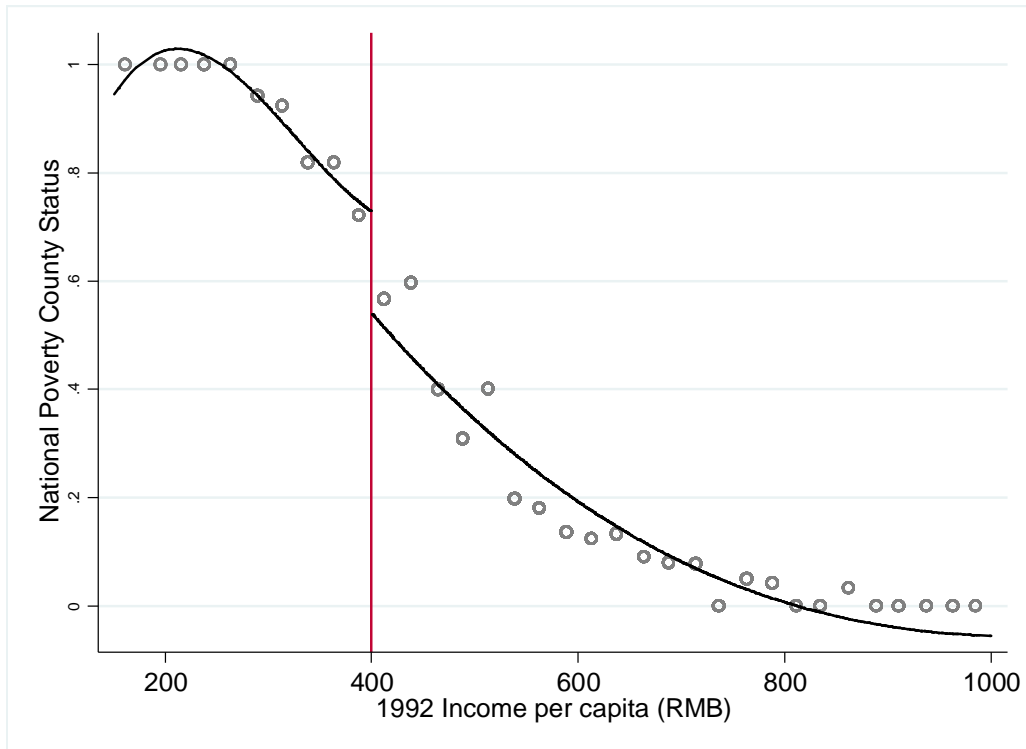# Online Appendix – Figures

## Figure A1 The Designation of National Poverty County Based on the 1992 County Rural Income per capita

Note: Each point represents the fraction of counties designated as National Poverty County within 25 yuan intervals of the 1992 rural income per capita relative to cutoff. The line is based on predicted values of 3rd order polynomial regressions.
Source: The 1992 county income per capita data was obtained from Park and Wang (2002)

