

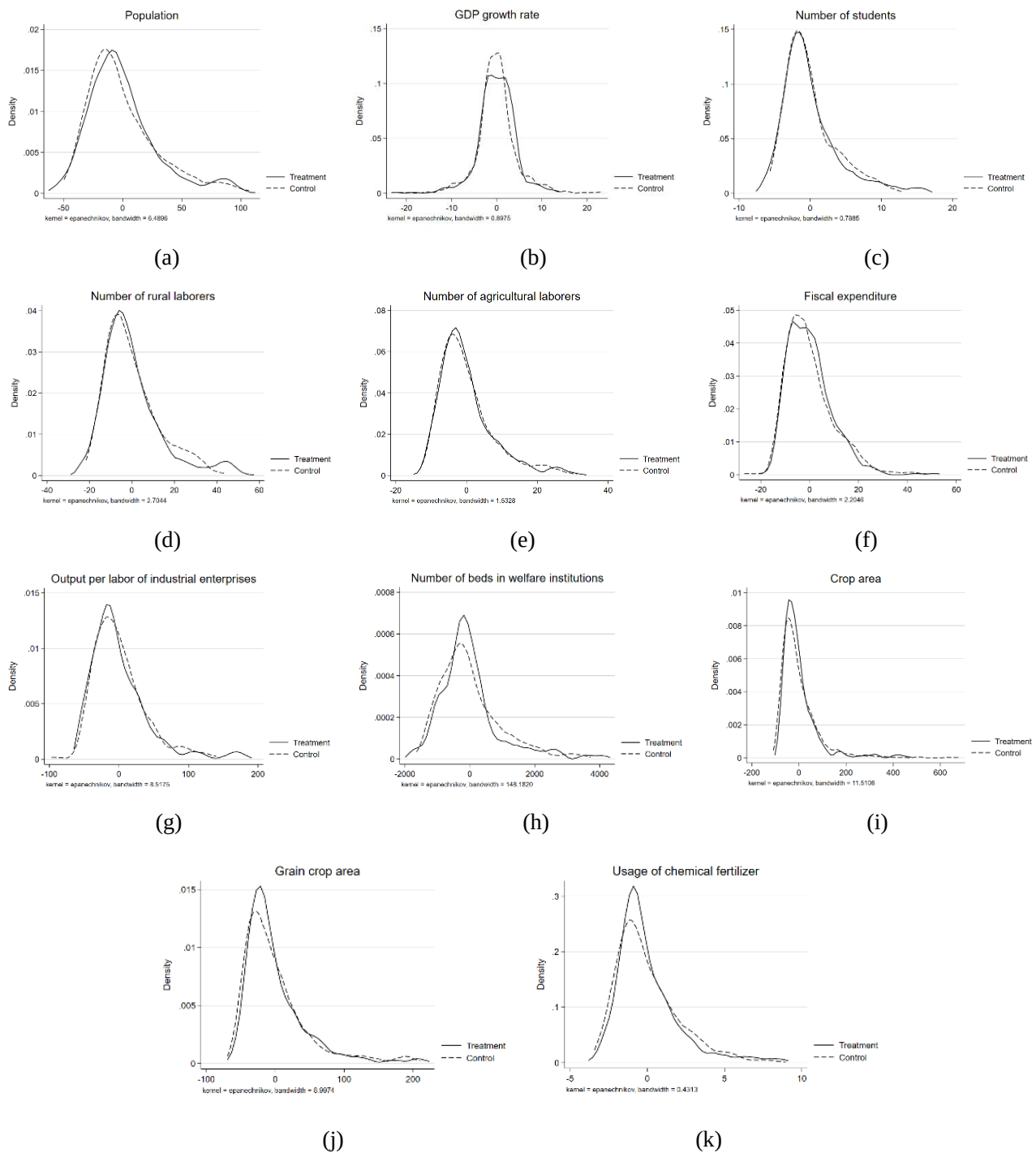
Online Appendix

The Effects of a Multifaceted Poverty-Alleviation Program on
Rural Income and Household Behavior in China

Rui Li, Hong Song, Jun Zhang, Junsen Zhang

Appendix A. Additional results at county level

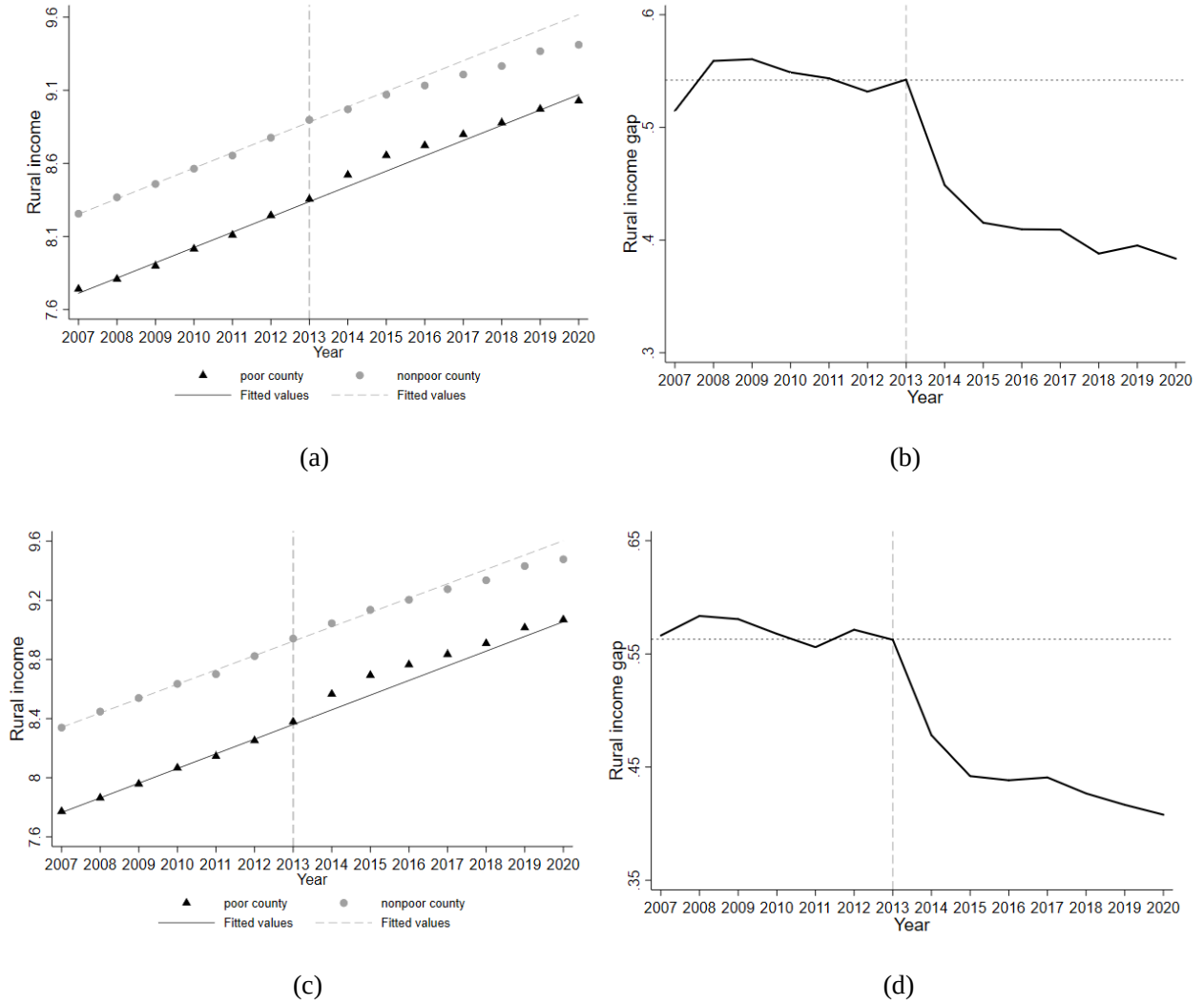
Figure A1. Distribution of the residual of economic characteristics variables



Notes: This graph shows differences in the distribution of the residual of economic characteristics variables between treatment and control groups. The solid line represents the treatment group and the dashed line the control group. Regarding the measurement of each variable, the population measures the total population of the county; GDP per rate represents the ratio of GDP between this year and the previous year; Number of students measures the total number of middle school and primary school students; Number of rural laborers measures the total labor force in rural areas; Number of agricultural laborers measures the total number of agricultural laborers in rural areas; Fiscal expenditure measures the total annual financial expenditure; Output per labor of industrial enterprise measures the per-

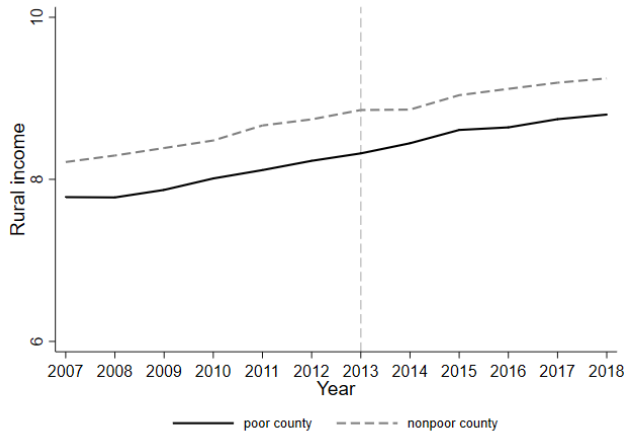
labor output of industrial enterprises; Number of beds in welfare institutions measure the total number of beds in welfare institutions; Crops area measures the total sown area of crops; Grain crop area measures the sown area of grain crops; Usage of chemical fertilizer measures the total amount of chemical fertilizer applied.

Figure A2. Trends in the rural income of counties among different samples

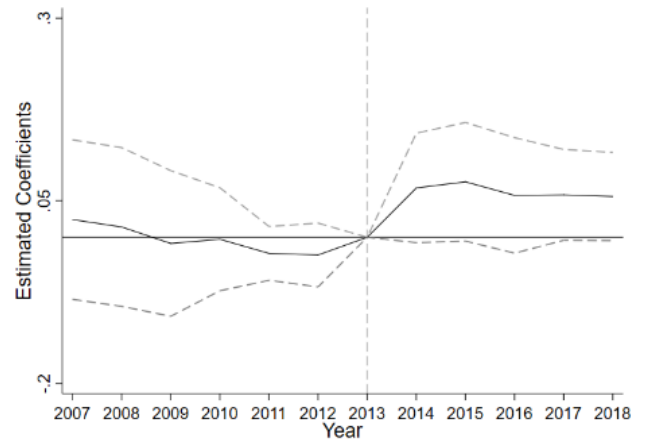


Notes: This graph shows the trends in log of rural income among different samples. Panel (a) and (b) show the trends in log of rural income from 2007 to 2020 at county level using the PSM sample. Panel (c) and (d) show the trends using the using the 832 poor counties. The straight black line is the fitted line calculated from the mean value of national key poor counties before 2013. The dashed gray line is the fitted line calculated from the mean value of non-poor counties before 2013. In Panel (a) and (c), the vertical axis is log of rural income. In Panel (b) and (d), the vertical axis represents the income gap between national poor counties and non-poor counties.

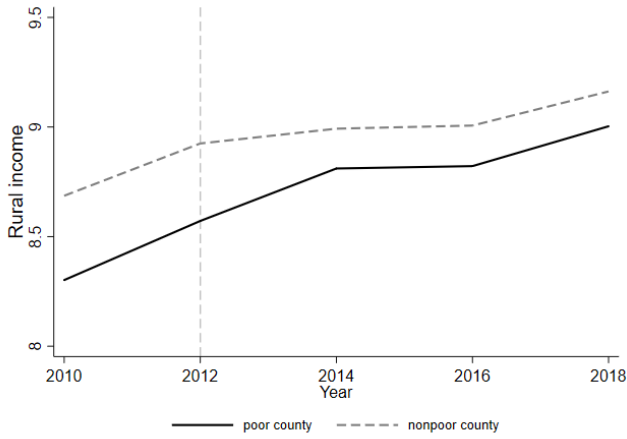
Figure A3. Trends in the rural income from different databases



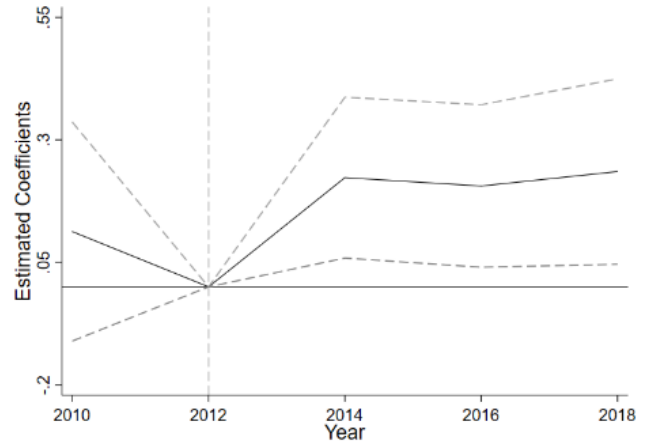
(a)



(b)



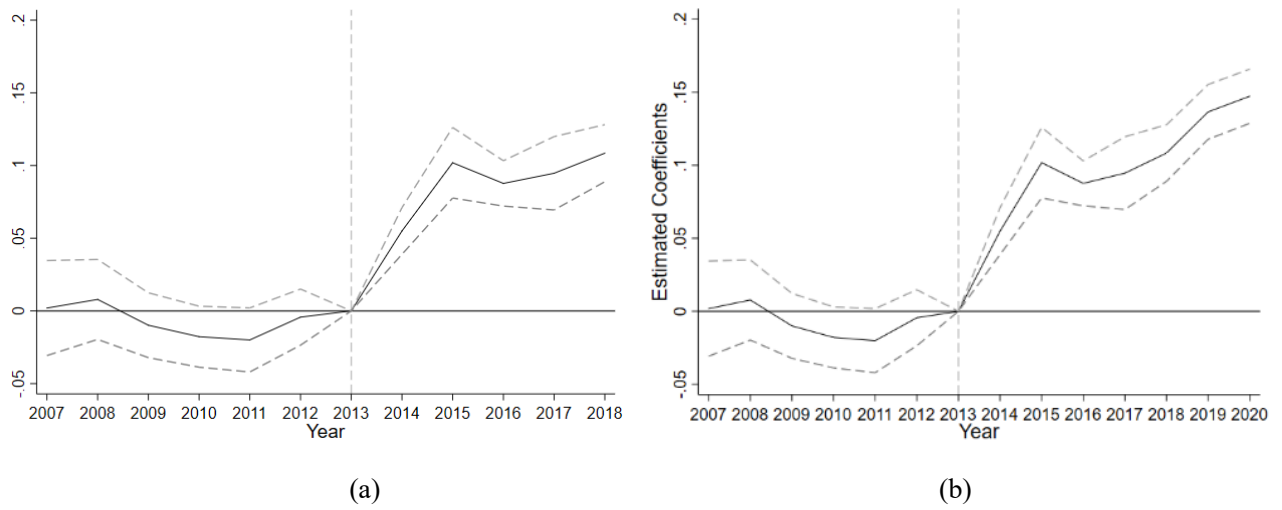
(c)



(d)

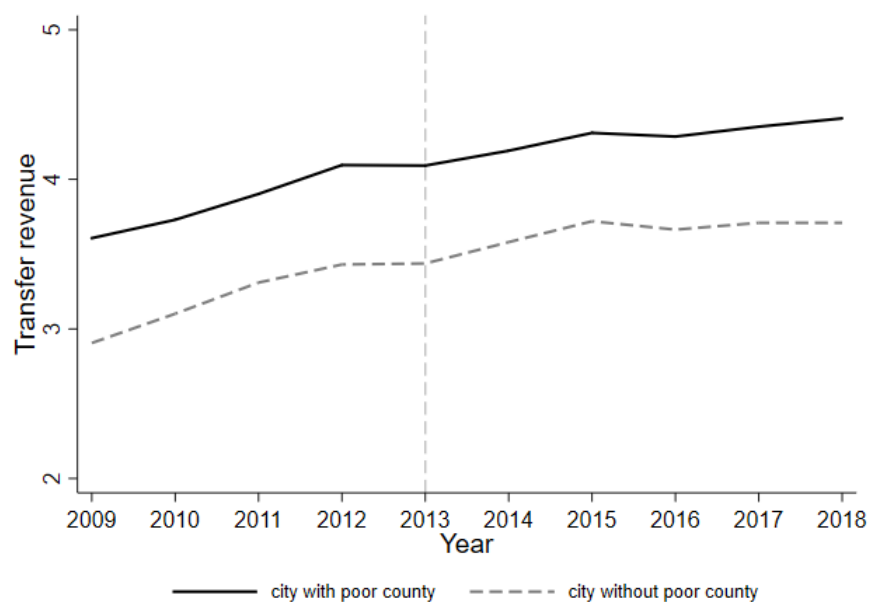
Notes: Panel (a) and (b) show trends in the log of rural income from yearbook data with the CFPS county sample. Panel (c) and (d) shows trends in the log of rural income from the CFPS. The black line represents the mean value of the outcome in national key poor counties. The gray line represents the mean value of the outcome in non-poor counties. The dependent variable is log of rural income at county level. All estimated coefficients are relative to the year prior to implementation (i.e., 2013).

