.0410)	(0.0265)	(0.0198)	(0.0142)
<u>Men</u>					
Working in the past 12 months	-0.0237	0.0998**	0.0897**	0.1366***	0.0732**
	(0.0711)	(0.0498)	(0.0454)	(0.0368)	(0.0341)
Working as agricultural worker	-0.1287	0.1103	0.1366*	0.1986***	0.0637
	(0.1650)	(0.1167)	(0.0778)	(0.0586)	(0.0515)
Working as services worker	0.1185	0.0652	0.0371	0.0403	0.0909***
	(0.0729)	(0.0474)	(0.0386)	(0.0308)	(0.0298)
Working as a professional	0.0034	0.0213	0.0162	0.0081	0.0083
	(0.0132)	(0.0134)	(0.0152)	(0.0143)	(0.0121)
Working as a manual worker	-0.1223	-0.1115**	-0.1013***	-0.0956***	-0.0709***
	(0.0931)	(0.0469)	(0.0344)	(0.0272)	(0.0237)

Notes: Reported coefficients are the coefficients of the interaction variable between the treatment dummy (defined as 'being in K kms vicinity of the closest mine' where K takes values of 10, 20, 50, 75, 100 and 150) and the year dummy. Unreported coefficients include coefficients of the treatment dummy, year dummy and the control variables. Standard errors are in parentheses. Sample weights are used to weigh the observations. Error terms are clustered at the sample cluster level. See Table 3 for variable definitions. * $p<0.05$, ** $p<0.01$, *** $p<0.001$.

Table A3. Weights given to control districts to generate the synthetic control group for the average mining district - Tanzania

Code	District	Stunted	Severely stunted	Wasted	Underweight	Access to electricity	Access to sanitation	Access to water	Net enrolment rate	Real per capita expenditures	Gini	Income share of bottom 40%	Income share of upper 5%	Employment rate (men)	Employment rate (women)
11	**Kondoa**	0.015	0.010	0.009	0.009	0.009	0.009	0.004	0.008	0.010	0.007	0.009	0.009	0.010	0.011
12	**Mpwapwa**	0.016	0.009	0.009	0.009	0.010	0.009	0.003	0.011	0.010	0.008	0.009	0.009	0.011	0.012
14	**Dodoma rural**	0.020	0.009	0.009	0.009	0.016	0.352	0.011	0.011	0.010	0.008	0.009	0.009	0.013	0.013
15	**Dodoma urban**	0.015	0.009	0.009	0.009	0.008	0.004	0.003	0.010	0.012	0.007	0.009	0.009	0.010	0.009
21	**Monduli**	0.010	0.009	0.010	0.009	0.010	0.007	0.003	0.010	0.012	0.011	0.011	0.012	0.010	0.010
22	**Aru Meru**	0.010	0.009	0.010	0.010	0.011	0.007	0.003	0.009	0.011	0.011	0.011	0.011	0.009	0.010
23	**Arusha**	0.010	0.009	0.010	0.010	0.007	0.004	0.002	0.009	0.013	0.010	0.011	0.012	0.009	0.008
25	**Ngorongoro**	0.009	0.010	0.010	0.009	0.013	0.003	0.007	0.159	0.011	0.018	0.012	0.012	0.010	0.010
31	**Rombo**	0.011	0.011	0.011	0.011	0.011	0.008	0.003	0.008	0.011	0.019	0.013	0.012	0.008	0.010
32	**Mwanga**	0.010	0.010	0.011	0.010	0.011	0.009	0.005	0.008	0.011	0.013	0.012	0.012	0.007	0.009
33	**Same**	0.011	0.011	0.011	0.011	0.009	0.008	0.003	0.008	0.011	0.013	0.012	0.012	0.010	0.011
34	**Moshi rural**	0.011	0.011	0.011	0.011	0.009	0.005	0.003	0.009	0.011	0.015	0.012	0.012	0.006	0.009
35	**Hai**	0.011	0.011	0.011	0.011	0.009	0.007	0.004	0.008	0.011	0.013	0.012	0.012	0.007	0.008
36	**Moshi urban**	0.011	0.012	0.013	0.012	0.006	0.002	0.002	0.010	0.013	0.011	0.011	0.012	0.008	0.008
41	**Lushoto**	0.010	0.009	0.010	0.009	0.009	0.006	0.005	0.009	0.010	0.012	0.012	0.011	0.008	0.010
42	**Korogwe**	0.010	0.009	0.010	0.010	0.008	0.005	0.004	0.009	0.011	0.010	0.011	0.011	0.010	0.010
43	**Muheza**	0.010	0.009	0.010	0.010	0.009	0.008	0.005	0.009	0.011	0.010	0.011	0.011	0.009	0.010
44	**Tanga**	0.010	0.010	0.011	0.010	0.007	0.005	0.003	0.008	0.012	0.010	0.011	0.011	0.008	0.008
45	**Pangani**	0.010	0.009	0.010	0.010	0.009	0.006	0.005	0.008	0.012	0.010	0.011	0.012	0.014	0.010
46	**Handeni**	0.010	0.009	0.010	0.009	0.009	0.009	0.004	0.011	0.011	0.011	0.011	0.011	0.011	0.011
51	**Kilosa**	0.011	0.010	0.010	0.010	0.009	0.006	0.004	0.009	0.011	0.010	0.011	0.011	0.011	0.011
52	**Morogoro rural**	0.010	0.010	0.010	0.010	0.011	0.008	0.005	0.010	0.010	0.012	0.011	0.011	0.013	0.013
53	**Kilombero**	0.011	0.010	0.010	0.010	0.010	0.006	0.004	0.010	0.011	0.011	0.011	0.011	0.008	0.010
54	**Ulanga**	0.010	0.010	0.010	0.010	0.014	0.007	0.007	0.009	0.010	0.014	0.012	0.011	0.010	0.012
55	**Morogoro urban**	0.012	0.011	0.011	0.011	0.006	0.003	0.002	0.008	0.012	0.010	0.011	0.012	0.007	0.008
61	**Bagamoyo**	0.012	0.009	0.009	0.009	0.009	0.007	0.004	0.011	0.012	0.009	0.010	0.010	0.011	0.010
62	**Kibaha**	0.012	0.009	0.009	0.009	0.009	0.006	0.003	0.010	0.012	0.009	0.011	0.011	0.009	0.009
63	**Kisarawe**	0.013	0.009	0.009	0.009	0.011	0.010	0.009	0.011	0.011	0.009	0.010	0.011	0.012	0.012