Figure A2 The Density Distribution of County Rural Income per capita in 1992
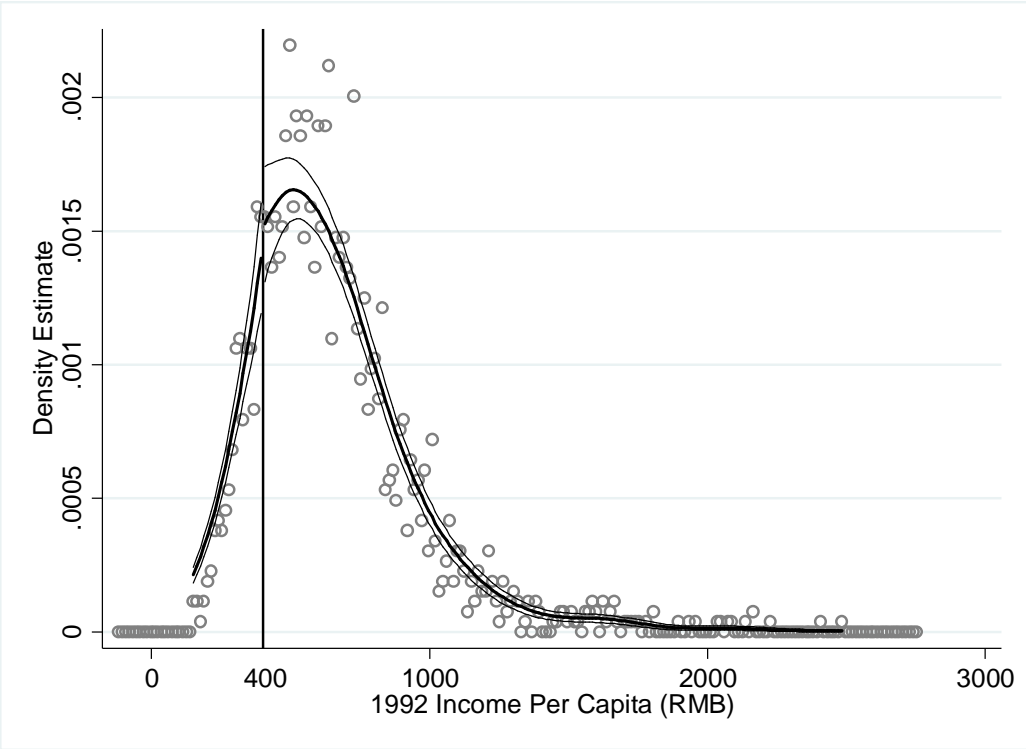
Note: This graph shows the histogram and estimated density based on the running variable (county personal income in 1992), using the DCdensity Stata command developed by McCrary (2008).
Source: The 1992 county income per capita data was obtained from Park and Wang (2002)

Figure A3 Pre-Treatment County Characteristics Comparison
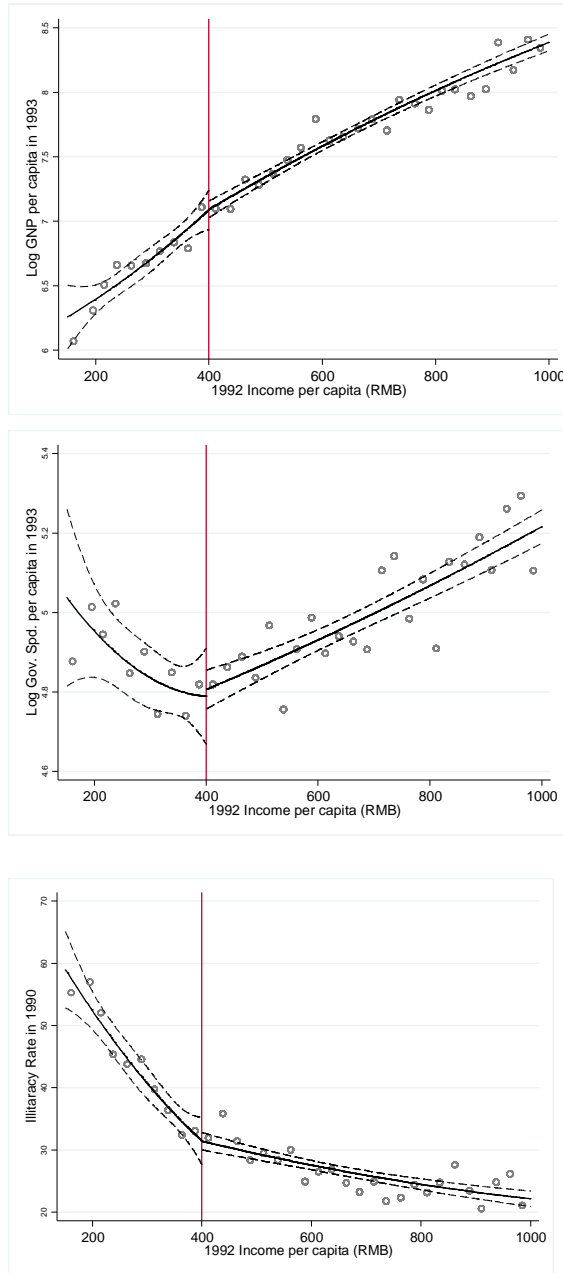
Note: Panels (from top to bottom) refers to 1993 Log County GNP per capita, 1993 Log Total Government Spending per capita, and 1990 County Illiteracy Rate. The continuous solid line represents the predicted value from a second order polynomial in the running variable, and the dashed lines are 95% confidence interval. Each point represents the average outcome within 25-yuan intervals of the 1992 income per capita relative to the cutoff. I only graph observations when the 1992 county rural income was less than RMB 1,000 to better illustrate the gap at the RMB400.