Figure A4. Dynamic effects on log of rural income with different year intervals



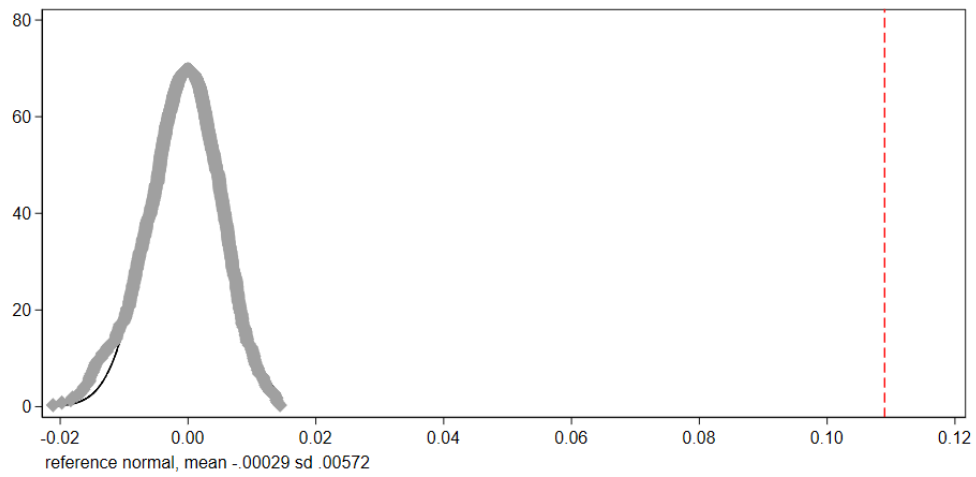
Notes: The figure plots the coefficients and associated 95% confidence intervals from estimating the leads and lags regression in equation (3), where the dependent variable is the log of rural income at county level. In Panel (a), the year interval of the sample includes 2007-2018. In Panel (b), the year interval of the sample includes 2007-2020. All estimated coefficients are relative to the year prior to implementation (i.e., 2013).

Figure A5. Trends in log of transfer revenue at prefecture level



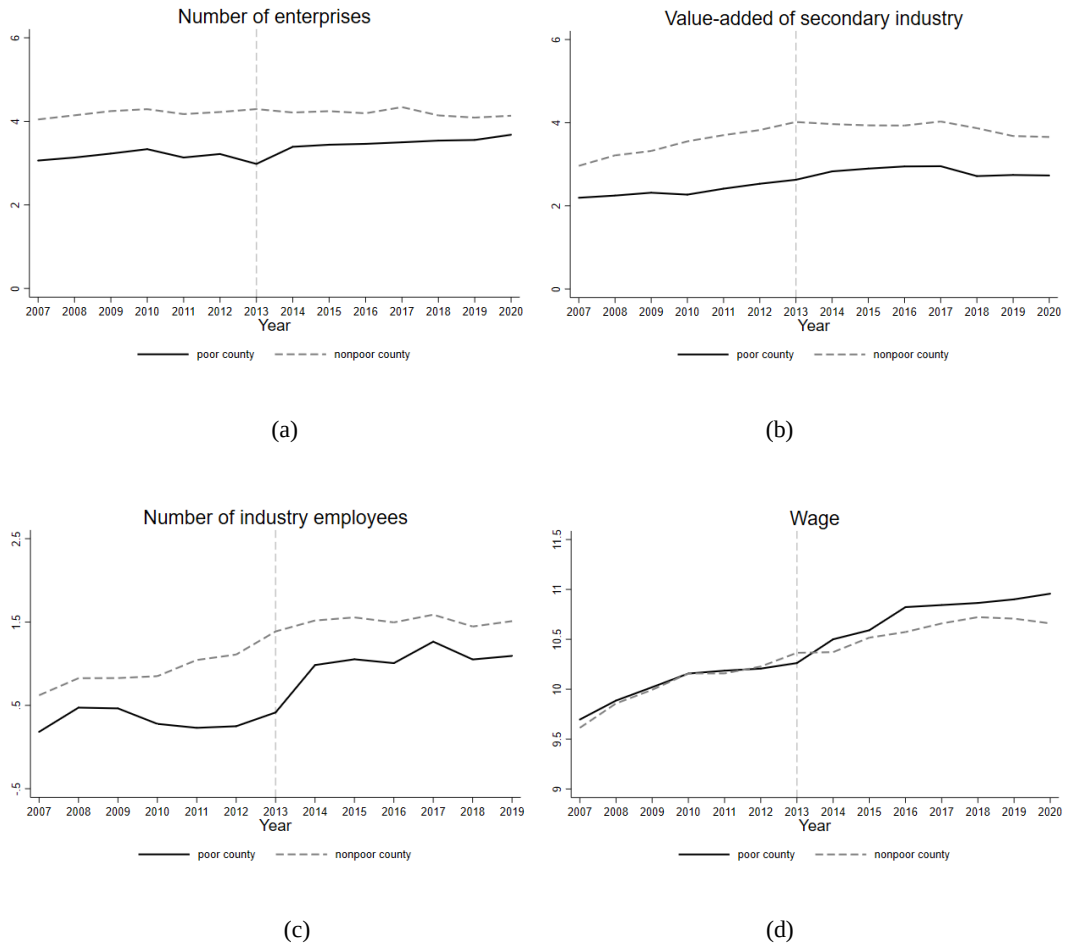
Notes: This figure shows trends in the log of transfer revenue at prefecture level. The black line represents the mean value of outcomes in prefectures with national key poor counties. The gray line represents the mean value of outcomes in prefectures without national key poor counties.

Figure A6. Placebo test: Random assignment of treatment status



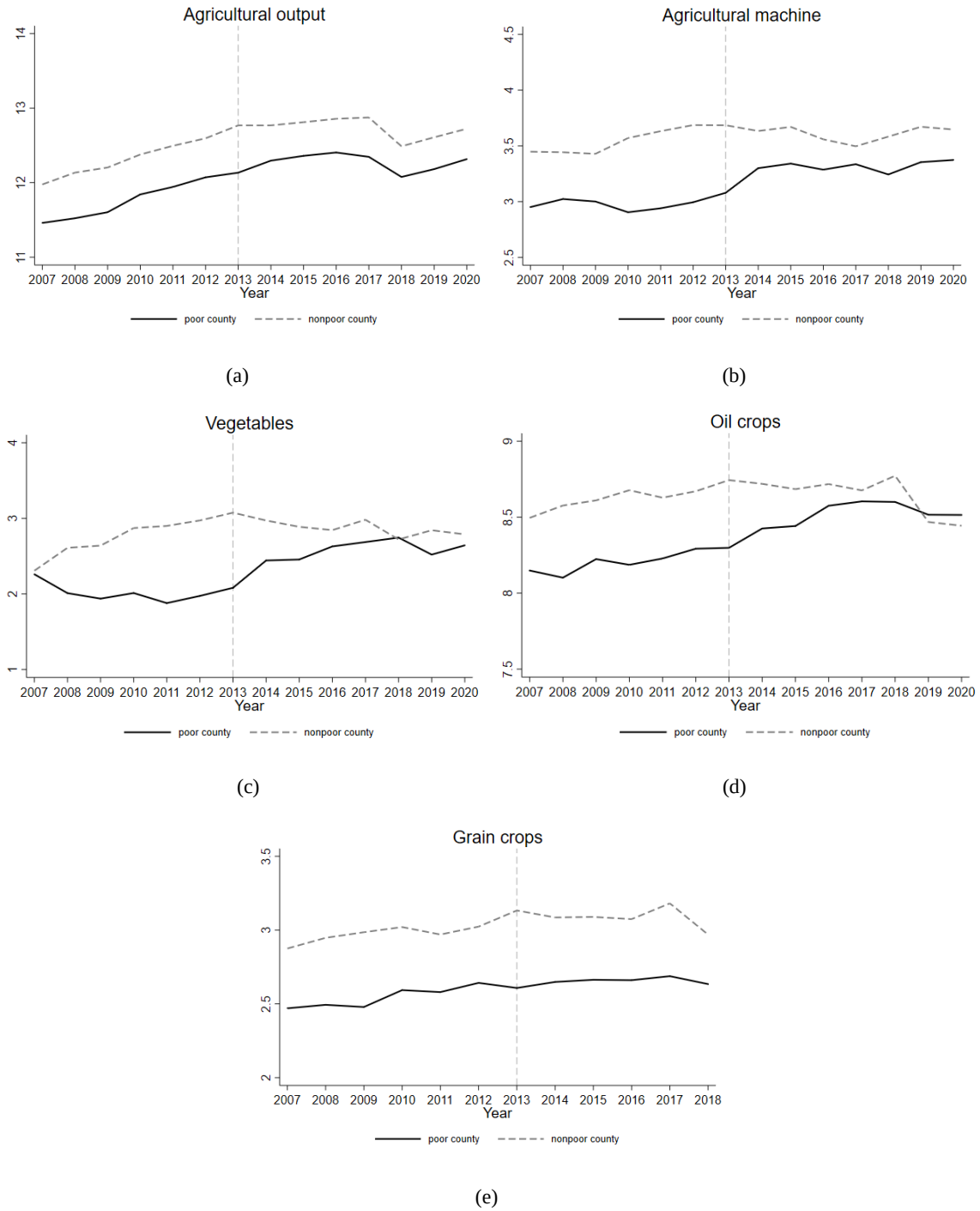
Notes: The figure plots the estimated coefficients from 1,000 regressions that randomly selected 592 counties and replicated specification (1). The dotted red line represents the coefficient of the baseline estimate (i.e., 0.109).

Figure A7. Trends in outcomes related to industrial development



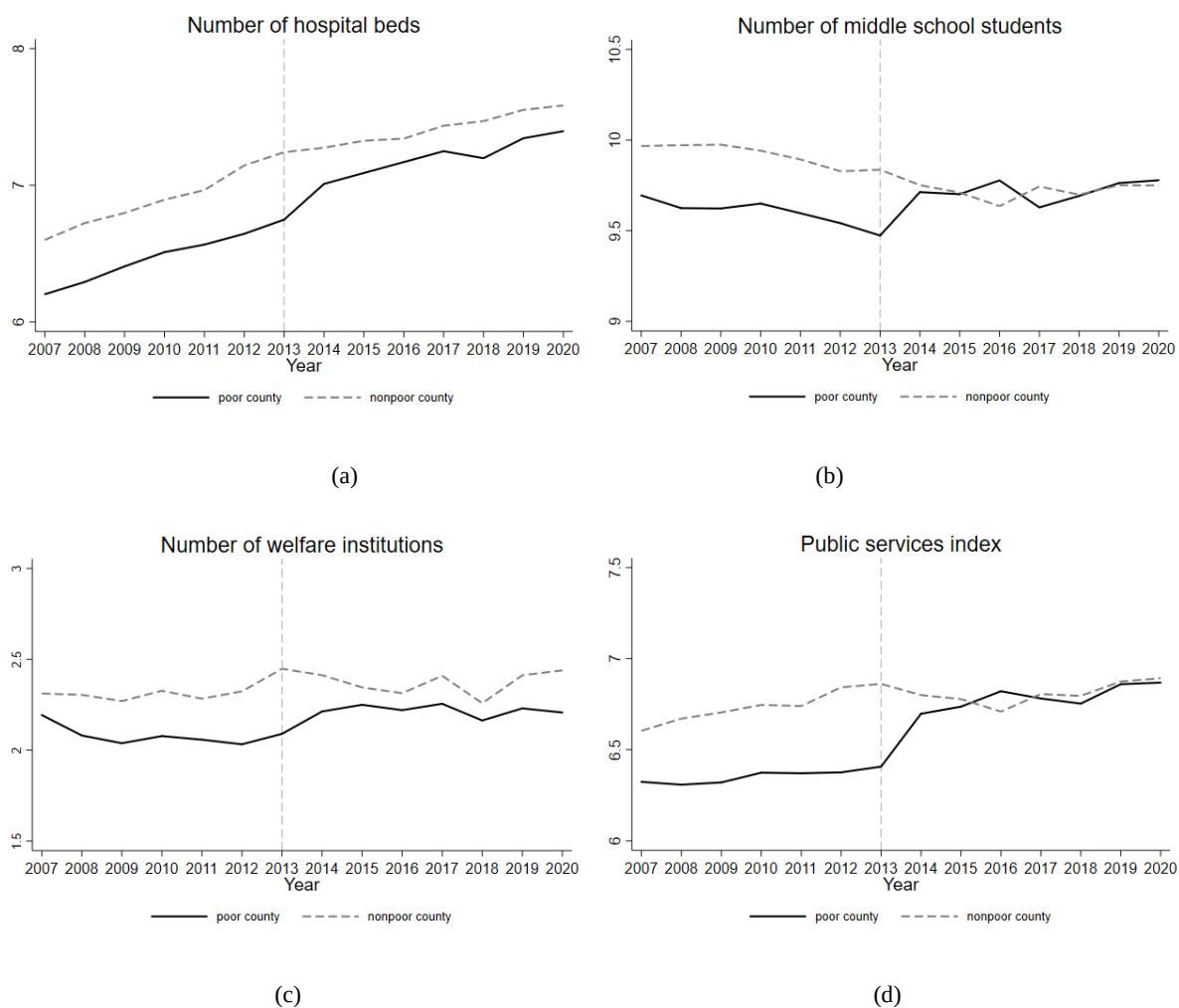
Notes: This figure shows trends in outcomes related to industrial development at county level. From Panel (a) to Panel (d), the dependent variables are log of the number of industrial enterprises, log of value-added of industry, log of the number of industrial employees, and log of wage. The black line represents the mean value of outcomes in national key poor counties. The gray line represents the mean value of outcomes in non-poor counties.