65	**Rufiji**	0.013	0.009	0.009	0.009	0.011	0.007	0.006	0.010	0.011	0.009	0.011	0.011	0.009	0.011
66	**Mafia**	0.013	0.009	0.009	0.009	0.009	0.007	0.009	0.009	0.011	0.009	0.011	0.011	0.018	0.013
71	**Kinondoni**	0.011	0.011	0.012	0.011	0.007	0.004	0.002	0.009	0.011	0.010	0.011	0.012	0.008	0.008
72	**Ilala**	0.011	0.011	0.013	0.012	0.008	0.005	0.005	0.010	0.011	0.011	0.011	0.012	0.010	0.008
73	**Temeke**	0.011	0.012	0.013	0.012	0.008	0.007	0.004	0.009	0.011	0.011	0.011	0.012	0.008	0.008
81	**Kilwa**	0.010	0.010	0.011	0.010	0.010	0.007	0.006	0.011	0.010	0.011	0.012	0.011	0.012	0.011
82	**Lindi rural**	0.010	0.010	0.010	0.010	0.014	0.011	0.005	0.011	0.010	0.012	0.012	0.011	0.012	0.013
83	**Nachingwea**	0.010	0.010	0.010	0.010	0.009	0.009	0.007	0.010	0.010	0.012	0.012	0.011	0.010	0.013
84	**Liwale**	0.011	0.011	0.011	0.011	0.011	0.011	0.005	0.010	0.010	0.014	0.012	0.011	0.016	0.021
86	**Lindi urban**	0.011	0.011	0.011	0.010	0.007	0.005	0.003	0.009	0.011	0.010	0.011	0.011	0.010	0.011
91	**Mtwara rural**	0.021	0.080	0.041	0.075	0.015	0.010	0.010	0.014	0.010	0.012	0.012	0.012	0.011	0.014
92	**Newala**	0.012	0.012	0.012	0.012	0.013	0.009	0.003	0.009	0.011	0.011	0.011	0.012	0.010	0.013
93	**Masasi**	0.014	0.015	0.016	0.015	0.010	0.006	0.005	0.009	0.011	0.011	0.011	0.011	0.010	0.012
95	**Mtwara urban**	0.011	0.011	0.012	0.011	0.008	0.005	0.003	0.010	0.011	0.011	0.011	0.011	0.008	0.009
101	**Tunduru**	0.012	0.012	0.012	0.012	0.010	0.005	0.007	0.010	0.012	0.010	0.011	0.011	0.010	0.012
102	**Songea rural**	0.013	0.013	0.013	0.013	0.014	0.009	0.005	0.009	0.011	0.010	0.011	0.011	0.011	0.013
103	**Mbinga**	0.011	0.011	0.012	0.012	0.011	0.006	0.006	0.008	0.012	0.010	0.011	0.011	0.010	0.011
104	**Songea urban**	0.011	0.011	0.011	0.011	0.007	0.006	0.003	0.008	0.014	0.009	0.011	0.011	0.007	0.008
111	**Iringa rural**	0.011	0.010	0.010	0.010	0.014	0.011	0.006	0.009	0.011	0.011	0.011	0.011	0.010	0.014
112	**Mufindi**	0.011	0.010	0.010	0.010	0.013	0.006	0.005	0.008	0.011	0.011	0.011	0.011	0.009	0.012
113	**Makete**	0.011	0.010	0.010	0.010	0.021	0.011	0.007	0.008	0.012	0.011	0.011	0.012	0.010	0.015
114	**Njombe**	0.011	0.010	0.010	0.010	0.009	0.007	0.004	0.008	0.011	0.011	0.011	0.011	0.010	0.012
115	**Ludewa**	0.011	0.010	0.010	0.010	0.012	0.007	0.006	0.008	0.011	0.011	0.011	0.011	0.010	0.014
116	**Iringa urban**	0.011	0.010	0.010	0.010	0.013	0.008	0.004	0.008	0.011	0.010	0.011	0.011	0.011	0.011
121	**Chunya**	0.011	0.011	0.012	0.011	0.015	0.009	0.005	0.012	0.011	0.011	0.011	0.011	0.022	0.013
122	**Mbeya rural**	0.011	0.011	0.012	0.011	0.013	0.006	0.004	0.009	0.011	0.011	0.011	0.011	0.011	0.015
123	**Kyela**	0.011	0.011	0.011	0.011	0.014	0.007	0.004	0.009	0.011	0.011	0.011	0.011	0.007	0.010
124	**Rungwe**	0.011	0.011	0.011	0.011	0.009	0.007	0.005	0.008	0.011	0.011	0.011	0.011	0.007	0.010
125	**Ileje**	0.011	0.011	0.012	0.011	0.014	0.008	0.007	0.008	0.011	0.012	0.012	0.011	0.010	0.014
126	**Mbozi**	0.011	0.012	0.012	0.012	0.010	0.008	0.010	0.009	0.011	0.011	0.011	0.011	0.011	0.013
128	**Mbeya urban**	0.011	0.012	0.013	0.012	0.009	0.006	0.003	0.008	0.011	0.011	0.011	0.011	0.009	0.011
131	**Iramba**	0.010	0.009	0.010	0.009	0.013	0.008	0.012	0.011	0.010	0.015	0.012	0.012	0.009	0.011
132	**Singida rural**	0.010	0.009	0.010	0.009	0.015	0.008	0.044	0.010	0.010	0.031	0.012	0.012	0.008	0.011
133	**Manyoni**	0.010	0.009	0.010	0.010	0.013	0.008	0.006	0.010	0.011	0.012	0.012	0.012	0.014	0.013
134	**Singida urban**	0.010	0.010	0.010	0.010	0.007	0.005	0.004	0.010	0.011	0.011	0.011	0.012	0.010	0.010