Sources: China Education Finance Statistical Yearbooks (Zhongguo jiaoyu jingfei tongji nianjian), Vol. 1994 - 2000; National Prefecture and County Finance Statistics Compendium (Quanguo Di Shi Xian Caizheng Tongji Ziliao), Vol. 1994 - 2000; China Population Census (1990, 2000, 2010)

Figure A4 County Total Educations Spending Per Capita
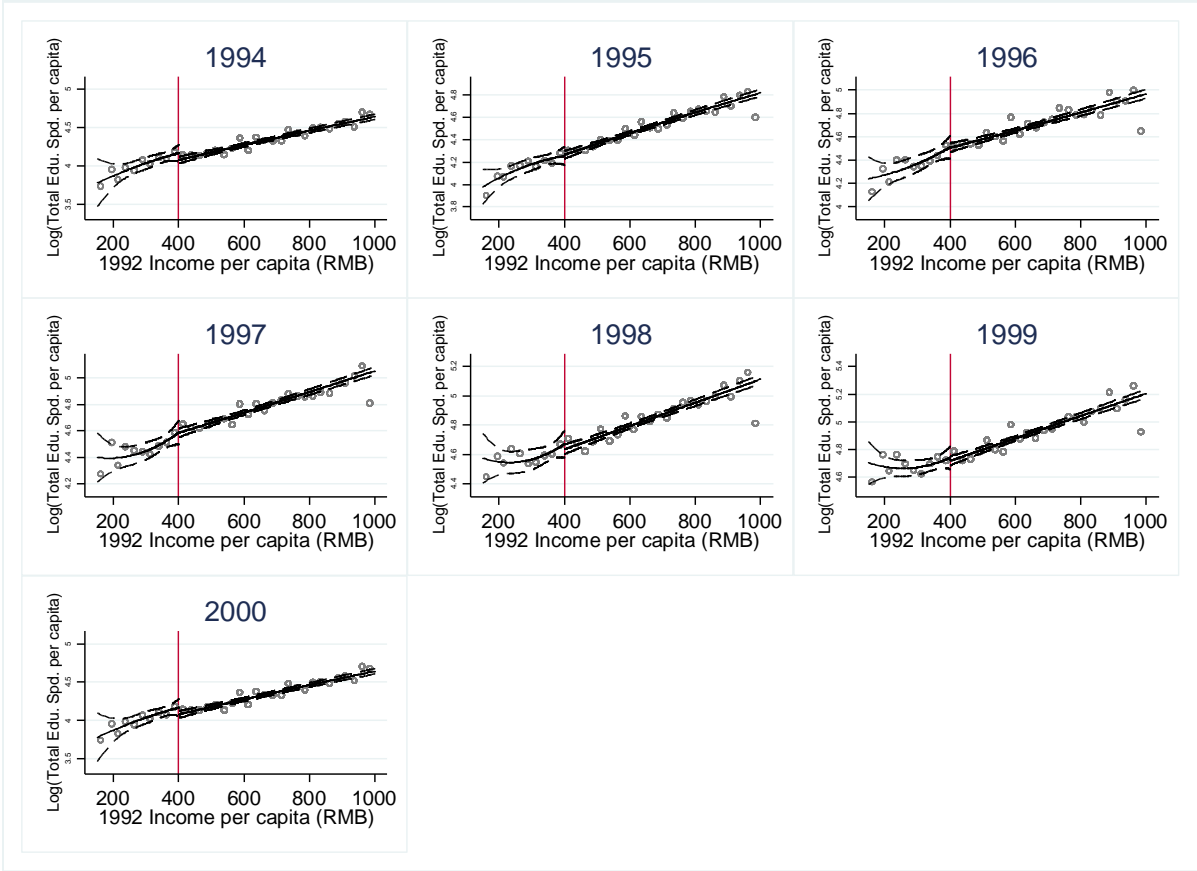
Note: Panels refers to county total education spending per capita in each year. The continuous solid line represents the predicted value from a second order polynomial in the running variable, and the dashed lines are the 95% confidence interval. Each point represents the average outcome within 25-yuan intervals of the 1992 income per capita relative to cutoff. I only graph observations when the 1992 county rural income was less than RMB 1,000 to better illustrate the gap at the RMB400.
Sources: China Education Finance Statistical Yearbooks (Zhongguo jiaoyu jingfei tongji nianjian), Vol. 1994 – 2000.