Figure A8. Trends in outcomes related to agricultural development



Notes: This figure shows trends in outcomes related to agricultural development at county level. From Panel (a) to Panel (d), dependent variables are log of agricultural output, log of agricultural machinery power, log of vegetable output, log of oil crops output, and log of grain crops output. The black line represents the mean value of outcomes in national key poor counties. The gray line represents the mean value of outcomes in non-poor counties.

Figure A9. Trends in outcomes related to public service



Notes: This figure shows trends in outcomes related to public service at county level. From Panel (a) to Panel (c), dependent variables are the log of number of hospital beds, log of number of middle school students, log of number of welfare institutions, and public services index. The black line represents the mean value of outcomes in national key poor counties. The gray line represents the mean value of outcomes in non-poor counties.

Table A1. Robustness checks: Related policies and trade shock controls

	Log (rural income)				
	(1)	(2)	(3)	(4)	(5)
$TPA_t \times Post_t$	0.109*** (0.010)	0.109*** (0.010)	0.109*** (0.010)	0.109*** (0.010)	0.109*** (0.010)
$Post_NRPS_{ct}$	0.002 (0.004)				0.002 (0.004)
$Post_AMFZ_{ct}$		0.010 (0.010)			0.010 (0.010)
$Post_PFT_{ct}$			0.005 (0.007)		0.005 (0.006)
$Trade_{ct}$				-0.007 (0.004)	-0.006 (0.004)
County FE	Yes	Yes	Yes	Yes	Yes
Province-Year FE	Yes	Yes	Yes	Yes	Yes
Controls $\times$ Year FE	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.9770	0.9770	0.9770	0.9770	0.9770
Observations	17,606	17,606	17,606	17,606	17,606

Notes: This table reports the impact on log of rural income. All columns control for county fixed effects and province-year fixed effects. Controls denote the seven key selection criteria the leading group used in selecting national key poor counties. Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

Table A2. Robustness checks: Alternative methods

	SDID	PSM
	(1)	(2)
$TPA_t \times Post_t$	0.080*** (0.010)	0.103*** (0.013)
County FE	Yes	Yes
Province-Year FE	Yes	Yes
Controls	Yes	No
Controls $\times$ Year FE	No	Yes
Adj R-squared	—	0.9759
Observations	1,260	12,038

Notes: This table reports the impact on log of rural income. In column (1), we estimate the outcome using SDID. In Column (2), we estimate the outcome using PSM. All columns control for county fixed effects and province-year fixed effects. The dependent variable is log of rural income. Controls denote the seven key selection criteria the leading group used in selecting national key poor counties. Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

Table A3. Robustness checks: Alternative samples

	Full poor counties sample	CFPS sample	Aggregated sample	Sample with shorter period
	(1)	(2)	(3)	(4)
$TPA_c \times Post_t$	0.108*** (0.009)	0.065** (0.031)	0.165*** (0.059)	0.096*** (0.010)
County FE	Yes	Yes	Yes	Yes
Province-Year FE	Yes	Yes	Yes	Yes
Controls $\times$ Year FE	Yes	Yes	Yes	Yes
Adj R-squared	0.9755	0.9858	0.7304	0.9732
Observations	19,558	738	406	15,280

Notes: This table reports the impact on log of rural income. In column (1), the sample covers the full list of poor counties. In column (2), the sample is restricted to counties covered by the CFPS database. In column (4), the sample is restricted to the period from 2007 to 2018. All columns control for county fixed effects and province-year fixed effects. In columns (1), (2) and (4), the outcome variable of rural household per capita net income comes from the county-level database of the provincial statistical yearbook. In column (3), we use the average value of rural household net income per capita by aggregating CFPS data to county level. Controls denote the seven key selection criteria the leading group used in selecting national key poor counties. Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

Table A4. Spillover effects

Dependent variable	Log (rural net income) (1)	Log (revenue per capita) (2)	Log (GDP per capita) (3)	Log (number of enterprises) (4)	Log (fixed investment) (5)
Panel A					
$TPA_c \times Post_t$	0.115*** (0.013)	0.092** (0.037)	0.074*** (0.021)	0.091** (0.036)	0.066* (0.037)
$Neighbor_county_c \times Post_t$	0.008 (0.011)	-0.039 (0.027)	-0.006 (0.016)	0.032 (0.025)	-0.036 (0.036)
Panel B					
$TPA_c \times Post_t$	0.115*** (0.012)	0.119*** (0.034)	0.069*** (0.019)	0.081** (0.034)	0.105*** (0.036)
$Neighbor_county_c \times Post_t \times Intensity_c$	0.005 (0.005)	-0.001 (0.010)	-0.008 (0.006)	0.009 (0.010)	0.009 (0.013)
County FE	Yes	Yes	Yes	Yes	Yes
Province-Year FE	Yes	Yes	Yes	Yes	Yes
Controls $\times$ Year FE	Yes	Yes	Yes	Yes	Yes
Observations	17,606	18,153	17,954	15,980	15,541

Notes: This table reports the spillover effects of the TPA program. Panel A presents the impact of TPA program on neighboring counties. Panel B presents the impact of TPA program on non-treated counties that are surrounded by national poor counties. Specifically, estimation samples are restricted to non-treated counties, and we define counties bordering national poor counties as the treatment group and counties not bordering any national poor counties as the control group. $Intensity_c$ represents the number of poor counties bordering county c . All columns control for county fixed effects and province-year fixed effects. Controls denote the seven key selection criteria the leading group used in selecting national key poor counties. Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

Table A5. Impact on fiscal transfer revenue

Dependent variable	Log (fiscal transfer revenue)	
	(1)	(2)
$TPA_c \times Post_t$	0.067*** (0.024)	0.082*** (0.030)
City FE	Yes	Yes
Province-Year FE	Yes	Yes
Controls $\times$ Year FE	No	Yes
Adj R-squared	0.9333	0.9351
Observations	1,003	1,003

Notes: This table reports the impact on fiscal transfer revenue at prefecture city level. All columns control for county fixed effects and province-year fixed effects. Controls denote population density in 2012, GDP per capita in 2012, investment in fixed assets in 2012, and the share of primary industry added value in GDP in 2012. Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

Table A6. Impact on migration

Dependent Variable	Immigration across counties (1)	Rural-urban migration (2)
$TPA_c \times Post_t$	-0.006 (0.013)	0.009 (0.032)
$Neighbor_county_c \times Post_t$	-0.013 (0.010)	
County FE	Yes	Yes
Province-Year FE	Yes	Yes
Controls $\times$ Year FE	Yes	Yes
Adj R-squared	0.0437	0.3559
Observations	144,393	155,278

Notes: This table reports the impact of the TPA program on migration. Column (1) reports the impact of the TPA program on immigration across counties. The dependent variable is a dummy indicator that equals 1 if the adult is a cross-county immigrant and 0 otherwise. According to the CFPS survey, an adult who lives locally but whose *hukou* is in another county is defined as a cross-county immigrant. Column (2) reports the impact on rural-urban migration. Controls denote the seven key selection criteria the leading group used in selecting national key poor counties. Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

Table A7. Impact on economic development and fiscal revenue

Dependent variable	Log (fixed investment) (1)	Log (GDP per capita) (2)	Log (fiscal revenue per capita) (3)
$TPA_t \times Post_t$	0.093*** (0.032)	0.078*** (0.018)	0.120*** (0.031)
County FE	Yes	Yes	Yes
Province-Year FE	Yes	Yes	Yes
Controls $\times$ Year FE	Yes	Yes	Yes
Adj R-squared	0.8965	0.9526	0.9145
Observations	15,541	17,954	18,153

Notes: This table reports the impact on economic development and fiscal revenue. All columns control for county fixed effects and province-year fixed effects. Controls denote the seven key selection criteria the leading group used in selecting national key poor counties. Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

Table A8. Number of observations and initial county characteristics

Dependent variable	Number of observations			
	(1)	(2)	(3)	(4)
	Number of enterprises	Value-added of industry	Number of industrial employees	Average wage for employees
Number of total populations	0.014 (0.015)	0.020** (0.010)	0.015* (0.009)	0.003 (0.006)
Number of rural populations	-0.008 (0.018)	-0.011 (0.011)	-0.020** (0.010)	-0.001 (0.006)
Real GDP	0.000 (0.004)	-0.009*** (0.003)	0.007*** (0.002)	0.000 (0.002)
Fiscal revenue	-0.170* (0.098)	-0.099 (0.064)	-0.025 (0.055)	-0.033 (0.050)
Loan	0.015** (0.007)	0.001 (0.005)	0.003 (0.004)	-0.005 (0.004)
Fixed assets investment	-0.031 (0.082)	-0.033 (0.058)	-0.009 (0.040)	-0.026 (0.058)
Number of Agricultural laborers	0.052** (0.024)	0.022 (0.014)	0.009 (0.014)	0.009 (0.015)
Agricultural output per labor	-0.014 (0.075)	0.159*** (0.048)	0.059 (0.044)	-0.001 (0.029)
Mean (Obs. > 0)	11.209	12.316	9.587	5.394
Observations	1415	1415	1415	1415

Notes: The dependent variable is the number of observations observed at county level for the specified variable. Independent variables are a series of county characteristics observed at baseline: the number of total populations, number of rural populations, real GDP, total fiscal revenue of local government, year-end loan balance of financial institution, total fixed asset investment, number of agricultural laborers, and agricultural output per labor. All specifications include prefecture fixed effects. *** significant at 1%, ** 5%, and * 10%.

Table A9. Number of observations and initial county characteristics

Dependent variable	Number of observations				
	(1)	(2)	(3)	(4)	(5)
	Agricultural output	Agricultural machine	Vegetables	Oil crops	Grain crops
Number of total populations	0.003 (0.0014)	0.023** (0.010)	0.033*** (0.010)	0.023 (0.015)	0.016** (0.007)
Number of rural populations	-0.002 (0.017)	-0.021** (0.010)	-0.023* (0.012)	-0.003 (0.018)	-0.011 (0.008)
Real GDP	0.000 (0.003)	0.002 (0.003)	-0.007* (0.003)	0.006* (0.004)	0.002 (0.002)
Fiscal revenue	-0.009 (0.049)	0.020 (0.061)	0.204*** (0.049)	-0.123* (0.074)	0.004 (0.074)
Loan	-0.006 (0.005)	-0.004 (0.005)	-0.007 (0.009)	-0.009 (0.004)	-0.006 (0.004)
Fixed assets investment	0.077* (0.041)	0.111** (0.050)	0.034 (0.048)	-0.033 (0.061)	-0.008 (0.038)
Number of Agricultural laborers	-0.010 (0.021)	-0.012 (0.017)	-0.062*** (0.021)	-0.060*** (0.260)	-0.015 (0.061)
Agricultural output per labor	-0.040 (0.036)	-0.062 (0.055)	-0.128** (0.055)	-0.260*** (0.094)	-0.061 (0.038)
Mean (Obs. > 0)	11.150	10.247	5.784	11.868	10.556
Observations	1415	1415	1415	1415	1415

Notes: The dependent variable is the number of observations observed at county level for the specified variable. Independent variables are a series of county characteristics observed at baseline: the number of total populations, number of rural populations, real GDP, total fiscal revenue of local government, year-end loan balance of financial institution, total fixed asset investment, number of agricultural laborers, and agricultural output per labor. All specifications include prefecture fixed effects. *** significant at 1%, ** 5%, and * 10%.

Table A10. Number of observations and initial county characteristics

Dependent variable	Number of observations			
	(1)	(2)	(3)	(4)
	Number of hospital beds	Middle school students	Number of welfare institutions	Public service index
Number of total populations	-0.004 (0.013)	-0.018 (0.015)	-0.007 (0.018)	-0.029* (-0.017)
Number of rural populations	0.009 (0.015)	-0.001 (0.017)	0.007 (0.021)	0.003 (0.019)
Real GDP	0.001 (0.003)	0.009*** (0.003)	0.005 (0.003)	0.013*** (0.003)
Fiscal revenue	-0.028 (0.054)	-0.072 (0.051)	-0.060 (0.056)	-0.134** (0.062)
Loan	-0.014*** (0.005)	-0.006 (0.005)	-0.007 (0.006)	-0.013* (0.007)
Fixed assets investment	0.050 (0.044)	0.000 (0.042)	0.002 (0.040)	-0.005 (0.052)
Number of Agricultural laborers	-0.009 (0.018)	-0.009 (0.024)	-0.002 (0.021)	0.015 (0.026)
Agricultural output per labor	-0.044 (0.051)	-0.081 (0.057)	-0.059 (0.048)	-0.040 (0.063)
Mean (Obs. > 0)	12.508	12.132	12.384	11.474
Observations	1415	1415	1415	1415

Notes: The dependent variable is the number of observations observed at county level for the specified variable. Independent variables are a series of county characteristics observed at baseline: the number of total populations, number of rural populations, real GDP, total fiscal revenue of local government, year-end loan balance of financial institution, total fixed asset investment, number of agricultural laborers, and agricultural output per labor. All specifications include prefecture fixed effects. *** significant at 1%, ** 5%, and * 10%.

Table A11. Summary and comparison of poverty-alleviation programs in the literature

Paper	Country	Program	Research Design	Multifaceted program	Well-targeting	Assessment incentives	Estimates
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Blattman et al. (2014)	Uganda	Youth Opportunities Program (YOP)	RCT	No	Yes	No	Monthly cash earnings (UGX) (18.19***)
Banerjee et al. (2015)	Ethiopia, Ghana, Honduras, India, Pakistan, and Peru	Graduation Program Consortium	RCT	Yes	Yes	No	Incomes and revenues index (five components) (0.273***)
Ravallion et al. (2015)	India	Trial Information Campaign	RCT	No	No	No	Wage (log) (0.048***)
Blattman et al. (2016)	Uganda	Women's Income Generating Support (WINGS) program	RCT	Yes	Yes	No	Index of income measures (z-score) (0.464***)
Haushofer and Shapiro (2016)	Kenya	The GiveDirectly Unconditional Cash Transfer Program	RCT	No	No	No	Total revenue, monthly (\$) (16.15***)
Bandiera et al. (2017)	Bangladesh	Targeting the Ultra-Poor Program	RCT, DID	Yes	Yes	No	Livestock Earnings (\$) (115***)
Schaner (2018)	Kenya	Family Bank offered low-cost accounts	RCT	No	Yes	No	Monthly income (log) (0.241***)
Handa et al. (2018)	Zambia	Multiple Category Targeted Program (MCP); Child Grant Program (CGP)	RCT, DID	No	Yes	No	Incomes and Revenues index (CGP:0.62** & MCP:0.019**)
Banerjee et al. (2019)	India	Microcredit program	RCT	No	Yes	No	Total assets (Rs.) (1565.222***)
Banerjee et al. (2021)	India	Targeting the Ultra-Poor Program	RCT	Yes	Yes	No	Income and revenues (0.334***)
Balboni et al. (2022)	Bangladesh	Targeting the Ultra-Poor Program	RCT, Structural Estimation	Yes	Yes	No	Earnings potential (log) (0.325***)

Notes: This table reports estimates of the income effects of other poverty-alleviation programs. Column (1) reports the paper and authors, column (2) the country in which the poverty-alleviation program is implemented, column (3) the title of the program, column (4) the research design for estimation, columns (5) to (7) the features of the program, and column (8) the main estimates. *** significant at 1%, ** 5%, and * 10%.

