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DISCUSSION PAPER SERIES

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ABSTRACT

Did Program Support for the Poorest Areas Work? Evidence from Rural Vietnam*

We investigate the impact of a large-scale poverty alleviation program targeted at 62 poorest districts in Vietnam, analyzing multiple datasets spanning the past 20 years with a regression discontinuity design with district fixed effects. While we do not find significant program effects on household welfare (as measured by per capita income and poverty) and local economic development (as measured by nighttime light intensity and establishment of new firms), we find that the program facilitates a shift from farm to nonfarm employment and significantly increases the share of nonfarm income for rural households. One possible explanation for the positive effects on nonfarm employment is the improved access to credit that the program provides to participating households. We also find that the program increases household access to electricity, public transfer, educational subsidies for students residing in the program districts, and healthcare utilization, possibly through improving availability of commune healthcare centers.

JEL Classification: C15, D31, I31, O10, O57

Keywords: poverty, targeting, household surveys, Vietnam

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1. Introduction

Reducing poverty is the first goal of the 17 Sustainable Development Goals (SDGs) in the United Nations' 2030 Agenda for Sustainable Development. Yet, due to limited assets and credit constraints, poor households usually face challenges in investing in human capital and productive activities, leading to these households being captured in a poverty trap (Balboni *et al.*, 2022). Consistent with earlier observations that the geographic structure of living standards can be reasonably stable over time (Ravallion and Wondon, 1999; Jalan and Ravallion, 2002), recent studies offer further evidence that persistent poverty is more likely to be concentrated in remote rural regions in many countries (Beegle *et al.*, 2011; Kraay and McKenzie, 2014; Hallegatte *et al.*, 2016; Pritchett and Hani, 2020; McBride *et al.*, 2022). Consequently, a common approach to poverty reduction involves implementing large-scale poverty alleviation programs that target disadvantaged, remote areas (OECD, 2009; World Bank, 2009).[1]

We investigate the effects of a large-scale poverty alleviation program on household welfare in Vietnam. Despite significant progress with poverty reduction, Vietnam still faces substantial disparities in poverty across different ethnic groups and geographic regions (Dang, 2012; Lanjouw *et al.*, 2017; World Bank, 2022). Recognizing the geographical dimension of poverty, since 2009 the Vietnamese government has initiated a major poverty reduction program—the 30A Program—that focuses on the country's 62 poorest districts (Government of Vietnam, 2008).[2] This program is designed to improve income and living standards within the program districts by fostering agricultural productivity and generating nonfarm employment opportunities for the local population. The 30A Program encompasses

[1] Such programs are commonly referred to in the literature as "place-based" policies (which differ from people-based policies aimed at targeting support to households or individuals). Place-based programs could generate positive externalities stemming from network effects, thus stimulating economic development in the areas (Neumark and Simpson, 2015).

[2] There are 63 provinces and around 700 districts in Vietnam.

four primary components: support for production and employment, infrastructure investment, policies concerning personnel in poor districts, and educational assistance for individuals and public personnel. One significant form of support for households is the program provision of microcredit and cash subsidies, which aim to enhance poor households' agricultural productivity and facilitate their transition to non-farm employment.

Overall, our analysis reveals no significant impact of the 30A Program on household income or poverty. We also do not find significant program effects on local economic development, as measured by commune-level nighttime light data, establishment of new firms or migration inflows and outflows. However, we find positive program impact on household transitions from farm self-employment to nonfarm self-employment, leading to increased nonfarm income and decreased farm income. The results are robust to various falsification tests, RDD bandwidths, model specifications, different ways of estimating the standard errors, and program spillover effects.

Notably, we find substantial and positive program effects on formal borrowing and microcredit utilization, which could be a plausible reason for these positive program effects on nonfarm employment. We also find heterogeneous program effects on nonfarm employment across gender, education level, and ethnicity and larger effects in the longer term. Moreover, the program has improved household access to public services, including electricity, public transfers, healthcare utilization, and educational subsidies for students.

We make several new contributions to the literature on evaluating poverty alleviation programs. Despite the existence of numerous poverty alleviation initiatives in low- and middle-income countries, there is still a dearth of empirical research investigating the impact of large-scale poverty reduction programs targeting impoverished areas. Recent studies have focused on other developing countries such as China, India, and countries in Latin America

(Meng *et al.*, 2013; Banerjee *et al.*, 2015; Asher and Novosad, 2020; Bahal, 2020; Millan *et al.*, 2020; Chaurey and Le, 2022), but not much evidence is available for Vietnam.

Vietnam presents an interesting, if not unique, case study. The country has achieved one of the fastest poverty reduction rates in the world. Following its economic reforms in 1986, its (headcount) poverty rate sharply decreased by about one-third from 58% in 1993 to 37% in 1998, and another two-thirds to 14% in 2010 and 12% in 2012 before reaching a remarkable low of 4% in 2020 (World Bank, 2022). While the country has implemented a number of poverty reduction programs based on a strong pro-poor development strategy, there is, however, limited evidence linking these interventions to its successes in poverty reduction. More worrisome, recent evidence suggests that poverty is increasingly segregated in certain provinces and there is rising within-province inequality in Vietnam (Benjamin *et al.*, 2017; Lanjouw *et al.*, 2017; Dang *et al.*, 2023). By offering a multi-component poverty reduction program supporting various aspects of the economy, ranging from employment support, investment in infrastructure, improvement with government personnel policies to education support, the country aims to sustainably reduce its poverty.

Yet, the few existing studies exploring the impact of other large-scale poverty reduction programs in Vietnam offer mixed evidence. Nguyen *et al.* (2015) show positive impact of Program 135 during 2007-2012, which specifically targets ethnic minority communes, on the living standards of households within the program's targeted areas. However, Phan *et al.* (2016) do not find significant effects of national targeted programs for poverty reduction during 2002-2010. At the same time, the 1993-1998 period had no national targeted poverty alleviation programs but still witnessed a significant poverty decline. From 2000 onwards, Vietnam has implemented various poverty alleviation programs, with nearly VND 560 trillion (approximately US$25 billion) invested in all national targeting programs

between 2010 and 2019, including the 30A poverty reduction program (World Bank, 2022). The question of whether poverty alleviation programs truly assist the poor in escaping poverty in Vietnam is thus of importance for policymakers and various aid donors, regarding both accurate evaluation of past programs and effective inputs for future policies.

Evaluating poverty alleviation programs that focus on disadvantaged areas, however, presents a challenge due to the nonrandom placement of such programs (Ravallion, 2007; Meng, 2013). In Vietnam, the 30A Program covers the poorest districts that had a poverty rate exceeding 50% in 2006. This threshold enables us to employ a sharp Regression Discontinuity Design (RDD) method combined with the difference-in-difference method, together with district fixed effects regressions, on rich data from the Vietnam Household Living Standard Surveys spanning the period 2004-2020 to rigorously estimate the program effects on household welfare. Our study thus offers more rigorous evaluation of a large-scale poverty reduction program and covers the longest time period that such a program was in operation to date in Vietnam.[3]

Furthermore, beyond offering new evidence from Vietnam, to our knowledge, very few existing studies on poverty reduction programs for other developing countries analyze a rich set of outcomes as we do. These outcomes are diverse, ranging from employment (including working rates and work sectors), wages (including incomes from different sources), health insurance (including numbers of healthcare visits), education (including school enrolment and receipt and amount of school subsidies), poverty measures to household access to credits and loan sizes, and availability of community public services and

[3] Several other features distinguish our study from these existing studies. While Nguyen *et al.* (2015) employ a difference-in-difference model to analyze household-level outcomes, Phan *et al.* (2016) use a GMM model to analyze province-level outcomes. We employ a more rigorous, combined RDD and difference-in-difference model with district fixed effects and analyze a richer database consisting of household surveys, firm surveys, and nightlight data. The time period that we analyze is also (more than) twice longer and more updated than those in the other studies.

infrastructure. The outcome variables are nationally representative and measured at different levels including individuals, households, communes, and districts, which allow us to gain a deeper understanding of the program effects and the mechanisms through which the program could impact household welfare for the country.

This paper has six sections. Section 2 presents an overview of the 30A Program in Vietnam. Section 3 presents data sets and descriptive analysis. Sections 4 discusses the estimation method, and Section 5 discusses the estimation results, including robustness checks, potential mechanisms, and heterogeneous program impact. Finally, Section 6 concludes.

2. The program for the poorest districts in Vietnam

Vietnam has adopted a "growth with equity" strategy for its socio-economic development, demonstrating a commitment to broad-based development. The Government has implemented various social assistance policies and programs to promote inclusive development and alleviate poverty. From 2006 to 2010, the central government allocated approximately VND 45 trillion (equivalent to approximately USD 2.8 billion at that time) towards poverty alleviation programs, which increased to around VND 75 trillion (approximately USD 3.4 billion at that time) for the 2012-2020 period (MOLISA and UNDP, 2009; Government of Vietnam, 2016). In addition, local provinces and private and international organizations also contribute to poverty alleviation programs, contributing around VND 70 trillion (approximately USD 3.2 billion) to poverty alleviation programs during the 2016-2020 period (Government of Vietnam, 2021). Between 2010 and 2019, nearly VND 560 trillion (approximately US$25 billion) was invested in all national targeting

programs, including the 30A poverty reduction program (World Bank, 2022).[4] Moreover, Vietnam received substantial overseas development assistance amounting to nearly USD 50 billion during 2000- 2021 (World Bank, 2023).

Since 1998, Vietnam has implemented two major programs focused on poverty alleviation. The first is the National Targeted Program for Poverty Reduction (NPPR), aimed at assisting impoverished households and communities in developing their production capabilities, increasing incomes, accessing social services, eliminating hunger, and reducing poverty. The second program, 'Socio-economic Development for the Communes Facing Greatest Hardships in the Ethnic Minority and Mountainous Areas', commonly known as Program 135, provides support to nearly 2,000 communes located in poor and remote areas. These communes are characterized by a significant proportion of ethnic minority households and high poverty rates (CEMA and UNDP, 2009).

Since 2009, Vietnam has implemented another major program dedicated to sustainable and rapid poverty reduction in the country's poorest districts, which is also known as the 30A Program (because it was approved by Resolution No. 30a/2008/NQ-CP (Government of Vietnam, 2008)). The program specifically targeted 62 districts with a poverty rate exceeding 50% in 2006 (using the poverty rate estimated by the Ministry of Labor, Invalids, and Social Affairs (MOLISA)). Figure 1 presents the geographic distribution of poverty rates in those districts during 2006. The 30A Program districts are located in 20 provinces, primarily in the Northern midlands and mountain areas, North Central and Central coastal areas, and Central Highlands. These regions represent the poorest areas in the country, characterized by a high concentration of ethnic minority populations. In the 62 targeted districts, ethnic minorities constitute 90% of the population.

[4] This sum roughly equals 10% of the country's annual GDP during this period.

Notably, Vietnam has combined both the 30A Program and the 135 Program into the NPPR since 2012 (Government of Vietnam, 2012 and 2016). However, the support policies and target groups remain separate between the 30A Program and the 135 Program. From 2009 to 2016, approximately VND 20 trillion (equivalent to approximately USD 1 billion at that time) was allocated and mobilized to support the poor districts under the 30A Program. Between 2016 and 2020, as part of the NPPR, the 30A Program and the 135 Program received a total support of VND 48 trillion (equivalent to approximately USD 2.1 billion at that time) (Government of Vietnam, 2021).

The primary objective of the 30A Program is to increase the average incomes of households in the targeted districts to five to six times higher than the 2008 level by 2020. The government expects to achieve this goal through policies aimed at improving agricultural productivity and generating non-farm employment opportunities (Government of Vietnam, 2008). The 30A Program aims to significantly enhance the living standards of impoverished and ethnic minority communities in the targeted districts, with the goal of reaching the same living standards in other districts in the region by 2020. The program's targets include reducing the poverty rates in the targeted districts to 40% by 2010, aligning these poverty rates with the provincial averages by 2015, and matching them with the regional averages by 2020.

Figure 2 provides a simple causal-chain framework that links the inputs and expected outcomes of the 30A Program. To achieve the objectives of increasing income, reducing poverty and improving public services, the program implements four main components including: (i) production and employment support, (ii) education and vocational training assistance, (iii) provision of cadres for poor districts, and (iv) infrastructure investment in villages, communes, and districts. One of the key support measures for households is the

provision of microcredit and cash subsidy to increase agricultural productivity and facilitate the transition to non-farm employment. Households can receive one-time support for purchasing seeds and fertilizers that encourage them to cultivate high-value crops and livestock. At the village and commune levels, the program invests in basic infrastructure, including electricity, irrigation, markets, roads, schools, and healthcare facilities.

3. Data and descriptive analysis

3.1. Data sources

Our main data source is the Vietnam Household Living Standard Surveys (VHLSSs) spanning over 16 years from 2004 to 2020. The VHLSSs are conducted biennially since 2002 by the General Statistics Office of Vietnam (GSO) in collaboration with the World Bank. The VHLSSs cover around 45,000 households from around 3,000 enumeration areas and provide detailed socio-economic data on households and their members. One key advantage of the VHLSSs is their comprehensive coverage, including all districts in the country with the exception of a few islands. Thus, these surveys cover all the districts that participate in the 30A Program, as well as districts with a poverty rate close to the threshold of 50% in the 2006. The VHLSSs are representative at the provincial level.

We focus on the rural sample, since the rural population accounted for 98% of the total population in the 30A districts in 2008. Moreover, we limit the analysis to households living in districts with a poverty rate greater than 40% in 2006, such that the control group comprises districts with a poverty rate ranging between 40% and 50% in 2006. There are 65 control districts, which is approximately equivalent to the number of treatment districts. Consequently, our final sample includes a total of 127 districts (62 program districts and 65 control districts). We also conduct various robustness checks using different bandwidths, resulting in varying numbers of districts in the analysis.

The VHLSSs provide a wealth of information at both the household and individual levels. Household-level data includes details on assets, production, income, housing conditions, and participation in government programs. Meanwhile, individual-level data encompass demographics, education, and employment information. Additionally, the VHLSSs offer insights into the basic characteristics and infrastructure of the communes and villages where the sampled households reside.

In addition to the VHLSSs, we utilize two other data sources to measure local communities' development. The first source is nighttime light data. Nighttime light intensity has been widely used as a reliable proxy for GDP (e.g., Henderson *et al.*, 2011; Hu and Yao, 2022). One advantage of using nighttime light data is its extensive temporal and spatial coverage, making it less susceptible to sampling errors compared to household surveys. We obtain nighttime light data from the Defense Meteorological Satellite Program (DMSP)/Operational Linescan System (OLS) and the Visible Infrared Imaging Radiometer Suite (VIIRS) on the Suomi National Polar-orbiting Partnership satellite. The annual nighttime light intensity is measured at the district level during the period 2001- 2017. The second data source is firm data at the district level. We compute the number of firms and their density using the annual Vietnam Enterprise Censuses during 2000- 2017, which were conducted by Vietnam's GSO. This data source provides indicators of wage and nonfarm employment opportunities at the district level.

3.2. Descriptive analysis

We next present descriptive statistics on the main outcome variables of households in the treatment (program) districts participating in the 30A Programs (i.e., districts with a poverty rate greater than 50% in 2006) and the control districts (i.e., districts without the 30A Programs but with a poverty rate above 40%).

Figure 3 shows that both the treatment and control districts experienced an upward trend in real per capita income over time. In 2020, the per capita income for the treatment group was 21.9 million VND, while for the control group it was 25.5 million VND. While the ratio of per capita income between the control group and the treatment group decreased from 1.48 in 2004 to 1.16 in 2020, Panel A of Figure 3 does not reveal a significant change in the income gap between the two groups before and after the implementation of the program. Thus, it is not clear from this figure whether the 30A Program has improved the income of the treatment districts.

To ensure comparability of poverty estimates over time, we use a common income poverty line which was set by the government for rural households during the 2016-2020 period. Specifically, we use an income poverty line of VND 8.4 million per year for 2020 and adjust this poverty line for other years using the overall Consumer Price Index (provided by GSO). Panel B of Figure 3 indicates a significant decrease in poverty for both the treatment and control groups. In 2020, the poverty rate for the treatment group was 16.8%, while for the control group it was 10.7%. Notably, the rural poverty rates for the Northern midlands and mountain areas, North Central and Central coastal areas, and Central Highlands in the same year were 11.2%, 3.0%, and 4.8%, respectively. These regional poverty rates were considerably lower than the average poverty rate observed in the 62 poorest districts. Hence, it can be concluded that a key objective of the 30A Program to reduce the poverty rate of the program districts to the average poverty rate of the regions in 2020 was not achieved.

In addition to income and poverty, we use a wide range of outcome variables to measure the effects of various components of the 30A Program according to the conceptual framework presented in Figure 2. Table 1 (upper half) shows that the treatment group exhibits

a higher rate of working individuals, mainly in farm self-employment, compared to the control group. The proportion of individuals with wage jobs is slightly higher in the control group than in the treatment group, but the difference is not statistically significant. Among wage workers, the average monthly wage in the treatment group surpasses that of the control group. Table 1 (bottom half) presents a summary of employment variables for individuals and households' per capita income from different sources in the treatment and control groups. Additionally, Table A.2 (Appendix A) provides summary statistics for other outcome variables, including health insurance and healthcare utilization of individuals, education of children, educational subsidies for students, and access to loans from formal sources.

4. Empirical method

We use the sharp regression discontinuity design (RDD) combined with district fixed effects model for analysis. Districts were selected into the 30A Program if their poverty rate in 2006 was larger than 50%. The running variable utilized in our analysis is the MOLISA poverty rate from 2006, employing a cutoff threshold of 50%. The sharp RDD equation can be written as follows

$$y_{i,j,t} = \beta_0 + \beta_1 Program_j + \beta_2\left(Rate_j - 50\right) + \beta_3\left(Rate_j - 50\right).Program_j + \beta_2 X_{i,j,t} + Year_t + u_j + \varepsilon_{i,j,t,} \quad (1)$$

where $y_{i,j,t}$ denotes an outcome of interest of individual (or household) *i* in district *j* in year *t*. The variable $Program_j$ equals 1 for districts covered in the 30A Program and 0 otherwise, reflecting the fact that the treatment districts had a poverty rate larger than 50% in 2006. The variable $Rate_j$ represents the 2006 poverty rate measured in percentage. To facilitate analysis, we center the poverty rate at 50% since it serves as the cutoff point. The local effects of the 30A Program are estimated by β_1.

Equation (1) includes interaction between $(Rate_j - 50)$ and $Program_j$ to allow the different slopes of the outcome equation of the treatment and control group. The control variables, which are denoted by $X_{i,j,t}$, include both individual-level and household-level variables. We include the district fixed effects u_j and the year fixed effects $Year_t$ to capture the unobservables that commonly affect districts and years as a whole. The household-level (or individual-level) error terms are denoted by $\varepsilon_{i,j,t}$.

We examine the impact of the program on a comprehensive set of outcome variables encompassing both individual-level and household-level variables in different areas ranging from employment, education, health and poverty to household access to credits and services. The lists of these outcome variables are shown in Table 1 and Table A.2 in the Appendix. Regarding control variables, they should not be influenced by the treatment variable under investigation (Heckman and Vytlacil, 2007; Angrist and Pischke, 2008). As the program may impact various outcomes of individuals, we control for a limited set of exogenous variables including age, gender, and ethnicity. Additionally, we conduct robustness checks by including additional control variables such as households' educational levels and demographic characteristics. As will be shown in the empirical result section, the inclusion of additional variables does not alter the results, thereby affirming the robustness of our findings. For interpretation, we primarily rely on the results derived from the parsimonious model specifications.

The RDD model relies on the crucial assumption of continuity in the running variable around the cutoff point. The 30A Program, as per Resolution 30a/2008/NQ-CP by the Government of Vietnam, was approved in December 2008, with the 2006 poverty rate serving as the cutoff variable. Thus, districts were unlikely to manipulate the poverty rate to be selected into the program. Nonetheless, it is useful to conduct a density test on the data

sample. We present the density graph of districts based on the 2006 poverty rate in Figure 4, which shows no discernible spike or jump immediately after the poverty rate of 50%. To further assess the possibility of manipulation, we employ the McCrary manipulation test (McCrary, 2008).[5] The test statistic is equal to 1.52 with a corresponding p-value of 0.13. It does not show statistical evidence of systematic manipulation occurring around the threshold of 50%.

The RDD model relies on the assumption that the cutoff point can serve as a surrogate for a randomized treatment, ensuring similarity among individuals around that point. However, a potential challenge in our study is that the number of treatment districts is relatively low, at 62. Consequently, we perform falsification (placebo) tests to examine the balance between the treatment and control groups around the cutoff. We utilize the VHLSS data collected before the program (specifically, VHLSSs 2004, 2006, and 2008) to estimate equation (1) and examine whether significant differences exist between the treatment and control groups in various outcomes at the cutoff. Our analysis incorporates individual-level and household-level outcomes. The results of these regressions are reported in Tables A.3 to A.5 in the Appendix. Notably, β_1 is statistically significant in multiple regressions, suggesting that households in the treatment districts and those in the control districts differ significantly in these outcome variables even in the absence of the program.

Thus, we employ the combined RDD and difference-in-differences (DD) model to account for the differences observed in the absence of the program. The RDD-DD equation is fully written as follows

$$y_{i,j,t} = \theta_0 + \theta_1 Program_j . Post_t + \theta_2 \left(Rate_j - 50\right) + \theta_3 \left(Rate_j - 50\right) . Program_j$$

[5] We implement this test using the user-written 'rddensity' Stata code (Cattaneo *et al.*, 2018).

$$+\theta_4(Rate_j - 50).Post_t + \theta_5(Rate_j - 50).Program_j.Post_t$$
$$+\theta_6 X_{i,j,t} + Year_t + u_j + v_{i,j,t}, \quad (2)$$

where $Post_t$ is a dummy variable, which equals 1 for years after 2009 and 0 otherwise. The local effect of the 30A Program is estimated by θ_1. We take advantage of the panel data at the district level to control for district fixed effects in equation (2). Thus, the time invariant variables (variables without subscript *t* in equation 2) are already controlled in the time-invariant variables, u_j, and as a result they are dropped from equation (2). Equation (2) can be re-written as follows

$$y_{i,j,t} = \theta_0 + \theta_1 Program_j.Post_t + \theta_4(Rate_j - 50).Post_t$$
$$+\theta_5(Rate_j - 50).Program_j.Post_t + \theta_6 X_{i,j,t} + Year_t + u_j + v_{i,j,t}. \quad (3)$$

The district fixed-effect RDD-DD model specified in equation (3) serves as our final model for estimating the impact of the 30A Program. We use this model specification to estimate the program impact on all the outcome variables.

In terms of standard errors, it is common practice to cluster them at the level of the running variable, which in our case is the district level (Lee and Lemieux, 2010). Additionally, we cluster the standard errors at the sampling unit of VHLSSs, which is the village level. We employ the multiway clustering technique introduced by Cameron *et al.* (2011), allowing us to cluster standard errors simultaneously at both the district and year-village level. However, it is worth noting that recent research by Kolesár and Rothe (2018) indicates that confidence intervals based on clustering standard errors according to the running variable may have inadequate coverage properties. We conduct additional analysis by employing alternative clustering approaches for robustness checks; our estimates remain robust across various clustering methods.

5. Estimation results

5.1. Program impact

We start first with examining the local impact of the 30A Program by plotting individual-level outcomes based on the 2006 poverty rate of the districts where people reside. In Figures 5 and 6, we present RDD graphs both before and after the program's initiation in 2009. The graphs demonstrate that the disparity in self-employed farm work between the treatment and control groups was reduced after the program. Moreover, the treatment group experienced an increasing trend in self-employed farm work as well as wage jobs, compared to the control group. In Figure 6, we find that the treatment group received higher education subsidies than the control group, particularly after the program's implementation.

Using equation (3) we further estimate the effects of the 30A Program on various outcomes for households and individuals. The direct outcomes of the 30A Program are employment. We start with the program impact on employment of individuals aged 15 and older in Table 2.[6] Table 2 shows that there are no significant program effects on the likelihood of working (column 1). However, the program has significant effects on individuals' probabilities of being self-employed in farm and nonfarm. Specifically, the program decreases the probability of self-employment in farm work by 0.11, while increasing the probability of self-employment in nonfarm work by 0.054 (columns 2 and 3). This suggests that the program encourages individuals to transition from self-employed farm work to self-employed nonfarm work.