Online Appendix – Tables

Table A1 Descriptive Statistics

	Mean	Std.	n
Illiteracy Rate (1990)	29.31	16.03	1825
Illiteracy Rate (2000)	13.50	12.43	2069
Illiteracy Rate (2010)	7.62	8.12	2058
Male Illiteracy Rate (1990)	19.09	13.83	1825
Male Illiteracy Rate (2000)	8.19	9.60	2069
Male Illiteracy Rate (2010)	4.52	6.25	2058
Female Illiteracy Rate (1990)	40.08	19.01	1825
Female Illiteracy Rate (2000)	19.09	15.74	2069
Female Illiteracy Rate (2010)	10.83	10.29	2057
Total Education Spending Per Capita (1994 - 2000)	127.61	66.07	12524
Budgetary Education Spending Per Capita (1994 - 2000)	79.58	46.02	12577
Budgetary Education Spending Per Primary School Student (1994 - 2000)	388.19	286.92	12589
Budgetary Education Spending Per Junior High School Student (1994 - 2000)	661.22	638.31	12574
Population in 10,000 (1990)	12.53	0.97	1825
Minority County	0.06	0.23	2076
Previous Designated Poverty County	0.13	0.33	2076

Sources: China Education Finance Statistical Yearbooks (Zhongguo jiaoyu jingfei tongji nianjian), Vol. 1994 - 2000; National Prefecture and County Finance Statistics Compendium (Quanguo Di Shi Xian Caizheng Tongji Ziliao), Vol. 1994 - 2000; China Population Census (1990, 2000, 2010).

Table A2: Specific-Purpose Transfers on County Education Spending (Fixed Effects Models)

	Full Sample	± RMB 200	± RMB 100
	(1)	(2)	(3)
Panel 1: Logged Total Education Spending Per Capita			
Log (Specific Purpose Transfers per capita)	0.036***	0.046***	0.041***
	(0.005)	(0.008)	(0.011)
County-level Controls	Yes	Yes	Yes
County Dummy	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes
Observations	12,412	5,953	3,434

Panel 2: Logged Budgetary Education Spending Per Capita

	Full Sample	± RMB 200	± RMB 100
Log (Specific Purpose Transfers per capita)	0.022***	0.031***	0.025***
	(0.005)	(0.007)	(0.010)
County-level Controls	Yes	Yes	Yes
County Dummy	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes
Observations	12,465	5,970	3,448

Note: For each panel, National Sample includes all the counties in the dataset; ± RMB 100 includes only counties whose 1992 rural income per capita were RMB 100 above or below the cutoff point (RMB 400); ± RMB 200 includes only counties whose 1992 rural income per capita were RMB 200 above or below the cutoff point (RMB 400). County-level controls include minority county indicator, previous designated National Poverty County status, logged population, percent of agricultural production in GNP, and logged GNP per capita. Clustered standard errors at the county level are reported in parenthesis. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Sources: China Education Finance Statistical Yearbooks (Zhongguo jiaoyu jingfei tongji nianjian), Vol. 1994 - 2000; National Prefecture and County Finance Statistics Compendium (Quanguo Di Shi Xian Caizheng Tongji Ziliao), Vol. 1994 - 2000.