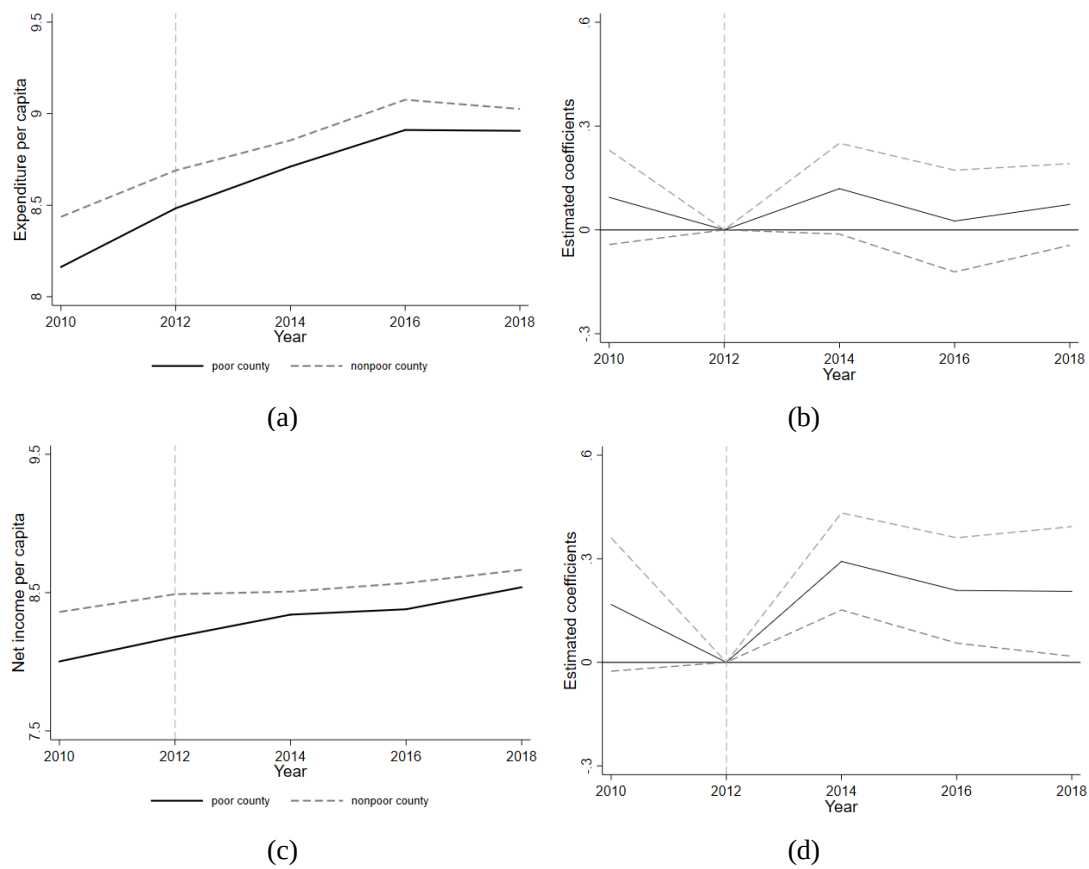
Table A12. Impact on annual savings per capita at county level

Dependent variable	Log (savings per capita)	
	(1)	(2)
$TPA_c \times Post_t$	0.120*** (0.011)	0.052*** (0.014)
County FE	Yes	Yes
Province-Year FE	Yes	Yes
Controls $\times$ Year FE	No	Yes
Adj R-squared	0.9558	0.9581
Observations	17,870	17,870

Notes: This table reports the impact on annual savings per capita at county level. All columns control for county fixed effects and province-year fixed effects. Controls denote the seven key selection criteria the leading group used in selecting national key poor counties. Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

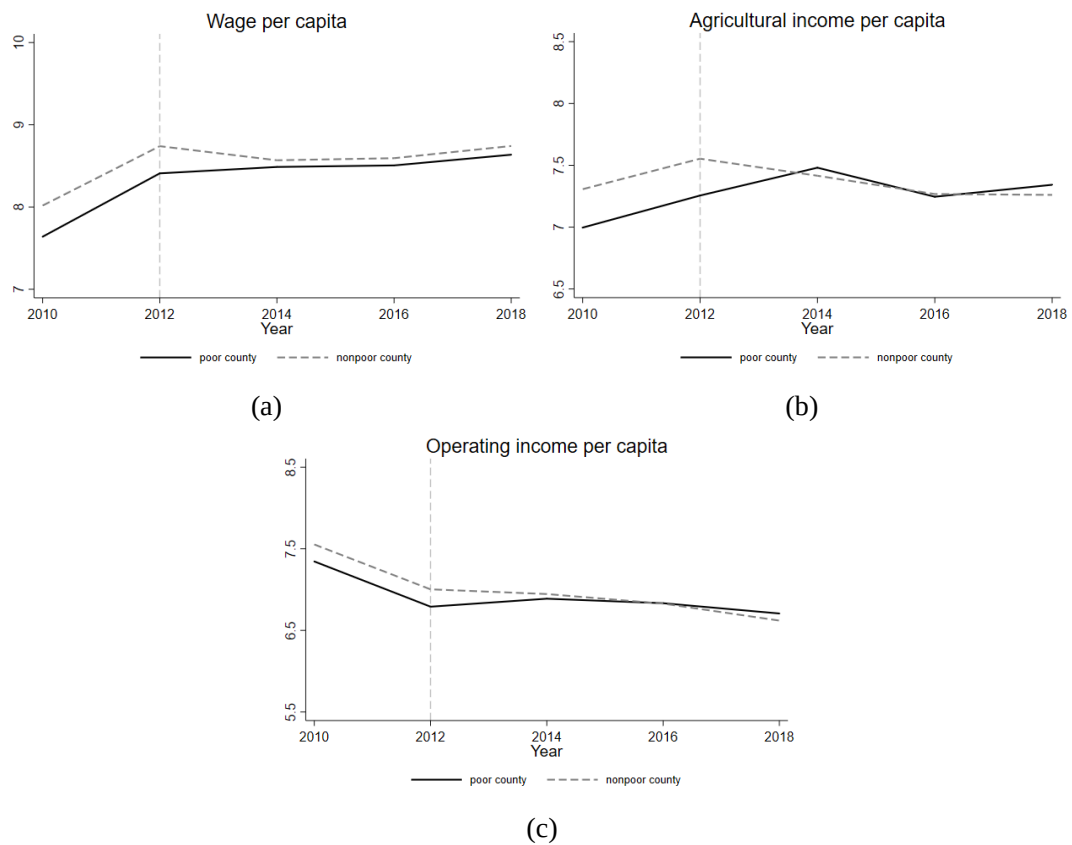
Appendix B. Additional results at household level

Figure B1. Trends in the expenditure per capita and net income per capita of rural households



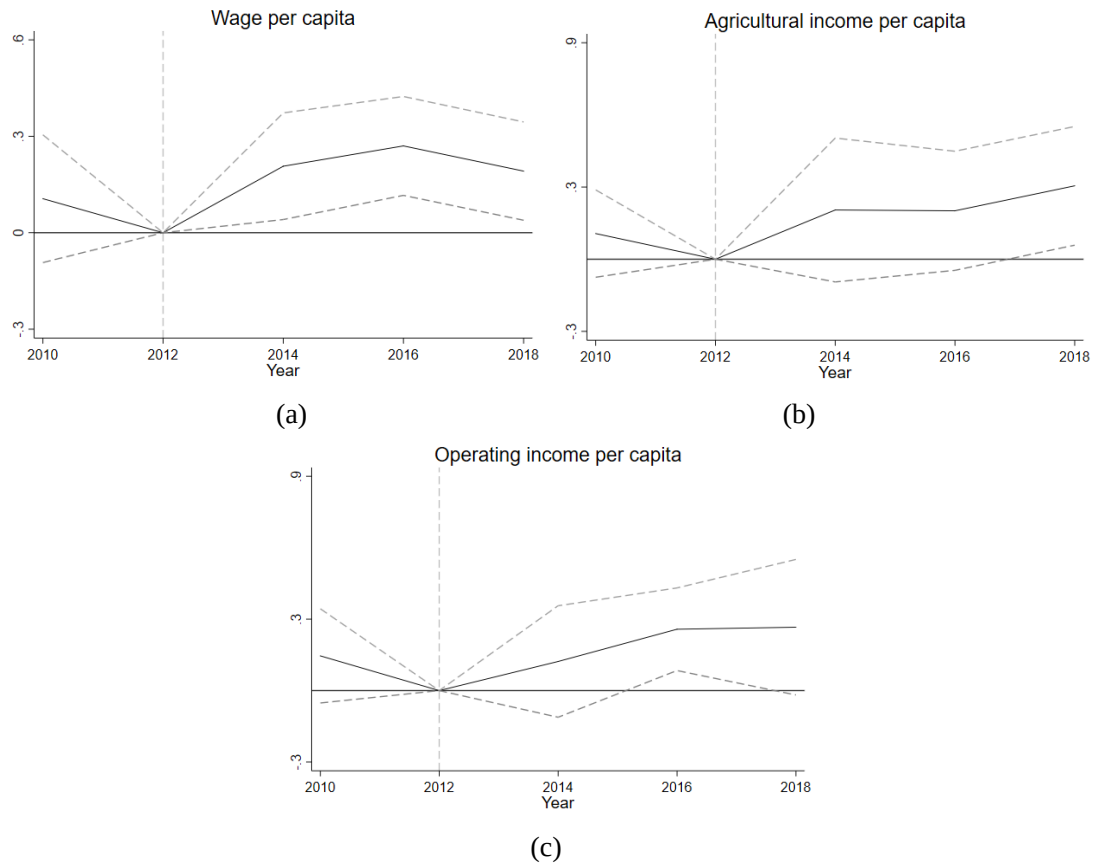
Notes: Panels (a) and (c) show trends in the log of expenditure per capita and log of net income per capita at rural household level. The black line represents the mean value of the outcome in national key poor counties. The gray line represents the mean value of the outcome in non-poor counties. Panels (b) and (d) plot the coefficients and associated 95% confidence intervals obtained by using an event-study approach. The dependent variable is log of expenditure per capita at rural household level. All estimated coefficients are relative to the wave prior to implementation (i.e., 2012).

Figure B2. Trends in income from different sources of rural households



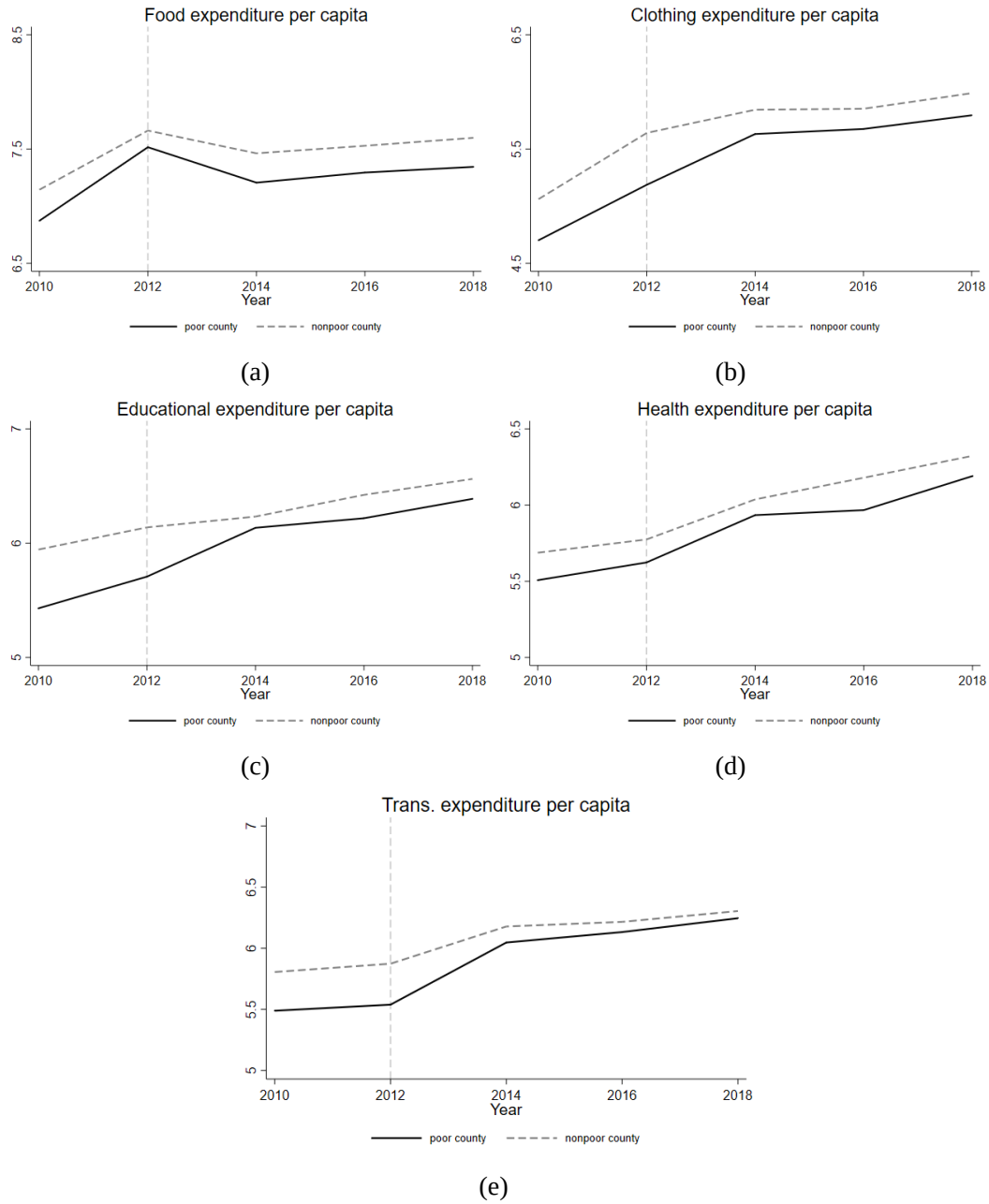
Notes: This figure shows trends in outcomes related to income at rural household level. From Panel (a) to Panel (c), dependent variables are log of wage income per capita, log of agricultural income per capita, and log of operating income per capita at rural household level. The black line represents the mean value of outcomes in national key poor counties. The gray line represents the mean value of outcomes in non-poor counties.