The program impact on the likelihood of having a wage job is positive, although it is not statistically significant (column 4). Similarly, the program effects on monthly wages of

[6] According to Vietnam's Labor Code, the minimum age for working is 15. We also try to use the sample of individuals aged 15-64 (Table A.6 in the Appendix), and the program impact estimates are quite similar to those derived from the sample of individuals aged 15 and older.

wage workers are positive but not statistically significant at the conventional level (column 5). However, when we expand the analysis to include all individuals (including those without a wage job, who are considered to have zero wages), we observe positive program effects on monthly wages that are marginally statistically significant (column 6).

In Table 3, we analyze the program impact on access to public services, including health insurance and healthcare utilization, and education achievement and subsidies (for children age 6-17). The results indicate that the program does not have a significant effect on health insurance (column 1), possibly because a high proportion of individuals in the program districts already had health insurance prior to the program. In 2008, 90% of people in the program districts had health insurance, and this figure increased to 98% in 2020 (Appendix A, Table A.2).

Healthcare utilization is measured by the number of annual visits for both inpatient and outpatient treatments. Interestingly, the program has positive effects on the annual number of healthcare visits (column 2), which appears primarily driven by the increased utilization of outpatient healthcare services (column 3) rather than inpatient healthcare (column 4). This finding is reasonable, as individuals with serious health conditions typically require inpatient healthcare services regardless of their participation in the program.

Regarding education, Table 3 shows no significant program effects on the number of completed schooling years or school enrollment among children age 6-17 (columns 5 and 6). We also estimate program impact on school enrollment separately for primary-school-age children and secondary-school-age children, but we do not find any significant program effects (not shown). However, we observe a strong and statistically significant program effect on the educational subsidy received by students (column 7). This suggests that despite the

increased student subsidies, the program is not successful in attracting more children to attend school.

Figure 7 illustrates the 30A Program's local impact on per capita income and per capita public transfers, both before and after its initiation in 2009. The disparity in per capita nonfarm income between the treatment and control groups at the local poverty rate of 50% decreased after the program. Conversely, the treatment group initially had a higher per capita farm income than the control group, but this trend reversed after the program. The treatment groups, however, receive more public cash transfer after the program.

Providing more rigorous analysis using the RDD-DD model, Table 4 shows that the program does not have statistically significant effects on per capita income or wage income (columns 1 and 2). However, we do observe significant program effects on per capita income from different sources. Specifically, the program leads to a decrease in farm income (column 4) but an increase in self-employed nonfarm income (column 3). This finding aligns with our discussion above that the program motivates individuals to transition from self-employed farm work to self-employed nonfarm work. It is also consistent with similar positive effects of large-scale program interventions that move workers out of agriculture to non-agricultural work documented for India (Asher and Novosad, 2020; Blakeslee *et al.*, 2022; Chaurey and Le, 2022).

Table 4 also shows that the program has positive and statistically significant effects on public cash transfers and income from other sources (columns 6 and 7). According to the Government of Vietnam (2021), the average annual agricultural subsidy provided to households is approximately VND 300 million per commune (equivalent to around USD 15 thousand). This program component may be a significant factor contributing to the positive program impact on public cash transfers and other incomes. Regarding wage income and

private transfers received by households during the past 12 months, we find a positive but not statistically significant program effect (column 5).

In Table 5, we examine the program impact on per capita income of poor households and lower-income households, which are in the bottom 20% and 40% of the income distribution. As discussed earlier, poverty is defined using the income poverty line in 2020. This provides evidence on whether the program can successfully achieve its objectives of increasing income and reducing poverty. Table 5 shows that the program does not have statistically significant effects on per capita income of poor and lower-income households.

In Appendix Table A.7, we further estimate the program effects on the shares of income from different sources in the total household income. Consistent with the findings in Table 4, the program has negative effects on the share of farm income and positive effects on the share of nonfarm income, as well as the share of private and public transfers and income from other sources. It is important to highlight that for poor households, farm income continues to constitute a significant portion of their total income compared to self-employed nonfarm income. Despite the program's positive impact on nonfarm income and other income sources, these increases do not fully compensate for the decrease in farm income. As a result, the program does not yield any significant effects on the per capita income of households.

One challenge in evaluating the impact of a poverty reduction program in Vietnam is the potential contamination from other targeted programs that can affect both the treatment and control groups. As discussed earlier in Section 2, the National Targeted Programme on Sustainable Poverty Reduction comprises the 30A Program and the 135 Program. It is possible that we may underestimate the 30A Program effects because some households in the control group might also have received support from the 135 Program. To examine this issue, we exclude households residing in the 135 communes from the control group and re-

estimate the 30A Program impact. The results are presented in Tables A.8 to A.11 in Appendix A. Overall, the estimated program effects on both individual-level and household-level outcomes remain similar to those reported in Tables 2 to 4. These findings suggest that our estimates are not biased by the 135 Program effects.

5.2. Further robustness analysis

We conduct a number of additional robustness checks that support our estimation results. First, we perform several falsification (placebo) tests. In the first test, we examine the placebo program effects using the pre-program data, specifically the VHLSSs from 2004 to 2008. We consider 2008 as the post-program year and 2004 and 2006 as the pre-program years. We apply equation (3) to estimate the placebo effect on both individual-level and household-level outcomes in 2008. The results, presented in Tables A.12 and A.13 in the Appendix, indicate that the variable 'Program*Year 2008' is not statistically significant in nearly all regressions. It is only statistically significant at the 10% level in the regressions of 'wage job'.[7]

In the second test, we exclude the 30A Program districts and allocate the control districts to a placebo treatment using cutoff points derived from the 2006 MOLISA poverty rate. Subsequently, we employ the same model specifications to estimate the impact of these placebo cutoffs on individual and household outcomes. Tables A.14 and A.15 report the effects on the individual-level outcomes at placebo cutoff points at 30% and 40%. It shows that there is only a marginally statistically significant effect of the cutoff point at 40% on healthcare utilization at the 10% level. We also conduct similar analysis for the household-

[7] We also estimate the placebo effects when using 2006 and 2008 as the post-program years and 2004 as the pre-program year. The results are very similar, demonstrating that the placebo program has no statistically significant effects on almost all the outcome variables.

level outcomes and do not find any statistically significant effects of the two placebo cutoff points.

In the third test, we assess the program impact on exogenous variables including individuals' age, gender, ethnicity, and education completion. For the education variables, we restrict the sample to individuals age 30 or above to ensure that their education was not affected by the program. We use the same model as described in equation (3), utilizing both the pre-program and post-program data from the VHLSSs from 2004 to 2020. We do not find significant impact of the program on these exogenous variables, suggesting that there is good balance in the exogenous variables around the cutoff point (Appendix A, Table 16).

Second, we examine the sensitivity of the estimated program effects when using different bandwidths. Initially, we expand the bandwidth to include districts with the 2006 poverty rate above 35%. Subsequently, we use narrower bandwidths by limiting the sample to households in districts where the poverty rate ranged from 40% to 60% in 2006. There are no available estimators for combining nonparametric RDD with fixed effects. However, we can apply nonparametric RDD to the post-treatment data to find the optimal bandwidth. We select optimal bandwidths using data-driven mean-squared errors (Calonico *et al.*, 2017), which yields an average optimal bandwidth of approximately 7%.[8] Using this bandwidth, we estimate the program impact and present the results in Tables A.17 to A.19 in the Appendix. Due to space constraints, we only provide robustness analysis for several key variables of individual and household outcomes. The estimated program effects on individual outcomes, using different bandwidths, closely align with the main results presented in Tables 2 and 3. As an another check, Table A.20 in the Appendix illustrates the 'donut' RDD, wherein we exclude districts that are very close to the cutoff point (2006 poverty rate of 50%) to assess

[8] To find these optimal bandwidths, we use the 'rdrobust' command developed by Calonico *et al.* (2017).

whether the effects are sensitive to the sample around this point (Cattaneo *et al.*, 2019). The results remain largely consistent with those displayed in Tables 2 and 3.

Third, we explore the sensitivity of the results to different model specifications. In Appendix A, Table A.21, we present the RDD-DD regression (as specified in equation 2) without accounting for district fixed effects. Table A.22 further shows the district fixed-effect regression without any covariates, and Table A.23 shows the district fixed-effect regression with additional covariates. The additional control variables include dummy variables for education levels, household size, the proportion of children in households, and the proportion of older members in households. Remarkably, all the estimates exhibit minimal changes when compared to the main specification model in Tables 2 and 3.

Fourth, we incorporate region-specific time trends in the model to account for potential variations in outcome trends across different regions. The results, presented in Appendix Table A.24, closely resemble the main findings. It is important to note that we use region-specific time trends for robustness checks rather than using them as the main specifications, since controlling for these time trends might absorb the program effects and bias these effects (Wolfers, 2006; Baum-Snow and Lutz, 2011).

Fifth, we assess the robustness of the results to different ways of clustering standard errors. As noted, according to Kolesár and Rothe (2018), confidence intervals based on clustering standard errors by the running variable may exhibit poor coverage properties. In Table A.25 and A.26 in the Appendix, we employ one-way clustering at the village level and the traditional Eicker-Huber-White (EHW) heteroskedasticity-robust standard error. Overall, the results closely align with the main interpretation results (reported in Tables 2 and 3).

Sixth, we investigate whether there are spillover program effects on nearby districts. Spillover effects can contaminate the control group and introduce bias into the impact

estimate. To estimate the spillover effects, we exclude the program district and consider control districts located in provinces with program districts as the 'treatment' districts. Appendix Table A.27 shows that the program effects are not statistically significant across all outcomes, indicating absence of spillover effects on nearby districts' outcomes.

Seventh, regarding standard errors, multiple testing issues can exist when analyzing multiple dependent variables. Traditional estimation provides p-values for each estimate, representing the rate of false positives among all the results. Alternatively, we calculate q-values, which represent the false positive rate among significant results. Figures A.1 and A.2 in the Appendix display graphs of the p-values and q-values (estimated using the Simes method (1986)) for the program effects on all the outcomes. These figures reveal that the estimated effects on self-employed non-farm work, healthcare utilization, education subsidy, nonfarm income, and public cash transfers maintain significance at the conventional levels.

Finally, we also conduct similar robustness analyses for household-level outcomes. The corresponding results are presented in Appendix Tables A.28 to A.38, which demonstrate that the estimated program effects on household-level outcomes remain similar to those reported in Table 4.

5.3. Potential mechanisms

We next explore several mechanisms through which the 30A Program could increase nonfarm employment and healthcare utilization. Poor households often face liquidity constraints that hinder their investment in nonfarm businesses. A key policy of the 30A Program is to provide microcredit and support in accessing loans from formal sources. The role of credit in promoting nonfarm employment and household production has been well-documented in studies such as van Rooyen *et al.* (2012), Augsburg *et al.* (2015), Ksoll *et al.*

(2016), and Tria *et al.* (2022). In Vietnam, Nguyen (2008) and Lensink and Pham (2012) find evidence of microcredit's poverty-reducing effects.

Table 6 presents our estimation of the program impact on households' loans from various sources. The results demonstrate program positive effects on borrowing from formal sources and microcredit. Specifically, the program increases the probability of obtaining formal loans and microcredit by 0.13 and 0.09, respectively. However, the program effects on the loan size are not statistically significant. When considering the sample of both borrowers and non-borrowers, we find positive program effects on loan size.[9] Our findings align with Thanh *et al.* (2019), who find positive impact of microcredit on self-employed nonfarm employment in Vietnam.

Table 7 estimates the impact of the 30A Program on infrastructure using commune-level data and the same model as in equation (3). The VHLSSs provide information on whether communes have basic infrastructure, and we select outcome variables that correspond to the list of infrastructures provided by the 30A Program in the program areas. Our findings indicate marginally statistically significant but positive program effects on the availability of all-weather roads in the villages (column 1). Specifically, an all-weather road is defined as one that remains passable throughout the year. These positive effects on rural roads could stimulate local market development (Mu and van de Walle, 2011), which might in turns serve as a mechanism through which the project promotes nonfarm employment and income. Indeed, studies on other developing countries such as Bangladesh and India also find that rural roads help local people to find more nonfarm self-employment opportunities (Khandker *et al.*, 2009; Asher and Novosad, 2020).

[9] We address zero loan values by adding 1 before taking natural logarithm of the loan values.

We do not observe any significant program effects on the availability of periodic markets and irrigation systems in the villages (columns 2 and 4). However, we find positive program effects on the availability of electricity grids (column 3). With respect to schools, the program does not yield statistically significant effects on kindergartens and primary schools (columns 5 and 6), possibly because most communes already have these facilities in place, but it has positive and statistically significant effects on the availability of secondary schools in communes (column 7). Regarding health facilities, we find positive program effects on availability of commune healthcare centers (column 8). This finding could explain why the program has positive program effects on healthcare utilization, although its effects on health insurance are not significant.

We also examine the program impact on migration inflows and outflows, as measured by the percentages of in-migrants and out-migrants over the commune population over the past 12 months. However, the results show that the program has no significant effects on the migration flows (columns 9 and 10).

In Table 8, we investigate whether the 30A Program effectively encourages the establishment of firms. To examine this, we use data from the annual Vietnam Enterprise Censuses from 2000 to 2017 and compute the density of firms of different sizes (micro, small, medium, and large) at the district level. Table 8, however, shows that the program does not yield any significant effects on firm density (columns 1 to 5). The concentration of firms is primarily influenced by other factors, such as local infrastructure and the human capital of the population. The lack of a significant effect on firm density partially explains why the program does not have notable impact on local job opportunities and wages.

Finally, we evaluate the program impact on nighttime light intensity, which serves as a proxy for local economic development, but we find no statistically significant program

effects (column 6). This finding aligns with our previous results, which show that there are no program effects on household income and poverty levels.

5.4. Heterogenous impact

Due to variations in individual characteristics, the impact of the 30A Program may differ among people. To investigate this issue, we interact the program treatment variable (*Program*Post-program period*) and several individual characteristics. Table 9 focuses on the heterogeneity in the program impact on nonfarm employment. The table shows that the program has more pronounced effects on males (column 1) and individuals with higher levels of education (column 3) compared to females and those with lower education levels. Moreover, the program impact appears to be lower for ethnic minorities compared to the Kinh group (column 2). We observe a positive and statistically significant interaction between *Program*Post-program period* and the dummy variable indicating VHLSSs conducted since 2006 (column 4). This suggests that the program impact on nonfarm employment tends to be higher in the longer term. Lastly, our analysis does not identify any heterogeneous program impact across communes with different levels of infrastructure (columns 5 to 8).

6. Conclusions

Poverty in Vietnam exhibits a strong correlation with geographic areas, with a higher concentration of poverty observed in mountainous and midland regions where ethnic minorities are more prevalent. In an effort to alleviate poverty, the government of Vietnam has initiated the 30A Program since 2009, targeting the poorest districts with a poverty rate exceeding 50% in 2006. This cutoff point allows us to use a sharp Regression Discontinuity

Design method, combined with a difference-in-difference model with district fixed effects, to estimate the impact of the program on households' welfare.

Overall, we do not find significant effects of the 30A Program on per capita income and poverty levels among households. However, we observe a shift from farm self-employment to nonfarm self-employment as a result of the program, leading to an increase in nonfarm income and a decrease in farm income. We find heterogeneous program impact on nonfarm employment across gender, education level, and ethnicity. We also find larger program effects on nonfarm employment in the longer term compared to the shorter term. Additionally, the program enhances access to microcredit and public services, including public transfers, healthcare utilization, and educational subsidies for students.

Our study offers several policy implications. Firstly, the finding that the 30A Program promotes nonfarm employment and improves access to credit and public services implies that a multifaceted poverty alleviation approach remains important for the poor areas. Secondly, in the poorest districts, nonfarm self-employment is relatively limited compared to farm and wage incomes. However, agricultural productivity tends to be low in these areas. Therefore, increasing nonfarm employment and wage job opportunities becomes vital for income growth and poverty reduction in the poor areas. Thirdly, our analysis also demonstrates heterogeneous impacts of the program on nonfarm employment across different population subgroups, including gender, ethnicity and education levels. Hence, poverty reduction programs and measures should be tailored to specific areas and population subgroups.

Finally, evaluating the impact of poverty reduction programs in Vietnam faces challenges due to potential contamination from other targeted initiatives. Both the central and local governments can allocate investments to the other poor districts that are not included in

the 30A Program. As a result, our analysis may underestimate the impact of the 30A Program. Without access to data on public finance and other investments received by districts, we are unable to assess this estimation bias. But it is a promising topic for future research.

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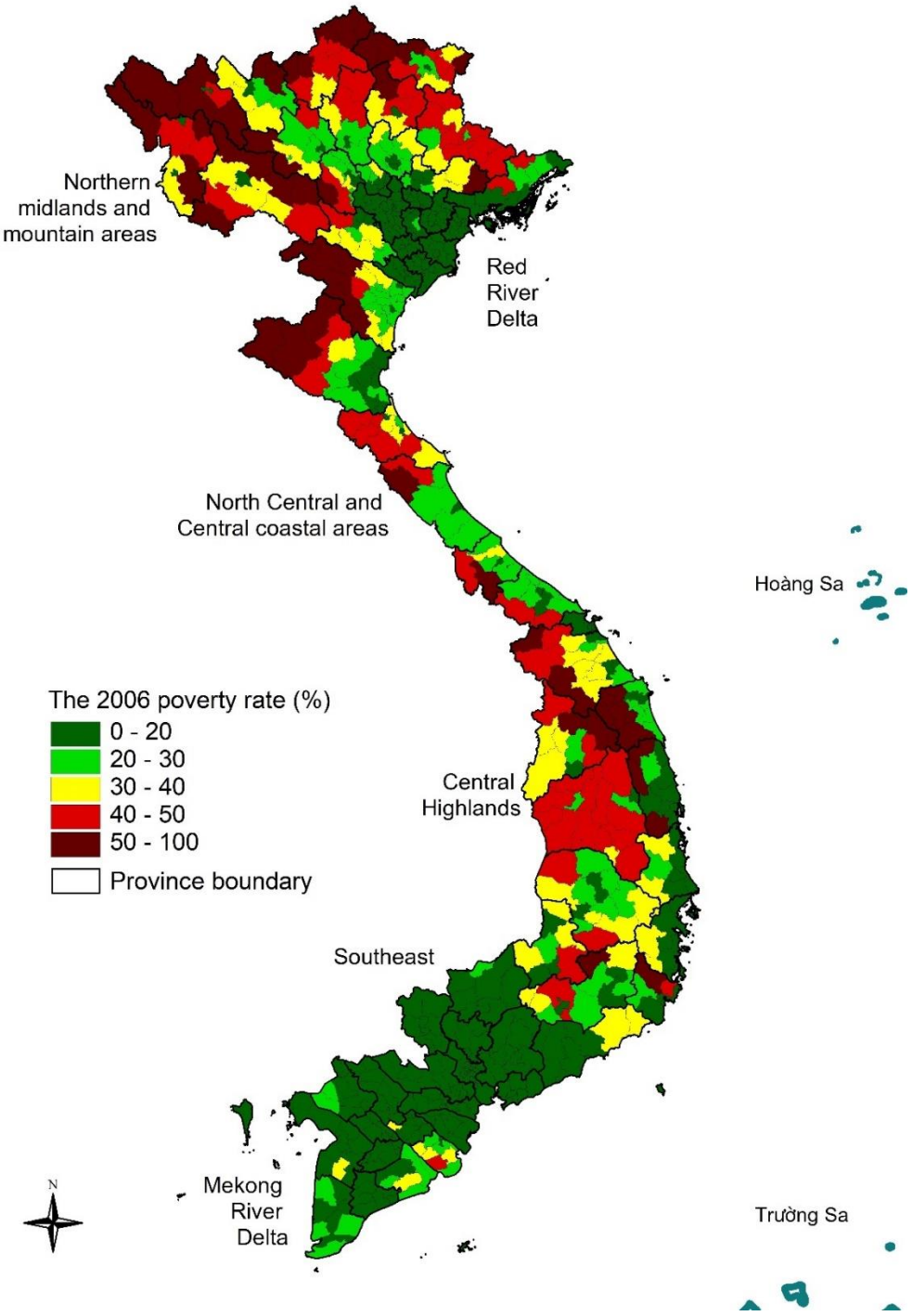
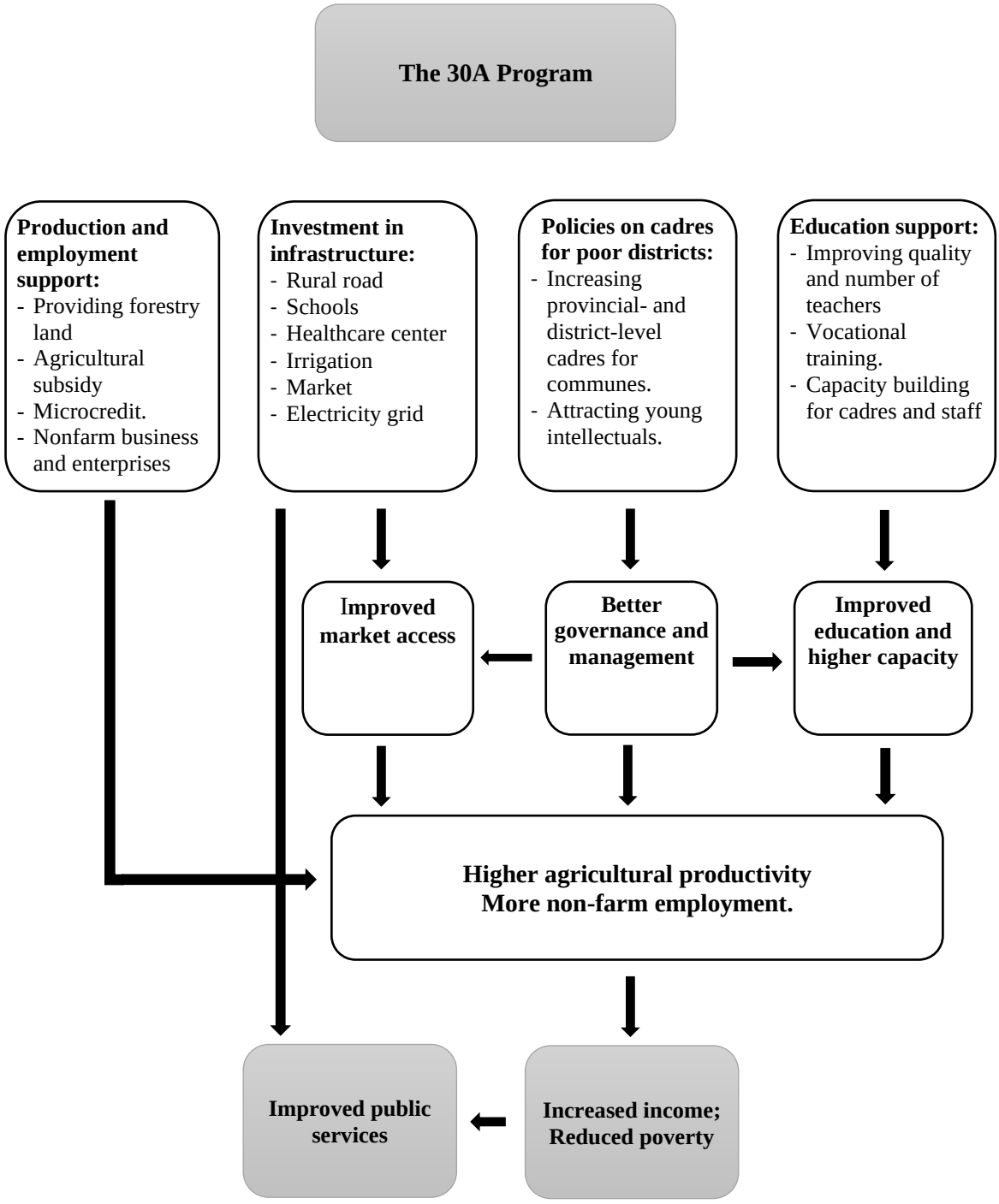
Figure 1. The geographic distribution of the treatment group



Note: The treatment group consists of the 62 poorest districts with the 2006 poverty rate above 50%. In this figure these districts are presented in the brown color.
Source: Authors' preparation using the 2006 poverty rate of districts.