151	**Mpanda**	0.011	0.011	0.011	0.011	0.011	0.006	0.006	0.010	0.010	0.008	0.010	0.010	0.010	0.010
152	**Sumbawanga rural**	0.010	0.010	0.011	0.010	0.016	0.011	0.007	0.010	0.010	0.009	0.011	0.011	0.010	0.012
153	**Nkasi**	0.011	0.011	0.011	0.010	0.014	0.011	0.006	0.010	0.010	0.008	0.010	0.010	0.010	0.012
154	**Sumbawanga urban**	0.010	0.010	0.011	0.010	0.009	0.007	0.003	0.009	0.010	0.008	0.010	0.010	0.008	0.010
161	**Kibondo**	0.010	0.009	0.010	0.009	0.014	0.009	0.007	0.008	0.010	0.007	0.010	0.010	0.010	0.011
162	**Kasulu**	0.010	0.010	0.010	0.010	0.013	0.007	0.004	0.009	0.010	0.008	0.010	0.010	0.007	0.010
163	**Kigoma rural**	0.010	0.010	0.010	0.010	0.014	0.011	0.006	0.011	0.010	0.008	0.010	0.010	0.009	0.011
164	**Kigoma urban**	0.011	0.010	0.010	0.010	0.008	0.006	0.003	0.010	0.011	0.008	0.010	0.010	0.007	0.008
171	**Bariadi**	0.010	0.010	0.011	0.010	0.014	0.010	0.026	0.010	0.010	0.014	0.012	0.011	0.010	0.011
172	**Maswa**	0.010	0.010	0.011	0.010	0.014	0.010	0.009	0.010	0.010	0.011	0.011	0.011	0.010	0.012
176	**Meatu**	0.011	0.010	0.011	0.010	0.017	0.011	0.307	0.010	0.010	0.014	0.012	0.011	0.010	0.010
177	**Shinyanga urban**	0.011	0.010	0.011	0.010	0.007	0.005	0.003	0.009	0.011	0.010	0.011	0.011	0.008	0.009
181	**Karagwe**	0.011	0.010	0.010	0.010	0.013	0.010	0.014	0.010	0.011	0.012	0.012	0.011	0.010	0.012
182	**Bukoba rural**	0.011	0.010	0.010	0.010	0.017	0.011	0.020	0.010	0.011	0.013	0.012	0.012	0.007	0.011
183	**Muleba**	0.010	0.010	0.010	0.010	0.015	0.008	0.048	0.010	0.011	0.014	0.012	0.011	0.009	0.012
185	**Ngara**	0.011	0.010	0.010	0.010	0.016	0.003	0.092	0.010	0.011	0.014	0.012	0.012	0.015	0.016
186	**Bukoba urban**	0.011	0.011	0.011	0.011	0.007	0.004	0.004	0.009	0.025	0.009	0.011	0.011	0.008	0.009
191	**Ukerewe**	0.011	0.011	0.011	0.011	0.015	0.008	0.019	0.009	0.010	0.011	0.010	0.011	0.009	0.013
192	**Magu**	0.011	0.011	0.011	0.011	0.011	0.008	0.007	0.010	0.011	0.010	0.010	0.011	0.011	0.013
193	**Nyamagana**	0.012	0.012	0.012	0.012	0.007	0.004	0.003	0.009	0.013	0.009	0.011	0.011	0.008	0.009
194	**Kwimba**	0.011	0.011	0.012	0.011	0.014	0.009	0.021	0.010	0.010	0.011	0.010	0.011	0.012	0.013
204	**Bunda**	0.010	0.010	0.011	0.010	0.013	0.009	0.012	0.010	0.011	0.011	0.011	0.011	0.010	0.013
205	**Musoma urban**	0.011	0.012	0.012	0.012	0.006	0.004	0.002	0.008	0.011	0.010	0.011	0.011	0.007	0.009
211	**Babati**	0.010	0.009	0.010	0.010	0.009	0.006	0.003	0.009	0.012	0.010	0.011	0.012	0.009	0.010
212	**Hanang**	0.010	0.010	0.010	0.010	0.014	0.011	0.005	0.012	0.011	0.012	0.012	0.011	0.009	0.009
213	**Mbulu**	0.010	0.010	0.010	0.010	0.014	0.008	0.005	0.011	0.011	0.011	0.012	0.011	0.008	0.010
215	**Kiteto**	0.010	0.009	0.010	0.010	0.013	0.009	0.005	0.012	0.012	0.011	0.011	0.012	0.118	0.013

Notes: Reported are weights given to the control group districts. Weights for the rest of the outcome variables are available upon request.

Table A4. Weights given to control districts to generate the synthetic control group for the average neighbouring district - Tanzania

Code	District	Stunted	Severely stunted	Wasted	Underweight	Access to electricity	Access to sanitation	Access to water	Net enrolment rate	Real per capita expenditures	Gini	Income share of bottom 40%	Income share of upper 5%	Employment rate (men)	Employment rate (women)
11	**Kondoa**	0.013	0.010	0.011	0.010	0.010	0.011	0.006	0.010	0.010	0.008	0.006	0.012	0.011	0.008
12	**Mpwapwa**	0.013	0.010	0.011	0.010	0.011	0.011	0.005	0.013	0.009	0.008	0.006	0.012	0.012	0.010
14	**Dodoma rural**	0.014	0.010	0.011	0.010	0.014	0.011	0.014	0.013	0.010	0.008	0.007	0.012	0.013	0.012
15	**Dodoma urban**	0.013	0.010	0.011	0.010	0.009	0.012	0.005	0.011	0.011	0.008	0.006	0.012	0.010	0.006
21	**Monduli**	0.010	0.010	0.011	0.010	0.010	0.011	0.005	0.012	0.012	0.011	0.011	0.011	0.011	0.007
22	**Aru Meru**	0.010	0.010	0.011	0.010	0.011	0.011	0.005	0.010	0.011	0.011	0.012	0.011	0.009	0.007
23	**Arusha**	0.011	0.010	0.011	0.010	0.008	0.012	0.004	0.010	0.013	0.011	0.010	0.011	0.010	0.005
25	**Ngorongoro**	0.010	0.009	0.011	0.009	0.013	0.011	0.010	0.038	0.011	0.017	0.016	0.011	0.010	0.007
31	**Rombo**	0.011	0.011	0.011	0.011	0.011	0.011	0.004	0.009	0.011	0.017	0.031	0.011	0.009	0.007
32	**Mwanga**	0.011	0.010	0.011	0.010	0.011	0.011	0.006	0.009	0.011	0.013	0.013	0.011	0.007	0.006
33	**Same**	0.011	0.011	0.011	0.011	0.010	0.011	0.005	0.009	0.011	0.013	0.013	0.011	0.010	0.009
34	**Moshi rural**	0.011	0.011	0.011	0.011	0.010	0.011	0.004	0.008	0.011	0.014	0.015	0.011	0.007	0.006
35	**Hai**	0.011	0.011	0.011	0.011	0.010	0.011	0.006	0.009	0.011	0.013	0.014	0.011	0.008	0.005
36	**Moshi urban**	0.011	0.012	0.011	0.012	0.007	0.019	0.003	0.008	0.013	0.011	0.011	0.011	0.009	0.005
41	**Lushoto**	0.010	0.010	0.011	0.010	0.009	0.011	0.006	0.011	0.010	0.012	0.012	0.011	0.009	0.007
42	**Korogwe**	0.010	0.010	0.011	0.010	0.008	0.011	0.006	0.010	0.011	0.010	0.011	0.011	0.011	0.007
43	**Muheza**	0.010	0.010	0.011	0.010	0.009	0.011	0.007	0.010	0.011	0.010	0.011	0.011	0.010	0.007
44	**Tanga**	0.011	0.010	0.011	0.010	0.008	0.011	0.004	0.010	0.011	0.010	0.010	0.011	0.009	0.004
45	**Pangani**	0.010	0.010	0.011	0.010	0.010	0.011	0.006	0.010	0.011	0.011	0.011	0.011	0.015	0.007
46	**Handeni**	0.010	0.010	0.011	0.010	0.010	0.011	0.006	0.012	0.010	0.011	0.012	0.011	0.011	0.008
51	**Kilosa**	0.011	0.010	0.011	0.010	0.009	0.011	0.006	0.010	0.010	0.011	0.010	0.011	0.012	0.008
52	**Morogoro rural**	0.011	0.010	0.011	0.010	0.011	0.011	0.007	0.011	0.010	0.012	0.011	0.011	0.013	0.012
53	**Kilombero**	0.011	0.011	0.011	0.011	0.010	0.011	0.005	0.012	0.010	0.011	0.011	0.011	0.009	0.007