Figure B3. Dynamic effects of income from different sources of rural households



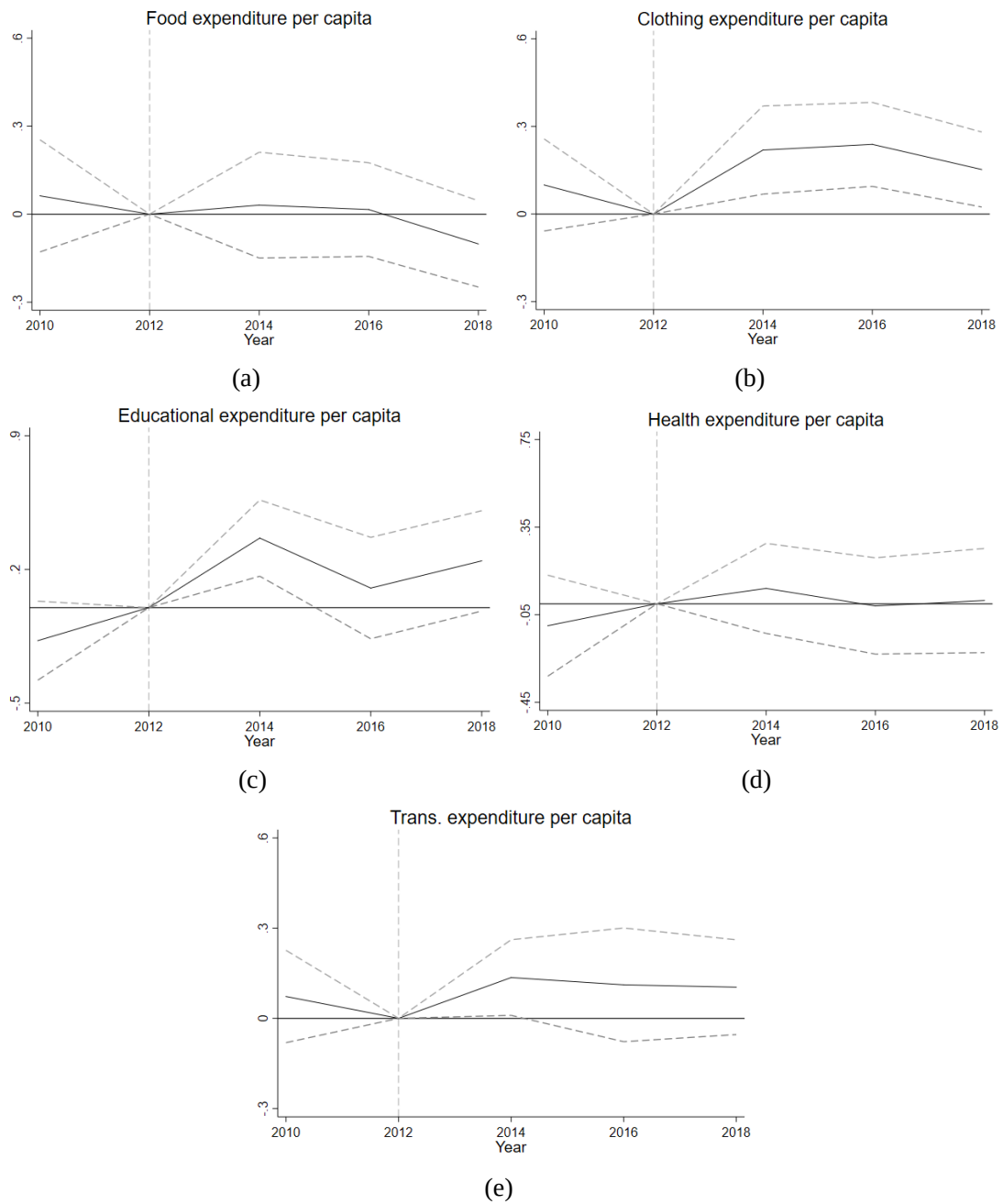
Notes: The figure plots the coefficients and associated 95% confidence intervals obtained by using an event-study approach. From Panel (a) to Panel (d), dependent variables are log of wage income per capita, log of agricultural income per capita, and log of operating income per capita at rural household level. All estimated coefficients are relative to the wave prior to implementation (i.e., 2012).

Figure B4. Trends in various expenditures of rural households



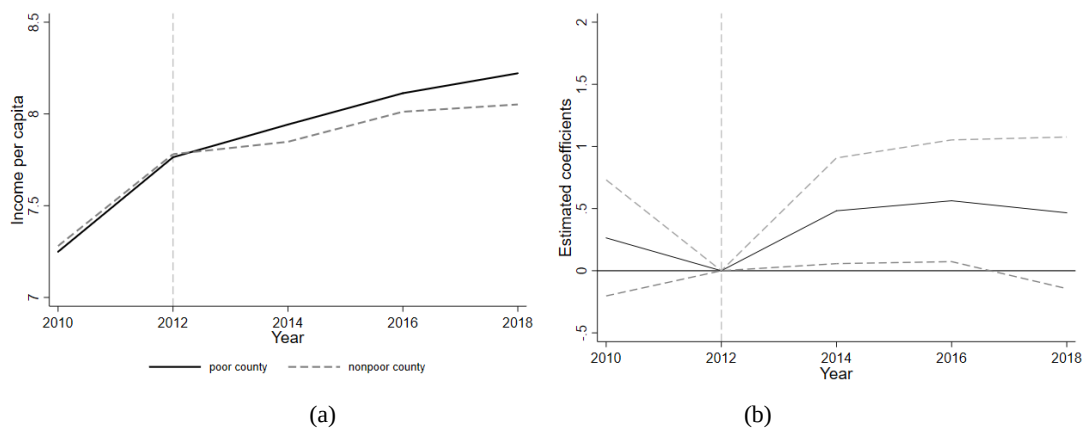
Notes: This figure shows trends in outcomes related to expenditure at rural household level. From Panel (a) to Panel (e), the dependent variables are log of food expenditure per capita, log of clothing expenditure per capita, log of educational expenditure per capita, log of health expenditure per capita, and log of transportation expenditure per capita at rural household level. The black line represents the mean value of outcomes in national key poor counties. The gray line represents the mean value of outcomes in non-poor counties.

Figure B5. Dynamic effects on various expenditures of rural households



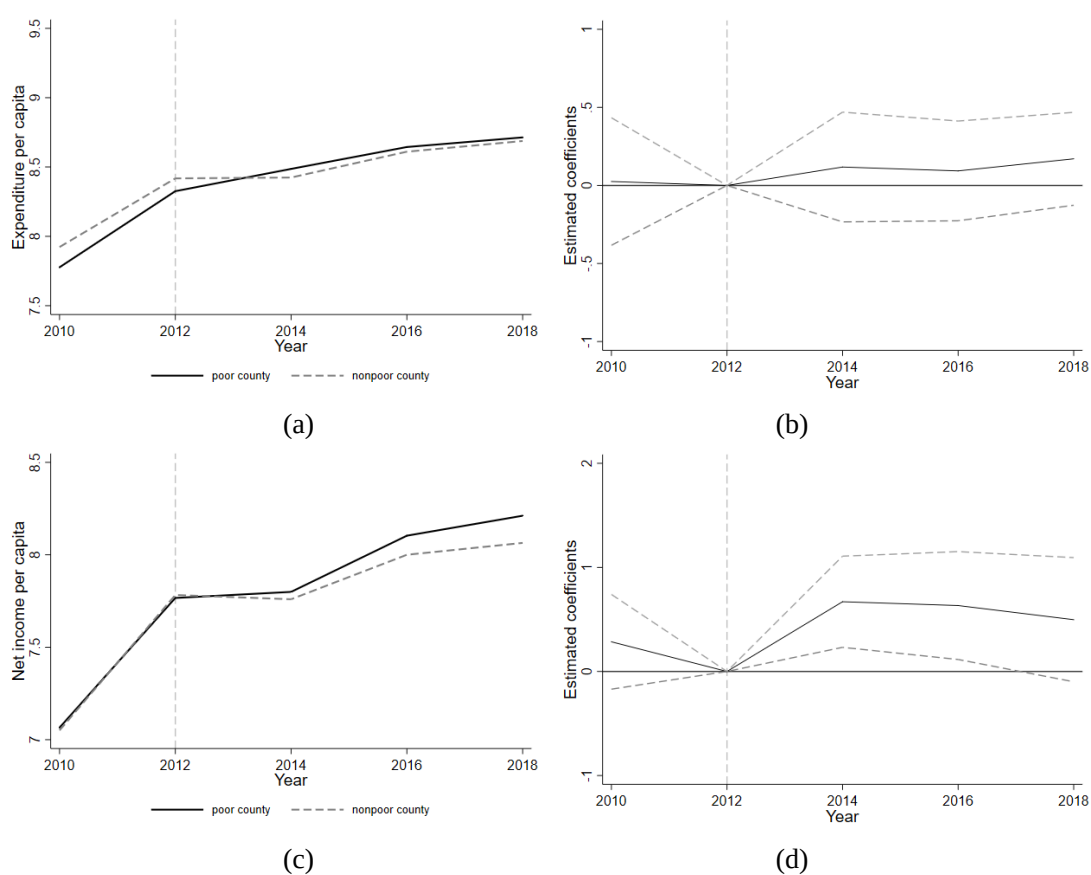
Notes: The figure plots the coefficients and associated 95% confidence intervals obtained using an event-study approach. From Panel (a) to Panel (e), the dependent variables are log of food expenditure per capita, log of clothing expenditure per capita, log of educational expenditure per capita, log of health expenditure per capita, and log of transportation expenditure per capita at rural household level. All estimated coefficients are relative to the wave prior to implementation (i.e., 2012).

Figure B6. Dynamic effects on the income per capita of poor households



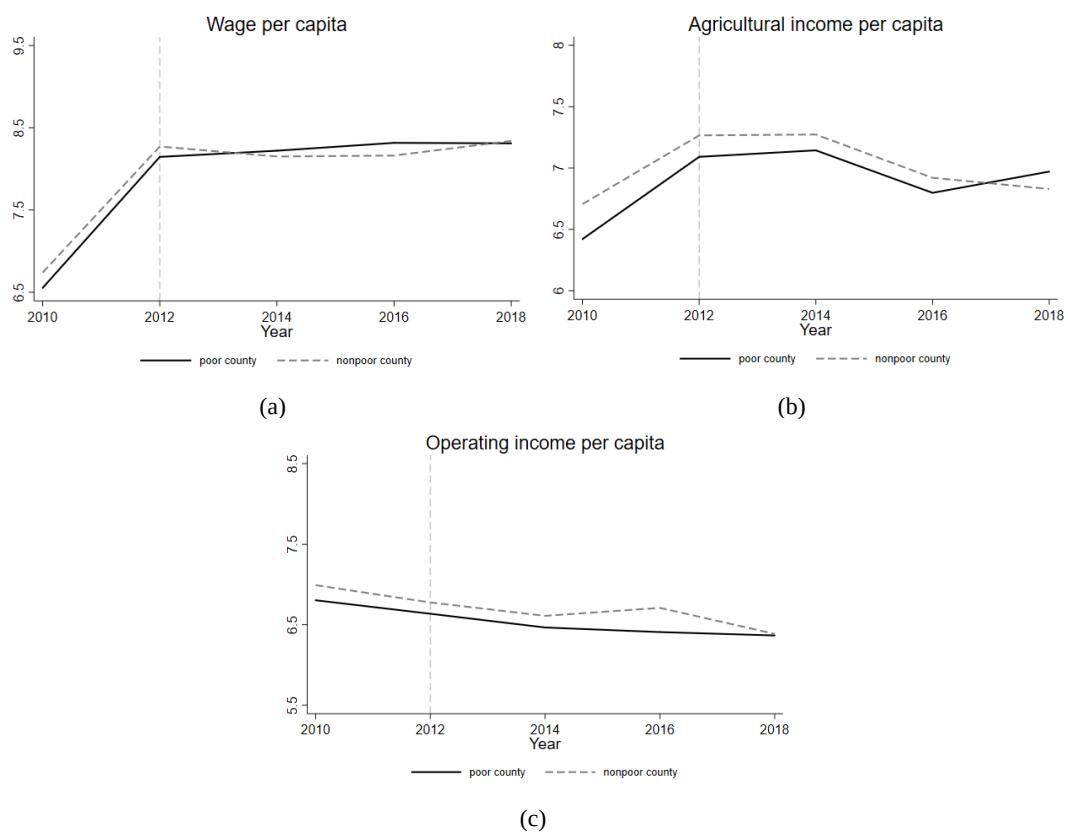
Notes: Panel (a) shows trends in the log of income per capita for poor households. The black line represents the mean value of outcomes in national key poor counties. The gray line represents the mean value of outcomes in non-poor counties. Panel (b) plots the coefficients and associated 95% confidence intervals obtained by using an event-study approach. The dependent variable is log of income per capita for poor households. All estimated coefficients are relative to the wave prior to implementation (i.e., 2012).

Figure B7. Trends in the expenditure per capita and net income per capita of poor households



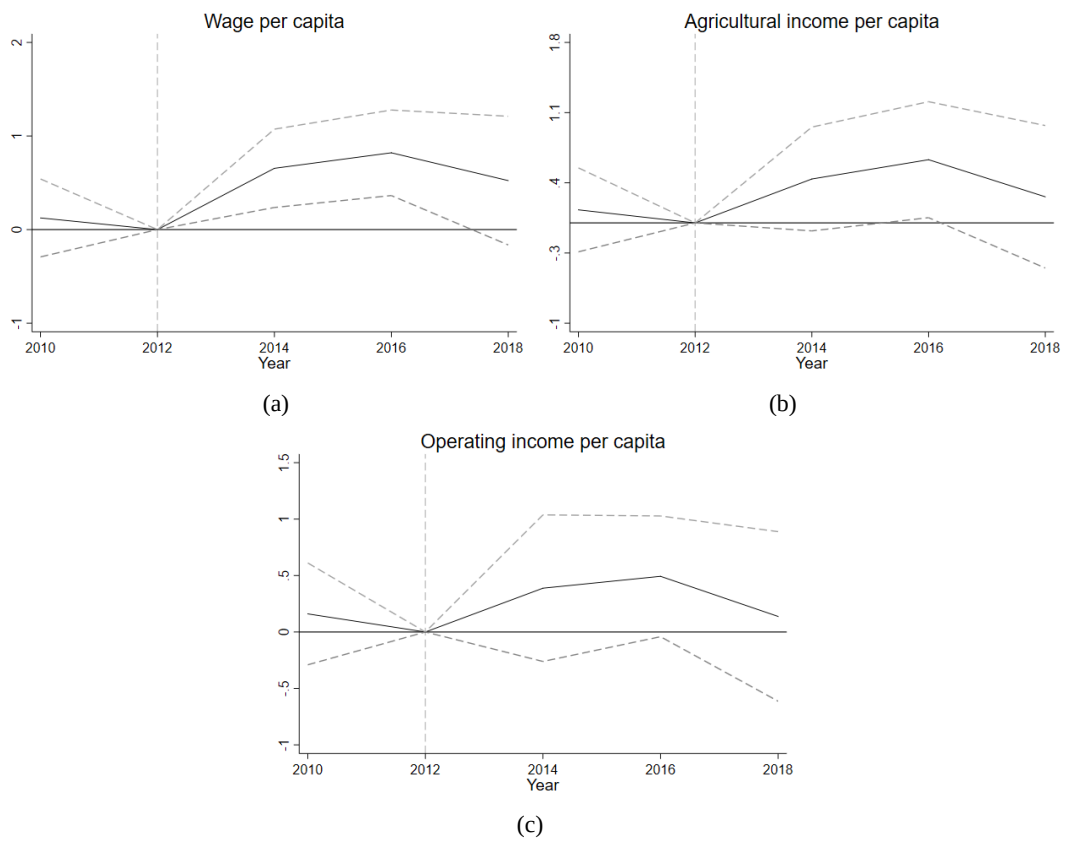
Notes: Panels (a) and (c) show trends in the expenditure per capita and net income per capita for poor households. The black line represents the mean value of outcomes in national key poor counties. The gray line represents the mean value of outcomes in non-poor counties. Panels (b) and (d) plot the coefficients and associated 95% confidence intervals obtained by using an event-study approach. All estimated coefficients are relative to the wave prior to implementation (i.e., 2012).