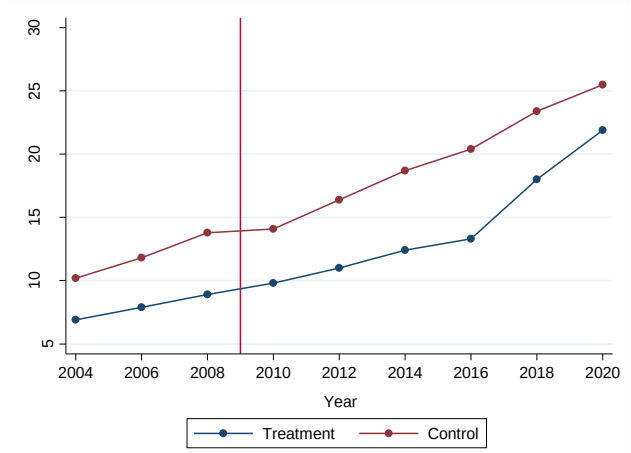
Figure 2. The 30A Program and the causal chain hypothesis



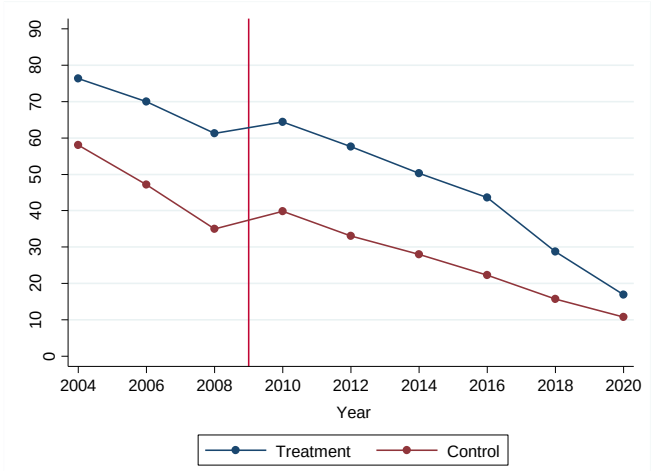
Source: authors' preparation

Figure 3. The poverty rate and per capita income of the districts with the 2006 poverty rate above 40%

A. Per capita income of households in the treatment and control districts



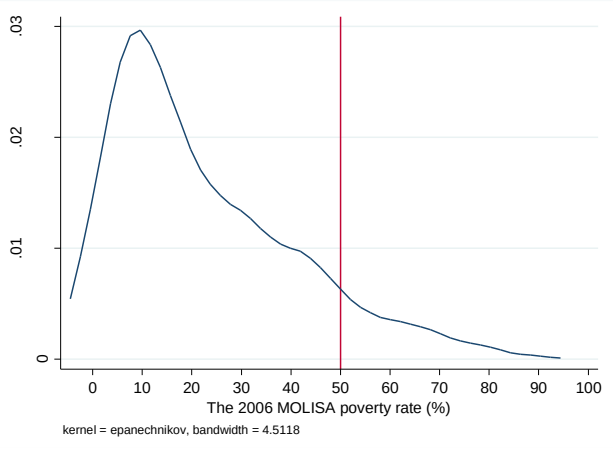
B. The poverty rate of households in the treatment and control districts (in percent)



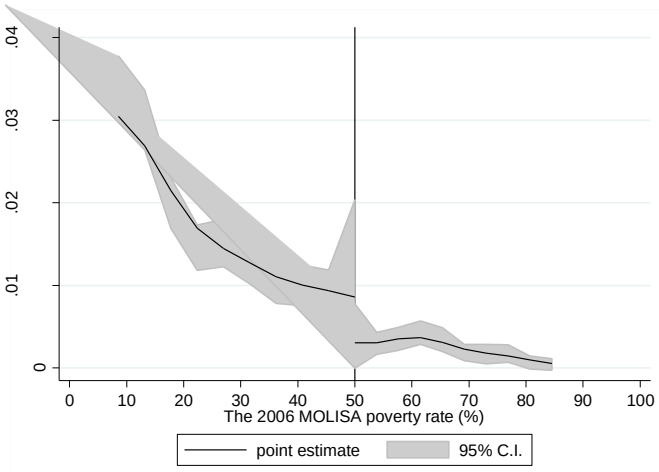
Note: This figure graphs the per capita income and poverty rate (%) of households in districts covered by the 30A Program compared to other districts during the 2004-2020 period. The per capita income values are adjusted to 2020 prices using the annual Consumer Price Index (CPI). The analysis focuses on households in districts where the poverty rate in 2006 was greater than 40%. The vertical lines indicate the year 2009, which marks the implementation of the 30A Program.

Figure 4. The density of the district poverty rate

A. The kernel density of the MOLISA poverty rate of districts



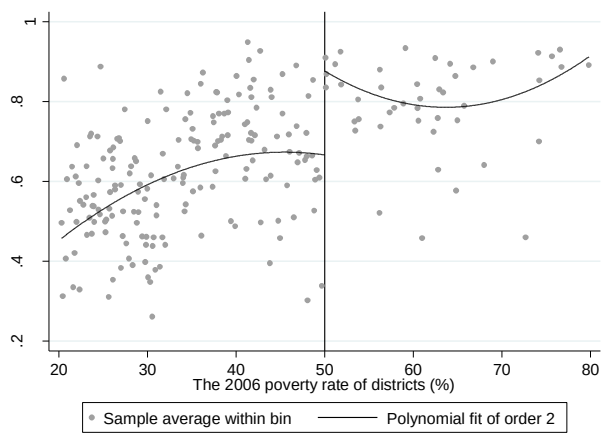
B. RDD manipulation test using local polynomial density estimation



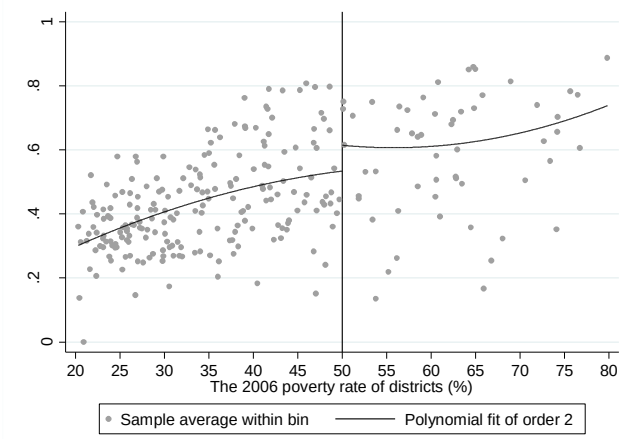
Note: This graph shows density of districts by the 2006 poverty rate around the threshold of 50%.

Figure 5: RDD plot of employment

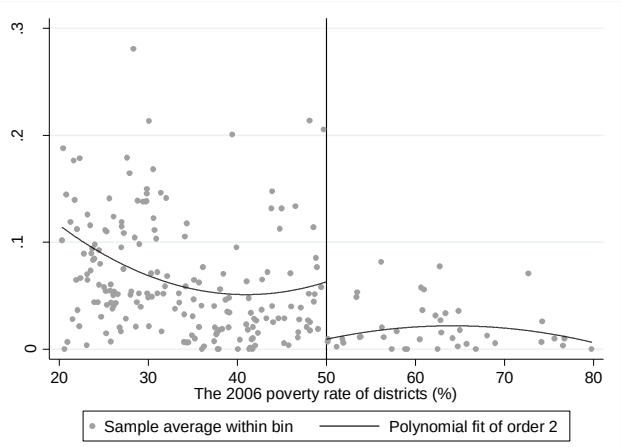
A. The probability of having farm work before 2009



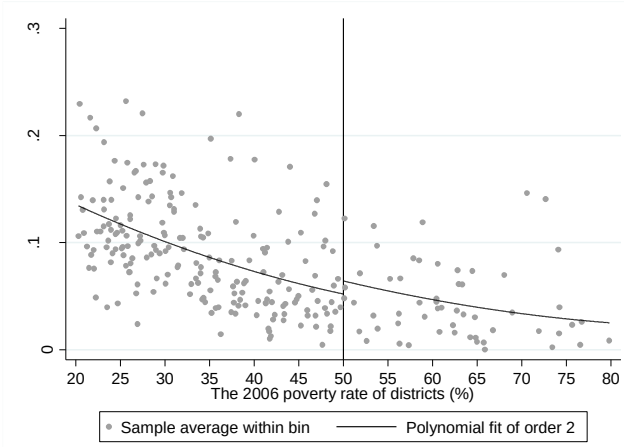
B. The probability of having farm work since 2009



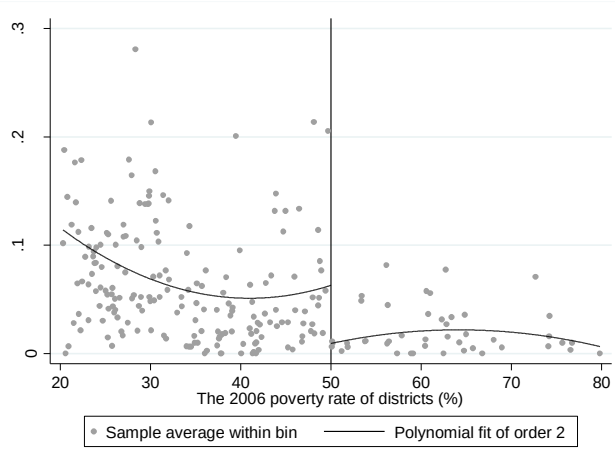
C. The probability of having nonfarm work before 2009



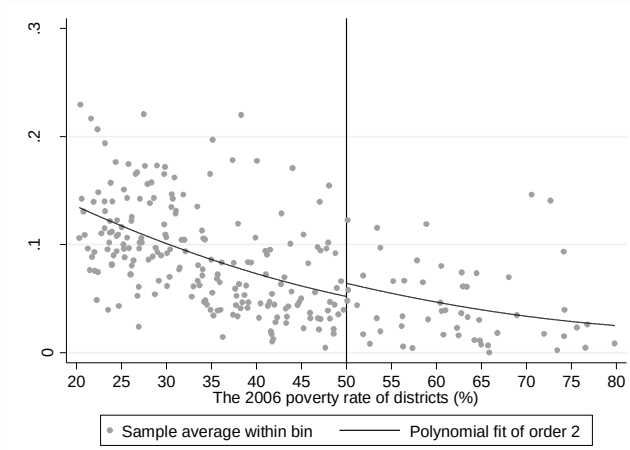
D. The probability of having nonfarm work since 2009



E. The probability of having a wage job before 2009



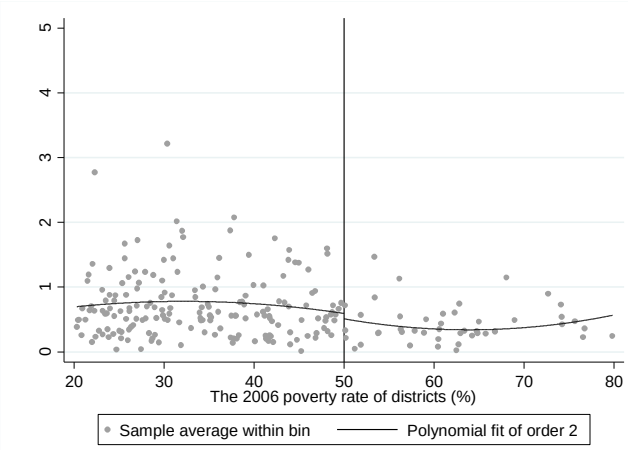
F. The probability of having a wage job since 2009



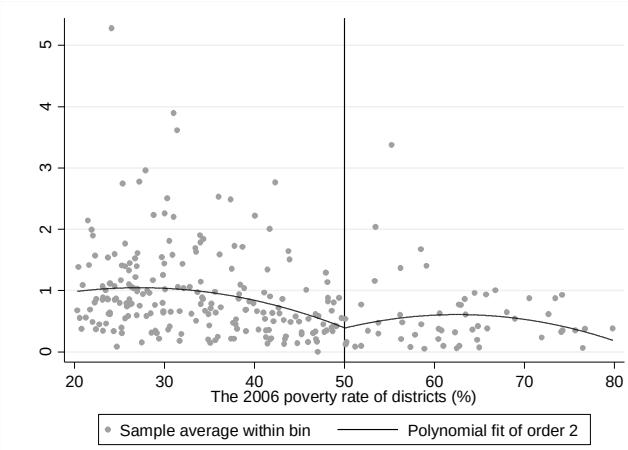
Note: This graph shows the regression discontinuity plot of employment outcomes of individuals across the 2006 poverty rate of districts. The sample is limited to individuals living districts with the 2006 poverty rate above 40%.

Figure 6: RD plot of healthcare utilization and education subsidy for students

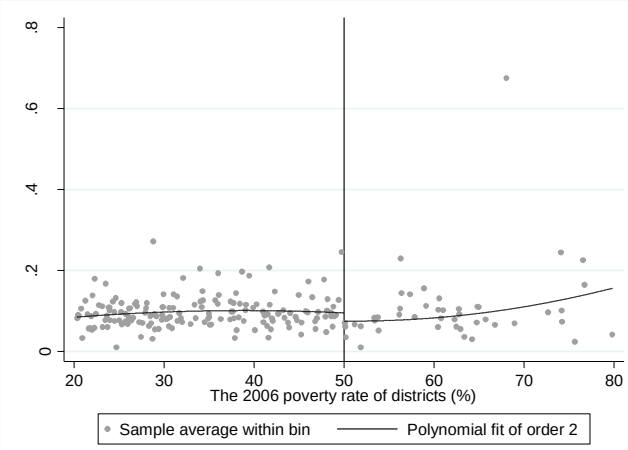
A. Outpatient healthcare utilization before 2009



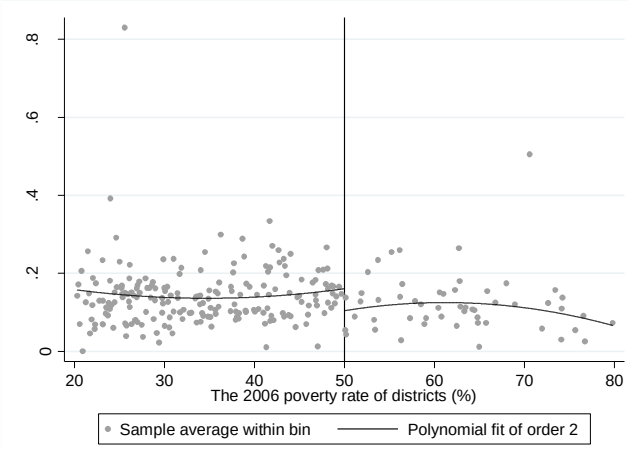
B. Outpatient healthcare utilization since 2009



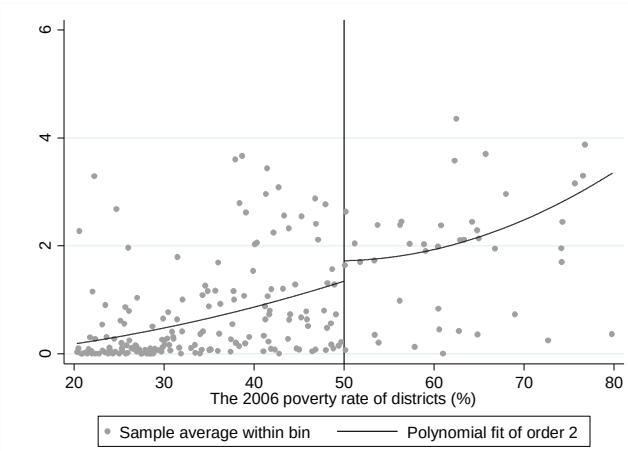
C. Inpatient healthcare utilization before 2009



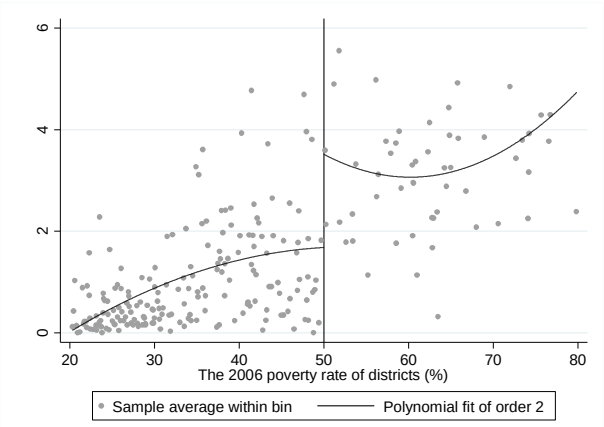
D. Inpatient healthcare utilization since 2009



E. Log of education subsidy before 2009



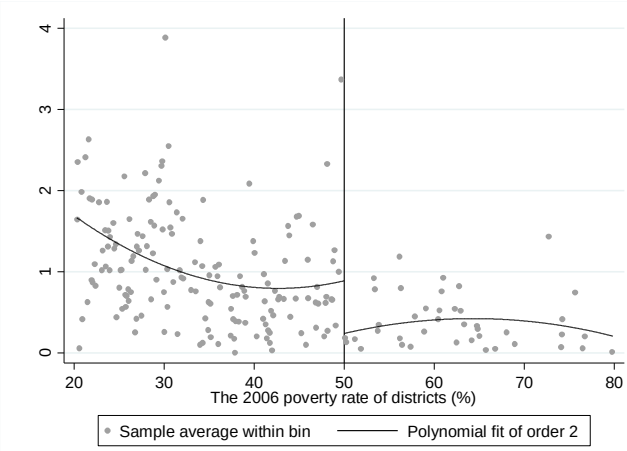
F. Log of education subsidy since 2009



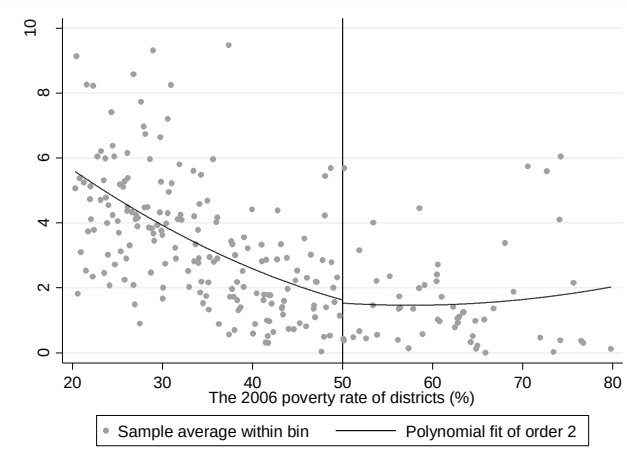
Note: This graph shows the regression discontinuity plot of healthcare utilization of individuals and educational subsidy for students across the 2006 poverty rate of districts. The sample is limited to individuals living districts with the 2006 poverty rate above 40%.

Figure 7: RD plot of households' per capita income

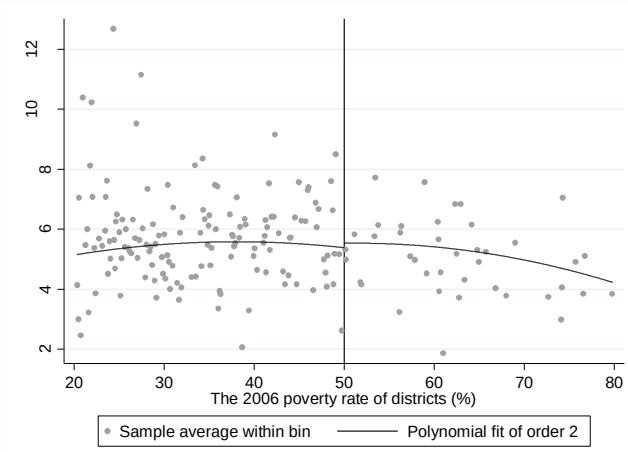
A. Log of per capita nonfarm income before 2009



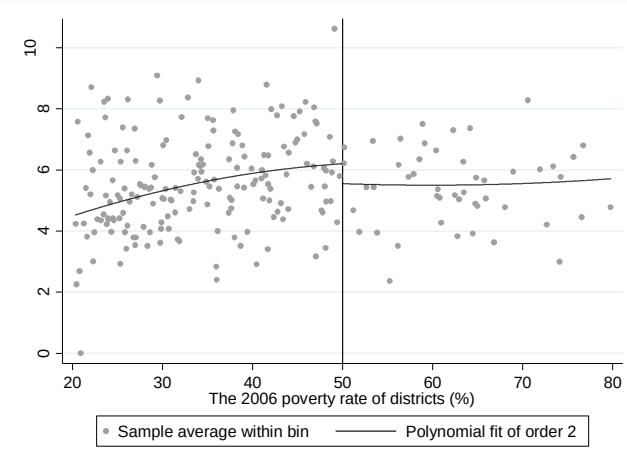
B. Log of per capita nonfarm income since 2009



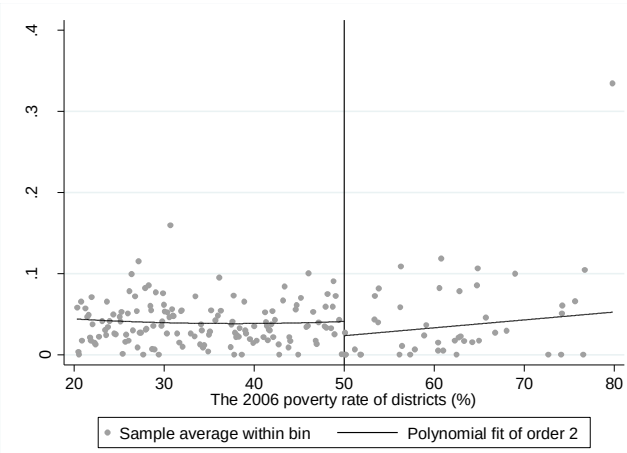
C. Log of per capita farm income before 2009



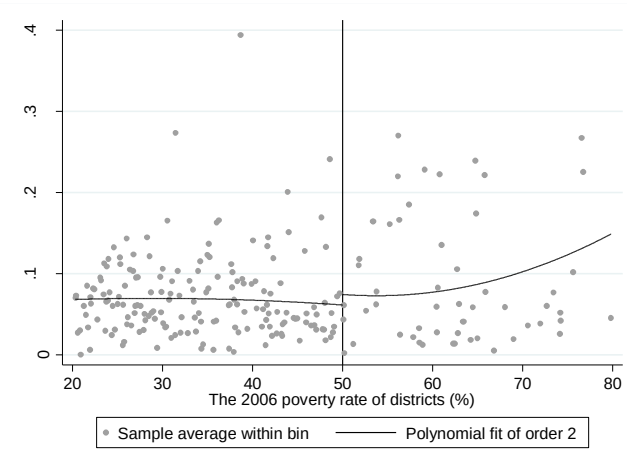
D. Log of per capita farm income since 2009



E. Log of per capita public cash transfers before 2009



F. Log of per capita public cash transfers since 2009



Note: This graph shows the regression discontinuity plot of households' per capita income from different sources across the 2006 poverty rate of districts. The sample is limited to households living districts with the 2006 poverty rate above 40%.

Table 1. The main outcome variables

Variables	Treatment					Control				
	Year 2004	Year 2008	Year 2012	Year 2016	Year 2020	Year 2004	Year 2008	Year 2012	Year 2016	Year 2020
Individual employment										
Currently working (%)	88.98	88.96	91.19	90.29	91.54	83.47	82.50	86.73	86.89	87.37
	(0.96)	(0.90)	(0.63)	(0.63)	(0.63)	(0.69)	(0.86)	(0.82)	(0.68)	(0.61)
Self-employed farm work (%)	81.89	80.43	65.55	62.79	48.49	68.62	66.29	54.14	53.67	42.78
	(1.57)	(1.55)	(2.21)	(2.27)	(2.68)	(1.58)	(1.85)	(1.67)	(1.52)	(1.88)
Self-employed non-farm work (%)	1.62	2.49	2.27	2.78	9.73	5.33	5.72	5.00	4.02	9.97
	(0.31)	(0.57)	(0.36)	(0.45)	(1.81)	(0.70)	(0.77)	(0.62)	(0.50)	(1.22)
Having wage job (%)	5.47	6.04	23.37	24.73	33.32	9.52	10.49	27.59	29.20	34.61
	(0.79)	(0.75)	(2.14)	(1.95)	(2.31)	(0.82)	(0.89)	(1.40)	(1.37)	(1.52)
Monthly wage (thousand VND)	2.20	2.42	2.45	3.33	4.18	2.16	2.94	2.66	3.40	2.96
	(0.12)	(0.16)	(0.14)	(0.21)	(0.24)	(0.08)	(0.11)	(0.10)	(0.14)	(0.19)
Per capita income from different sources (million VND)										
Per capita income	6.86	8.94	10.95	13.33	21.91	10.18	13.78	16.36	20.37	25.47
	(0.28)	(0.40)	(0.48)	(0.76)	(1.28)	(0.40)	(0.45)	(0.69)	(0.80)	(1.02)
Per capita income from wages	1.23	1.96	3.56	4.65	10.46	1.89	2.62	5.19	6.70	9.78
	(0.15)	(0.20)	(0.36)	(0.42)	(0.86)	(0.19)	(0.20)	(0.37)	(0.36)	(0.51)
Per capita income from nonfarm production	0.39	0.56	0.73	1.26	2.42	1.19	1.62	1.74	1.71	2.97
	(0.06)	(0.09)	(0.15)	(0.26)	(0.61)	(0.18)	(0.22)	(0.23)	(0.21)	(0.33)
Per capita income from farm production	4.69	5.42	5.73	6.09	6.83	5.60	7.05	7.89	9.51	10.06
	(0.19)	(0.25)	(0.22)	(0.39)	(0.57)	(0.24)	(0.28)	(0.44)	(0.58)	(0.71)
Per capita remittances from private sources	0.22	0.44	0.33	0.66	1.46	0.68	1.17	0.79	1.48	1.89
	(0.02)	(0.08)	(0.05)	(0.15)	(0.30)	(0.10)	(0.14)	(0.11)	(0.17)	(0.19)
Per capita public cash transfers	0.08	0.26	0.28	0.33	0.30	0.13	0.29	0.43	0.43	0.38
	(0.02)	(0.06)	(0.05)	(0.07)	(0.06)	(0.02)	(0.06)	(0.06)	(0.06)	(0.05)
Per capita income from other sources	0.25	0.30	0.31	0.34	0.44	0.69	1.03	0.33	0.53	0.40
	(0.05)	(0.05)	(0.05)	(0.04)	(0.06)	(0.09)	(0.12)	(0.05)	(0.08)	(0.05)
The income poverty rate (%)	76.42	61.25	57.64	43.63	16.85	57.99	34.95	33.00	22.28	10.65
	(2.45)	(3.16)	(2.57)	(3.13)	(2.09)	(1.97)	(2.16)	(1.83)	(1.80)	(1.27)

Note: The sample is limited to households residing in districts with a poverty rate exceeding 40% in 2006. Within this sample, households living in the 30A districts are referred to as the treatment group, while households residing in districts without the 30A Programs but having the 2006 poverty rate above 40% are considered the control group.