54	**Ulanga**	0.011	0.010	0.011	0.010	0.013	0.011	0.010	0.010	0.009	0.013	0.012	0.011	0.010	0.011
55	**Morogoro urban**	0.012	0.012	0.011	0.011	0.007	0.013	0.003	0.009	0.012	0.010	0.010	0.011	0.008	0.004
61	**Bagamoyo**	0.012	0.010	0.011	0.009	0.009	0.011	0.006	0.012	0.011	0.009	0.009	0.011	0.012	0.007
62	**Kibaha**	0.012	0.010	0.011	0.009	0.010	0.011	0.004	0.011	0.012	0.009	0.009	0.011	0.009	0.005
63	**Kisarawe**	0.012	0.010	0.011	0.009	0.011	0.011	0.011	0.013	0.010	0.009	0.009	0.011	0.012	0.011
65	**Rufiji**	0.012	0.010	0.011	0.009	0.011	0.011	0.008	0.012	0.010	0.010	0.010	0.011	0.010	0.009
66	**Mafia**	0.012	0.010	0.011	0.009	0.010	0.011	0.011	0.011	0.011	0.009	0.009	0.011	0.018	0.012
71	**Kinondoni**	0.011	0.011	0.011	0.011	0.008	0.012	0.004	0.010	0.011	0.011	0.010	0.011	0.009	0.004
72	**Ilala**	0.011	0.012	0.011	0.012	0.008	0.011	0.006	0.011	0.010	0.011	0.011	0.011	0.010	0.005
73	**Temeke**	0.011	0.012	0.011	0.012	0.009	0.011	0.006	0.011	0.011	0.011	0.011	0.011	0.009	0.004
81	**Kilwa**	0.011	0.010	0.011	0.010	0.010	0.011	0.008	0.013	0.010	0.012	0.012	0.011	0.012	0.009
82	**Lindi rural**	0.011	0.010	0.011	0.010	0.013	0.011	0.007	0.013	0.010	0.012	0.012	0.011	0.012	0.014
83	**Nachingwea**	0.011	0.010	0.011	0.010	0.010	0.011	0.009	0.011	0.010	0.012	0.012	0.011	0.011	0.013
84	**Liwale**	0.011	0.011	0.011	0.011	0.011	0.011	0.007	0.012	0.009	0.013	0.014	0.011	0.017	0.199
86	**Lindi urban**	0.011	0.011	0.011	0.011	0.008	0.011	0.005	0.010	0.010	0.010	0.010	0.011	0.011	0.008
91	**Mtwara rural**	0.014	0.052	0.012	0.045	0.014	0.011	0.013	0.017	0.010	0.012	0.012	0.011	0.011	0.016
92	**Newala**	0.012	0.012	0.011	0.012	0.013	0.011	0.004	0.011	0.010	0.012	0.011	0.011	0.010	0.013
93	**Masasi**	0.013	0.016	0.012	0.016	0.010	0.011	0.007	0.011	0.010	0.011	0.011	0.011	0.011	0.011
95	**Mtwara urban**	0.011	0.012	0.011	0.012	0.009	0.011	0.004	0.012	0.010	0.011	0.011	0.011	0.009	0.006
101	**Tunduru**	0.012	0.013	0.011	0.013	0.010	0.011	0.009	0.011	0.011	0.010	0.010	0.011	0.011	0.010
102	**Songea rural**	0.012	0.014	0.011	0.014	0.013	0.011	0.007	0.010	0.010	0.010	0.010	0.011	0.011	0.012
103	**Mbinga**	0.011	0.012	0.011	0.012	0.011	0.011	0.008	0.009	0.011	0.010	0.010	0.011	0.011	0.008
104	**Songea urban**	0.011	0.011	0.011	0.011	0.008	0.011	0.004	0.009	0.013	0.010	0.010	0.011	0.007	0.004
111	**Iringa rural**	0.011	0.010	0.011	0.011	0.013	0.011	0.007	0.010	0.011	0.011	0.011	0.011	0.011	0.015
112	**Mufindi**	0.011	0.010	0.011	0.011	0.013	0.011	0.007	0.009	0.011	0.011	0.011	0.011	0.010	0.009
113	**Makete**	0.011	0.010	0.011	0.011	0.016	0.011	0.009	0.008	0.012	0.011	0.011	0.011	0.010	0.018
114	**Njombe**	0.011	0.010	0.011	0.011	0.010	0.011	0.005	0.010	0.011	0.011	0.011	0.011	0.010	0.010
115	**Ludewa**	0.011	0.010	0.011	0.011	0.012	0.011	0.008	0.010	0.011	0.011	0.011	0.011	0.011	0.017
116	**Iringa urban**	0.011	0.010	0.011	0.010	0.013	0.011	0.006	0.009	0.011	0.010	0.010	0.011	0.011	0.009
121	**Chunya**	0.011	0.012	0.011	0.011	0.014	0.011	0.007	0.014	0.010	0.011	0.011	0.011	0.022	0.013
122	**Mbeya rural**	0.011	0.012	0.011	0.012	0.012	0.011	0.005	0.011	0.010	0.011	0.011	0.011	0.012	0.017
123	**Kyela**	0.011	0.011	0.011	0.011	0.013	0.011	0.006	0.010	0.010	0.011	0.012	0.011	0.008	0.007