Table A3: FRD First Stage Results

	Full Sample		± RMB 200		± RMB 100	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Panel 1: Logged Total Education Spending Per Capita						
T=1[X ≤ c]	0.233	0.146	0.155	0.109	0.133	0.146
	(0.033)	(0.039)	(0.046)	(0.060)	(0.060)	(0.078)
County-level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Provincial Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Polynomial Order	2	3	2	3	2	3
R^2	0.601	0.608	0.532	0.533	0.454	0.454
Observations	11,006	11,006	5,921	6,031	3,417	3,417
Panel 2: Logged Budgetary Education Spending Per Capita						
T=1[X ≤ c]	0.232	0.145	0.155	0.110	0.135	0.147
	(0.033)	(0.039)	(0.046)	(0.060)	(0.060)	(0.078)
County-level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Provincial Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Polynomial Order	2	3	2	3	2	3
R^2	0.601	0.607	0.532	0.533	0.453	0.454
Observations	11,053	11,053	5,938	5,938	3,431	3,431

Note: T=1[X ≤ c] is an indicator variable that is equal to one if the county's 1992 rural income per capita is equal to or below RMB 400. For each panel, National Sample includes all the counties in the dataset; ± RMB 100 includes only counties whose 1992 rural income per capita were RMB 100 above or below the cutoff point (RMB 400); ± RMB 200 includes only counties whose 1992 rural income per capita were RMB 200 above or below the cutoff point (RMB 400). County-level controls include minority county indicator, previous designated National Poverty County status, 1993 logged GNP per capita, 1993 logged government revenue per capita, as well as logged population and the illiteracy rate for population aged 15 and above calculated from the 1990 Population Census. Clustered standard errors at the county level are reported in parenthesis. *** p<0.01, ** p<0.05, * p<0.1
Sources: China Education Finance Statistical Yearbooks (Zhongguo jiaoyu jingfei tongji nianjian), Vol. 1994 - 2000; National Prefecture and County Finance Statistics Compendium (Quanguo Di Shi Xian Caizheng Tongji Ziliao), Vol. 1994 - 2000.

Table A4: Education Spending Per Capita (by Year)

	Full Sample		± RMB 200		± RMB 100	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
1994						
NP94	0.106	0.006	-0.007	0.105	0.220	-0.164
	(0.090)	(0.154)	(0.159)	(0.311)	(0.277)	(0.531)
Polynomial Order	2	3	2	3	2	3
Observations	1,219	1,219	674	674	421	421
1995						
NP94	-0.038	-0.043	-0.037	0.080	0.131	-0.052
	(0.094)	(0.168)	(0.192)	(0.327)	(0.273)	(0.326)
Polynomial Order	2	3	2	3	2	3
Observations	1,649	1,649	907	907	530	530
1996						
NP94	-0.212*	-0.173	0.013	-0.002	0.114	0.078
	(0.117)	(0.210)	(0.216)	(0.422)	(0.311)	(0.278)
Polynomial Order	2	3	2	3	2	3
Observations	1,509	1,509	797	797	444	444
1997						
NP94	-0.251**	-0.334	-0.184	-0.206	-0.049	-0.478
	(0.104)	(0.212)	(0.210)	(0.415)	(0.329)	(0.499)
Polynomial Order	2	3	2	3	2	3
Observations	1,624	1,624	881	881	501	501
1998						
NP94	-0.120	-0.117	-0.013	-0.022	0.030	-0.341
	(0.103)	(0.185)	(0.199)	(0.320)	(0.270)	(0.355)
Polynomial Order	2	3	2	3	2	3
Observations	1,663	1,663	884	884	507	507
1999						
NP94	-0.122	-0.216	-0.021	0.086	0.095	-0.457
	(0.105)	(0.210)	(0.204)	(0.358)	(0.280)	(0.398)
Polynomial Order	2	3	2	3	2	3
Observations	1,654	1,654	880	880	503	503
2000						
NP94	0.059	-0.047	-0.031	0.270	0.234	-0.115
	(0.083)	(0.162)	(0.177)	(0.315)	(0.269)	(0.286)
Polynomial Order	2	3	2	3	2	3
Observations	1,678	1,678	893	893	510	510