The income variables are adjusted to the 2020 price using overall CPI.

Standard errors of the means in parentheses.

Table 2. The district fixed-effect RDD-DD regressions of employment of individuals

Explanatory variables	Dependent variables					
	Currently working (yes=1, no=0)	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (wage workers)	Log of monthly wage (all workers)
	(1)	(2)	(3)	(4)	(5)	(6)
Program * Post-program period	-0.0277	-0.1144**	0.0538***	0.0330	0.1285	0.5545*
	(0.0198)	(0.0554)	(0.0151)	(0.0512)	(0.2694)	(0.2845)
(Poverty rate – 50) * Post-program period	-0.0024	0.0070	-0.0056***	-0.0038	-0.0059	-0.0338
	(0.0024)	(0.0057)	(0.0018)	(0.0043)	(0.0335)	(0.0269)
Program * (Poverty rate – 50) * Post-program period	0.0047*	-0.0026	0.0046**	0.0026	0.0041	-0.0002
	(0.0025)	(0.0062)	(0.0018)	(0.0049)	(0.0348)	(0.0300)
Age	0.0387***	0.0243***	0.0040***	0.0104***	0.0444***	0.1132***
	(0.0014)	(0.0013)	(0.0005)	(0.0006)	(0.0060)	(0.0066)
Age squared	-0.0005***	-0.0003***	-0.0000***	-0.0001***	-0.0006***	-0.0015***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0001)
Male	0.0136***	-0.0653***	-0.0076**	0.0865***	0.0910***	0.9974***
	(0.0046)	(0.0072)	(0.0030)	(0.0051)	(0.0197)	(0.0567)
Ethnic minorities (yes=1, Kinh=0)	0.0523***	0.1805***	-0.0990***	-0.0292*	-0.3732***	-0.2248
	(0.0130)	(0.0265)	(0.0109)	(0.0168)	(0.0511)	(0.1580)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.1697***	0.2242***	0.0402***	-0.0947***	6.8517***	-0.6763***
	(0.0330)	(0.0343)	(0.0101)	(0.0190)	(0.1321)	(0.1886)
Observations	128,446	128,446	128,446	128,446	27,510	128,446
R-squared	0.289	0.190	0.066	0.174	0.203	0.154
The mean value of the dependent variables before the program	0.854	0.734	0.040	0.081	7.483	1.394

Note: This table reports district fixed-effect RDD-DD regressions of employment of individuals using individual-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table 3. The district fixed-effect RDD-DD regressions of individual's health and children's education

Explanatory variables	Dependent variables						
	Having health insurance (yes=1, no=0)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	The annual number of inpatient healthcare visits	The number of completed schooling years (children aged 6-17)	Currently attending school (children aged 6-17)	Log of education subsidy for students (children aged 6-17)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Program * Post-program period	-0.0174	0.3757**	0.3814***	-0.0059	0.0422	-0.0080	1.2841***
	(0.0995)	(0.1483)	(0.1371)	(0.0371)	(0.3331)	(0.0448)	(0.4805)
(Poverty rate – 50) * Post-program period	0.0162	0.0561**	0.0523**	0.0037	-0.0368	-0.0102**	0.0504
	(0.0118)	(0.0229)	(0.0221)	(0.0040)	(0.0396)	(0.0051)	(0.0546)
Program * (Poverty rate – 50) * Post-program period	-0.0066	-0.0580**	-0.0547**	-0.0032	0.0385	0.0075	-0.0467
	(0.0111)	(0.0226)	(0.0218)	(0.0038)	(0.0381)	(0.0049)	(0.0517)
Age	-0.0020***	-0.0058	-0.0059	0.0000	1.1998***	0.1571***	0.3874***
	(0.0007)	(0.0039)	(0.0038)	(0.0006)	(0.0410)	(0.0093)	(0.0473)
Age squared	0.0000***	0.0003***	0.0002***	0.0000***	-0.0212***	-0.0081***	-0.0197***
	(0.0000)	(0.0001)	(0.0001)	(0.0000)	(0.0019)	(0.0004)	(0.0021)
Male	0.0133***	-0.1495***	-0.1382***	-0.0111**	0.1212**	0.0370***	0.1056***
	(0.0029)	(0.0263)	(0.0253)	(0.0054)	(0.0599)	(0.0105)	(0.0325)
Ethnic minorities (yes=1, Kinh=0)	0.0153	-0.2511**	-0.2432**	-0.0078	-1.1867***	-0.1293***	0.7992***
	(0.0211)	(0.1012)	(0.0992)	(0.0114)	(0.1724)	(0.0258)	(0.1114)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.2507***	0.7249***	0.6527***	0.0723***	-5.4798***	0.2662***	-1.1919***
	(0.0211)	(0.0801)	(0.0780)	(0.0122)	(0.3037)	(0.0530)	(0.2757)
Observations	187,734	86,980	86,980	86,980	50,645	50,645	50,645
R-squared	0.515	0.096	0.091	0.028	0.526	0.195	0.330
The mean value of the dependent variables before the program	0.285	0.619	0.519	0.100	4.733	0.823	1.254

Note: This table reports district fixed-effect RDD-DD regressions of individual's health and children's education using individual-level observations. Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table 4. The district fixed-effect RDD-DD regressions of households' income and poverty

Explanatory variables	Dependent variables						
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Program * Post-program period	-0.0181	0.4116	0.8039**	-0.3774**	0.5492	0.8739***	0.9973**
	(0.0869)	(0.5071)	(0.3499)	(0.1852)	(0.5740)	(0.3109)	(0.4132)
(Poverty rate – 50) * Post-program period	0.0052	-0.0756*	-0.0658*	0.0099	-0.0303	-0.0566*	-0.0153
	(0.0088)	(0.0442)	(0.0382)	(0.0216)	(0.0554)	(0.0317)	(0.0407)
Program * (Poverty rate – 50) * Post-program period	-0.0092	0.0284	0.0511	-0.0052	-0.0064	0.0444	0.0215
	(0.0093)	(0.0502)	(0.0414)	(0.0223)	(0.0607)	(0.0373)	(0.0456)
Age of household heads	0.0262***	0.0485***	0.0565***	0.1330***	-0.0451***	-0.0931***	-0.0598***
	(0.0021)	(0.0135)	(0.0081)	(0.0128)	(0.0090)	(0.0099)	(0.0105)
Age squared of household heads	-0.0002***	-0.0008***	-0.0007***	-0.0013***	0.0006***	0.0012***	0.0007***
	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Gender of household head (male=1, female=0)	0.0053	-0.0124	0.2031***	0.6791***	-0.4089***	-0.0837	-0.3800***
	(0.0181)	(0.0987)	(0.0626)	(0.0753)	(0.0502)	(0.0556)	(0.0663)
Ethnic minorities (yes=1, Kinh=0)	-0.6139***	-0.2264	-1.7972***	0.8630***	-0.5437***	0.6164***	-0.7285***
	(0.0490)	(0.1793)	(0.1596)	(0.1217)	(0.1376)	(0.1165)	(0.1017)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.6202***	3.0156***	1.6227***	3.7472***	4.8958***	1.9215***	3.0930***
	(0.0824)	(0.3525)	(0.2387)	(0.3254)	(0.2912)	(0.2996)	(0.2578)
Observations	40,468	40,468	40,468	40,468	40,468	40,468	40,468
R-squared	0.364	0.164	0.107	0.148	0.228	0.149	0.091
The mean value of the dependent variables before the program	9.026	3.651	1.712	8.149	3.912	0.754	1.324

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table 5. The district fixed-effect RDD-DD regressions of income of bottom-income households and poverty

Explanatory variables	Dependent variables					
	Log of per capita income (the sample of the poor)	Log of per capita income (the sample of the bottom 20% income households)	Log of per capita income (the sample of the bottom 40% income households)	Income poor households (using the constant poverty line in 2020)	Bottom 20% households (using the bottom 20% income threshold in 2020)	Bottom 40% households (using the bottom 40% income threshold in 2020)
	(1)	(2)	(3)	(4)	(5)	(6)
Program * Post-program period	0.0528	0.0490	0.0347	-0.0463	-0.0528	0.0141
	(0.0436)	(0.0434)	(0.0515)	(0.0604)	(0.0603)	(0.0523)
(Poverty rate – 50) * Post-program period	-0.0040	-0.0036	0.0012	-0.0025	-0.0017	-0.0021
	(0.0055)	(0.0055)	(0.0062)	(0.0057)	(0.0057)	(0.0055)
Program * (Poverty rate – 50) * Post-program period	0.0033	0.0029	-0.0027	0.0054	0.0046	0.0057
	(0.0057)	(0.0057)	(0.0065)	(0.0063)	(0.0062)	(0.0058)
Age of household heads	0.0059***	0.0059***	0.0098***	-0.0143***	-0.0141***	-0.0148***
	(0.0014)	(0.0014)	(0.0015)	(0.0013)	(0.0014)	(0.0014)
Age squared of household heads	-0.0001***	-0.0001***	-0.0001***	0.0001***	0.0001***	0.0001***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Gender of household head (male=1, female=0)	0.0249**	0.0270***	0.0299***	-0.0115	-0.0092	-0.0126
	(0.0096)	(0.0097)	(0.0087)	(0.0092)	(0.0085)	(0.0111)
Ethnic minorities (yes=1, Kinh=0)	-0.0853***	-0.0820***	-0.1585***	0.2422***	0.2403***	0.3138***
	(0.0164)	(0.0165)	(0.0202)	(0.0202)	(0.0197)	(0.0259)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.3926***	8.3845***	8.4786***	0.8696***	0.8577***	0.9889***
	(0.0421)	(0.0415)	(0.0495)	(0.0442)	(0.0447)	(0.0468)
Observations	16,857	15,389	24,891	40,468	40,468	40,468
R-squared	0.159	0.157	0.196	0.252	0.252	0.274
The mean value of the dependent variables before the program	8.560	8.495	8.732	0.546	0.472	0.741

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations. Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table 6. Mechanism: the impact of the program on households' access to credit

Explanatory variables	Dependent variables					
	Borrow from formal sources (yes=1, no=0)	Borrow from microcredit sources (yes=1, no=0)	Log of formal loan (the sample of borrowing households)	Log of microcredit (the sample of borrowing households)	Log of formal loan (the sample all households)	Log of microcredit (the sample all households)
	(1)	(2)	(3)	(4)	(5)	(6)
Program * Post-program period	0.1353**	0.0903*	0.0047	-0.1188	1.1861**	0.9366*
	(0.0657)	(0.0509)	(0.1413)	(0.0966)	(0.5540)	(0.4879)
(Poverty rate – 50) * Post-program period	-0.0146**	-0.0126**	0.0062	0.0028	-0.1005*	-0.1304**
	(0.0066)	(0.0057)	(0.0161)	(0.0121)	(0.0571)	(0.0545)
Program * (Poverty rate – 50) * Post-program period	0.0119*	0.0129**	-0.0126	0.0019	0.0793	0.1346**
	(0.0071)	(0.0062)	(0.0168)	(0.0126)	(0.0606)	(0.0596)
Age of household heads	0.0075***	0.0029**	0.0236***	0.0156***	0.0697***	0.0323***
	(0.0017)	(0.0012)	(0.0058)	(0.0050)	(0.0127)	(0.0121)
Age squared of household heads	-0.0001***	-0.0001***	-0.0002***	-0.0002***	-0.0010***	-0.0006***
	(0.0000)	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Gender of household head (male=1, female=0)	0.0248**	0.0001	0.1504***	0.0609**	0.2377**	0.0068
	(0.0124)	(0.0098)	(0.0339)	(0.0241)	(0.0971)	(0.0974)
Ethnic minorities (yes=1, Kinh=0)	-0.0199	0.0662***	-0.5917***	-0.2038***	-0.4173**	0.6141***
	(0.0222)	(0.0160)	(0.0656)	(0.0302)	(0.1848)	(0.1577)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.2244***	0.0813*	9.1356***	8.8530***	2.1609***	0.6479
	(0.0459)	(0.0411)	(0.1432)	(0.1182)	(0.3486)	(0.4011)
Observations	30,556	40,468	11,978	11,382	30,556	40,468
R-squared	0.101	0.104	0.349	0.326	0.204	0.107
The mean value of the dependent variables before the program	0.201	0.183	9.629	3.693	9.326	1.705

Note: This table reports district fixed-effect RDD-DD regressions of loans of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table 7. Mechanism: the impact of the program on commune outcomes

Explanatory variables	Dependent variables									
	Village has an all-weather road (passable for all the time)	Commune has a whole and periodic market	There is electricity grid in the village	Village has an irrigation system	Commune has a kindergarten	Commune has a primary school	Commune has a secondary school	Commune has a health center	The proportion of in-migrants (in percent)	The proportion of out-migrants (in percent)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Program * Post-program period	0.1602*	0.0713	0.1399**	-0.1320	0.1778	0.0030	0.1584**	0.1265**	-0.2236	0.0811
	(0.0829)	(0.0958)	(0.0571)	(0.1098)	(0.1106)	(0.0092)	(0.0703)	(0.0621)	(0.2231)	(0.2842)
(Poverty rate – 50) * Post-program period	0.0018	-0.0049	-0.0106	0.0034	-0.0090	0.0003	-0.0141*	-0.0030	0.0468	0.0310
	(0.0115)	(0.0116)	(0.0080)	(0.0103)	(0.0143)	(0.0010)	(0.0072)	(0.0076)	(0.0367)	(0.0483)
Program * (Poverty rate – 50) * Post-program period	-0.0124	0.0024	0.0103	-0.0023	0.0095	-0.0004	0.0114	-0.0005	-0.0504	-0.0379
	(0.0121)	(0.0120)	(0.0084)	(0.0113)	(0.0147)	(0.0010)	(0.0078)	(0.0084)	(0.0419)	(0.0526)
Communes in remote areas	-0.0927***	-0.0735**	-0.0286**	-0.0197	-0.0242	-0.0001	-0.0060	0.0208	-0.6171	-0.7425*
	(0.0300)	(0.0349)	(0.0129)	(0.0272)	(0.0181)	(0.0032)	(0.0190)	(0.0208)	(0.3858)	(0.3979)
Log of commune area	-0.0294	0.1595***	0.0125	0.0244	0.0362**	0.0001	0.0664***	0.0705***	-1.2451	-1.4580
	(0.0248)	(0.0452)	(0.0114)	(0.0284)	(0.0180)	(0.0022)	(0.0174)	(0.0249)	(1.1062)	(1.0997)
Log of population density of communes	0.0063	0.1645***	0.0249*	0.0348	0.0447**	0.0036	0.0497***	0.0584**	-1.5236	-1.7573
	(0.0229)	(0.0422)	(0.0131)	(0.0279)	(0.0188)	(0.0024)	(0.0161)	(0.0238)	(1.2876)	(1.2857)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.8560***	-0.9320**	0.7500***	0.4928**	0.4406***	0.9811***	0.4075***	0.5285***	12.9126	14.9616
	(0.1986)	(0.3563)	(0.1026)	(0.2325)	(0.1427)	(0.0186)	(0.1355)	(0.1986)	(10.3237)	(10.2833)
Observations	2,617	2,617	2,617	2,617	2,617	2,617	2,617	2,617	2,617	2,617
R-squared	0.227	0.339	0.284	0.189	0.437	0.053	0.279	0.162	0.176	0.165
The mean value of the dependent variables before the program	0.788	0.627	0.981	0.669	0.597	0.989	0.949	0.912	0.783	0.916

Note: This table reports district fixed-effect RDD-DD regressions of infrastructures of communes using commune-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district level.
*** p<0.01, ** p<0.05, * p<0.1.

Table 8. Mechanism: the impact of the program on enterprise and economic activity

Explanatory variables	Dependent variables					
	The number of firms per 100 square km	The number of micro firms (1-9 workers) per 100 square km	The number of small firms (10-50 workers) per 100 square km	The number of medium firms (51-299 workers) per 100 square km	The number of large firms (300+ workers) per 100 square km	Log of nighttime light intensity
	(1)	(2)	(3)	(4)	(5)	(6)
Program * Post-program period	-0.7263	-0.6645	-0.4307	0.3238	0.0452	0.3178
	(3.0742)	(1.7593)	(1.0410)	(0.2868)	(0.0809)	(0.2501)
(Poverty rate – 50) * Post-program period	-0.6688	-0.3703	-0.1740	-0.0937	-0.0308	-0.0055
	(0.9449)	(0.5366)	(0.2915)	(0.0922)	(0.0294)	(0.0262)
Program * (Poverty rate – 50) * Post-program period	0.5014	0.2798	0.1230	0.0710	0.0277	0.0103
	(0.7820)	(0.4410)	(0.2448)	(0.0762)	(0.0258)	(0.0290)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.4518	0.1390	0.2238	0.0707	0.0183	-2.6308***
	(1.4249)	(0.5715)	(0.5626)	(0.2691)	(0.0394)	(0.0786)
Observations	2,625	2,625	2,625	2,625	2,625	2,279
R-squared	0.578	0.490	0.604	0.633	0.359	0.840
The mean value of the dependent variables before the program	9.016	0.908	0.923	0.348	0.067	0.277

Note: This table reports district fixed-effect RDD-DD regressions of density of firms and nighttime light data intensity of districts using district-level observations. The number and density of firms at the district level are computed using the annual Vietnam Enterprise Censuses from 2000 to 2017.

Robust standard errors in parentheses. Standard errors are clustered by district level.

*** p<0.01, ** p<0.05, * p<0.1.

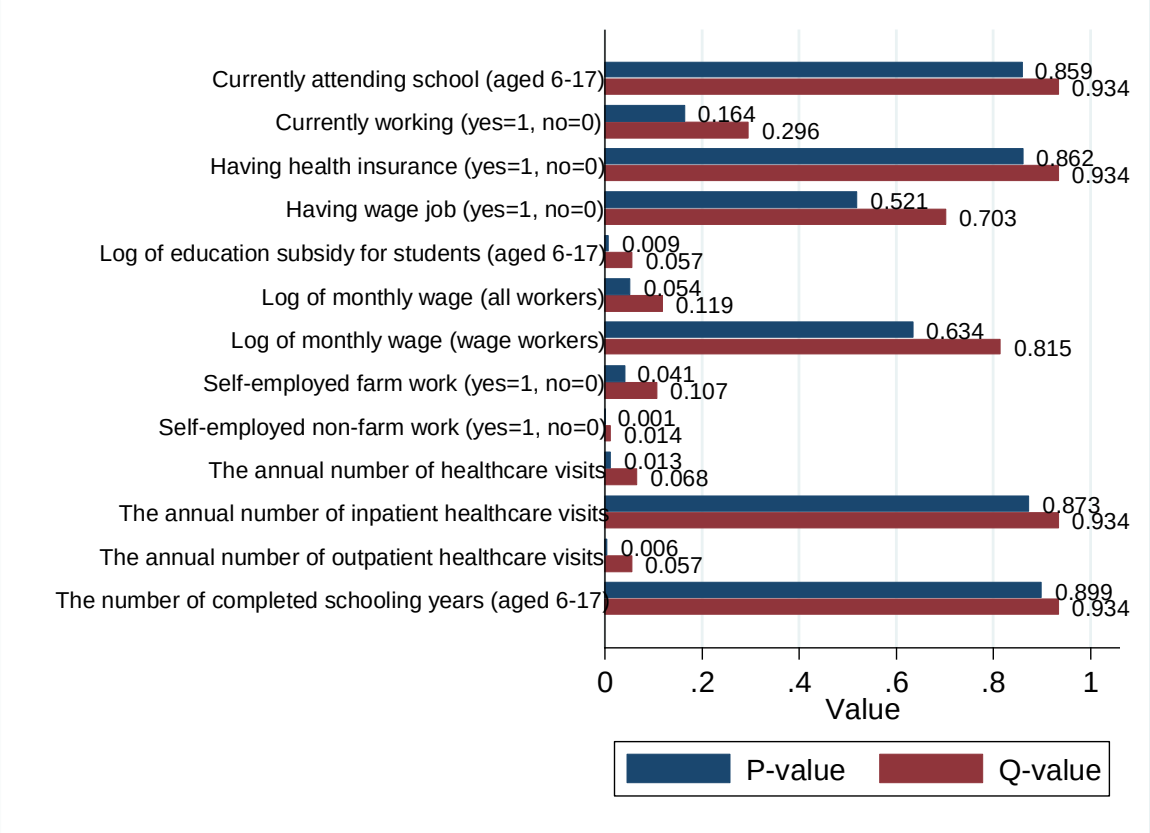
Table 9. The heterogenous impact of the program on nonfarm employment of individuals

Explanatory variables	Dependent variable is the dummy of having nonfarm work							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program * Post * Male	0.1027***							
	(0.0149)							
Program * Post * Ethnic minorities		-0.0876**						
		(0.0346)						
Program * Post * The number of schooling years			0.0086***					
			(0.0019)					
Program * Post * Dummy variable indicating VHLSSs since 2006				0.0377*				
				(0.0217)				
Program * Post * log of distance from village to the nearest town					-0.0084			
					(0.0108)			
Program * Post * Village has all-weather roads						0.0128		
						(0.0257)		
Program * Post * log of distance from village to the nearest market							-0.0167	
							(0.0110)	
Program * Post * log of distance from village to the nearest bank								-0.0076
								(0.0098)
Program * Post-program period	0.0366	0.1603***	0.0343	0.0677	0.1136*	0.0830	0.1338**	0.1153**
	(0.0512)	(0.0518)	(0.0566)	(0.0520)	(0.0603)	(0.0529)	(0.0601)	(0.0569)
(Poverty rate – 50) * Post-program period	-0.0095**	-0.0095**	-0.0099**	-0.0094**	-0.0094**	-0.0094**	-0.0094*	-0.0098**
	(0.0047)	(0.0047)	(0.0047)	(0.0047)	(0.0047)	(0.0046)	(0.0051)	(0.0047)
Program * (Poverty rate – 50) * Post-program period	0.0072	0.0075	0.0082	0.0072	0.0073	0.0071	0.0066	0.0072
	(0.0052)	(0.0052)	(0.0053)	(0.0052)	(0.0052)	(0.0052)	(0.0056)	(0.0052)
Interacted variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.0460**	-0.0619**	-0.2006***	-0.0547**	-0.0136	-0.0747***	-0.0406	-0.0218
	(0.0233)	(0.0238)	(0.0249)	(0.0235)	(0.0301)	(0.0235)	(0.0258)	(0.0273)
Observations	128,446	128,446	128,446	128,446	128,446	128,446	103,971	128,446
R-squared	0.198	0.197	0.212	0.196	0.197	0.197	0.189	0.199

Note: This table reports district fixed-effect RDD-DD regressions of nonfarm employment of individuals using individual-level observations. Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

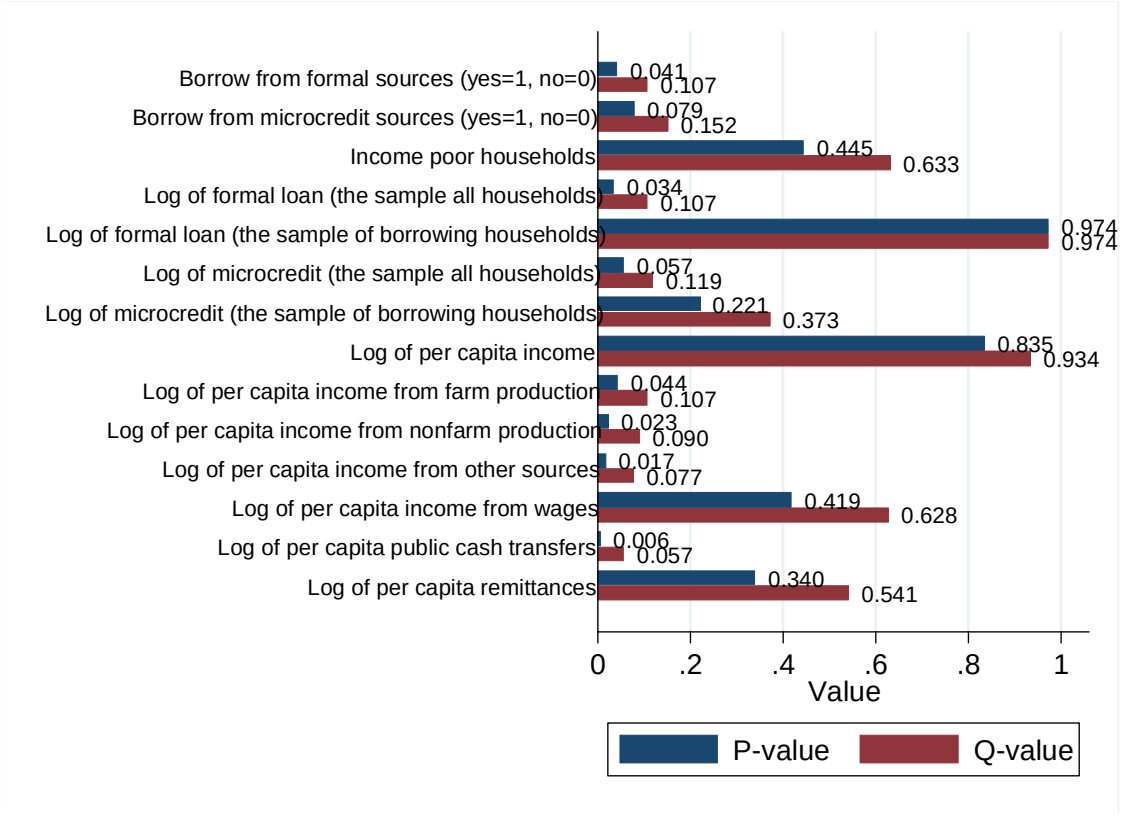
Appendix A: Additional Tables and Figures

Figure A.1. P-value and q-value of estimates of the effects of the program on individual-level outcomes



Note: The figure compares the p- and q-values of estimates of the program on individual-level outcomes. The p-value is estimated for the program effect reported in Tables 2 and 3, while the q-value is estimated using Simes' (1986) method.