124	**Rungwe**	0.011	0.011	0.011	0.011	0.010	0.011	0.007	0.009	0.010	0.011	0.011	0.011	0.008	0.007
125	**Ileje**	0.011	0.012	0.011	0.012	0.013	0.011	0.009	0.010	0.010	0.012	0.013	0.011	0.010	0.016
126	**Mbozi**	0.011	0.012	0.011	0.012	0.011	0.011	0.013	0.010	0.010	0.011	0.012	0.011	0.011	0.014
128	**Mbeya urban**	0.011	0.012	0.011	0.012	0.009	0.011	0.004	0.009	0.010	0.011	0.011	0.011	0.010	0.008
131	**Iramba**	0.010	0.010	0.011	0.010	0.013	0.011	0.015	0.012	0.010	0.014	0.014	0.011	0.009	0.009
132	**Singida rural**	0.010	0.010	0.011	0.010	0.014	0.011	0.042	0.012	0.009	0.022	0.018	0.011	0.009	0.009
133	**Manyoni**	0.010	0.010	0.011	0.010	0.013	0.011	0.008	0.011	0.010	0.012	0.012	0.011	0.014	0.013
134	**Singida urban**	0.011	0.010	0.011	0.010	0.008	0.011	0.005	0.011	0.010	0.011	0.011	0.011	0.011	0.007
151	**Mpanda**	0.011	0.011	0.011	0.011	0.011	0.011	0.008	0.011	0.009	0.009	0.009	0.011	0.011	0.007
152	**Sumbawanga rural**	0.011	0.011	0.011	0.011	0.015	0.011	0.009	0.012	0.010	0.009	0.009	0.011	0.010	0.010
153	**Nkasi**	0.011	0.011	0.011	0.011	0.014	0.011	0.007	0.012	0.009	0.009	0.009	0.011	0.011	0.011
154	**Sumbawanga urban**	0.011	0.010	0.011	0.010	0.010	0.011	0.005	0.011	0.010	0.009	0.009	0.011	0.009	0.006
161	**Kibondo**	0.011	0.010	0.011	0.010	0.013	0.011	0.009	0.009	0.009	0.008	0.008	0.011	0.010	0.009
162	**Kasulu**	0.011	0.010	0.011	0.010	0.013	0.011	0.005	0.010	0.009	0.008	0.009	0.011	0.007	0.007
163	**Kigoma rural**	0.011	0.010	0.011	0.010	0.013	0.011	0.008	0.013	0.009	0.008	0.009	0.011	0.009	0.008
164	**Kigoma urban**	0.011	0.010	0.011	0.011	0.009	0.011	0.005	0.011	0.010	0.008	0.008	0.011	0.008	0.005
171	**Bariadi**	0.011	0.010	0.011	0.010	0.013	0.011	0.028	0.011	0.009	0.014	0.014	0.011	0.011	0.009
172	**Maswa**	0.011	0.010	0.011	0.011	0.013	0.011	0.012	0.011	0.010	0.011	0.011	0.011	0.011	0.010
176	**Meatu**	0.011	0.010	0.011	0.011	0.015	0.011	0.175	0.011	0.009	0.013	0.013	0.011	0.011	0.007
177	**Shinyanga urban**	0.011	0.010	0.011	0.011	0.008	0.011	0.004	0.010	0.011	0.010	0.010	0.011	0.009	0.005
181	**Karagwe**	0.011	0.010	0.011	0.011	0.013	0.011	0.017	0.011	0.011	0.012	0.013	0.011	0.010	0.010
182	**Bukoba rural**	0.011	0.010	0.011	0.011	0.015	0.011	0.023	0.011	0.011	0.013	0.013	0.011	0.008	0.008
183	**Muleba**	0.011	0.010	0.011	0.010	0.014	0.011	0.045	0.012	0.010	0.013	0.014	0.011	0.010	0.009
185	**Ngara**	0.011	0.011	0.011	0.011	0.014	0.011	0.074	0.012	0.010	0.014	0.014	0.011	0.015	0.021
186	**Bukoba urban**	0.011	0.011	0.011	0.011	0.008	0.012	0.005	0.010	0.068	0.010	0.010	0.011	0.009	0.005
191	**Ukerewe**	0.011	0.011	0.011	0.011	0.014	0.011	0.022	0.010	0.009	0.011	0.008	0.011	0.010	0.011
192	**Magu**	0.011	0.011	0.011	0.012	0.012	0.011	0.009	0.011	0.010	0.010	0.009	0.011	0.012	0.014
193	**Nyamagana**	0.012	0.012	0.011	0.012	0.008	0.012	0.005	0.010	0.013	0.010	0.009	0.011	0.008	0.005
194	**Kwimba**	0.011	0.012	0.011	0.012	0.013	0.011	0.024	0.011	0.009	0.011	0.008	0.011	0.013	0.012
204	**Bunda**	0.011	0.010	0.011	0.010	0.013	0.011	0.015	0.011	0.010	0.011	0.011	0.011	0.011	0.013
205	**Musoma urban**	0.011	0.012	0.011	0.012	0.007	0.012	0.004	0.010	0.011	0.010	0.010	0.011	0.007	0.005

211	**Babati**	0.011	0.010	0.011	0.010	0.010	0.011	0.005	0.010	0.012	0.011	0.011	0.011	0.010	0.007
212	**Hanang**	0.011	0.010	0.011	0.010	0.013	0.011	0.007	0.014	0.011	0.012	0.013	0.011	0.010	0.006
213	**Mbulu**	0.011	0.010	0.011	0.010	0.013	0.011	0.007	0.012	0.011	0.011	0.012	0.011	0.009	0.006
215	**Kiteto**	0.010	0.010	0.011	0.010	0.013	0.011	0.007	0.014	0.012	0.011	0.011	0.011	0.065	0.012

Notes: Reported are weights given to the control group districts. Weights for the rest of the outcome variables are available upon request.

Table A5. Weights given to control districts to generate the synthetic control group for the average mining district - Mali

Code	District	Stunted	Severely stunted	Wasted	Underweight	Access to electricity	Access to sanitation	Real per capita expenditures	Gini	Income share of bottom 40%	Income share of upper 5%	Employment rate (men)	Employment rate (women)
1101	**Kayes Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1109	**Ambidedi**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1117	**Aourou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1141	**Koussane**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1173	**Segala**	0.000	0.000	0.000	0.000	0.125	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1201	**Bafoulabe Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1212	**Bamafele, Diallan, and Diakon**	0.186	0.091	0.068	0.066	0.000	0.000	0.127	0.253	0.055	0.125	0.121	0.162
1239	**Goundara**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1245	**Koundian**	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000
1267	**Oualia**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1278	**Oussoubidiagna**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1301	**Diema Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1318	**Bema**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1335	**Diangounte Camar**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1352	**Dioumara**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1369	**Lakamane**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1501	**Kita Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1512	**Djidian**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1523	**Kokofata**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1534	**Sagabari**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1545	**Sebekoro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1556	**Sefeto**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1567	**Sirakoro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1578	**Toukoto**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1591	**Kita**	0.062	0.000	0.000	0.000	0.000	0.000	0.077	0.014	0.000	0.000	0.000	0.000