Note: The dependent variable is Logged Total Education Spending Per Capita. NP94 is an indicator variable that is equal to one if the county was designated as a National Poverty County in 1994. For each panel, National Sample includes all the counties in the dataset; ± RMB 100 includes only counties whose 1992 rural income per capita were RMB 100 above or below the cutoff point (RMB 400); ± RMB 200 includes only counties whose 1992 rural income per capita were RMB 200 above or below the cutoff point (RMB 400). County-level controls include minority county indicator, previous designated National Poverty County status, 1993 logged GNP per capita, 1993 logged government revenue per capita, as well as logged population and the illiteracy rate for population aged 15 and above calculated from the 1990 Population Census. Clustered standard errors at the county level are reported in parenthesis. *** p<0.01, ** p<0.05, * p<0.1
Sources: China Education Finance Statistical Yearbooks (Zhongguo jiaoyu jingfei tongji nianjian), Vol. 1994 - 2000; National Prefecture and County Finance Statistics Compendium (Quanguo Di Shi Xian Caizheng Tongji Ziliao), Vol. 1994 - 2000.

Table A5: Budgetary Education Spending Per Capita (by Year)

	Full Sample		± RMB 200		± RMB 100	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
1994						
NP94	-0.071**	-0.026	-0.014	0.002	-0.032	0.097
	(0.033)	(0.033)	(0.044)	(0.055)	(0.062)	(0.106)
Polynomial Order	2	3	2	3	2	3
Observations	1,219	1,219	674	674	421	421
1995						
NP94	-0.155***	-0.129***	-0.100***	-0.103**	-0.137**	-0.050
	(0.028)	(0.029)	(0.038)	(0.052)	(0.054)	(0.094)
Polynomial Order	2	3	2	3	2	3
Observations	1,649	1,649	907	907	530	530
1996						
NP94	-0.054*	-0.074**	-0.035	-0.009	-0.090	-0.017
	(0.031)	(0.033)	(0.045)	(0.054)	(0.061)	(0.105)
Polynomial Order	2	3	2	3	2	3
Observations	1,551	1,551	814	814	455	455
1997						
NP94	-0.074**	-0.068*	-0.093**	-0.063	-0.143**	0.009
	(0.036)	(0.038)	(0.040)	(0.054)	(0.059)	(0.106)
Polynomial Order	2	3	2	3	2	3
Observations	1,626	1,626	881	881	501	501
1998						
NP94	-0.110***	-0.094***	-0.071*	-0.053	-0.076	-0.035
	(0.029)	(0.031)	(0.041)	(0.057)	(0.059)	(0.120)
Polynomial Order	2	3	2	3	2	3
Observations	1,664	1,664	884	884	508	508
1999						
NP94	-0.063**	-0.041	-0.030	0.006	-0.057	0.120
	(0.030)	(0.031)	(0.040)	(0.059)	(0.062)	(0.120)
Polynomial Order	2	3	2	3	2	3
Observations	1,655	1,655	881	881	505	505
2000						
NP94	0.020	0.064**	0.046	0.041	0.044	0.214*
	(0.033)	(0.033)	(0.039)	(0.055)	(0.055)	(0.116)
Polynomial Order	2	3	2	3	2	3
Observations	1,679	1,679	892	892	510	510

Note: The dependent variable is Logged Total Budgetary Education Spending Per Capita. NP94 is an indicator variable that is equal to one if the county was designated as a National Poverty County in 1994. For each panel, National Sample includes all the counties in the dataset; ± RMB 100 includes only counties whose 1992 rural income per capita were RMB 100 above or below the cutoff point (RMB 400); ± RMB 200 includes only counties whose 1992 rural income per capita were RMB 200 above or below the cutoff point (RMB 400). County-level controls include minority county indicator, previous designated National Poverty County status, 1993 logged GNP per capita, 1993 logged government revenue per capita, as well as logged population and the illiteracy rate for population aged 15 and above calculated from the 1990 Population Census. Clustered standard errors at the county level are reported in parenthesis. *** p<0.01, ** p<0.05, * p<0.1

Sources: China Education Finance Statistical Yearbooks (Zhongguo jiaoyu jingfei tongji nianjian), Vol. 1994 - 2000; National Prefecture and County Finance Statistics Compendium (Quanguo Di Shi Xian Caizheng Tongji Ziliao), Vol. 1994 - 2000.