Figure A.2. P-value and q-value of estimates of the effects of the program on household-level outcomes



Note: The figure compares the p- and q-values of estimates of the program on household-level outcomes. The p-value is estimated for the program effect reported in Tables 4 and 5, while the q-value is estimated using Simes' (1986) method.

Table A.1. The list of 62 poorest districts (Resolution 30a/2008/NQ-CP)

Provinces	The number of poorest districts in the province	Name of the poorest districts
Hà Giang	6	Đồng Văn, Mèo Vạc, Yên Minh, Quản Bạ, Hoàng Su Phì, Xín Mần
Cao Bằng	5	Bảo Lâm, Bảo Lạc, Thông Nông, Hà Quảng, Hạ Lang
Lào Cai	3	Si Ma Cai, Mường Khương, Bắc Hà
Yên Bái	2	Mù Cang Chải, Trạm Tấu
Bắc Kạn	2	Ba Bể, Pác Nặm
Bắc Giang	1	Sơn Động
Phú Thọ	1	Tân Sơn
Sơn La	5	Sốp Cộp, Phù Yên, Bắc Yên, Mường La, Quỳnh Nhai
Lai Châu	5	Mường Tè, Phong Thổ, Sìn Hồ, Tân Yên, Than Uyên
Điện Biên	4	Điện Biên Đông, Mường Nhé, Tủa Chùa, Mường Ảng
Thanh Hóa	7	Lang Chánh, Thường Xuân, Quan Hóa, Quan Sơn, Mường Lát, Như Xuân, Bá Thước
Nghệ An	3	Kỳ Sơn, Tương Dương, Quế Phong
Quảng Bình	1	Minh Hóa
Quảng Trị	1	Đa Krông
Quảng Ngãi	6	Sơn Hà, Trà Bồng, Sơn Tây, Minh Long, Tây Trà, Ba Tơ
Quảng Nam	3	Nam Trà My, Tây Giang, Phước Sơn
Bình Định	3	An Lão, Vĩnh Thạnh, Vân Canh
Ninh Thuận	1	Bác Ái
Kon Tum	2	Tu Mơ Rông, Kon Plông
Lâm Đồng	1	Đam Rông

Source: Authors' preparation using information from Resolution 30a/2008/NQ-CP (The government of Vietnam, 2008).

Table A.2. Outcome variables

Variables	Treatment					Control				
	Year 2004	Year 2008	Year 2012	Year 2016	Year 2020	Year 2004	Year 2008	Year 2012	Year 2016	Year 2020
Individual-level outcomes										
Percentage of having health insurance	25.81	89.57	94.13	97.19	97.77	23.73	73.29	82.59	85.97	94.34
	(3.47)	(2.79)	(0.94)	(0.53)	(0.67)	(1.95)	(2.28)	(1.68)	(1.63)	(0.78)
The annual number of healthcare visits	0.43	0.53	0.50	0.69	0.44	0.72	0.75	0.90	0.82	0.70
	(0.03)	(0.05)	(0.04)	(0.07)	(0.04)	(0.05)	(0.05)	(0.08)	(0.07)	(0.07)
The annual number of outpatient healthcare visits	0.33	0.44	0.40	0.56	0.33	0.62	0.66	0.75	0.65	0.58
	(0.03)	(0.05)	(0.04)	(0.06)	(0.04)	(0.05)	(0.05)	(0.08)	(0.07)	(0.07)
The annual number of inpatient healthcare visits	0.09	0.10	0.10	0.13	0.12	0.11	0.09	0.15	0.17	0.11
	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)
The number of completed schooling years (children aged 6-17)	4.28	4.84	4.48	4.66	5.70	4.94	5.38	4.97	5.07	5.31
	(0.17)	(0.18)	(0.14)	(0.12)	(0.28)	(0.13)	(0.16)	(0.12)	(0.09)	(0.21)
Percentage of attending school (children aged 6-17)	80.27	77.88	78.52	82.89	84.06	83.91	80.53	81.64	85.23	84.65
	(1.60)	(2.00)	(1.44)	(1.60)	(2.08)	(1.22)	(1.44)	(1.28)	(1.33)	(1.53)
Percentage of receiving subsidy for students (children aged 6-17)	41.68	45.44	57.76	55.18	44.72	19.33	25.82	31.09	22.24	19.19
	(3.97)	(3.67)	(2.63)	(3.02)	(3.82)	(2.32)	(2.63)	(2.64)	(2.75)	(2.46)
Education subsidy for students (children aged 6-17, million VND)	0.28	0.40	1.26	2.56	3.26	0.26	0.48	0.95	2.41	3.35
	(0.04)	(0.06)	(0.10)	(0.18)	(0.23)	(0.03)	(0.08)	(0.09)	(0.34)	(0.42)
Household-level outcomes										
Percentage of borrowing from the formal sources	13.80	13.89	n.a.	7.95	10.08	24.27	28.76	n.a.	18.11	15.37
	(0.00)	(1.83)	n.a.	(1.14)	(0.00)	(0.00)	(0.00)	n.a.	(1.38)	(0.00)
Percentage of borrowing from the micro-credit sources	14.85	25.31	39.38	31.18	29.91	12.28	20.08	24.59	28.64	24.01
	(1.76)	(2.09)	(2.69)	(2.41)	(2.43)	(1.15)	(1.42)	(1.60)	(1.73)	(1.77)
Formal loan size (sample of borrowing households, million VND)	3.26	5.52	n.a.	15.06	25.44	5.59	7.53	n.a.	18.53	47.94
	(0.00)	(0.00)	n.a.	(0.00)	(0.00)	(0.00)	(0.00)	n.a.	(0.00)	(0.00)
Microcredit size (sample of borrowing households, million VND)	1.96	2.79	4.47	6.41	10.72	2.34	2.99	5.63	8.75	11.59
	(0.12)	(0.14)	(0.18)	(0.29)	(0.61)	(0.11)	(0.09)	(0.34)	(0.45)	(0.58)
Formal loan size (sample all households, million VND)	0.45	0.77	n.a.	1.20	2.57	1.36	2.17	n.a.	3.36	7.37
	(0.00)	(0.16)	n.a.	(0.19)	(0.00)	(0.00)	(0.00)	n.a.	(0.38)	(0.00)
Microcredit size (sample all households, million VND)	0.29	0.71	1.76	2.00	3.21	0.29	0.60	1.39	2.51	2.78
	(0.03)	(0.07)	(0.14)	(0.18)	(0.31)	(0.03)	(0.05)	(0.12)	(0.19)	(0.25)

Note: The sample is limited to households residing in districts with a poverty rate exceeding 40% in 2006. Within this sample, households living in the 30A districts are referred to as the treatment group, while households residing in districts without the 30A Programs but having the 2006 poverty rate above 40% are considered the control group.

There are no data on loans from formal sources in VHLSSs 2010 and 2012

Standard errors of the means in parentheses.

Table A.3. RDD regressions of employment of individuals using VHLSSs 2004 to 2008

Explanatory variables	Dependent variables					
	Currently working (yes=1, no=0)	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (wage workers)	Log of monthly wage (all workers)
	(1)	(2)	(3)	(4)	(5)	(6)
Program	0.0461***	0.1172***	-0.0340***	-0.0371*	0.1427*	-0.6372**
	(0.0160)	(0.0314)	(0.0106)	(0.0201)	(0.0814)	(0.2508)
(Poverty rate – 50)	0.0008	-0.0081**	0.0035**	0.0054**	-0.0054	0.0548**
	(0.0019)	(0.0038)	(0.0015)	(0.0022)	(0.0069)	(0.0254)
Program * (Poverty rate – 50)	-0.0016	0.0082**	-0.0035**	-0.0063***	0.0004	-0.0445
	(0.0021)	(0.0040)	(0.0015)	(0.0023)	(0.0077)	(0.0281)
Age	0.0392***	0.0274***	0.0039***	0.0078***	0.0482***	0.1250***
	(0.0015)	(0.0013)	(0.0005)	(0.0007)	(0.0075)	(0.0078)
Age squared	-0.0005***	-0.0003***	-0.0000***	-0.0001***	-0.0006***	-0.0016***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0001)
Male	0.0111**	-0.0288***	-0.0071*	0.0470***	0.0605**	0.9283***
	(0.0054)	(0.0069)	(0.0037)	(0.0046)	(0.0264)	(0.0580)
Ethnic minorities (yes=1, Kinh=0)	0.0480***	0.2035***	-0.0761***	-0.0794***	-0.1935***	-0.5107***
	(0.0106)	(0.0243)	(0.0106)	(0.0149)	(0.0433)	(0.1390)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.1671***	0.0978***	0.0496***	0.0196	6.5815***	-0.3888*
	(0.0330)	(0.0362)	(0.0118)	(0.0194)	(0.1378)	(0.2099)
Observations	41,780	41,780	41,780	41,780	7,773	41,780
R-squared	0.266	0.154	0.048	0.050	0.073	0.078

Note: This table reports district fixed-effect RDD regressions of employment of individuals using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1

Table A.4. RDD regressions of individual's health and children's education using VHLSSs 2004 to 2008

Explanatory variables	Dependent variables						
	Having health insurance (yes=1, no=0)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	The annual number of inpatient healthcare visits	The number of completed schooling years (children aged 6-17)	Currently attending school (children aged 6-17)	Log of education subsidy for students
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Program	0.1991***	-0.2849***	-0.2718***	-0.0130	0.0840	0.0230	0.6334**
	(0.0651)	(0.0877)	(0.0845)	(0.0174)	(0.2655)	(0.0386)	(0.2507)
(Poverty rate – 50)	-0.0046	0.0132	0.0109	0.0022	-0.0492*	-0.0089**	-0.0098
	(0.0064)	(0.0119)	(0.0114)	(0.0018)	(0.0276)	(0.0039)	(0.0227)
Program * (Poverty rate – 50)	-0.0060	-0.0094	-0.0071	-0.0022	0.0452	0.0096**	0.0161
	(0.0070)	(0.0123)	(0.0118)	(0.0020)	(0.0298)	(0.0043)	(0.0270)
Age	-0.0012*	-0.0063*	-0.0066**	0.0003	1.2068***	0.1701***	0.3738***
	(0.0007)	(0.0032)	(0.0032)	(0.0007)	(0.0535)	(0.0116)	(0.0469)
Age squared	0.0000**	0.0003***	0.0002***	0.0000***	-0.0226***	-0.0084***	-0.0183***
	(0.0000)	(0.0001)	(0.0001)	(0.0000)	(0.0024)	(0.0005)	(0.0020)
Male	0.0219***	-0.1499***	-0.1384***	-0.0114*	0.1320**	0.0498***	0.1180***
	(0.0044)	(0.0213)	(0.0197)	(0.0060)	(0.0569)	(0.0102)	(0.0347)
Ethnic minorities (yes=1, Kinh=0)	-0.0423	-0.3841***	-0.3644***	-0.0196*	-1.1113***	-0.0862***	0.9549***
	(0.0312)	(0.0715)	(0.0704)	(0.0103)	(0.1298)	(0.0185)	(0.1138)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.2386***	0.9632***	0.8723***	0.0907***	-5.5569***	0.0739	-1.6620***
	(0.0331)	(0.0936)	(0.0917)	(0.0158)	(0.3042)	(0.0708)	(0.2945)
Observations	62,232	62,232	62,232	62,232	19,133	19,133	19,133
R-squared	0.115	0.053	0.047	0.014	0.581	0.114	0.142

Note: This table reports district fixed-effect RDD regressions of individual's health and children's education using individual-level observations. Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.5. RDD regressions of households' income and poverty using VHLSSs 2004 to 2008

Explanatory variables	Dependent variables							
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources	Poor households (using constant poverty line)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program	-0.1970**	-0.9491	-0.6676	0.1892	-0.4467	-0.5750**	-0.2603	0.1224*
	(0.0931)	(0.5946)	(0.4126)	(0.2526)	(0.4421)	(0.2485)	(0.2403)	(0.0644)
(Poverty rate – 50)	0.0050	0.0938*	0.0168	-0.0284	-0.0102	0.0509*	0.0047	-0.0012
	(0.0101)	(0.0558)	(0.0498)	(0.0337)	(0.0494)	(0.0264)	(0.0267)	(0.0065)
Program * (Poverty rate – 50)	-0.0083	-0.0709	0.0123	0.0249	0.0300	-0.0369	-0.0156	0.0039
	(0.0108)	(0.0626)	(0.0525)	(0.0341)	(0.0535)	(0.0295)	(0.0283)	(0.0072)
Age of household heads	0.0210***	0.0927***	0.0549**	0.1233***	-0.0396***	-0.0263**	-0.0260	-0.0140***
	(0.0041)	(0.0239)	(0.0223)	(0.0191)	(0.0150)	(0.0126)	(0.0207)	(0.0026)
Age squared of household heads	-0.0002***	-0.0013***	-0.0007***	-0.0013***	0.0006***	0.0005***	0.0007***	0.0001***
	(0.0000)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0000)
Gender of household head (male=1, female=0)	-0.0382	-0.4097***	0.3645**	0.5771***	-0.4978***	-0.1663*	-0.0721	0.0338*
	(0.0260)	(0.1360)	(0.1721)	(0.1710)	(0.0909)	(0.0942)	(0.1566)	(0.0173)
Ethnic minorities (yes=1, Kinh=0)	-0.3843***	-0.5678*	-1.1928***	0.7370***	-0.8648***	0.2361**	-1.0454***	0.2432***
	(0.0561)	(0.3085)	(0.2192)	(0.1521)	(0.1921)	(0.1195)	(0.1267)	(0.0360)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.7636***	3.3031***	1.3617**	4.2311***	5.2798***	1.1064***	1.8050***	0.7455***
	(0.1263)	(0.8451)	(0.5453)	(0.5251)	(0.4835)	(0.3660)	(0.4543)	(0.0861)
Observations	12,154	12,154	12,154	12,154	12,154	12,154	12,154	12,154
R-squared	0.178	0.032	0.039	0.102	0.059	0.039	0.111	0.132

Note: This table reports district fixed-effect RDD regressions of income and poverty of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.6. The district fixed-effect RDD-DD regressions of employment of individuals aged 15-64

Explanatory variables	Dependent variables					
	Currently working (yes=1, no=0)	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (wage workers)	Log of monthly wage (all workers)
	(1)	(2)	(3)	(4)	(5)	(6)
Program * Post-program period	-0.0189	-0.1021*	0.0561***	0.0270	0.1280	0.5345*
	(0.0209)	(0.0569)	(0.0158)	(0.0546)	(0.2707)	(0.3071)
(Poverty rate – 50) * Post-program period	-0.0028	0.0066	-0.0060***	-0.0034	-0.0054	-0.0319
	(0.0027)	(0.0059)	(0.0019)	(0.0044)	(0.0336)	(0.0294)
Program * (Poverty rate – 50) * Post-program period	0.0048*	-0.0023	0.0049**	0.0021	0.0035	-0.0039
	(0.0028)	(0.0064)	(0.0019)	(0.0051)	(0.0349)	(0.0325)
Age	0.0417***	0.0114***	0.0062***	0.0240***	0.0435***	0.2651***
	(0.0023)	(0.0021)	(0.0010)	(0.0012)	(0.0064)	(0.0127)
Age squared	-0.0005***	-0.0001***	-0.0001***	-0.0003***	-0.0006***	-0.0037***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0002)
Male	0.0045	-0.0822***	-0.0076**	0.0942***	0.0886***	1.0887***
	(0.0047)	(0.0075)	(0.0032)	(0.0057)	(0.0197)	(0.0628)
Ethnic minorities (yes=1, Kinh=0)	0.0590***	0.1939***	-0.1021***	-0.0328*	-0.3696***	-0.2361
	(0.0132)	(0.0283)	(0.0113)	(0.0180)	(0.0514)	(0.1705)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.1246***	0.4184***	0.0093	-0.3031***	6.8637***	-2.9807***
	(0.0463)	(0.0455)	(0.0168)	(0.0275)	(0.1376)	(0.2782)
Observations	118,369	118,369	118,369	118,369	27,361	118,369
R-squared	0.174	0.191	0.070	0.187	0.202	0.167

Note: This table reports district fixed-effect RDD-DD regressions of employment of individuals using individual-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.7. The impact of the program on households' income and poverty

Explanatory variables	Dependent variables					
	Share of income from wages (in percent)	Share of income from nonfarm production (in percent)	Share of income from farm production (in percent)	Share of private remittances (in percent)	Share of public cash transfers (in percent)	Share of income from other sources (in percent)
	(1)	(2)	(3)	(4)	(5)	(6)
Program * Post-program period	2.4046	4.1918**	-15.2273***	2.6543**	1.4392*	4.5374***
	(3.6972)	(1.7090)	(4.4861)	(1.0337)	(0.7440)	(1.3819)
(Poverty rate – 50) * Post-program period	-0.2635	-0.3696*	1.0891**	-0.1838	-0.0554	-0.2167
	(0.3709)	(0.2036)	(0.4849)	(0.1581)	(0.0634)	(0.1631)
Program * (Poverty rate – 50) * Post-program period	-0.0163	0.3133	-0.6639	0.1126	-0.0141	0.2683
	(0.4001)	(0.2077)	(0.5139)	(0.1629)	(0.0974)	(0.1726)
Age of household heads	-0.1432	0.1256***	1.1810***	-0.4116***	-0.4833***	-0.2686***
	(0.1243)	(0.0379)	(0.1429)	(0.0533)	(0.0495)	(0.0426)
Age squared of household heads	-0.0010	-0.0022***	-0.0120***	0.0055***	0.0063***	0.0034***
	(0.0012)	(0.0004)	(0.0014)	(0.0006)	(0.0006)	(0.0005)
Gender of household head (male=1, female=0)	-3.6036***	0.1971	8.6076***	-3.6608***	-0.3850*	-1.1553***
	(0.7196)	(0.3688)	(0.7596)	(0.5531)	(0.2236)	(0.3021)
Ethnic minorities (yes=1, Kinh=0)	-3.0134**	-11.8797***	15.4604***	-0.7899	1.0040***	-0.7815***
	(1.4817)	(0.9528)	(1.7760)	(0.4945)	(0.2947)	(0.2687)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	28.6026***	13.1056***	24.7434***	14.5162***	8.9215***	10.1106***
	(3.0573)	(1.2043)	(3.6762)	(1.6011)	(1.2172)	(0.9337)
Observations	40,468	40,468	40,468	40,468	40,468	40,468
R-squared	0.191	0.092	0.296	0.111	0.127	0.059

Note: This table reports district fixed-effect RDD-DD regressions of share of income from different sources of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.8. The district fixed-effect RDD-DD regressions of employment of individuals using the sample without the program 135 communes

Explanatory variables	Dependent variables					
	Currently working (yes=1, no=0)	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (wage workers)	Log of monthly wage (all workers)
	(1)	(2)	(3)	(4)	(5)	(6)
Program * Post-program period	-0.0356	-0.1896***	0.0623***	0.0917*	0.1535	0.7408**
	(0.0292)	(0.0623)	(0.0225)	(0.0501)	(0.2958)	(0.3287)
(Poverty rate – 50) * Post-program period	0.0020	-0.0140*	0.0050	0.0109**	0.0276	0.0326
	(0.0040)	(0.0084)	(0.0034)	(0.0047)	(0.0398)	(0.0337)
Program * (Poverty rate – 50) * Post-program period	0.0002	0.0184**	-0.0061*	-0.0121***	-0.0297	-0.0665**
	(0.0040)	(0.0080)	(0.0033)	(0.0041)	(0.0388)	(0.0310)
Age	0.0378***	0.0229***	0.0042***	0.0107***	0.0422***	0.1122***
	(0.0017)	(0.0014)	(0.0006)	(0.0008)	(0.0063)	(0.0077)
Age squared	-0.0005***	-0.0003***	-0.0000***	-0.0001***	-0.0006***	-0.0015***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0001)
Male	0.0130**	-0.0656***	-0.0086**	0.0872***	0.0968***	1.0201***
	(0.0058)	(0.0085)	(0.0034)	(0.0056)	(0.0248)	(0.0655)
Ethnic minorities (yes=1, Kinh=0)	0.0497***	0.1700***	-0.0961***	-0.0242	-0.3798***	-0.2234
	(0.0129)	(0.0283)	(0.0121)	(0.0169)	(0.0595)	(0.1549)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.1920***	0.2662***	0.0321**	-0.1063***	6.9410***	-0.7118***
	(0.0379)	(0.0366)	(0.0127)	(0.0212)	(0.1305)	(0.2077)
Observations	91,916	91,916	91,916	91,916	19,209	91,916
R-squared	0.292	0.204	0.068	0.183	0.189	0.162

Note: This table reports district fixed-effect RDD-DD regressions of employment of individuals using individual-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.9. The district fixed-effect RDD-DD regressions of individual's health and children's education using the sample without the program 135 communes