1601	**Nioro Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1613	**Gavinane**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1637	**Gogui and Korera Kore**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1649	**Sandare**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1661	**Simbi**	0.000	0.000	0.000	0.000	0.000	0.168	0.000	0.000	0.000	0.000	0.000	0.000
1673	**Troungoumbe**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1691	**Nioro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.000	0.000	0.000
1701	**Yelimane Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1723	**Kirane**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1767	**Tambacara and Marena**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2101	**Koulikoro Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2113	**Kenekou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2125	**Koula-Koulikoro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2137	**Niamina**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2149	**Sirakorola**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2191	**Commune Koulikoro, Tienfala, and Tougou**	0.048	0.072	0.036	0.118	0.000	0.016	0.000	0.000	0.046	0.016	0.043	0.000
2201	**Banamba Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2215	**Boron**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2229	**Madina Sacko**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2243	**Sebete and Toukoroba**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2257	**Toubacoura**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2301	**Dioila Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2315	**Banco**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2329	**Beleko**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2343	**Fana**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2371	**Mena**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2401	**Kangaba Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2445	**Narena**	0.082	0.111	0.057	0.130	0.216	0.000	0.061	0.064	0.039	0.165	0.108	0.020
2501	**Kati Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2513	**Baguineda**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2525	**Kalabancoro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2531	**Kourouba**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2537	**Neguela**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2549	**Ouelessebougou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2561	**Sanankoroba**	0.000	0.000	0.000	0.000	0.052	0.000	0.004	0.000	0.000	0.000	0.000	0.011

2573	**Siby**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2591	**Kati**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
2601	**Kolokani Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2623	**Djidieni**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2645	**Massantola**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2667	**Nonssombougou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2701	**Nara Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2715	**Balle**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2729	**Dilly**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2743	**Fallou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2757	**Guire**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2771	**Mourdiah**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3101	**Sikasso Central**	0.267	0.199	0.109	0.085	0.000	0.370	0.000	0.164	0.329	0.320	0.274	0.000
3119	**Danderesso**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3128	**Dogoni andFinkolo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3137	**Kignan**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.032	0.000	0.000	0.000	0.000
3146	**Klela**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3173	**N'Kourala**	0.000	0.089	0.226	0.154	0.185	0.000	0.137	0.000	0.000	0.000	0.069	0.273
3191	**Commune Sikasso**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.034
3201	**Bougouni Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3219	**Faragouaran**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3228	**Garalo**	0.000	0.020	0.000	0.000	0.166	0.000	0.000	0.000	0.000	0.000	0.028	0.000
3237	**Keleya**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3255	**Manankoro**	0.000	0.066	0.000	0.167	0.000	0.124	0.000	0.000	0.007	0.000	0.000	0.000
3291	**Commune Bougouni**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.056	0.005	0.018
3401	**Kolondieba Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3418	**Fakola**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3452	**Kebila and Tonssekela**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3501	**Koutiala Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3515	**Konsseguela**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3529	**Kouniana**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3543	**Molobala**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3557	**M'Pessoba**	0.014	0.000	0.000	0.000	0.000	0.000	0.149	0.093	0.000	0.000	0.000	0.030
3571	**Zangasso**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3591	**Commune Koutiala**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

3634	**Gueleninkoro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3656	**Kangare**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3667	**Siekorole**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3701	**Yorosso Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000
3723	**Boura**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3745	**Kouri and Mahou**	0.239	0.064	0.000	0.111	0.000	0.000	0.153	0.257	0.000	0.000	0.000	0.237
4101	**Segou Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4112	**Sinzana**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4123	**Dioro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4134	**Doura**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4145	**Farako**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4156	**Katiena**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4167	**Markala**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4172	**Sansanding**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4191	**Segou**	0.000	0.000	0.000	0.000	0.000	0.056	0.000	0.000	0.057	0.000	0.000	0.000
4201	**Baroueli Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4223	**Konobougou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4245	**Sanando**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4267	**Tamani**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4301	**Bla Central and Diaramana**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4335	**Falo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4352	**Touna**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4369	**Yangasso**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4401	**Macina Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4418	**Kologotomo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4435	**Monipe**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4452	**Sarro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4469	**Saye**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4501	**Niono Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4545	**Nampala and Pogo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4567	**Sokolo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4601	**San Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4613	**Dieli**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4625	**Kassorola**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4637	**Kimparana**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

4649	**Sourountouna**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4661	**Sy**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4673	**Tene**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4691	**San**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4701	**Tominian Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.172	0.000	0.000	0.000	0.000	0.000
4715	**Fangasso**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4729	**Koula**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4743	**Mafoune**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4757	**Mandiakuy**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4771	**Timissa**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5101	**Mopti Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5110	**Dialloube**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5119	**Fatoma**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5128	**Konna**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5137	**Korientze**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5146	**Ouromodi and Sendegue**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5164	**Soufouroulaye**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5173	**Soye**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5191	**Mopti**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5201	**Bandiagara Central**	0.000	0.000	0.315	0.000	0.000	0.117	0.000	0.000	0.032	0.000	0.001	0.000
5212	**Dourou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5223	**Goundaka**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5234	**Kani-Gogouna**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5245	**Kendie**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.146	0.000	0.000	0.000
5256	**Ningari**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5267	**Ouo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5278	**Sangha**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5301	**Bankass Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.183	0.000	0.128
5313	**Baye**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5325	**Dialassagou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5337	**Kani-Bonzon**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.000	0.000	0.000
5349	**Ouenkoro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5361	**Segue**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5373	**Sokoura**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5401	**Djenne Central**	0.000	0.000	0.000	0.000	0.000	0.115	0.000	0.000	0.000	0.000	0.000	0.000

5429	**Kouakourou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5443	**Mougnan**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5457	**Sofara**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5471	**Konio and Taga**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5501	**Douentza Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5515	**Boni**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5529	**Bore**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5543	**Hombori**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5557	**Mondoro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5571	**N'Gouma**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5601	**Koro Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5613	**Diankabou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5625	**Dinangourou**	0.062	0.143	0.018	0.061	0.000	0.000	0.000	0.000	0.014	0.000	0.140	0.000
5637	**Dioungani**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5649	**Koporo Keniena**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5661	**Madougou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5673	**Toroli**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5701	**Tenenkou Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5715	**Diafarabe and Sossobe**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5729	**Diondiori**	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000
5743	**Dioura**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5771	**Toguerecoumbe**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5799	**Districts under 20,000 population in Tenenkou Province**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5801	**Youwarou Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5815	**Ambiri, Dogo, Gathi Loumo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5857	**Guidio**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5871	**Sah**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6169	**Tinaguelhoy**	0.027	0.066	0.121	0.096	0.197	0.024	0.095	0.000	0.129	0.024	0.055	0.027
6191	**Commune Tombouctou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6201	**Dire Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6223	**Danga and Haibongo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6267	**Sareymou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6301	**Goundam Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6378	**Tonka**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