Figure B8. Trends in various income sources of poor households



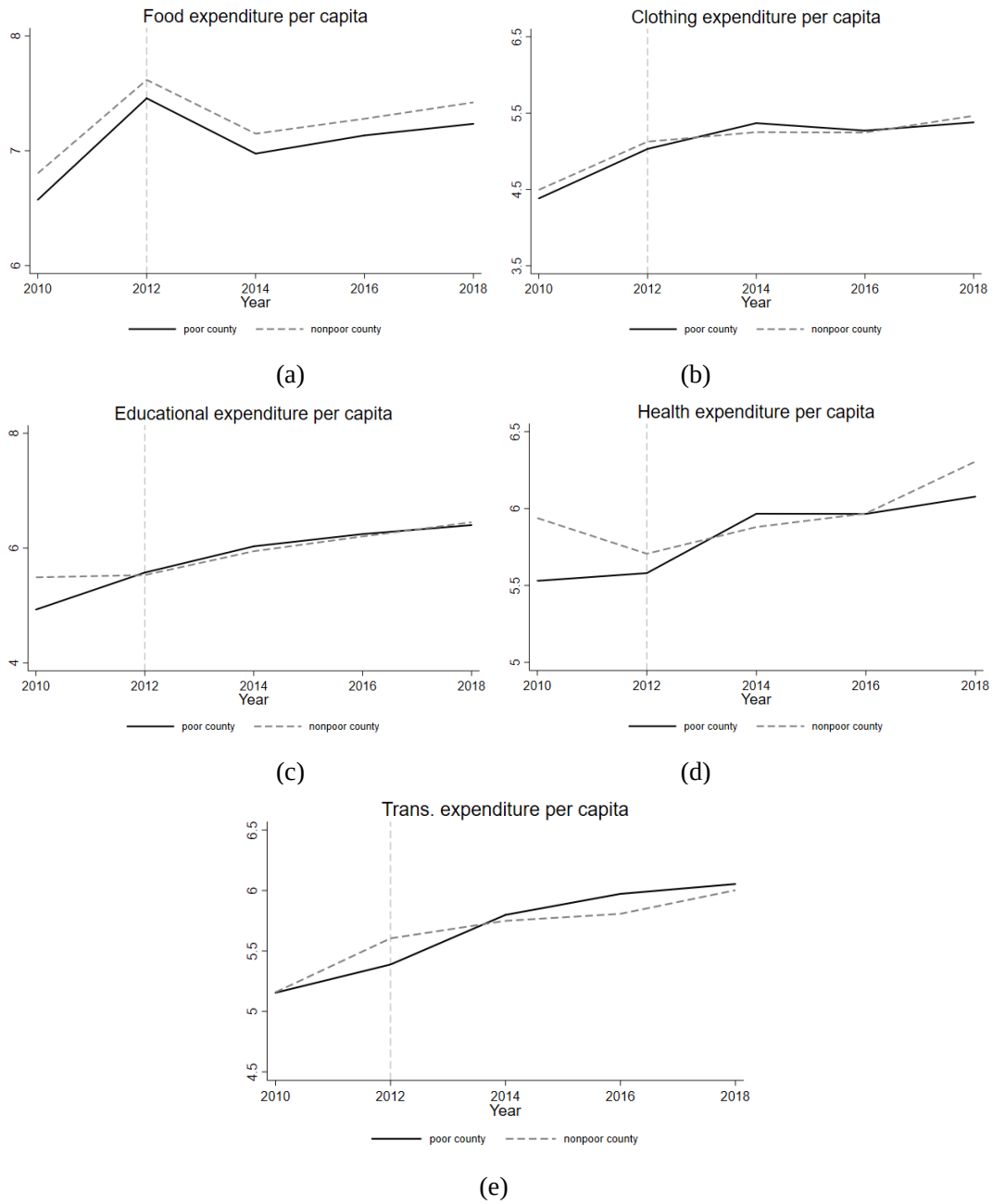
Notes: This figure shows trends in outcomes related to income for poor households. From Panel (a) to Panel (d), the dependent variables are log of wage income per capita, log of agricultural income per capita, log of operating income per capita, and log of net income per capita for poor households. The black line represents the mean value of outcomes in national key poor counties. The gray line represents the mean value of outcomes in non-poor counties.

Figure B9. Dynamic effects on various income sources of poor households



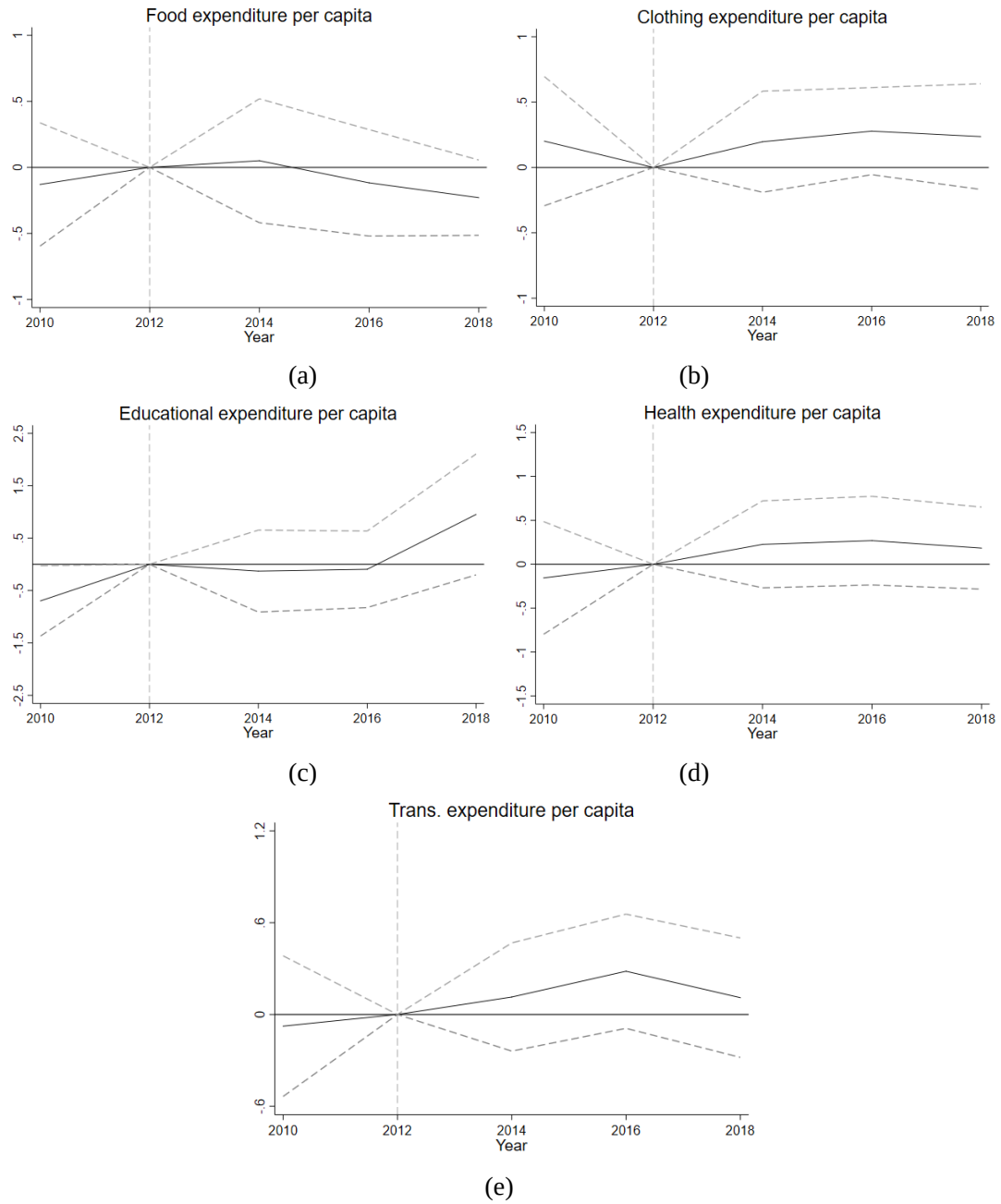
Notes: The figure plots the coefficients and associated 95% confidence intervals obtained by using an event-study approach. From Panel (a) to Panel (c), dependent variables are log of wage income per capita, log of agricultural income per capita, and log of operating income per capita for poor households. All estimated coefficients are relative to the wave prior to implementation (i.e., 2012).

Figure B10. Trends in various expenditures of poor households



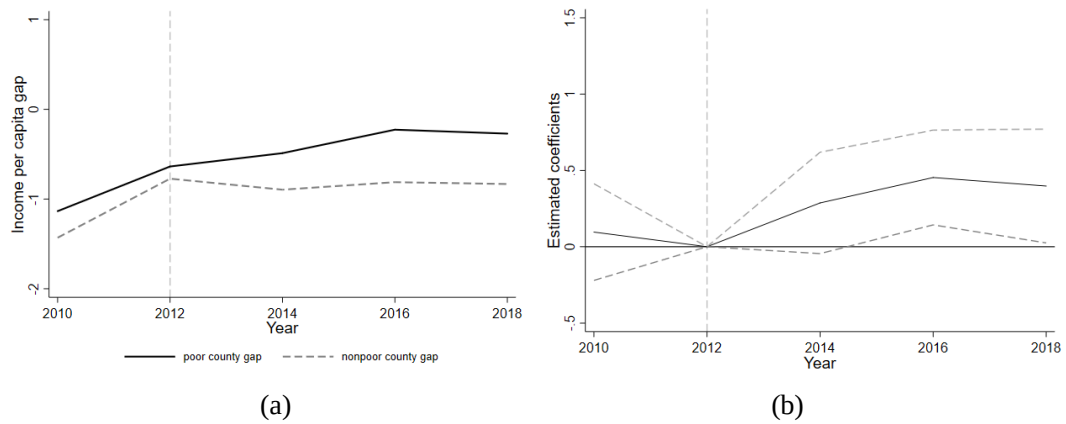
Notes: This figure shows trends in outcomes related to expenditure for poor households. From Panel (a) to Panel (e), dependent variables are log of food expenditure per capita, log of clothing expenditure per capita, log of educational expenditure per capita, log of health expenditure per capita, and log of transportation expenditure per capita for poor households. The black line represents the mean value of outcomes in national key poor counties. The gray line represents the mean value of outcomes in non-poor counties.

Figure B11. Dynamic effects on various expenditures of poor households



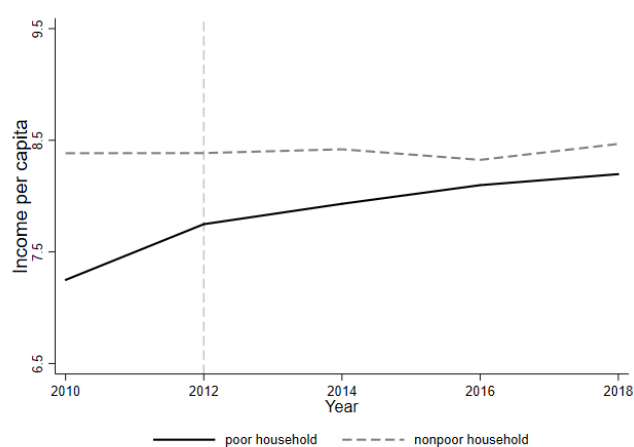
Notes: The figure plots the coefficients and associated 95% confidence intervals obtained by using an event-study approach. From Panel (a) to Panel (e), dependent variables are log of food expenditure per capita, log of clothing expenditure per capita, log of educational expenditure per capita, log of health expenditure per capita, and log of transportation expenditure per capita for poor households. All estimated coefficients are relative to the wave prior to implementation (i.e., 2012).

Figure B12. Dynamic effects on income per capita of poor households and non-poor households



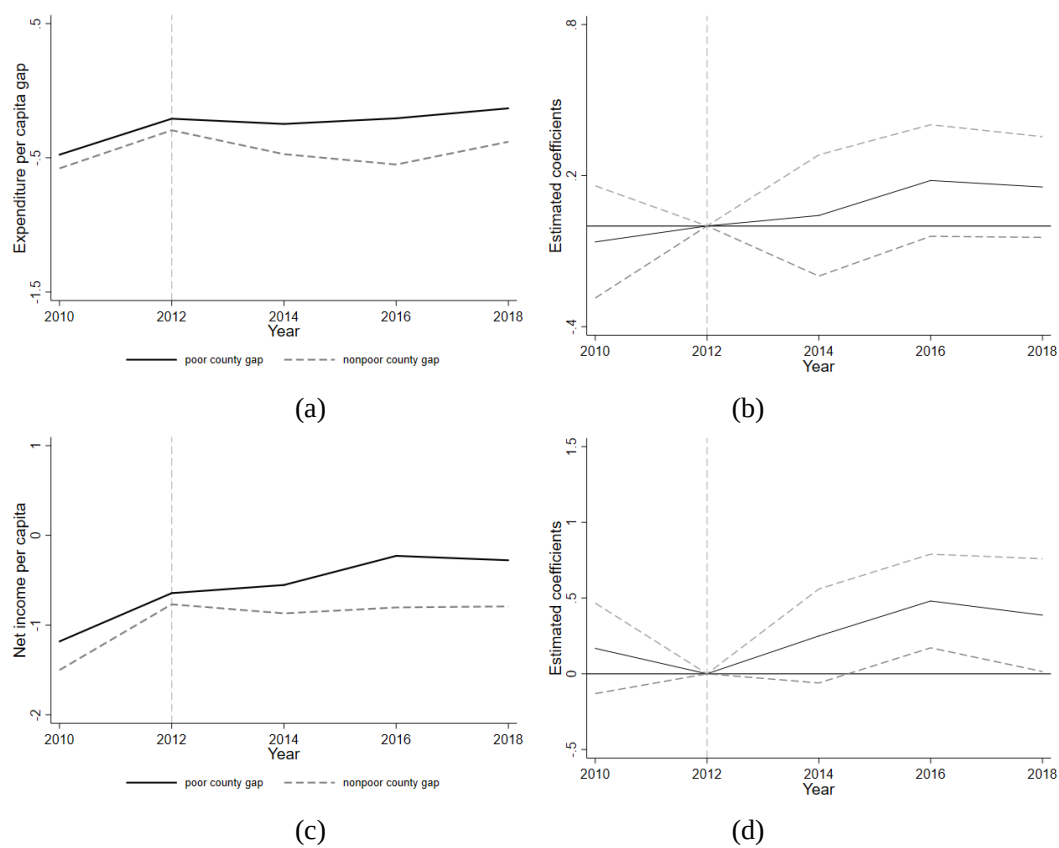
Notes: Panel (a) shows trends in the gap in log of income per capita between poor households and non-poor households, which is equal to the value of poor households minus the value of nonpoor households. The black line represents the mean value of outcomes in national key poor counties. The gray line represents the mean value of outcomes in non-poor counties. Panel (b) plots the coefficients and associated 95% confidence intervals obtained by using an event-study approach. The dependent variable is log of income per capita. All estimated coefficients are relative to the wave prior to implementation (i.e., 2012).