Explanatory variables	Dependent variables						
	Having health insurance (yes=1, no=0)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	The annual number of inpatient healthcare visits	The number of completed schooling years (children aged 6-17)	Currently attending school (children aged 6-17)	Log of education subsidy for students (children aged 6-17)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Program * Post-program period	0.1206	0.4203**	0.4249**	-0.0047	0.4343	0.0071	-0.0142
	(0.1006)	(0.2041)	(0.1831)	(0.0530)	(0.3342)	(0.0497)	(0.0283)
(Poverty rate – 50) * Post-program period	0.0285**	0.0723**	0.0684**	0.0038	-0.0134	-0.0097	0.0007
	(0.0111)	(0.0312)	(0.0300)	(0.0064)	(0.0377)	(0.0062)	(0.0027)
Program * (Poverty rate – 50) * Post-program period	-0.0188*	-0.0743**	-0.0709**	-0.0033	0.0150	0.0070	0.0009
	(0.0104)	(0.0309)	(0.0298)	(0.0063)	(0.0359)	(0.0060)	(0.0022)
Age	-0.0029***	-0.0049	-0.0046	-0.0002	1.1898***	0.1488***	-0.0095***
	(0.0009)	(0.0044)	(0.0044)	(0.0007)	(0.0484)	(0.0114)	(0.0008)
Age squared	0.0000***	0.0003***	0.0002***	0.0000***	-0.0203***	-0.0078***	0.0001***
	(0.0000)	(0.0001)	(0.0001)	(0.0000)	(0.0023)	(0.0005)	(0.0000)
Male	0.0158***	-0.1239***	-0.1213***	-0.0025	0.1608**	0.0421***	0.0081**
	(0.0032)	(0.0234)	(0.0209)	(0.0068)	(0.0622)	(0.0120)	(0.0034)
Ethnic minorities (yes=1, Kinh=0)	0.0365	-0.2617***	-0.2596***	-0.0021	-0.8599***	-0.0915***	0.0484***
	(0.0263)	(0.0905)	(0.0926)	(0.0109)	(0.1712)	(0.0296)	(0.0128)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.2514***	0.6532***	0.5861***	0.0670***	-5.7179***	0.2867***	0.2305***
	(0.0245)	(0.0717)	(0.0701)	(0.0124)	(0.3146)	(0.0685)	(0.0187)
Observations	134,049	61,118	61,118	61,118	35,930	35,930	134,049
R-squared	0.532	0.097	0.092	0.030	0.520	0.196	0.182

Note: This table reports district fixed-effect RDD-DD regressions of individual's health and children's education using individual-level observations. Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.10. The district fixed-effect RDD-DD regressions of households' income and poverty using the sample without the program 135 communes

Explanatory variables	Dependent variables							
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources	Income poor households
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program * Post-program period	-0.0517	0.4750	0.9983**	-0.4430*	0.5304	0.9442***	1.1550**	-0.0503
	(0.0919)	(0.5635)	(0.4380)	(0.2309)	(0.5760)	(0.2807)	(0.4489)	(0.0598)
(Poverty rate – 50) * Post-program period	0.0044	-0.0997*	-0.1156**	0.0247	-0.0059	-0.0651**	0.0079	-0.0022
	(0.0111)	(0.0520)	(0.0560)	(0.0305)	(0.0663)	(0.0277)	(0.0531)	(0.0058)
Program * (Poverty rate – 50) * Post-program period	-0.0085	0.0527	0.1009*	-0.0203	-0.0306	0.0529	-0.0019	0.0053
	(0.0115)	(0.0570)	(0.0582)	(0.0311)	(0.0709)	(0.0342)	(0.0569)	(0.0063)
Age of household heads	0.0268***	0.0528***	0.0657***	0.1398***	-0.0501***	-0.1080***	-0.0588***	-0.0142***
	(0.0026)	(0.0155)	(0.0099)	(0.0150)	(0.0099)	(0.0115)	(0.0126)	(0.0015)
Age squared of household heads	-0.0003***	-0.0008***	-0.0008***	-0.0014***	0.0007***	0.0014***	0.0007***	0.0001***
	(0.0000)	(0.0002)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0000)
Gender of household head (male=1, female=0)	0.0166	0.0184	0.2169***	0.7117***	-0.3702***	-0.0586	-0.3139***	-0.0139
	(0.0203)	(0.0978)	(0.0711)	(0.0886)	(0.0617)	(0.0631)	(0.0792)	(0.0100)
Ethnic minorities (yes=1, Kinh=0)	-0.5658***	-0.3437*	-1.7880***	0.9697***	-0.4657***	0.4397***	-0.5626***	0.2113***
	(0.0573)	(0.2002)	(0.1854)	(0.1433)	(0.1536)	(0.1129)	(0.1200)	(0.0242)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.5712***	2.9181***	1.3450***	3.5091***	4.9270***	2.1595***	2.9019***	0.8883***
	(0.0961)	(0.4433)	(0.2898)	(0.3731)	(0.3201)	(0.3182)	(0.3225)	(0.0496)
Observations	28,920	28,920	28,920	28,920	28,920	28,920	28,920	28,920
R-squared	0.389	0.180	0.117	0.160	0.241	0.164	0.101	0.275

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.11. The district fixed-effect RDD-DD regressions of households' access to credit using the sample without the program 135 communes

Explanatory variables	Dependent variables					
	Borrow from formal sources (yes=1, no=0)	Borrow from microcredit sources (yes=1, no=0)	Log of formal loan (the sample of borrowing households)	Log of microcredit (the sample of borrowing households)	Log of formal loan (the sample all households)	Log of microcredit (the sample all households)
	(1)	(2)	(3)	(4)	(5)	(6)
Program * Post-program period	0.2078***	0.1529***	-0.1693	-0.1595	1.7207***	1.5428***
	(0.0717)	(0.0547)	(0.1472)	(0.1138)	(0.5882)	(0.5202)
(Poverty rate – 50) * Post-program period	-0.0229***	-0.0171**	0.0124	-0.0023	-0.1665**	-0.1732**
	(0.0085)	(0.0074)	(0.0194)	(0.0144)	(0.0715)	(0.0700)
Program * (Poverty rate – 50) * Post-program period	0.0202**	0.0174**	-0.0189	0.0069	0.1452*	0.1775**
	(0.0089)	(0.0077)	(0.0199)	(0.0148)	(0.0745)	(0.0741)
Age of household heads	0.0080***	0.0033**	0.0207***	0.0147***	0.0711***	0.0354**
	(0.0018)	(0.0014)	(0.0067)	(0.0048)	(0.0144)	(0.0139)
Age squared of household heads	-0.0001***	-0.0001***	-0.0002***	-0.0001***	-0.0010***	-0.0006***
	(0.0000)	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Gender of household head (male=1, female=0)	0.0245*	0.0027	0.1278***	0.0623**	0.2379**	0.0333
	(0.0129)	(0.0091)	(0.0374)	(0.0276)	(0.1026)	(0.0914)
Ethnic minorities (yes=1, Kinh=0)	-0.0129	0.0503**	-0.5654***	-0.2406***	-0.3353*	0.4499**
	(0.0228)	(0.0198)	(0.0754)	(0.0356)	(0.1794)	(0.1958)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.1996***	0.0740*	9.1621***	8.8840***	1.9772***	0.5824
	(0.0506)	(0.0441)	(0.1536)	(0.1129)	(0.3941)	(0.4371)
Observations	21,737	28,920	8,215	8,085	28,920	28,920
R-squared	0.116	0.123	0.384	0.335	0.207	0.126

Note: This table reports district fixed-effect RDD-DD regressions of loans of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.12. The placebo test of the program effect on individuals' outcomes

Explanatory variables	Dependent variables							
	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (all workers)	Log of monthly wage (wage workers)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	Log of education subsidy for students (children aged 6-17)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program * Year 2008	0.0276	-0.0009	-0.0262*	0.1003	-0.1977*	0.0259	0.0187	-0.4615
	(0.0346)	(0.0149)	(0.0156)	(0.2917)	(0.1086)	(0.1326)	(0.1283)	(0.3139)
(Poverty rate – 50) * Year 2008	-0.0044	0.0001	0.0013	0.0110	0.0123	-0.0081	-0.0061	0.0023
	(0.0038)	(0.0019)	(0.0022)	(0.0251)	(0.0110)	(0.0150)	(0.0141)	(0.0285)
Program * (Poverty rate – 50) * Year 2008	0.0051	-0.0000	-0.0007	-0.0181	-0.0093	0.0146	0.0098	0.0363
	(0.0039)	(0.0019)	(0.0023)	(0.0287)	(0.0122)	(0.0159)	(0.0152)	(0.0332)
Age	0.0277***	0.0039***	0.0077***	0.1213***	0.0420***	-0.0050	-0.0054	0.3567***
	(0.0017)	(0.0007)	(0.0006)	(0.0087)	(0.0086)	(0.0043)	(0.0042)	(0.0581)
Age squared	-0.0003***	-0.0000***	-0.0001***	-0.0015***	-0.0005***	0.0003***	0.0002***	-0.0171***
	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0025)
Male	-0.0314***	-0.0062	0.0476***	0.9325***	0.0348	-0.1440***	-0.1333***	0.1443***
	(0.0082)	(0.0038)	(0.0055)	(0.0706)	(0.0294)	(0.0276)	(0.0265)	(0.0386)
Ethnic minorities (yes=1, Kinh=0)	0.2366***	-0.1104***	-0.0764***	-0.3756*	-0.2764***	-0.2440**	-0.2373**	0.8376***
	(0.0419)	(0.0175)	(0.0242)	(0.2245)	(0.0455)	(0.1173)	(0.1150)	(0.1686)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.1410***	0.0497***	-0.0162	-0.7904***	6.7972***	0.7029***	0.6362***	-1.2519***
	(0.0428)	(0.0140)	(0.0205)	(0.2558)	(0.1504)	(0.0908)	(0.0885)	(0.3508)
Observations	41,780	41,780	41,780	41,780	7,773	62,232	62,232	19,133
R-squared	0.220	0.083	0.102	0.161	0.201	0.099	0.094	0.417

Note: This table reports district fixed-effect RDD-DD regressions of employment of individuals using individual-level observations. The sample used in these regressions includes VHLSS 2004, 2006 and 2008. The VHLSS 2008 is used as the survey after the placebo program.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.13. The placebo test of the program effect on individual's health and children's education

Explanatory variables	Dependent variables										
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources	Borrow from formal sources (yes=1, no=0)	Borrow from micro-credit sources (yes=1, no=0)	Log of formal loan (the sample of borrowing households)	Log of microcredit (the sample of borrowing households)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Program * Year 2008	-0.0349	0.0295	-0.0273	0.3211	0.0359	0.2058	-0.1799	0.0386	0.0268	0.1063	0.0532
	(0.0592)	(0.5273)	(0.3235)	(0.2259)	(0.4219)	(0.2911)	(0.3593)	(0.0614)	(0.0487)	(0.0900)	(0.1331)
(Poverty rate – 50) * Year 2008	-0.0013	0.0285	-0.0383	-0.0532*	-0.0216	-0.0368	0.0214	0.0010	0.0034	0.0069	0.0257**
	(0.0086)	(0.0440)	(0.0372)	(0.0305)	(0.0397)	(0.0300)	(0.0389)	(0.0088)	(0.0050)	(0.0115)	(0.0122)
Program * (Poverty rate – 50) * Year 2008	0.0001	-0.0256	0.0418	0.0518*	0.0097	0.0585	-0.0233	-0.0028	-0.0029	-0.0081	-0.0289**
	(0.0091)	(0.0517)	(0.0404)	(0.0309)	(0.0436)	(0.0371)	(0.0411)	(0.0091)	(0.0059)	(0.0123)	(0.0139)
Age of household heads	0.0173***	0.0925***	0.0527**	0.1209***	-0.0456***	-0.0213*	-0.0266	0.0137***	0.0063***	0.0236***	0.0041
	(0.0039)	(0.0205)	(0.0205)	(0.0194)	(0.0129)	(0.0126)	(0.0205)	(0.0029)	(0.0021)	(0.0070)	(0.0060)
Age squared of household heads	-0.0001***	-0.0013***	-0.0006***	-0.0012***	0.0006***	0.0005***	0.0007***	-0.0002***	-0.0001***	-0.0002***	-0.0000
	(0.0000)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0000)	(0.0000)	(0.0001)	(0.0001)
Gender of hh. head (male=1, female=0)	0.0006	-0.1157	0.5530***	0.4849***	-0.4818***	-0.1337	0.0139	0.0496***	0.0202	0.0798	0.0819*
	(0.0274)	(0.1297)	(0.1250)	(0.1357)	(0.0787)	(0.0825)	(0.1498)	(0.0170)	(0.0122)	(0.0483)	(0.0418)
Ethnic minorities (yes=1, Kinh=0)	-0.5658***	-0.3507	-1.8163***	0.6421***	-0.4542***	0.4998***	-1.1709***	-0.0606**	0.0430**	-0.4543***	-0.0261
	(0.0597)	(0.2528)	(0.3140)	(0.1440)	(0.1494)	(0.1835)	(0.2166)	(0.0277)	(0.0212)	(0.0572)	(0.0545)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.8094***	2.3786***	1.4655***	4.4929***	5.0903***	0.5021	1.6602***	0.0642	-0.0288	9.1221***	8.9677***
	(0.1221)	(0.4986)	(0.4972)	(0.4803)	(0.3533)	(0.3749)	(0.4398)	(0.0743)	(0.0601)	(0.1666)	(0.1519)
Observations	12,154	12,154	12,154	12,154	12,154	12,154	12,154	12,154	12,154	4,536	2,346
R-squared	0.298	0.159	0.149	0.214	0.238	0.120	0.159	0.130	0.105	0.192	0.213

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.14. The placebo test of the program effect on individuals' outcomes using the threshold of the poverty rate at 40%

Explanatory variables	Dependent variables							
	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (all workers)	Log of monthly wage (wage workers)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	Log of education subsidy for students (children aged 6-17)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Districts with the 2006 poverty above 40% * Year 2008	0.0453	0.0070	-0.0186	0.0430	0.1368	0.1083	-0.0519*	0.2058
	(0.0389)	(0.0155)	(0.0300)	(0.2323)	(0.1777)	(0.1742)	(0.0268)	(0.3198)
(Poverty rate – 40) * Year 2008	-0.0034*	0.0001	0.0031**	-0.0147	-0.0067	-0.0057	0.0001	0.0339***
	(0.0018)	(0.0010)	(0.0013)	(0.0109)	(0.0082)	(0.0079)	(0.0009)	(0.0111)
Districts with the 2006 poverty above 40% * (Poverty rate – 40) * Year 2008	0.0098	-0.0056***	-0.0066	-0.0174	-0.0532**	-0.0508**	0.0075	-0.0805
	(0.0060)	(0.0021)	(0.0045)	(0.0294)	(0.0241)	(0.0232)	(0.0050)	(0.0525)
Age	0.0320***	0.0084***	0.0094***	0.1108***	-0.0090***	-0.0084***	0.1544***	0.1415***
	(0.0008)	(0.0004)	(0.0004)	(0.0039)	(0.0024)	(0.0022)	(0.0055)	(0.0187)
Age squared	-0.0003***	-0.0001***	-0.0001***	-0.0015***	0.0004***	0.0003***	-0.0079***	-0.0071***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0003)	(0.0009)
Male	-0.0737***	-0.0208***	0.1152***	1.2509***	-0.1637***	-0.1555***	0.0130***	-0.0085
	(0.0086)	(0.0039)	(0.0048)	(0.0421)	(0.0170)	(0.0156)	(0.0047)	(0.0129)
Ethnic minorities (yes=1, Kinh=0)	0.1133***	-0.0679***	0.0083	0.1569*	-0.1082**	-0.1096**	-0.1046***	0.7840***
	(0.0122)	(0.0055)	(0.0089)	(0.0829)	(0.0523)	(0.0502)	(0.0101)	(0.1201)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.0105	-0.0526***	-0.0442***	-0.4257***	0.6811***	0.6157***	0.2591***	-0.4258***
	(0.0182)	(0.0072)	(0.0092)	(0.0872)	(0.0297)	(0.0283)	(0.0292)	(0.1131)
Observations	322,913	322,913	322,913	322,913	216,298	216,298	106,531	106,531
R-squared	0.174	0.058	0.137	0.133	0.114	0.113	0.196	0.301

Note: This table reports district fixed-effect RDD-DD regressions of employment of individuals using individual-level observations. The placebo treatment includes districts with the 2006 MOLISA poverty above 40%. The sample consists of individuals living in districts with the 2006 MOLISA poverty rate between 30% and 50%. Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.15. The placebo test of the program effect on individuals' outcomes using the threshold of the poverty rate at 30%

Explanatory variables	Dependent variables							
	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (all workers)	Log of monthly wage (wage workers)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	Log of education subsidy for students (children aged 6-17)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Districts with the 2006 poverty above 30% * Year 2008	-0.0083	-0.0027	-0.0028	-0.1095	0.2970	0.3128	0.0201	0.0088
	(0.0370)	(0.0178)	(0.0273)	(0.2217)	(0.2287)	(0.2325)	(0.0170)	(0.1262)
(Poverty rate – 30) * Year 2008	0.0045	-0.0003	-0.0033	-0.0292	-0.0084	-0.0075	-0.0011	0.0239
	(0.0046)	(0.0023)	(0.0026)	(0.0192)	(0.0196)	(0.0187)	(0.0021)	(0.0168)
Districts with the 2006 poverty above 40% * (Poverty rate – 30) * Year 2008	-0.0151**	0.0011	0.0136***	0.0466	-0.0420	-0.0443	-0.0007	0.0193
	(0.0069)	(0.0036)	(0.0050)	(0.0413)	(0.0363)	(0.0363)	(0.0033)	(0.0330)
Age	0.0333***	0.0091***	0.0091***	0.1083***	-0.0091***	-0.0084***	0.1542***	0.1161***
	(0.0009)	(0.0005)	(0.0005)	(0.0044)	(0.0026)	(0.0024)	(0.0063)	(0.0194)
Age squared	-0.0003***	-0.0001***	-0.0001***	-0.0015***	0.0004***	0.0003***	-0.0079***	-0.0058***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0003)	(0.0009)
Male	-0.0779***	-0.0233***	0.1222***	1.3178***	-0.1633***	-0.1571***	0.0129***	-0.0144
	(0.0103)	(0.0047)	(0.0054)	(0.0473)	(0.0187)	(0.0169)	(0.0048)	(0.0138)
Ethnic minorities (yes=1, Kinh=0)	0.0921***	-0.0585***	0.0180*	0.2516***	-0.0552	-0.0600	-0.0869***	0.7475***
	(0.0122)	(0.0056)	(0.0095)	(0.0865)	(0.0565)	(0.0537)	(0.0097)	(0.1506)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.0476**	-0.0664***	-0.0327***	-0.3447***	0.6606***	0.5970***	0.2556***	-0.3239***
	(0.0197)	(0.0082)	(0.0105)	(0.0982)	(0.0321)	(0.0302)	(0.0333)	(0.1140)
Observations	251,539	251,539	251,539	251,539	167,838	167,838	80,003	80,003
R-squared	0.171	0.057	0.134	0.132	0.118	0.117	0.196	0.305

Note: This table reports district fixed-effect RDD-DD regressions of employment of individuals using individual-level observations. The placebo treatment includes districts with the 2006 MOLISA poverty above 30%. The sample consists of individuals living in districts with the 2006 MOLISA poverty rate between 20% and 40%. Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.16. The placebo test of the program effect on exogenous variables of individuals

Explanatory variables	Dependent variables					
	Age of individuals	Gender of individuals (male=1, female=0)	Ethnic minorities (yes=1, Kinh=0)	The completed education level (aged from 30)	Individual completed high school and above (aged from 30)	Individual completed college and above (aged from 30)
	(1)	(2)	(3)	(4)	(5)	(6)
Program * Post-program period	-1.0608	0.0024	-0.0278	-0.0161	0.0007	-0.0090
	(1.0445)	(0.0131)	(0.0689)	(0.1153)	(0.0270)	(0.0075)
(Poverty rate – 50) * Post-program period	0.0610	-0.0013	0.0008	-0.0008	-0.0008	0.0005
	(0.1287)	(0.0014)	(0.0073)	(0.0118)	(0.0033)	(0.0006)
Program * (Poverty rate – 50) * Post-program period	-0.1254	0.0023	-0.0007	0.0028	0.0011	-0.0005
	(0.1341)	(0.0014)	(0.0076)	(0.0128)	(0.0034)	(0.0007)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	26.4921***	0.4950***	0.7302***	1.9141***	0.0964***	0.0093***
	(0.1128)	(0.0013)	(0.0078)	(0.0135)	(0.0032)	(0.0009)
Observations	187,734	187,737	187,734	76,879	76,882	76,882
R-squared	0.028	0.002	0.559	0.197	0.051	0.022

Note: This table reports district fixed-effect RDD-DD regressions of individual-level characteristics.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.17. The district fixed-effect RDD-DD regressions of individual-level outcomes using districts with the 2006 poverty rate from 35%

Explanatory variables	Dependent variables							
	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (all workers)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	Currently attending school (children aged 6-17)	Log of education subsidy for students
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program * Post-program period	-0.1021*	0.0561***	0.0270	0.5345*	0.3477**	0.3535***	-0.0080	1.2841***
	(0.0569)	(0.0158)	(0.0546)	(0.3071)	(0.1461)	(0.1340)	(0.0448)	(0.4805)
(Poverty rate – 50) * Post-program period	0.0066	-0.0060***	-0.0034	-0.0319	-0.0566***	-0.0535***	0.0075	-0.0467
	(0.0059)	(0.0019)	(0.0044)	(0.0294)	(0.0210)	(0.0201)	(0.0049)	(0.0517)
Program * (Poverty rate – 50) * Post-program period	-0.0023	0.0049**	0.0021	-0.0039	0.0558**	0.0519**	-0.0102**	0.0504
	(0.0064)	(0.0019)	(0.0051)	(0.0325)	(0.0214)	(0.0205)	(0.0051)	(0.0546)
Age	0.0114***	0.0062***	0.0240***	0.2651***	-0.0143***	-0.0126***	0.1571***	0.3874***
	(0.0021)	(0.0010)	(0.0012)	(0.0127)	(0.0033)	(0.0031)	(0.0093)	(0.0473)
Age squared	-0.0001***	-0.0001***	-0.0003***	-0.0037***	0.0004***	0.0004***	-0.0081***	-0.0197***
	(0.0000)	(0.0000)	(0.0000)	(0.0002)	(0.0001)	(0.0001)	(0.0004)	(0.0021)
Male	-0.0822***	-0.0076**	0.0942***	1.0887***	-0.1543***	-0.1370***	0.0370***	0.1056***
	(0.0075)	(0.0032)	(0.0057)	(0.0628)	(0.0233)	(0.0220)	(0.0105)	(0.0325)
Ethnic minorities (yes=1, Kinh=0)	0.1939***	-0.1021***	-0.0328*	-0.2361	-0.2387**	-0.2305**	-0.1293***	0.7992***
	(0.0283)	(0.0113)	(0.0180)	(0.1705)	(0.1059)	(0.1048)	(0.0258)	(0.1114)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.4184***	0.0093	-0.3031***	-2.9807***	0.7855***	0.6951***	0.2662***	-1.1919***
	(0.0455)	(0.0168)	(0.0275)	(0.2782)	(0.0797)	(0.0782)	(0.0530)	(0.2757)
Observations	118,369	118,369	118,369	118,369	82,402	82,402	50,645	50,645
R-squared	0.191	0.070	0.187	0.167	0.084	0.083	0.195	0.330

Note: This table reports district fixed-effect RDD-DD regressions of individual-level outcomes.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.18. The district fixed-effect RDD-DD regressions of individual-level outcomes using a poverty rate bandwidth of 10%

Explanatory variables	Dependent variables							
	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (all workers)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	Currently attending school (children aged 6-17)	Log of education subsidy for students
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program * Post-program period	-0.1299**	0.0480***	0.0419	0.5341*	0.2424*	0.2608**	0.0122	1.1550**
	(0.0522)	(0.0142)	(0.0493)	(0.2805)	(0.1397)	(0.1300)	(0.0400)	(0.4450)
(Poverty rate – 50) * Post-program period	0.0113***	-0.0040***	-0.0062**	-0.0304*	-0.0250*	-0.0248**	0.0020	-0.0119
	(0.0033)	(0.0014)	(0.0024)	(0.0158)	(0.0128)	(0.0121)	(0.0025)	(0.0282)
Program * (Poverty rate – 50) * Post-program period	-0.0067	0.0029*	0.0050	-0.0040	0.0232*	0.0225*	-0.0047	0.0153
	(0.0041)	(0.0015)	(0.0034)	(0.0207)	(0.0134)	(0.0127)	(0.0029)	(0.0333)
Age	0.0262***	0.0043***	0.0099***	0.1107***	-0.0056*	-0.0050*	0.1609***	0.3477***
	(0.0012)	(0.0004)	(0.0005)	(0.0054)	(0.0030)	(0.0030)	(0.0076)	(0.0393)
Age squared	-0.0003***	-0.0000***	-0.0001***	-0.0015***	0.0003***	0.0002***	-0.0084***	-0.0177***
	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0003)	(0.0018)
Male	-0.0728***	-0.0072***	0.0914***	1.1042***	-0.1599***	-0.1471***	0.0328***	0.0889***
	(0.0064)	(0.0027)	(0.0047)	(0.0553)	(0.0211)	(0.0200)	(0.0081)	(0.0262)
Ethnic minorities (yes=1, Kinh=0)	0.1575***	-0.0863***	-0.0237**	-0.1006	-0.2153***	-0.2013***	-0.1091***	0.7050***
	(0.0191)	(0.0088)	(0.0114)	(0.1125)	(0.0675)	(0.0657)	(0.0184)	(0.0889)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.2074***	0.0229***	-0.0880***	-0.6223***	0.6915***	0.6096***	0.2490***	-0.9925***
	(0.0268)	(0.0077)	(0.0132)	(0.1374)	(0.0545)	(0.0527)	(0.0417)	(0.2224)
Observations	174,774	174,774	174,774	174,774	117,124	117,124	65,879	65,879
R-squared	0.187	0.063	0.172	0.155	0.099	0.093	0.206	0.337