6399	**Districts under 20,000 population in Goundam Province**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6401	**Gourma-Rharous Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6425	**Gossi**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6499	**Districts under 20,000 population in Gourma Rhoarous Province**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6501	**Niafunke Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6513	**Banikane**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6537	**Lere**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6549	**N'Gorkou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6561	**Sarafere**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6573	**Koumaira and Soumpi**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7101	**Gao Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7123	**Djebock**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7145	**Haoussa Foulane**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7167	**In-Tillit**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7191	**Gao**	0.013	0.055	0.000	0.012	0.000	0.000	0.000	0.015	0.039	0.000	0.016	0.036
7201	**Ansongo Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7223	**Ouatagouna**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7267	**Talataye and Tessit**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7301	**Bourem Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.108	0.000	0.000
7345	**Bamba**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7367	**Temera and Almoustarat**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7401	**Menaka Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7499	**Districts under 20,000 population in Menaka Province**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8199	**Districts under 20,000 population in Kidal Region**	0.000	0.023	0.051	0.000	0.000	0.000	0.000	0.037	0.000	0.000	0.118	0.000
9191	**Commune I of the District of Bamako**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9192	**Commune II of the District of Bamako**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
9193	**Commune III of the District of Bamako**	0.000	0.000	0.000	0.000	0.059	0.004	0.018	0.018	0.000	0.000	0.000	0.000
9194	**Commune IV of the District of Bamako**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.000

9195	**Commune V of the District of Bamako**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9196	**Commune VI of the District of Bamako**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.018

Notes: Reported are weights given to the control group districts. Weights for the rest of the outcome variables are available upon request.

Table A6. Weights given to control districts to generate the synthetic control group for the average neighbouring district - Mali

Code	District	Stunted	Severely stunted	Wasted	Underweight	Access to electricity	Access to sanitation	Real per capita expenditures	Gini	Income share of bottom 40%	Income share of upper 5%	Employment rate (men)	Employment rate (women)
1101	**Kayes Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000
1109	**Ambidedi**	0.020	0.000	0.015	0.027	0.021	0.028	0.056	0.011	0.000	0.019	0.000	0.000
1117	**Aourou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1141	**Koussane**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1173	**Segala**	0.145	0.042	0.041	0.061	0.000	0.014	0.000	0.000	0.051	0.000	0.067	0.000
1201	**Bafoulabe Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1212	**Bamafele, Diallan, and Diakon**	0.027	0.044	0.039	0.038	0.058	0.022	0.017	0.060	0.000	0.054	0.013	0.059

1239	**Goundara**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1245	**Koundian**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1267	**Oualia**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1278	**Oussoubidiagna**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.033	0.000	0.000	0.000
1301	**Diema Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1318	**Bema**	0.000	0.000	0.000	0.000	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1335	**Diangounte Camar**	0.064	0.087	0.016	0.066	0.000	0.114	0.091	0.000	0.018	0.000	0.009	0.020
1352	**Dioumara**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1369	**Lakamane**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1501	**Kita Central**	0.000	0.056	0.080	0.050	0.000	0.000	0.006	0.064	0.002	0.141	0.036	0.139
1512	**Djidian**	0.000	0.012	0.064	0.037	0.000	0.000	0.000	0.000	0.143	0.000	0.075	0.000
1523	**Kokofata**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.024	0.000
1534	**Sagabari**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1545	**Sebekoro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1556	**Sefeto**	0.000	0.000	0.000	0.004	0.071	0.138	0.047	0.112	0.041	0.061	0.000	0.022
1567	**Sirakoro**	0.045	0.081	0.098	0.072	0.069	0.047	0.043	0.008	0.060	0.000	0.044	0.029
1578	**Toukoto**	0.026	0.000	0.000	0.011	0.000	0.000	0.010	0.029	0.019	0.012	0.046	0.000
1591	**Kita**	0.015	0.003	0.043	0.034	0.013	0.002	0.034	0.030	0.000	0.045	0.003	0.048
1601	**Nioro Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.020
1613	**Gavinane**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1637	**Gogui and Korera Kore**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1649	**Sandare**	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1661	**Simbi**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1673	**Troungoumbe**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1691	**Nioro**	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.003	0.000	0.011	0.000
1701	**Yelimane Central**	0.000	0.056	0.025	0.000	0.037	0.032	0.029	0.049	0.021	0.000	0.079	0.000
1723	**Kirane**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1767	**Tambacara and Marena**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2101	**Koulikoro Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2113	**Kenekou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2125	**Koula-Koulikoro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2137	**Niamina**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2149	**Sirakorola**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2191	**Commune Koulikoro, Tienfala, and Tougou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2201	**Banamba Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2215	**Boron**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2229	**Madina Sacko**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

2243	**Sebete and Toukoroba**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2257	**Toubacoura**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2301	**Dioila Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2315	**Banco**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2329	**Beleko**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2343	**Fana**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2371	**Mena**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2401	**Kangaba Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2445	**Narena**	0.000	0.000	0.000	0.004	0.000	0.000	0.001	0.002	0.002	0.005	0.000	0.000
2501	**Kati Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2513	**Baguineda**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2525	**Kalabancoro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2531	**Kourouba**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2537	**Neguela**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2549	**Ouelessebougou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2561	**Sanankoroba**	0.000	0.000	0.000	0.000	0.053	0.000	0.000	0.023	0.000	0.010	0.000	0.036
2573	**Siby**	0.046	0.014	0.000	0.000	0.029	0.000	0.050	0.000	0.000	0.035	0.000	0.071
2591	**Kati**	0.032	0.038	0.027	0.030	0.017	0.027	0.020	0.007	0.033	0.000	0.009	0.000
2601	**Kolokani Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2623	**Djidieni**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2645	**Massantola**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2667	**Nonssombougou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2701	**Nara Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2715	**Balle**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2729	**Dilly**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2743	**Fallou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2757	**Guire**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2771	**Mourdiah**	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3101	**Sikasso Central**	0.056	0.000	0.041	0.046	0.000	0.033	0.024	0.041	0.091	0.048	0.011	0.000
3119	**Danderesso**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.000
3128	**Dogoni andFinkolo**	0.108	0.010	0.000	0.053	0.075	0.000	0.075	0.002	0.000	0.000	0.000	0.000
3137	**Kignan**	0.045	0.153	0.198	0.073	0.000	0.089	0.069	0.118	0.047	0.106	0.177	0.179
3146	**Klela**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3173	**N'Kourala**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3191	**Commune Sikasso**	0.004	0.007	0.000	0.000	0.000	0.022	0.000	0.000	0.000	0.000	0.000	0.015
3201	**Bougouni Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3219	**Faragouaran**	0.000	0.000	0.000	0.000	0.061	0.000	0.000	0.000	0.000	0.000	0.000	0.000