Figure B13. Trends in income per capita of poor households and non-poor households in poor counties



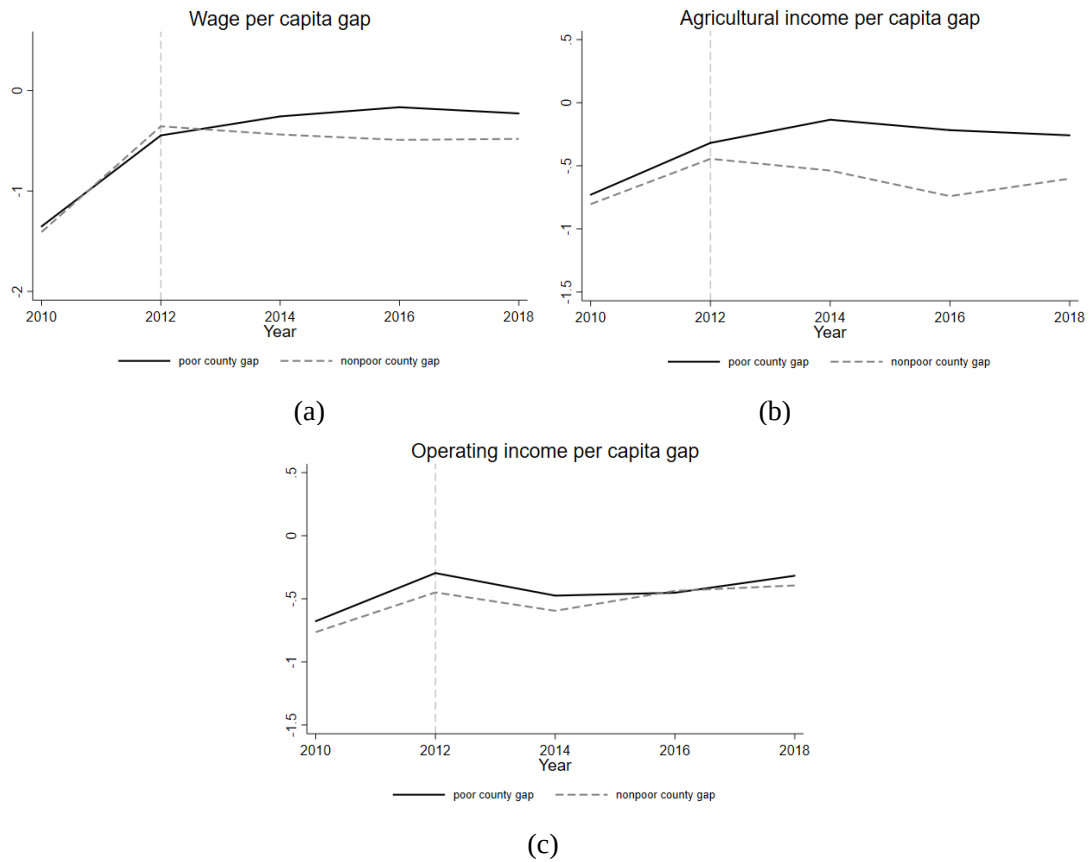
Notes: The figure shows trends in log of income per capita of poor households and non-poor households in poor counties. The black line represents the mean value of the outcome in poor households. The gray line represents the mean value of the outcome in non-poor households.

Figure B14. Trends in the expenditure per capita and net income per capita of poor households and non-poor households



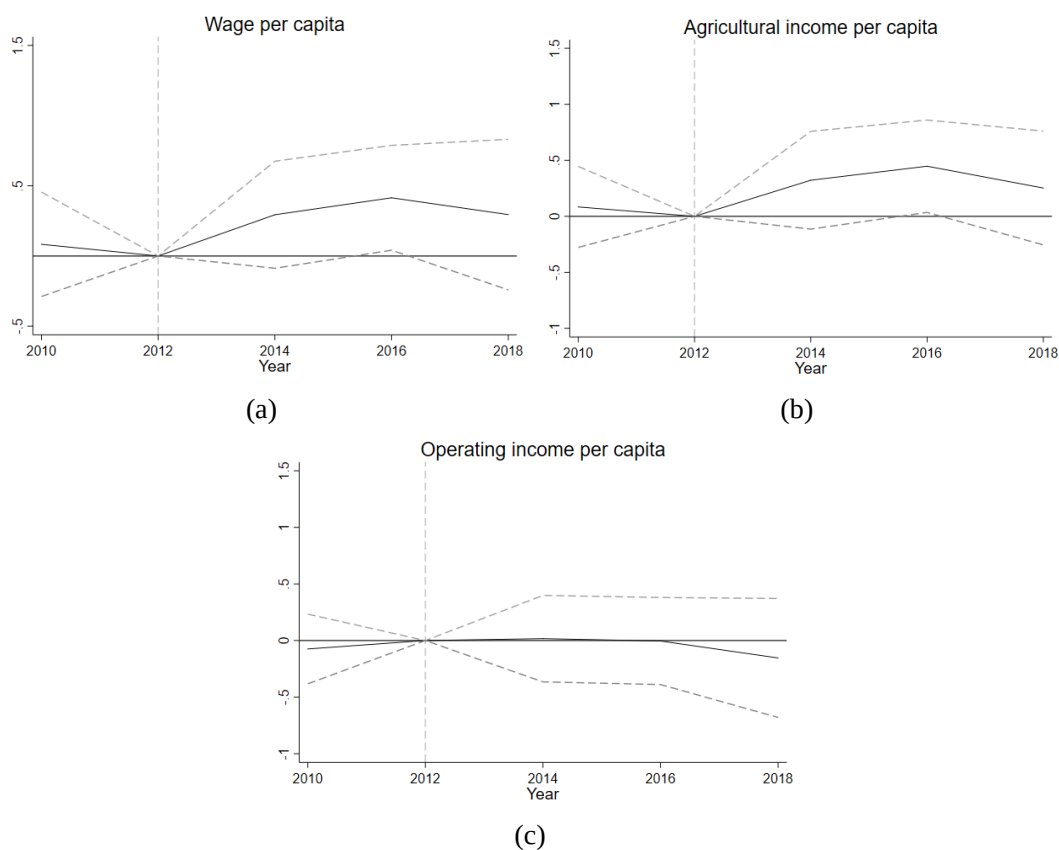
Notes: Panels (a) and (c) show trends in the gap in log of expenditure per capita and log of net income per capita between poor households and non-poor households, which is equal to the value of poor households minus the value of non-poor households. The black line represents the mean value of outcomes in national key poor counties. The gray line represents the mean value of outcomes in non-poor counties. Panels (b) and (d) plot the coefficients and associated 95% confidence intervals obtained by using an event-study approach. All estimated coefficients are relative to the wave prior to implementation (i.e., 2012).

Figure B15. Trends in various income sources of poor households and non-poor households



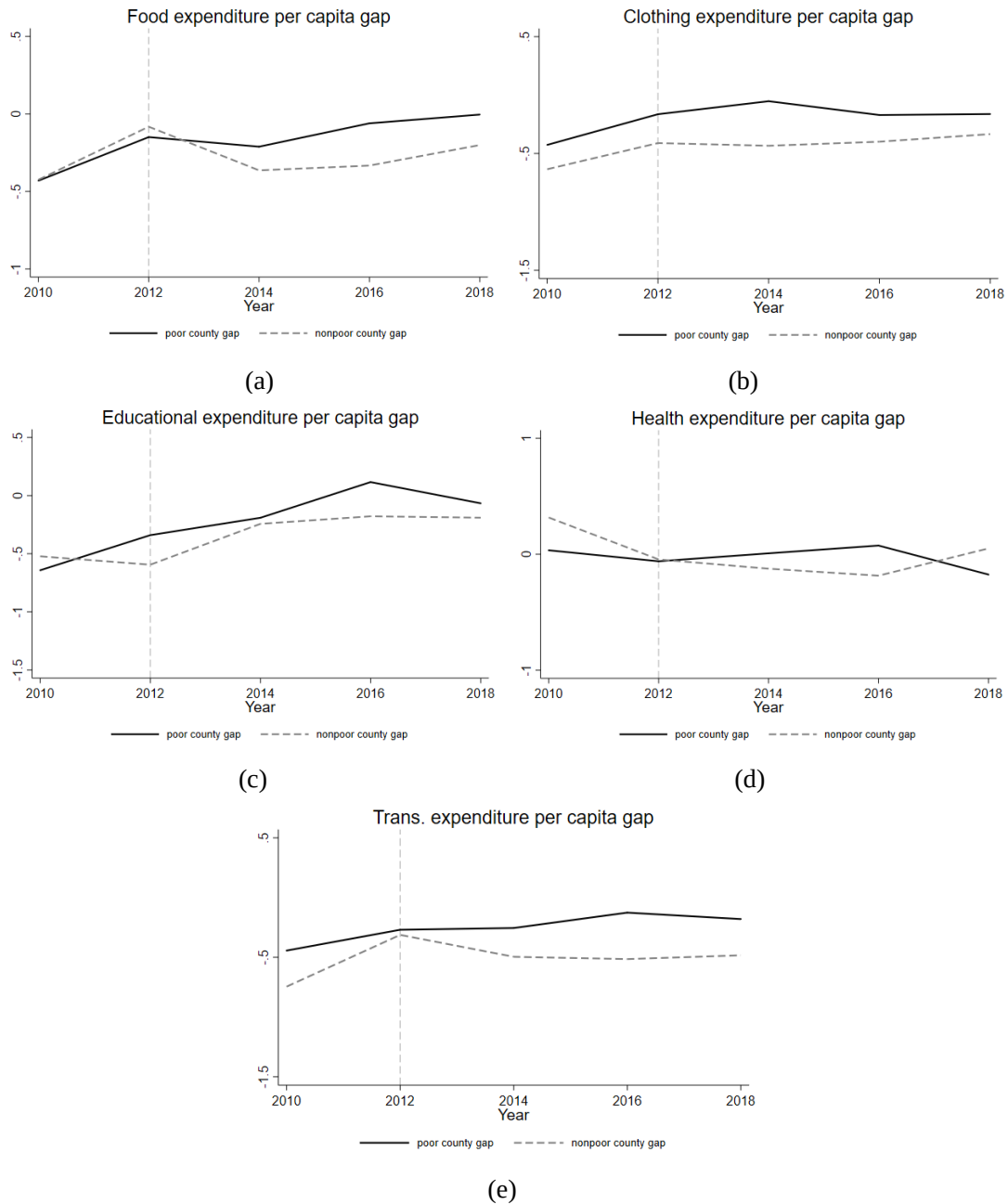
Notes: This figure shows trends in outcomes related to income. From Panel (a) to Panel (c), the dependent variables are the gap in outcomes between poor households and non-poor households, including the log of wage income per capita, log of agricultural income per capita, and log of operating income per capita. The gap is equal to the value of poor households minus the value of nonpoor households. The black line represents the mean value of outcomes in national key poor counties. The gray line represents the mean value of outcomes in non-poor counties.

Figure B16. Dynamic effects on various income sources of poor households
and non-poor households



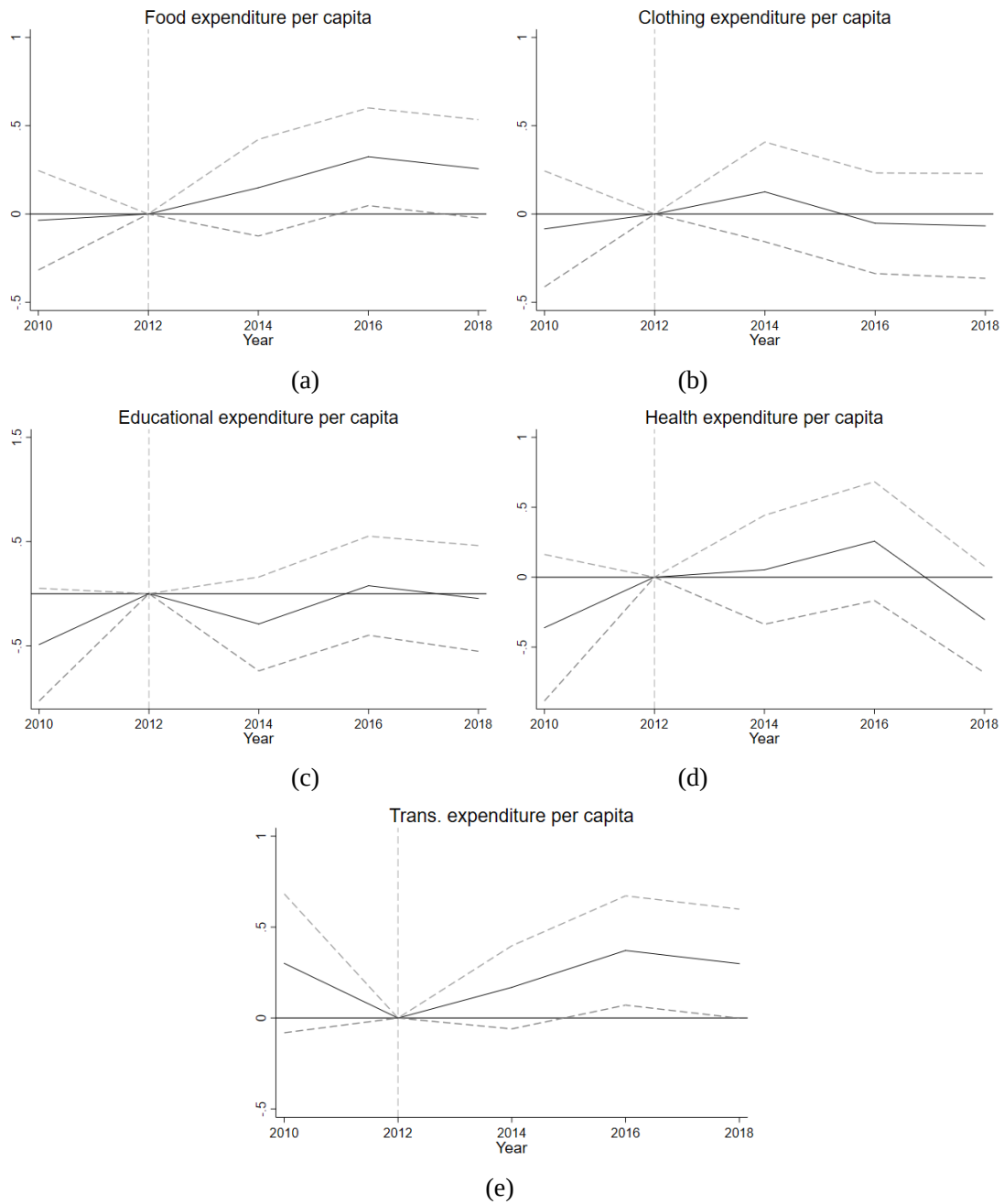
Notes: The figure plots the coefficients and associated 95% confidence intervals obtained by using an event-study approach. From Panel (a) to Panel (c), dependent variables are log of wage income per capita, log of agricultural income per capita, and log of operating income per capita. All estimated coefficients are relative to the wave prior to implementation (i.e., 2012).