Note: This table reports district fixed-effect RDD-DD regressions of individual-level outcomes.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.19. The district fixed-effect RDD-DD regressions of individual-level outcomes using a poverty rate bandwidth of 7%

Explanatory variables	Dependent variables							
	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (all workers)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	Currently attending school (children aged 6-17)	Log of education subsidy for students
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program * Post-program period	-0.1561**	0.0575***	0.0419	0.3801	0.3777*	0.3388*	0.0697	1.5792**
	(0.0733)	(0.0171)	(0.0775)	(0.4918)	(0.1922)	(0.1796)	(0.0619)	(0.7210)
(Poverty rate – 50) * Post-program period	0.0069	-0.0057***	-0.0038	-0.0332	-0.0582**	-0.0549**	0.0076	-0.0473
	(0.0057)	(0.0018)	(0.0043)	(0.0269)	(0.0226)	(0.0219)	(0.0049)	(0.0517)
Program * (Poverty rate – 50) * Post-program period	0.0040	0.0046	0.0007	0.0239	0.0474	0.0577	-0.0297***	0.0351
	(0.0127)	(0.0037)	(0.0126)	(0.0752)	(0.0393)	(0.0352)	(0.0092)	(0.1234)
Age	0.0254***	0.0045***	0.0103***	0.1130***	-0.0054	-0.0055	0.1608***	0.3268***
	(0.0015)	(0.0006)	(0.0007)	(0.0079)	(0.0049)	(0.0048)	(0.0103)	(0.0533)
Age squared	-0.0003***	-0.0000***	-0.0001***	-0.0015***	0.0003***	0.0002***	-0.0082***	-0.0162***
	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0005)	(0.0023)
Male	-0.0578***	-0.0084**	0.0826***	0.9369***	-0.1580***	-0.1447***	0.0295**	0.0840**
	(0.0084)	(0.0037)	(0.0061)	(0.0602)	(0.0341)	(0.0328)	(0.0131)	(0.0388)
Ethnic minorities (yes=1, Kinh=0)	0.1941***	-0.1031***	-0.0340*	-0.2291	-0.2750**	-0.2706**	-0.1525***	0.8975***
	(0.0286)	(0.0120)	(0.0193)	(0.1848)	(0.1154)	(0.1124)	(0.0256)	(0.1226)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.1668***	0.0354***	-0.0770***	-0.5728***	0.7621***	0.6897***	0.2459***	-1.2109***
	(0.0390)	(0.0113)	(0.0214)	(0.2116)	(0.0892)	(0.0867)	(0.0574)	(0.3148)
Observations	90,314	90,314	90,314	90,314	61,659	61,659	34,203	34,203
R-squared	0.190	0.067	0.174	0.153	0.097	0.091	0.197	0.295

Note: This table reports district fixed-effect RDD-DD regressions of individual-level outcomes.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.20. The district fixed-effect RDD-DD regressions of individual-level outcomes using a 'donut' sample

Explanatory variables	Dependent variables							
	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (all workers)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	Currently attending school (children aged 6-17)	Log of education subsidy for students
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program * Post-program period	-0.1479*	0.0597***	0.0331	0.1833	0.2307	0.1966	0.0656	1.5132*
	(0.0780)	(0.0194)	(0.0796)	(0.5181)	(0.2178)	(0.2087)	(0.0689)	(0.7682)
(Poverty rate – 50) * Post-program period	0.0063	-0.0044	-0.0040	0.0379	0.0039	0.0048	0.0112	-0.0234
	(0.0118)	(0.0048)	(0.0079)	(0.0468)	(0.0487)	(0.0509)	(0.0104)	(0.0981)
Program * (Poverty rate – 50) * Post-program period	0.0022	0.0007	0.0052	-0.0387	-0.0160	-0.0035	-0.0365**	0.0025
	(0.0186)	(0.0058)	(0.0166)	(0.0937)	(0.0605)	(0.0586)	(0.0138)	(0.1728)
Age	0.0246***	0.0053***	0.0107***	0.1213***	-0.0056	-0.0048	0.1612***	0.3261***
	(0.0017)	(0.0008)	(0.0009)	(0.0095)	(0.0041)	(0.0040)	(0.0134)	(0.0619)
Age squared	-0.0003***	-0.0001***	-0.0001***	-0.0016***	0.0003***	0.0002***	-0.0082***	-0.0160***
	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0006)	(0.0027)
Male	-0.0535***	-0.0108**	0.0845***	0.9882***	-0.1671***	-0.1556***	0.0382**	0.0873*
	(0.0105)	(0.0051)	(0.0071)	(0.0740)	(0.0455)	(0.0442)	(0.0155)	(0.0440)
Ethnic minorities (yes=1, Kinh=0)	0.2283***	-0.1146***	-0.0401*	-0.1407	-0.3247**	-0.3183**	-0.1617***	0.8786***
	(0.0278)	(0.0116)	(0.0223)	(0.2000)	(0.1396)	(0.1368)	(0.0318)	(0.1500)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.1385***	0.0352**	-0.0681**	-0.6624***	0.8494***	0.7637***	0.2270***	-1.2148***
	(0.0402)	(0.0137)	(0.0261)	(0.2409)	(0.0941)	(0.0934)	(0.0753)	(0.3581)
Observations	62,432	62,432	62,432	62,432	43,227	43,227	23,967	23,967
R-squared	0.198	0.073	0.173	0.165	0.095	0.090	0.202	0.298

Note: This table reports district fixed-effect RDD-DD regressions of individual-level outcomes.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.21. The DID regressions of individual-level outcomes

Explanatory variables	Dependent variables							
	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (all workers)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	Currently attending school (children aged 6-17)	Log of education subsidy for students
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program	0.1239***	-0.0352***	-0.0445	-0.6460*	-0.2874**	-0.2743**	0.0274	0.5869*
	(0.0441)	(0.0133)	(0.0272)	(0.3508)	(0.1449)	(0.1395)	(0.0524)	(0.3346)
(Poverty rate – 50)	-0.0086	0.0036*	0.0060*	0.0550	0.0134	0.0112	-0.0093*	-0.0058
	(0.0057)	(0.0019)	(0.0032)	(0.0357)	(0.0198)	(0.0192)	(0.0052)	(0.0341)
Program * (Poverty rate – 50)	0.0088	-0.0036*	-0.0070**	-0.0446	-0.0096	-0.0073	0.0100*	0.0114
	(0.0059)	(0.0019)	(0.0033)	(0.0392)	(0.0203)	(0.0196)	(0.0056)	(0.0395)
Program * Post-program period	-0.1399***	0.0532***	0.0542	0.8080***	0.4419***	0.4473***	0.0126	0.9449**
	(0.0537)	(0.0143)	(0.0513)	(0.2988)	(0.1557)	(0.1481)	(0.0450)	(0.4628)
(Poverty rate – 50) * Post-program period	0.0086	-0.0048***	-0.0063	-0.0592**	-0.0559**	-0.0532**	0.0092*	-0.0248
	(0.0060)	(0.0017)	(0.0049)	(0.0299)	(0.0232)	(0.0225)	(0.0049)	(0.0493)
Program * (Poverty rate – 50) * Post-program period	-0.0039	0.0039**	0.0047	0.0168	0.0495**	0.0471**	-0.0131**	0.0303
	(0.0066)	(0.0017)	(0.0054)	(0.0335)	(0.0238)	(0.0230)	(0.0052)	(0.0527)
Age	0.0241***	0.0040***	0.0105***	0.1161***	-0.0070*	-0.0069*	0.1586***	0.3991***
	(0.0013)	(0.0005)	(0.0006)	(0.0066)	(0.0039)	(0.0038)	(0.0094)	(0.0486)
Age squared	-0.0003***	-0.0000***	-0.0001***	-0.0015***	0.0003***	0.0002***	-0.0082***	-0.0205***
	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0004)	(0.0022)
Male	-0.0641***	-0.0080***	0.0861***	0.9938***	-0.1551***	-0.1432***	0.0348***	0.0900***
	(0.0075)	(0.0030)	(0.0050)	(0.0569)	(0.0276)	(0.0266)	(0.0103)	(0.0344)
Ethnic minorities (yes=1, Kinh=0)	0.1911***	-0.0729***	-0.0626***	-0.5110***	-0.3782***	-0.3585***	-0.0961***	1.0711***
	(0.0273)	(0.0093)	(0.0174)	(0.1605)	(0.0769)	(0.0764)	(0.0193)	(0.1274)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.1470***	0.0470***	-0.0341	-0.1693	0.9745***	0.8798***	0.1858***	-1.6689***
	(0.0503)	(0.0144)	(0.0287)	(0.2986)	(0.1553)	(0.1520)	(0.0641)	(0.3338)
Observations	128,446	128,446	128,446	128,446	86,980	86,980	50,645	50,645
R-squared	0.141	0.044	0.126	0.085	0.052	0.046	0.137	0.204

Note: This table reports DID regression of individual-level outcomes. The impact of the program is measured by variable 'Program * Post-program period'. Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.22. The district fixed-effect RDD-DD regressions of individual-level outcomes without control variables

Explanatory variables	Dependent variables							
	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (all workers)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	Currently attending school (children aged 6-17)	Log of education subsidy for students
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program * Post-program period	-0.1087*	0.0571***	0.0401	0.6282**	0.3414**	0.3553**	0.0027	1.2549**
	(0.0567)	(0.0171)	(0.0515)	(0.2876)	(0.1556)	(0.1419)	(0.0437)	(0.4825)
(Poverty rate – 50) * Post-program period	0.0066	-0.0056***	-0.0045	-0.0407	-0.0554**	-0.0527**	0.0074	-0.0458
	(0.0057)	(0.0020)	(0.0044)	(0.0275)	(0.0228)	(0.0218)	(0.0049)	(0.0529)
Program * (Poverty rate – 50) * Post-program period	-0.0024	0.0044**	0.0033	0.0066	0.0529**	0.0498**	-0.0104**	0.0492
	(0.0062)	(0.0021)	(0.0049)	(0.0306)	(0.0232)	(0.0221)	(0.0051)	(0.0558)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.7368***	0.0378***	0.0819***	1.3837***	0.6064***	0.5057***	0.8226***	1.0583***
	(0.0059)	(0.0018)	(0.0045)	(0.0329)	(0.0073)	(0.0069)	(0.0035)	(0.0418)
Observations	128,449	128,449	128,449	128,449	86,983	86,983	50,645	50,645
R-squared	0.125	0.039	0.132	0.088	0.062	0.064	0.061	0.304

Note: This table reports district fixed-effect RDD-DD regressions of individual-level outcomes.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.23. The district fixed-effect RDD-DD regressions of individual-level outcomes using a large-specification model

Explanatory variables	Dependent variables							
	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (all workers)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	Currently attending school (children aged 6-17)	Log of education subsidy for students
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program * Post-program period	-0.1112**	0.0521***	0.0296	0.5192*	0.3505**	0.3591***	-0.0217	1.2441***
	(0.0553)	(0.0153)	(0.0522)	(0.2789)	(0.1483)	(0.1368)	(0.0355)	(0.4751)
(Poverty rate – 50) * Post-program period	0.0070	-0.0056***	-0.0038	-0.0337	-0.0572**	-0.0540**	0.0060	-0.0475
	(0.0056)	(0.0018)	(0.0043)	(0.0262)	(0.0223)	(0.0215)	(0.0039)	(0.0506)
Program * (Poverty rate – 50) * Post-program period	-0.0027	0.0046**	0.0030	0.0027	0.0567**	0.0528**	-0.0082**	0.0523
	(0.0061)	(0.0019)	(0.0049)	(0.0294)	(0.0227)	(0.0219)	(0.0041)	(0.0536)
Age	0.0268***	0.0039***	0.0089***	0.0962***	-0.0027	-0.0034	0.1373***	0.3337***
	(0.0013)	(0.0005)	(0.0005)	(0.0058)	(0.0038)	(0.0037)	(0.0109)	(0.0466)
Age squared	-0.0003***	-0.0000***	-0.0001***	-0.0012***	0.0002***	0.0002***	-0.0088***	-0.0198***
	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0005)	(0.0022)
Male	-0.0589***	-0.0096***	0.0803***	0.9564***	-0.1448***	-0.1342***	0.0290***	0.1097***
	(0.0072)	(0.0031)	(0.0054)	(0.0595)	(0.0254)	(0.0245)	(0.0087)	(0.0299)
Ethnic minorities (yes=1, Kinh=0)	0.1224***	-0.0879***	0.0062	0.0210	-0.2176**	-0.2159**	-0.0344*	0.8635***
	(0.0227)	(0.0101)	(0.0162)	(0.1591)	(0.0961)	(0.0943)	(0.0180)	(0.1237)
Additional control variables	-0.1112**	0.0521***	0.0296	0.5192*	0.3505**	0.3591***	-0.0217	1.2441***
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.2852***	0.0129	-0.1131***	-0.7239***	0.8918***	0.8090***	0.4349***	-0.9731***
	(0.0391)	(0.0123)	(0.0228)	(0.2336)	(0.0900)	(0.0866)	(0.0628)	(0.2742)
Observations	128,446	128,446	128,446	128,446	86,980	86,980	50,645	50,645
R-squared	0.232	0.072	0.215	0.193	0.100	0.095	0.284	0.336

Note: This table reports district fixed-effect RDD-DD regressions of individual-level outcomes. The additional control variables include education levels of individuals (dummy variables), education levels (dummy variables), household size, the proportion of children in households, the proportion of older members in households.

Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.

*** p<0.01, ** p<0.05, * p<0.1.

Table A.24. The district fixed-effect RDD-DD regressions of individual-level outcomes using region-specific time trend

Explanatory variables	Dependent variables							
	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (all workers)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	Currently attending school (children aged 6-17)	Log of education subsidy for students
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program * Post-program period	-0.1531***	0.0510***	0.0601	0.5362**	0.2655*	0.2872**	-0.0087	0.7291
	(0.0570)	(0.0168)	(0.0493)	(0.2695)	(0.1533)	(0.1435)	(0.0469)	(0.5125)
(Poverty rate – 50) * Post-program period	0.0097	-0.0054***	-0.0060	-0.0456*	-0.0510**	-0.0483**	0.0068	-0.0195
	(0.0059)	(0.0018)	(0.0047)	(0.0274)	(0.0228)	(0.0221)	(0.0050)	(0.0512)
Program * (Poverty rate – 50) * Post-program period	-0.0047	0.0043**	0.0045	0.0129	0.0501**	0.0467**	-0.0095*	0.0293
	(0.0064)	(0.0018)	(0.0052)	(0.0298)	(0.0229)	(0.0221)	(0.0052)	(0.0540)
Age	0.0243***	0.0040***	0.0104***	0.1130***	-0.0058	-0.0059	0.1570***	0.3932***
	(0.0013)	(0.0005)	(0.0006)	(0.0065)	(0.0039)	(0.0038)	(0.0093)	(0.0473)
Age squared	-0.0003***	-0.0000***	-0.0001***	-0.0015***	0.0003***	0.0002***	-0.0081***	-0.0199***
	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0004)	(0.0021)
Male	-0.0655***	-0.0076**	0.0867***	0.9970***	-0.1497***	-0.1383***	0.0371***	0.1042***
	(0.0072)	(0.0030)	(0.0051)	(0.0567)	(0.0263)	(0.0253)	(0.0105)	(0.0322)
Ethnic minorities (yes=1, Kinh=0)	0.1854***	-0.0987***	-0.0333**	-0.2281	-0.2455**	-0.2388**	-0.1294***	0.8573***
	(0.0260)	(0.0110)	(0.0163)	(0.1575)	(0.0994)	(0.0976)	(0.0259)	(0.1159)
Region-specific time trend	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.2182***	0.0400***	-0.0979***	-0.6343***	0.6536***	0.5768***	0.2783***	-1.3268***
	(0.0359)	(0.0104)	(0.0188)	(0.1919)	(0.0829)	(0.0804)	(0.0537)	(0.2875)
Observations	128,446	128,446	128,446	128,446	86,980	86,980	50,645	50,645
R-squared	0.193	0.066	0.178	0.156	0.097	0.092	0.196	0.337

Note: This table reports district fixed-effect RDD-DD regressions of individual-level outcomes. The additional control variables include education levels of individuals (dummy variables), education levels (dummy variables), household size, the proportion of children in households, the proportion of older members in households.

Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.

*** p<0.01, ** p<0.05, * p<0.1.

Table A.25. The district fixed-effect RDD-DD regressions of individual-level outcomes with clustering the standard error at the village level

Explanatory variables	Dependent variables							
	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (all workers)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	Currently attending school (children aged 6-17)	Log of education subsidy for students
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program * Post-program period	-0.1144***	0.0538***	0.0330	0.5545***	0.3757***	0.3814***	-0.0080	1.2841***
	(0.0292)	(0.0145)	(0.0221)	(0.1777)	(0.0808)	(0.0779)	(0.0290)	(0.2386)
(Poverty rate – 50) * Post-program period	0.0070**	-0.0056***	-0.0038*	-0.0338	-0.0580***	-0.0547***	0.0075**	-0.0467*
	(0.0034)	(0.0018)	(0.0022)	(0.0206)	(0.0117)	(0.0114)	(0.0031)	(0.0248)
Program * (Poverty rate – 50) * Post-program period	-0.0026	0.0046**	0.0026	-0.0002	0.0561***	0.0523***	-0.0102***	0.0504*
	(0.0036)	(0.0018)	(0.0024)	(0.0219)	(0.0119)	(0.0116)	(0.0035)	(0.0269)
Age	0.0243***	0.0040***	0.0104***	0.1132***	-0.0058**	-0.0059**	0.1571***	0.3874***
	(0.0009)	(0.0004)	(0.0005)	(0.0051)	(0.0029)	(0.0029)	(0.0082)	(0.0345)
Age squared	-0.0003***	-0.0000***	-0.0001***	-0.0015***	0.0003***	0.0002***	-0.0081***	-0.0197***
	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0000)	(0.0000)	(0.0004)	(0.0015)
Male	-0.0653***	-0.0076***	0.0865***	0.9974***	-0.1495***	-0.1382***	0.0370***	0.1056***
	(0.0050)	(0.0025)	(0.0038)	(0.0398)	(0.0186)	(0.0172)	(0.0073)	(0.0245)
Ethnic minorities (yes=1, Kinh=0)	0.1805***	-0.0990***	-0.0292**	-0.2248**	-0.2511***	-0.2432***	-0.1293***	0.7992***
	(0.0194)	(0.0096)	(0.0125)	(0.1120)	(0.0781)	(0.0771)	(0.0195)	(0.0953)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.2242***	0.0402***	-0.0947***	-0.6763***	0.7249***	0.6527***	0.2662***	-1.1919***
	(0.0247)	(0.0083)	(0.0129)	(0.1290)	(0.0629)	(0.0614)	(0.0473)	(0.2023)
Observations	128,446	128,446	128,446	128,446	86,980	86,980	50,645	50,645
R-squared	0.190	0.066	0.174	0.154	0.096	0.091	0.195	0.330

Note: This table reports district fixed-effect RDD-DD regressions of individual-level outcomes.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.26. The district fixed-effect RDD-DD regressions of individual-level outcomes with heteroscedasticity-consistent standard errors

Explanatory variables	Dependent variables							
	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (all workers)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	Currently attending school (children aged 6-17)	Log of education subsidy for students
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Program * Post-program period	-0.1144***	0.0538***	0.0330***	0.5545***	0.3757***	0.3814***	-0.0080	1.2841***
	(0.0141)	(0.0066)	(0.0104)	(0.0949)	(0.0600)	(0.0545)	(0.0179)	(0.0890)
(Poverty rate – 50) * Post-program period	-0.0026	0.0046***	0.0026**	-0.0002	0.0561***	0.0523***	-0.0102***	0.0504***
	(0.0018)	(0.0009)	(0.0013)	(0.0118)	(0.0086)	(0.0079)	(0.0022)	(0.0103)
Program * (Poverty rate – 50) * Post-program period	0.0070***	-0.0056***	-0.0038***	-0.0338***	-0.0580***	-0.0547***	0.0075***	-0.0467***
	(0.0017)	(0.0008)	(0.0012)	(0.0111)	(0.0084)	(0.0077)	(0.0020)	(0.0094)
Age	0.0243***	0.0040***	0.0104***	0.1132***	-0.0058**	-0.0059**	0.1571***	0.3874***
	(0.0006)	(0.0002)	(0.0004)	(0.0039)	(0.0027)	(0.0026)	(0.0070)	(0.0271)
Age squared	-0.0003***	-0.0000***	-0.0001***	-0.0015***	0.0003***	0.0002***	-0.0081***	-0.0197***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0003)	(0.0012)
Male	-0.0653***	-0.0076***	0.0865***	0.9974***	-0.1495***	-0.1382***	0.0370***	0.1056***
	(0.0044)	(0.0021)	(0.0030)	(0.0298)	(0.0182)	(0.0170)	(0.0057)	(0.0239)
Ethnic minorities (yes=1, Kinh=0)	0.1805***	-0.0990***	-0.0292***	-0.2248***	-0.2511***	-0.2432***	-0.1293***	0.7992***
	(0.0082)	(0.0045)	(0.0061)	(0.0575)	(0.0426)	(0.0408)	(0.0098)	(0.0418)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.2242***	0.0402***	-0.0947***	-0.6763***	0.7249***	0.6527***	0.2662***	-1.1919***
	(0.0140)	(0.0054)	(0.0088)	(0.0874)	(0.0418)	(0.0396)	(0.0394)	(0.1543)
Observations	128,446	128,446	128,446	128,446	86,980	86,980	50,645	50,645
R-squared	0.190	0.066	0.174	0.154	0.096	0.091	0.195	0.330

Note: This table reports district fixed-effect RDD-DD regressions of individual-level outcomes.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.27. The spillover effect on individual-level outcomes

Explanatory variables	Dependent variables							
	Self-employed farm work (yes=1, no=0)	Self-employed non-farm work (yes=1, no=0)	Having wage job (yes=1, no=0)	Log of monthly wage (all workers)	The annual number of healthcare visits	The annual number of outpatient healthcare visits	Currently attending school (children aged 6-17)	Log of education subsidy for students
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Districts in provinces with the program	-0.0113	0.0013	0.0128	0.1267	0.0050	0.0015	0.0098	0.1724
	(0.0252)	(0.0105)	(0.0197)	(0.1430)	(0.1154)	(0.1149)	(0.0147)	(0.1849)
Age	0.0303***	0.0063***	0.0095***	0.1107***	-0.0121***	-0.0108***	0.1588***	0.1932***
	(0.0012)	(0.0005)	(0.0005)	(0.0053)	(0.0038)	(0.0036)	(0.0069)	(0.0315)
Age squared	-0.0003***	-0.0001***	-0.0001***	-0.0015***	0.0004***	0.0004***	-0.0082***	-0.0100***
	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0003)	(0.0015)
Male	-0.0614***	-0.0157***	0.0954***	1.1164***	-0.1978***	-0.1817***	0.0170**	0.0220
	(0.0085)	(0.0040)	(0.0049)	(0.0510)	(0.0252)	(0.0239)	(0.0072)	(0.0217)
Ethnic minorities (yes=1, Kinh=0)	0.1322***	-0.0723***	-0.0071	0.0997	-0.1579**	-0.1482**	-0.1172***	0.6665***
	(0.0180)	(0.0080)	(0.0114)	(0.1105)	(0.0671)	(0.0622)	(0.0146)	(0.0900)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.0714***	-0.0178**	-0.0560***	-0.4341***	0.8067***	0.7216***	0.2612***	-0.5382***
	(0.0259)	(0.0085)	(0.0116)	(0.1177)	(0.0444)	(0.0424)	(0.0366)	(0.1772)
Observations	167,748	167,748	167,748	167,748	110,518	110,518	57,720	57,720
R-squared	0.179	0.055	0.149	0.136	0.122	0.118	0.209	0.287