3228	**Garalo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3237	**Keleya**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3255	**Manankoro**	0.131	0.133	0.052	0.103	0.042	0.096	0.117	0.108	0.042	0.067	0.056	0.100
3291	**Commune Bougouni**	0.000	0.010	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.012	0.005	0.000
3401	**Kolondieba Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3418	**Fakola**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3452	**Kebila and Tonssekela**	0.000	0.043	0.077	0.000	0.042	0.000	0.000	0.118	0.105	0.107	0.137	0.039
3501	**Koutiala Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3515	**Konsseguela**	0.008	0.038	0.000	0.064	0.028	0.091	0.005	0.007	0.000	0.061	0.000	0.064
3529	**Kouniana**	0.052	0.059	0.000	0.052	0.000	0.047	0.129	0.047	0.000	0.000	0.000	0.010
3543	**Molobala**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.000
3557	**M'Pessoba**	0.023	0.000	0.002	0.000	0.209	0.036	0.000	0.001	0.129	0.059	0.057	0.000
3571	**Zangasso**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3591	**Commune Koutiala**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3634	**Gueleninkoro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.016
3656	**Kangare**	0.000	0.000	0.035	0.005	0.000	0.010	0.000	0.000	0.000	0.038	0.037	0.035
3667	**Siekorole**	0.055	0.043	0.060	0.069	0.008	0.048	0.033	0.000	0.073	0.020	0.012	0.059
3701	**Yorosso Central**	0.000	0.000	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.000
3723	**Boura**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3745	**Kouri and Mahou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4101	**Segou Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4112	**Sinzana**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4123	**Dioro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4134	**Doura**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4145	**Farako**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4156	**Katiena**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4167	**Markala**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4172	**Sansanding**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4191	**Segou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4201	**Baroueli Central**	0.016	0.000	0.000	0.000	0.000	0.012	0.000	0.012	0.000	0.001	0.000	0.000
4223	**Konobougou**	0.027	0.000	0.000	0.000	0.016	0.000	0.038	0.006	0.000	0.002	0.000	0.001
4245	**Sanando**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4267	**Tamani**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4301	**Bla Central and Diaramana**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4335	**Falo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4352	**Touna**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4369	**Yangasso**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

4401	**Macina Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000
4418	**Kologotomo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4435	**Monipe**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4452	**Sarro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4469	**Saye**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4501	**Niono Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4545	**Nampala and Pogo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4567	**Sokolo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4601	**San Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4613	**Dieli**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4625	**Kassorola**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4637	**Kimparana**	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.053	0.000	0.035	0.000	0.000
4649	**Sourountouna**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.012	0.012
4661	**Sy**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4673	**Tene**	0.000	0.004	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4691	**San**	0.000	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4701	**Tominian Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4715	**Fangasso**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4729	**Koula**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4743	**Mafoune**	0.039	0.007	0.000	0.019	0.000	0.000	0.000	0.000	0.022	0.000	0.004	0.000
4757	**Mandiakuy**	0.001	0.009	0.025	0.030	0.007	0.057	0.046	0.000	0.000	0.000	0.008	0.006
4771	**Timissa**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5101	**Mopti Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.000	0.008	0.000	0.006
5110	**Dialloube**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5119	**Fatoma**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5128	**Konna**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5137	**Korientze**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5146	**Ouromodi and Sendegue**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5164	**Soufouroulaye**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.006	0.000	0.000
5173	**Soye**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5191	**Mopti**	0.005	0.000	0.000	0.000	0.037	0.006	0.000	0.023	0.000	0.000	0.000	0.000
5201	**Bandiagara Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5212	**Dourou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5223	**Goundaka**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5234	**Kani-Gogouna**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5245	**Kendie**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5256	**Ningari**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

5267	**Ouo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5278	**Sangha**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5301	**Bankass Central**	0.000	0.009	0.000	0.020	0.000	0.006	0.000	0.000	0.000	0.008	0.000	0.000
5313	**Baye**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5325	**Dialassagou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5337	**Kani-Bonzon**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5349	**Ouenkoro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5361	**Segue**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5373	**Sokoura**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5401	**Djenne Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5429	**Kouakourou**	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.006
5443	**Mougnan**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5457	**Sofara**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5471	**Konio and Taga**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5501	**Douentza Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5515	**Boni**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5529	**Bore**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5543	**Hombori**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5557	**Mondoro**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5571	**N'Gouma**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5601	**Koro Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5613	**Diankabou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5625	**Dinangourou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5637	**Dioungani**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5649	**Koporo Keniena**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5661	**Madougou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5673	**Toroli**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5701	**Tenenkou Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5715	**Diafarabe and Sossobe**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5729	**Diondiori**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5743	**Dioura**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5771	**Toguerecoumbe**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5799	**Districts under 20,000 population in Tenenkou Province**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5801	**Youwarou Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5815	**Ambiri, Dogo, Gathi Loumo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5857	**Guidio**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

5871	**Sah**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6169	**Tinaguelhoy**	0.000	0.007	0.008	0.001	0.008	0.000	0.007	0.000	0.000	0.004	0.006	0.000
6191	**Commune Tombouctou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6201	**Dire Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6223	**Danga and Haibongo**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6267	**Sareymou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6301	**Goundam Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6378	**Tonka**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6399	**Districts under 20,000 population in Goundam Province**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6401	**Gourma-Rharous Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6425	**Gossi**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6499	**Districts under 20,000 population in Gourma Rhoarous Province**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6501	**Niafunke Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6513	**Banikane**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6537	**Lere**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6549	**N'Gorkou**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6561	**Sarafere**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6573	**Koumaira and Soumpi**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7101	**Gao Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7123	**Djebock**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7145	**Haoussa Foulane**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7167	**In-Tillit**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7191	**Gao**	0.002	0.000	0.000	0.000	0.000	0.023	0.006	0.000	0.045	0.000	0.037	0.000
7201	**Ansongo Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7223	**Ouatagouna**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7267	**Talataye and Tessit**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7301	**Bourem Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7345	**Bamba**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7367	**Temera and Almoustarat**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7401	**Menaka Central**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7499	**Districts under 20,000 population in Menaka Province**	0.000	0.000	0.000	0.001	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8199	**Districts under 20,000 population in Kidal Region**	0.006	0.012	0.026	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000
9191	**Commune I of the District of**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

	Bamako												
9192	**Commune II of the District of Bamako**	0.000	0.001	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.011	0.000
9193	**Commune III of the District of Bamako**	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.007	0.002	0.010	0.000	0.008
9194	**Commune IV of the District of Bamako**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9195	**Commune V of the District of Bamako**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9196	**Commune VI of the District of Bamako**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Notes: Reported are weights given to the control group districts. Weights for the rest of the outcome variables are available upon request.

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