Figure B17. Trends in various expenditures of poor households and non-poor households



Notes: This figure shows trends in outcomes related to expenditure. From Panel (a) to Panel (e), dependent variables are the gap in outcomes between poor households and non-poor households, including log of food expenditure per capita, log of clothing expenditure per capita, log of educational expenditure per capita, log of health expenditure per capita, and log of transportation expenditure per capita. The gap is equal to the value of poor households minus the value of non-poor households. The black line represents the mean value of outcomes in national key poor counties. The gray line represents the mean value of outcomes in non-poor counties.

Figure B18. Dynamic effects on various expenditures of poor households
and non-poor households



Notes: The figure plots the coefficients and associated 95% confidence intervals obtained by using an event-study approach. From Panel (a) to Panel (e), dependent variables are log of food expenditure per capita, log of clothing expenditure per capita, log of educational expenditure per capita, log of health expenditure per capita, and log of transportation expenditure per capita. All estimated coefficients are relative to the wave prior to implementation (i.e., 2012).

Table B1. Impact on different sources of income of rural households

Dependent variable	Wage per capita (1)	Agricultural income per capita (2)	Operating income per capita (3)
Panel A Intensive margin effects			
$TPA_t \times Post_t$	0.164** (0.066)	0.182** (0.091)	0.133* (0.080)
Observations	13,019	11,437	12,396
Panel B Extensive margin effects			
$TPA_t \times Post_t$	0.018 (0.021)	-0.009 (0.029)	-0.011 (0.026)
Observations	18,433	12,876	18,012
County FE	Yes	Yes	Yes
Province-Year FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes
Share of the category	0.46	0.34	0.13

Notes: This table reports the impact on various income sources of rural households. Panel A reports estimates obtained using the log-transformation method, which reveals the intensive margin effects generated after project implementation. In Panel B, the dependent variable is a binary indicator that equals 1 if data are greater than 0, otherwise 0. The bottom row of the table reports the share of each income source in the total income of rural households in 2010. All columns control for county fixed effects and province-year fixed effects. Controls denote the seven key selection criteria the leading group used in selecting national key poor counties and the characteristics of the household head (age, gender, ethnicity). Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

Table B2. Impact on various types of expenditure of rural households

Dependent variable	Food per capita (1)	Clothing per capita (2)	Education per capita (3)	Health per capita (4)	Transportation per capita (5)
Panel A Intensive margin effects					
$TPA_t \times Post_t$	-0.048 (0.071)	0.157*** (0.055)	0.325*** (0.094)	0.075 (0.102)	0.081 (0.050)
Observations	17,987	16,733	9,771	16,770	17,680
Panel B Extensive margin effects					
$TPA_t \times Post_t$	0.002 (0.003)	0.003 (0.018)	0.039* (0.022)	0.003 (0.018)	0.012 (0.009)
Observations	18,042	18,236	18,310	18,286	18,060
County FE	Yes	Yes	Yes	Yes	Yes
Province-Year FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Share of the category	0.35	0.04	0.09	0.12	0.10

Notes: This table reports the impact on various income sources of rural households. Panel A reports estimates obtained using the log-transformation method, which reveals the intensive margin effects generated after project implementation. In Panel B, the dependent variable is a binary indicator that equals 1 if data are greater than 0, otherwise 0. The bottom row of the table reports the share of each category in the total expenditure of rural households in 2010. All columns control for county fixed effects and province-year fixed effects. Controls denote the seven key selection criteria the leading group used in selecting national key poor counties and the characteristics of the household head (age, gender, ethnicity). Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

Table B3. Impact on the transfer income and non-transfer income of rural households

Dependent variable	Transfer income per capita	Non-transfer income per capita
	(1)	(2)
Panel A Poisson regression		
$TPA_t \times Post_t$	-0.175 (0.116)	0.193*** (0.042)
Observations	18,177	16,919
Panel B Intensive margin effects		
$TPA_t \times Post_t$	0.002 (0.087)	0.176*** (0.059)
Observations	12,009	16,908
Panel C Extensive margin effects		
$TPA_t \times Post_t$	-0.000 (0.036)	0.000 (0.002)
Observations	18,177	16,919
County FE	Yes	Yes
Province-Year FE	Yes	Yes
Controls	Yes	Yes
Share of the category	0.03	0.97

Notes: This table reports the impact on various income sources of rural households. Panel A reports estimates obtained using Poisson regressions. Panel B reports estimates obtained using the log-transformation method, which reveals the intensive margin effects generated after program implementation. In Panel C, the dependent variable is a binary indicator that equals 1 if the corresponding outcome variable is greater than 0, otherwise 0. The bottom row of the table reports the share of each income source in the total income of rural households in 2010. All columns control for county fixed effects and province-year fixed effects. Controls denote the seven key selection criteria the leading group used in selecting national key poor counties and the characteristics of the household head (age, gender, ethnicity). Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

Table B4. Impact on different sources of income of poor households

Dependent variable	Wage per capita (1)	Agricultural income per capita (2)	Operating income per capita (3)
Panel A Poisson regression			
$TPA_t \times Post_t$	0.862*** (0.214)	0.546** (0.258)	0.384* (0.226)
Observations	1,877	1,171	1,868
Panel B Intensive margin effects			
$TPA_t \times Post_t$	0.607*** (0.179)	0.408** (0.176)	0.276** (0.138)
Observations	1,084	1,030	1,257
Panel C Extensive margin effects			
$TPA_t \times Post_t$	0.103* (0.055)	0.088 (0.062)	-0.101** (0.041)
Observations	1,877	1,171	1,868
County FE	Yes	Yes	Yes
Province-Year FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes
Share of the category	0.28	0.44	0.16

Notes: This table reports the impact on various income sources of rural households. Panel A reports estimates obtained using Poisson regressions. Panel B reports estimates obtained using the log-transformation method, which reveals the intensive margin effects generated after program implementation. In Panel C, the dependent variable is a binary indicator that equals 1 if the corresponding outcome variable is greater than 0, otherwise 0. The bottom row of the table reports the share of each income source in the total income of poor households in 2010. All columns control for county fixed effects and province-year fixed effects. Controls denote the seven key selection criteria the leading group used in selecting national key poor counties and the characteristics of the household head (age, gender, ethnicity). Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

Table B5. Impact on various types of expenditure of poor households

Dependent variable	Food per capita (1)	Clothing per capita (2)	Education per capita (3)	Health per capita (4)	Transportation per capita (5)
Panel A Poisson regression					
$TPA_t \times Post_t$	-0.236 (0.148)	0.212 (0.144)	0.163 (0.365)	0.373* (0.222)	0.179 (0.151)
Observations	1,891	1,886	1,865	1,892	1,881
Panel B Intensive margin effects					
$TPA_t \times Post_t$	-0.037 (0.143)	0.161 (0.134)	0.522 (0.328)	0.301 (0.182)	0.205* (0.121)
Observations	1,866	1,601	972	1,729	1,774
Panel C Extensive margin effects					
$TPA_t \times Post_t$	-0.012 (0.020)	-0.125** (0.054)	-0.084 (0.073)	-0.055 (0.043)	0.029 (0.033)
Observations	1,891	1,886	1,865	1,892	1,881
County FE	Yes	Yes	Yes	Yes	Yes
Province-Year FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Share of the category	0.38	0.03	0.07	0.19	0.08

Notes: This table reports the impact on various expenditure sources of rural households. Panel A reports estimates obtained using Poisson regressions. Panel B reports estimates obtained using the log-transformation method, which reveals the intensive margin effects generated after program implementation. In Panel C, the dependent variable is a binary indicator that equals 1 if the corresponding outcome variable is greater than 0, otherwise 0. The bottom row of the table reports the share of each category in the total expenditure of poor households in 2010. All columns control for county fixed effects and province-year fixed effects. Controls denote the seven key selection criteria the leading group used in selecting national key poor counties and the characteristics of the household head (age, gender, ethnicity). Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

Table B6. Impact on income sources of poor households and non-poor households

Dependent variable	Wage per capita	Agricultural income per capita	Operating income per capita
	(1)	(2)	(3)
Panel A Poisson regression			
$TPA_t \times Post_t \times Poor_h$	0.469** (0.222)	0.424 (0.274)	0.436 (0.333)
Observations	12,818	9,077	12,654
Panel B Intensive margin effects			
$TPA_t \times Post_t \times Poor_h$	0.293* (0.153)	0.312* (0.165)	-0.001 (0.118)
Observations	9,249	8,202	9,156
Panel C Extensive margin effects			
$TPA_t \times Post_t \times Poor_h$	-0.028 (0.048)	0.014 (0.049)	0.021 (0.047)
Observations	12,818	9,077	12,654
Poor household-Year FE	Yes	Yes	Yes
Poor household-County FE	Yes	Yes	Yes
County-Year FE	Yes	Yes	Yes
Family Controls	Yes	Yes	Yes
Share of the category	0.45	0.36	0.11

Notes: This table reports the impact on various income sources of rural households. Panel A reports estimates obtained using Poisson regressions. Panel B reports estimates obtained using the log-transformation method, which reveals the intensive margin effects generated after program implementation. In Panel C, the dependent variable is a binary indicator that equals 1 if the corresponding outcome variable is greater than 0, otherwise 0. The bottom row of the table reports the share of each income source in the total income of poor and nonpoor households in 2010. All columns control for poor household-year fixed effects, poor household-county fixed effects, and county-year fixed effects. Family Controls denote the characteristics of household head (age, gender, ethnicity). Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

Table B7. Impact on various expenditures of poor households and non-poor households

Dependent variable	Food per capita (1)	Clothing per capita (2)	Education per capita (3)	Health per capita (4)	Transportation per capita (5)
Panel A Poisson regression					
$TPA_t \times Post_t \times Poor_h$	0.251** (0.108)	0.032 (0.100)	-0.296 (0.228)	-0.055 (0.231)	0.073 (0.150)
Observations	12,790	12,763	12,767	12,800	12,731
Panel B Intensive margin effects					
$TPA_t \times Post_t \times Poor_h$	0.260** (0.114)	0.040 (0.101)	0.143 (0.199)	0.183 (0.140)	0.136 (0.104)
Observations	12,692	11,734	6,954	11,848	12,439
Panel C Extensive margin effects					
$TPA_t \times Post_t \times Poor_h$	-0.008 (0.014)	-0.069* (0.038)	-0.205*** (0.054)	-0.042 (0.031)	-0.012 (0.026)
Observations	12,790	12,763	12,767	12,800	12,731
Poor household-Year FE	Yes	Yes	Yes	Yes	Yes
Poor household-County FE	Yes	Yes	Yes	Yes	Yes
County-Year FE	Yes	Yes	Yes	Yes	Yes
Family Controls	Yes	Yes	Yes	Yes	Yes
Share of the category	0.35	0.04	0.09	0.13	0.10

Notes: This table reports the impact on various expenditure sources of rural households. Panel A reports estimates obtained using Poisson regressions. Panel B reports estimates obtained using the log-transformation method, which reveals the intensive margin effects generated after program implementation. In Panel C, the dependent variable is a binary indicator that equals 1 if the corresponding outcome variable is greater than 0, otherwise 0. The bottom row of the table reports the share of each category in the total expenditure of poor and nonpoor households in 2010. All columns control for poor household-year fixed effects, poor household-county fixed effects, and county-year fixed effects. Family Controls denote the characteristics of household head (age, gender, ethnicity). Standard errors are clustered at the county level. *** significant at 1%, ** 5%, and * 10%.

Table B8. Impact on labor supply and wages of rural adults

Dependent variable	Work hours (1)	Wage (2)	Self-employment (Yes=1) (3)
$TPA_t \times Post_t$	0.132** (0.062)	0.163** (0.080)	0.009 (0.014)
County FE	Yes	Yes	Yes
Province-Year FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes
R-squared	0.2296	0.3301	0.1841
Observations	31,980	33,700	26,639

Notes: This table reports the impact on labor supply and wages of rural adults. The dependent variables in columns (1)-(3) are the average working hours per day, wage income, and a dummy variable that indicates whether the adult engages in self-employment. Estimates in columns (1) and (2) obtained using Poisson regressions. Estimates in column (3) obtained using OLS regression. All columns control for county fixed effects and province-year fixed effects. Controls denote the interaction terms of the seven key selection criteria the leading group used in selecting national key poor counties and year fixed effects and characteristics of the adult (age, gender, ethnicity). Standard errors are clustered at the county level. *** significant at 1%, ** at 5%, and * at 10%.

Table B9. Impact on educational investment and cognitive abilities of rural children

Dependent variable	Education expenditure (1)	Saving for Education (Yes=1) (2)	Word recognition (3)	Math recognition (4)
$TPA_c \times Post_t$	0.250*** (0.075)	0.024 (0.030)	0.248** (0.103)	0.084 (0.069)
County FE	Yes	Yes	Yes	Yes
Province-Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
R-squared	0.2907	0.0614	0.2658	0.2725
Observations	11,289	11,532	5,770	5,471

Notes: This table reports the impact on the educational investment and cognitive abilities of rural children. The dependent variables in columns (1)-(4) are household's expenditure on children's education, the probability that the parents save for the children's future education, children's performance on the word test, and children's performance on the math test, respectively. Estimates in column (1) obtained using Poisson regression. Estimates in columns (2)-(4) obtained using OLS regressions. All columns control for county fixed effects and province-year fixed effects. Controls denote the interaction terms of the seven key selection criteria the leading group used in selecting national key poor counties and year fixed effects and characteristics of the adult (age, gender, ethnicity). Standard errors are clustered at the county level. *** significant at 1%, ** at 5%, and * at 10%.