Note: This table reports district fixed-effect RDD-DD regressions of individual-level outcomes.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.28. The district fixed-effect RDD-DD regressions of households' income using districts with the poverty rate from 35%

Explanatory variables	Dependent variables						
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Program * Post-program period	0.0283	0.3115	0.7693**	-0.5190***	0.5714	0.8281***	1.0078***
	(0.0821)	(0.4804)	(0.3213)	(0.1741)	(0.5429)	(0.2908)	(0.3853)
(Poverty rate – 50) * Post-program period	-0.0070	-0.0471	-0.0620***	0.0457***	-0.0487*	-0.0443**	-0.0175
	(0.0057)	(0.0288)	(0.0234)	(0.0145)	(0.0287)	(0.0191)	(0.0215)
Program * (Poverty rate – 50) * Post-program period	0.0029	-0.0005	0.0472*	-0.0409***	0.0121	0.0322	0.0238
	(0.0066)	(0.0374)	(0.0282)	(0.0156)	(0.0380)	(0.0274)	(0.0297)
Age of household heads	0.0300***	0.0569***	0.0624***	0.1478***	-0.0475***	-0.1009***	-0.0696***
	(0.0021)	(0.0131)	(0.0074)	(0.0115)	(0.0085)	(0.0089)	(0.0093)
Age squared of household heads	-0.0003***	-0.0009***	-0.0007***	-0.0014***	0.0007***	0.0013***	0.0009***
	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Gender of household head (male=1, female=0)	0.0108	0.1242	0.2039***	0.7015***	-0.4569***	-0.1650***	-0.4123***
	(0.0138)	(0.1177)	(0.0584)	(0.0614)	(0.0628)	(0.0551)	(0.0533)
Ethnic minorities (yes=1, Kinh=0)	-0.5423***	-0.1136	-1.8118***	0.7284***	-0.4677***	0.4781***	-0.5759***
	(0.0369)	(0.1356)	(0.1192)	(0.1035)	(0.0974)	(0.0842)	(0.1036)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.4763***	2.8778***	1.5021***	3.5720***	4.9592***	2.1890***	3.2333***
	(0.0742)	(0.3380)	(0.2094)	(0.2810)	(0.2691)	(0.2528)	(0.2262)
Observations	55,334	55,334	55,334	55,334	55,334	55,334	55,334
R-squared	0.369	0.163	0.104	0.143	0.246	0.140	0.092

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.29. The district fixed-effect RDD-DD regressions of households' income using a poverty rate bandwidth of 10%

Explanatory variables	Dependent variables						
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Program * Post-program period	-0.0833	-0.3695	1.0748***	-0.4384*	1.0473	0.8605**	1.4858**
	(0.1215)	(0.7388)	(0.3877)	(0.2360)	(0.9295)	(0.3744)	(0.6418)
(Poverty rate – 50) * Post-program period	0.0056	-0.0741*	-0.0660*	0.0104	-0.0305	-0.0571*	-0.0159
	(0.0087)	(0.0442)	(0.0383)	(0.0215)	(0.0553)	(0.0318)	(0.0408)
Program * (Poverty rate – 50) * Post-program period	0.0001	0.2270*	-0.0024	0.0005	-0.2262	0.0734	-0.0446
	(0.0190)	(0.1198)	(0.0901)	(0.0374)	(0.1743)	(0.0781)	(0.1175)
Age of household heads	0.0303***	0.0409**	0.0501***	0.1466***	-0.0465***	-0.0853***	-0.0584***
	(0.0022)	(0.0160)	(0.0091)	(0.0151)	(0.0112)	(0.0118)	(0.0117)
Age squared of household heads	-0.0003***	-0.0007***	-0.0006***	-0.0014***	0.0007***	0.0012***	0.0008***
	(0.0000)	(0.0002)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)
Gender of household head (male=1, female=0)	0.0119	-0.0816	0.1754**	0.7573***	-0.4447***	-0.0625	-0.4033***
	(0.0205)	(0.1189)	(0.0713)	(0.0857)	(0.0577)	(0.0657)	(0.0771)
Ethnic minorities (yes=1, Kinh=0)	-0.6126***	-0.1217	-1.7998***	0.7210***	-0.5323***	0.6820***	-0.7981***
	(0.0535)	(0.1973)	(0.1868)	(0.1232)	(0.1620)	(0.1358)	(0.1115)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.5328***	3.2504***	1.7557***	3.4376***	4.9524***	1.7241***	3.1431***
	(0.0800)	(0.3780)	(0.2682)	(0.3926)	(0.3479)	(0.3670)	(0.2875)
Observations	28,796	28,796	28,796	28,796	28,796	28,796	28,796
R-squared	0.338	0.152	0.095	0.153	0.204	0.142	0.092

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.30. The district fixed-effect RDD-DD regressions of households' income using a poverty rate bandwidth of 7%

Explanatory variables	Dependent variables						
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Program * Post-program period	-0.0914	-0.5461	1.1514***	-0.4597*	1.1423	0.7776**	1.5803**
	(0.1264)	(0.7667)	(0.3930)	(0.2445)	(0.9663)	(0.3817)	(0.6662)
(Poverty rate – 50) * Post-program period	0.0086	-0.0587	-0.0836**	0.0089	0.0027	-0.0482	-0.0029
	(0.0093)	(0.0469)	(0.0380)	(0.0231)	(0.0566)	(0.0334)	(0.0430)
Program * (Poverty rate – 50) * Post-program period	-0.0026	0.2659**	0.0081	0.0099	-0.3381	0.0885	-0.1123
	(0.0216)	(0.1325)	(0.0996)	(0.0436)	(0.2108)	(0.0904)	(0.1306)
Age of household heads	0.0311***	0.0417**	0.0473***	0.1476***	-0.0449***	-0.0808***	-0.0596***
	(0.0022)	(0.0166)	(0.0094)	(0.0155)	(0.0117)	(0.0122)	(0.0119)
Age squared of household heads	-0.0003***	-0.0007***	-0.0006***	-0.0014***	0.0007***	0.0011***	0.0008***
	(0.0000)	(0.0002)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)
Gender of household head (male=1, female=0)	0.0243	-0.0345	0.1911**	0.7423***	-0.4253***	-0.0480	-0.4027***
	(0.0203)	(0.1203)	(0.0726)	(0.0880)	(0.0598)	(0.0674)	(0.0793)
Ethnic minorities (yes=1, Kinh=0)	-0.5951***	-0.0827	-1.7646***	0.6101***	-0.5391***	0.6751***	-0.7962***
	(0.0533)	(0.1938)	(0.1894)	(0.1033)	(0.1663)	(0.1386)	(0.1133)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.4848***	3.2073***	1.7711***	3.5179***	4.9014***	1.6246***	3.1781***
	(0.0778)	(0.3741)	(0.2726)	(0.3957)	(0.3622)	(0.3822)	(0.2919)
Observations	26,803	26,803	26,803	26,803	26,803	26,803	26,803
R-squared	0.336	0.150	0.092	0.148	0.206	0.140	0.093

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.31. The district fixed-effect RDD-DD regressions of households' income using a 'donut' sample

Explanatory variables	Dependent variables						
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Program * Post-program period	0.2085	1.4672	1.0765*	-0.4884*	1.2916*	0.8844*	0.7303
	(0.1604)	(0.9095)	(0.6333)	(0.2526)	(0.7531)	(0.4953)	(0.4981)
(Poverty rate – 50) * Post-program period	-0.0179	-0.1060	-0.1307**	0.0534**	-0.1292**	-0.0556*	-0.0698*
	(0.0171)	(0.0762)	(0.0596)	(0.0265)	(0.0589)	(0.0313)	(0.0372)
Program * (Poverty rate – 50) * Post-program period	0.0107	0.0322	0.1311**	-0.0574**	0.0887	0.0433	0.1075**
	(0.0176)	(0.0819)	(0.0645)	(0.0271)	(0.0651)	(0.0415)	(0.0442)
Age of household heads	0.0288***	0.0540***	0.0673***	0.1387***	-0.0421***	-0.0973***	-0.0608***
	(0.0029)	(0.0163)	(0.0095)	(0.0144)	(0.0091)	(0.0115)	(0.0117)
Age squared of household heads	-0.0003***	-0.0008***	-0.0008***	-0.0014***	0.0006***	0.0012***	0.0007***
	(0.0000)	(0.0002)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)
Gender of household head (male=1, female=0)	0.0102	0.1407	0.2359***	0.6502***	-0.4488***	-0.1180*	-0.3801***
	(0.0179)	(0.1559)	(0.0755)	(0.0742)	(0.0793)	(0.0628)	(0.0580)
Ethnic minorities (yes=1, Kinh=0)	-0.5679***	-0.1670	-1.7312***	0.8275***	-0.5734***	0.5718***	-0.4833***
	(0.0524)	(0.1819)	(0.1645)	(0.1361)	(0.1275)	(0.1055)	(0.1428)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.5472***	2.8292***	1.3281***	3.7045***	4.8671***	1.9666***	3.1140***
	(0.1037)	(0.4317)	(0.2560)	(0.3473)	(0.2964)	(0.3361)	(0.2909)
Observations	36,184	36,184	36,184	36,184	36,184	36,184	36,184
R-squared	0.373	0.155	0.106	0.139	0.273	0.139	0.093

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.32. The DID regressions of households' income

Explanatory variables	Dependent variables						
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Program	-0.1312	-0.8133	-0.6152	0.1825	-0.4320	-0.6369***	-0.4612**
	(0.1048)	(0.6220)	(0.4070)	(0.2518)	(0.4477)	(0.2458)	(0.2297)
(Poverty rate – 50)	0.0004	0.0841	0.0132	-0.0277	-0.0112	0.0549**	0.0181
	(0.0121)	(0.0600)	(0.0505)	(0.0332)	(0.0502)	(0.0270)	(0.0243)
Program * (Poverty rate – 50)	-0.0033	-0.0613	0.0162	0.0239	0.0309	-0.0420	-0.0292
	(0.0127)	(0.0663)	(0.0533)	(0.0336)	(0.0543)	(0.0302)	(0.0259)
Program * Post-program period	0.0269	0.8250	0.8851**	-0.4883***	0.5302	0.8165***	0.6916*
	(0.0908)	(0.5590)	(0.3517)	(0.1814)	(0.5551)	(0.3137)	(0.3934)
(Poverty rate – 50) * Post-program period	0.0040	-0.1024**	-0.0708*	0.0203	-0.0255	-0.0523	-0.0027
	(0.0092)	(0.0448)	(0.0386)	(0.0235)	(0.0528)	(0.0338)	(0.0395)
Program * (Poverty rate – 50) * Post-program period	-0.0090	0.0390	0.0481	-0.0115	-0.0156	0.0420	0.0146
	(0.0098)	(0.0526)	(0.0423)	(0.0240)	(0.0578)	(0.0385)	(0.0432)
Age of household heads	0.0300***	0.0604***	0.0649***	0.1311***	-0.0434***	-0.1005***	-0.0721***
	(0.0024)	(0.0165)	(0.0088)	(0.0127)	(0.0123)	(0.0103)	(0.0104)
Age squared of household heads	-0.0003***	-0.0008***	-0.0008***	-0.0013***	0.0006***	0.0013***	0.0008***
	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Gender of household head (male=1, female=0)	-0.0163	-0.2734**	0.1499*	0.7678***	-0.4285***	-0.1297**	-0.4458***
	(0.0186)	(0.1150)	(0.0802)	(0.0931)	(0.0590)	(0.0657)	(0.0708)
Ethnic minorities (yes=1, Kinh=0)	-0.5401***	-0.7838***	-1.2738***	0.8158***	-0.8673***	0.4293***	-0.8206***
	(0.0454)	(0.2310)	(0.1344)	(0.1023)	(0.1930)	(0.1062)	(0.0961)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.5794***	3.7036***	1.3208***	3.6383***	5.2056***	2.6051***	3.8583***
	(0.1080)	(0.6313)	(0.3732)	(0.3524)	(0.4262)	(0.3300)	(0.2658)
Observations	40,468	40,468	40,468	40,468	40,468	40,468	40,468
R-squared	0.297	0.053	0.042	0.090	0.059	0.066	0.045

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.33. The district fixed-effect RDD-DD regressions of households' income without control variables

Explanatory variables	Dependent variables						
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Program * Post-program period	-0.0209	0.4515	0.8195**	-0.3693*	0.5160	0.8267***	0.9735**
	(0.0968)	(0.5037)	(0.3844)	(0.1956)	(0.5730)	(0.3156)	(0.4203)
(Poverty rate – 50) * Post-program period	0.0062	-0.0778*	-0.0639	0.0063	-0.0270	-0.0542*	-0.0120
	(0.0101)	(0.0438)	(0.0418)	(0.0234)	(0.0552)	(0.0325)	(0.0420)
Program * (Poverty rate – 50) * Post-program period	-0.0107	0.0323	0.0488	-0.0008	-0.0115	0.0403	0.0167
	(0.0107)	(0.0498)	(0.0453)	(0.0242)	(0.0605)	(0.0384)	(0.0468)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.8557***	3.3849***	1.6412***	8.0901***	3.5404***	0.7814***	1.1349***
	(0.0246)	(0.1341)	(0.1007)	(0.0648)	(0.1239)	(0.0873)	(0.0998)
Observations	40,468	40,468	40,468	40,468	40,468	40,468	40,468
R-squared	0.287	0.155	0.069	0.087	0.209	0.104	0.075

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.34. The district fixed-effect RDD-DD regressions of households' income using districts with a large model specification

Explanatory variables	Dependent variables						
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Program * Post-program period	-0.0326	0.4782	0.8274**	-0.3462*	0.4848	0.8810***	0.9782**
	(0.0826)	(0.4940)	(0.3510)	(0.1818)	(0.5703)	(0.3076)	(0.4105)
(Poverty rate – 50) * Post-program period	0.0073	-0.0766*	-0.0664*	0.0079	-0.0268	-0.0568*	-0.0143
	(0.0088)	(0.0438)	(0.0392)	(0.0220)	(0.0560)	(0.0316)	(0.0411)
Program * (Poverty rate – 50) * Post-program period	-0.0120	0.0230	0.0493	-0.0035	-0.0077	0.0453	0.0205
	(0.0093)	(0.0500)	(0.0421)	(0.0226)	(0.0610)	(0.0373)	(0.0457)
Age of household heads	0.0195***	-0.0609***	0.0255***	0.0986***	0.0406***	-0.0696***	-0.0095
	(0.0022)	(0.0159)	(0.0092)	(0.0117)	(0.0091)	(0.0095)	(0.0120)
Age squared of household heads	-0.0002***	0.0005***	-0.0003***	-0.0009***	-0.0003***	0.0008***	0.0002
	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Gender of household head (male=1, female=0)	0.0363***	-0.3626***	0.0360	0.6278***	-0.1916***	-0.0918*	-0.3783***
	(0.0123)	(0.0914)	(0.0628)	(0.0733)	(0.0483)	(0.0535)	(0.0654)
Ethnic minorities (yes=1, Kinh=0)	-0.4101***	0.1067	-1.6502***	0.7840***	-0.3530***	0.5370***	-0.6138***
	(0.0341)	(0.1648)	(0.1667)	(0.1076)	(0.1221)	(0.1166)	(0.0990)
Additional control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.9691***	4.1633***	1.6549***	4.7474***	3.4436***	1.6957***	1.4939***
	(0.0642)	(0.4084)	(0.2953)	(0.3386)	(0.2956)	(0.2891)	(0.3439)
Observations	40,468	40,468	40,468	40,468	40,468	40,468	40,468
R-squared	0.496	0.214	0.119	0.187	0.252	0.159	0.101

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations.
The additional control variables include education levels of individuals (dummy variables), education levels (dummy variables), household size, the proportion of children in households, the proportion of older members in households.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.35. The district fixed-effect RDD-DD regressions of households' income using districts with region-specific time trends

Explanatory variables	Dependent variables						
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Program * Post-program period	-0.0211	0.1414	0.5139	-0.3346*	0.3496	0.6362*	0.9971**
	(0.0836)	(0.4732)	(0.3495)	(0.1950)	(0.5840)	(0.3254)	(0.3931)
(Poverty rate – 50) * Post-program period	0.0028	-0.0747*	-0.0494	0.0079	-0.0121	-0.0430	-0.0085
	(0.0081)	(0.0408)	(0.0378)	(0.0230)	(0.0588)	(0.0311)	(0.0387)
Program * (Poverty rate – 50) * Post-program period	-0.0065	0.0329	0.0389	-0.0037	-0.0227	0.0343	0.0139
	(0.0086)	(0.0465)	(0.0398)	(0.0237)	(0.0632)	(0.0371)	(0.0435)
Age of household heads	0.0263***	0.0479***	0.0553***	0.1331***	-0.0460***	-0.0943***	-0.0600***
	(0.0021)	(0.0133)	(0.0080)	(0.0127)	(0.0090)	(0.0100)	(0.0106)
Age squared of household heads	-0.0002***	-0.0007***	-0.0006***	-0.0013***	0.0007***	0.0012***	0.0007***
	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Gender of household head (male=1, female=0)	0.0038	-0.0244	0.1982***	0.6801***	-0.4093***	-0.0864	-0.3757***
	(0.0181)	(0.0980)	(0.0625)	(0.0753)	(0.0505)	(0.0558)	(0.0669)
Ethnic minorities (yes=1, Kinh=0)	-0.6194***	-0.2434	-1.7851***	0.8629***	-0.5281***	0.6340***	-0.7120***
	(0.0484)	(0.1838)	(0.1596)	(0.1221)	(0.1361)	(0.1185)	(0.1015)
Region-specific time trend	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.6160***	2.9543***	1.5280***	3.7686***	4.7509***	1.9300***	3.1246***
	(0.0838)	(0.3548)	(0.2404)	(0.3276)	(0.3100)	(0.3053)	(0.2559)
Observations	40,468	40,468	40,468	40,468	40,468	40,468	40,468
R-squared	0.367	0.167	0.109	0.149	0.229	0.152	0.093

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.36. The district fixed-effect RDD-DD regressions of households' income with clustering the standard error at the village level

Explanatory variables	Dependent variables						
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Program * Post-program period	-0.0181	0.4116	0.8039***	-0.3774***	0.5492**	0.8739***	0.9973***
	(0.0517)	(0.3108)	(0.2190)	(0.1403)	(0.2655)	(0.1978)	(0.2159)
(Poverty rate – 50) * Post-program period	0.0052	-0.0756**	-0.0658**	0.0099	-0.0303	-0.0566***	-0.0153
	(0.0057)	(0.0330)	(0.0279)	(0.0188)	(0.0253)	(0.0199)	(0.0251)
Program * (Poverty rate – 50) * Post-program period	-0.0092	0.0284	0.0511*	-0.0052	-0.0064	0.0444*	0.0215
	(0.0061)	(0.0360)	(0.0294)	(0.0192)	(0.0280)	(0.0238)	(0.0268)
Age of household heads	0.0262***	0.0485***	0.0565***	0.1330***	-0.0451***	-0.0931***	-0.0598***
	(0.0016)	(0.0099)	(0.0064)	(0.0065)	(0.0073)	(0.0083)	(0.0083)
Age squared of household heads	-0.0002***	-0.0008***	-0.0007***	-0.0013***	0.0006***	0.0012***	0.0007***
	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Gender of household head (male=1, female=0)	0.0053	-0.0124	0.2031***	0.6791***	-0.4089***	-0.0837*	-0.3800***
	(0.0123)	(0.0721)	(0.0504)	(0.0426)	(0.0461)	(0.0439)	(0.0547)
Ethnic minorities (yes=1, Kinh=0)	-0.6139***	-0.2264**	-1.7972***	0.8630***	-0.5437***	0.6164***	-0.7285***
	(0.0232)	(0.1125)	(0.0980)	(0.0755)	(0.0848)	(0.0733)	(0.0792)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.6202***	3.0156***	1.6227***	3.7472***	4.8958***	1.9215***	3.0930***
	(0.0492)	(0.2853)	(0.2004)	(0.1945)	(0.2174)	(0.2131)	(0.2141)
Observations	40,468	40,468	40,468	40,468	40,468	40,468	40,468
R-squared	0.364	0.164	0.107	0.148	0.228	0.149	0.091

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.37. The district fixed-effect RDD-DD regressions of households' income with heteroscedasticity-consistent standard errors

Explanatory variables	Dependent variables						
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Program * Post-program period	-0.0181	0.4116**	0.8039***	-0.3774***	0.5492***	0.8739***	0.9973***
	(0.0260)	(0.1738)	(0.1290)	(0.0752)	(0.1210)	(0.1051)	(0.1231)
(Poverty rate – 50) * Post-program period	0.0052	-0.0756***	-0.0658***	0.0099	-0.0303**	-0.0566***	-0.0153
	(0.0032)	(0.0211)	(0.0170)	(0.0097)	(0.0140)	(0.0123)	(0.0155)
Program * (Poverty rate – 50) * Post-program period	-0.0092***	0.0284	0.0511***	-0.0052	-0.0064	0.0444***	0.0215
	(0.0034)	(0.0223)	(0.0176)	(0.0100)	(0.0148)	(0.0133)	(0.0162)
Age of household heads	0.0262***	0.0485***	0.0565***	0.1330***	-0.0451***	-0.0931***	-0.0598***
	(0.0015)	(0.0094)	(0.0061)	(0.0056)	(0.0067)	(0.0070)	(0.0071)
Age squared of household heads	-0.0002***	-0.0008***	-0.0007***	-0.0013***	0.0006***	0.0012***	0.0007***
	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Gender of household head (male=1, female=0)	0.0053	-0.0124	0.2031***	0.6791***	-0.4089***	-0.0837*	-0.3800***
	(0.0111)	(0.0682)	(0.0491)	(0.0392)	(0.0461)	(0.0427)	(0.0510)
Ethnic minorities (yes=1, Kinh=0)	-0.6139***	-0.2264***	-1.7972***	0.8630***	-0.5437***	0.6164***	-0.7285***
	(0.0121)	(0.0752)	(0.0639)	(0.0455)	(0.0453)	(0.0406)	(0.0516)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.6202***	3.0156***	1.6227***	3.7472***	4.8958***	1.9215***	3.0930***
	(0.0390)	(0.2471)	(0.1687)	(0.1423)	(0.1733)	(0.1701)	(0.1796)
Observations	40,468	40,468	40,468	40,468	40,468	40,468	40,468
R-squared	0.364	0.164	0.107	0.148	0.228	0.149	0.091

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.

Table A.38. The spillover program effects on households' income

Explanatory variables	Dependent variables						
	Log of per capita income	Log of per capita income from wages	Log of per capita income from nonfarm production	Log of per capita income from farm production	Log of per capita remittances	Log of per capita public cash transfers	Log of per capita income from other sources
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Districts in provinces with the program	0.0496	-0.2784	0.0602	0.0823	0.3874	0.0189	0.5494**
	(0.0764)	(0.3376)	(0.2964)	(0.1448)	(0.2804)	(0.1566)	(0.2394)
Age of household heads	0.0378***	0.0738***	0.0587***	0.1936***	-0.0313***	-0.1124***	-0.0666***
	(0.0020)	(0.0143)	(0.0088)	(0.0127)	(0.0091)	(0.0104)	(0.0090)
Age squared of household heads	-0.0003***	-0.0011***	-0.0008***	-0.0019***	0.0006***	0.0014***	0.0009***
	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Gender of household head (male=1, female=0)	0.0236*	0.0657	0.1049*	0.8948***	-0.4331***	-0.2015***	-0.3998***
	(0.0128)	(0.1114)	(0.0610)	(0.0602)	(0.0610)	(0.0545)	(0.0525)
Ethnic minorities (yes=1, Kinh=0)	-0.4812***	0.1094	-1.5872***	0.5220***	-0.4287***	0.3832***	-0.5147***
	(0.0327)	(0.1153)	(0.1204)	(0.0956)	(0.0812)	(0.0836)	(0.1099)
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	8.2226***	3.0168***	1.6135***	2.3383***	4.5253***	2.5174***	2.8994***
	(0.0626)	(0.3755)	(0.2625)	(0.3108)	(0.3011)	(0.2823)	(0.2736)
Observations	54,870	54,870	54,870	54,870	54,870	54,870	54,870
R-squared	0.352	0.118	0.081	0.155	0.246	0.132	0.098

Note: This table reports district fixed-effect RDD-DD regressions of income and poverty of households using household-level observations.
Robust standard errors in parentheses. Standard errors are clustered by district and village-year levels.
*** p<0.01, ** p<0.05, * p<0.1.