Table A6: Change in Education Spending Per Capita (1994 - 2000)

	Full Sample		± RMB 200		± RMB 100	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Panel 1: Change in Logged Education Spending Per Capita 1994 - 2000						
NP94	-0.025	-0.066	-0.027	-0.027	0.072	0.067
	(0.100)	(0.169)	(0.150)	(0.132)	(0.060)	(0.061)
County-level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Provincial Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Polynomial Order	2	3	2	3	2	3
Observations	1,085	1,085	624	624	388	388

Panel 2: Change in Logged Budgetary Education Spending Per Capita 1994 - 2000

	Full Sample		± RMB 200		± RMB 100	
NP94	0.077	0.044	0.065	0.059	0.083	0.083
	(0.097)	(0.165)	(0.146)	(0.131)	(0.060)	(0.060)
County-level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Provincial Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Polynomial Order	2	3	2	3	2	3
Observations	1,086	1,086	624	624	388	388

Note: NP94 is an indicator variable that is equal to one if the county was designated as a National Poverty County in 1994. For each panel, National Sample includes all the counties in the dataset; ± RMB 100 includes only counties whose 1992 rural income per capita were RMB 100 above or below the cutoff point (RMB 400); ± RMB 200 includes only counties whose 1992 rural income per capita were RMB 200 above or below the cutoff point (RMB 400). County-level controls include minority county indicator, previous designated National Poverty County status, 1993 logged GNP per capita, 1993 logged government revenue per capita, as well as logged population and the illiteracy rate for population aged 15 and above calculated from the 1990 Population Census. Clustered standard errors at the county level are reported in parenthesis. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: China Education Finance Statistical Yearbooks (Zhongguo jiaoyu jingfei tongji nianjian), Vol. 1994 - 2000; National Prefecture and County Finance Statistics Compendium (Quanguo Di Shi Xian Caizheng Tongji Ziliao), Vol. 1994 - 2000.

Table A7: Change in Population Aged between 20 and 49

	Full Sample		± RMB 200		± RMB 100	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel 1: Change in Logged Population Aged between 20 and 49 (1990 - 2000)						
NP94	0.028	0.041	0.060	0.081	0.104	0.216
	(0.044)	(0.089)	(0.100)	(0.183)	(0.167)	(0.194)
County-level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Provincial Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Polynomial Order	2	3	2	3	2	3
Observations	1,766	1,766	930	930	528	528

Panel 2: Change in Logged Population Aged between 20 and 49 (1990 - 2010)

	Full Sample		± RMB 200		± RMB 100	
NP94	-0.103	-0.284	0.033	-0.043	0.095	0.343
	(0.111)	(0.235)	(0.213)	(0.373)	(0.325)	(0.367)
County-level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Provincial Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Polynomial Order	2	3	2	3	2	3
Observations	1,754	1,754	929	929	528	528

Note: NP94 is an indicator variable that is equal to one if the county was designated as a National Poverty County in 1994. For each panel, National Sample includes all the counties in the dataset; ± RMB 100 includes only counties whose 1992 rural income per capita were RMB 100 above or below the cutoff point (RMB 400); ± RMB 200 includes only counties whose 1992 rural income per capita were RMB 200 above or below the cutoff point (RMB 400). County-level controls include minority county indicator, previous designated National Poverty County status, 1993 logged GNP per capita, 1993 logged government revenue per capita, as well as logged population and the illiteracy rate for population aged 15 and above calculated from the 1990 Population Census. Clustered standard errors at the county level are reported in parenthesis. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$
Sources: National Prefecture and County Finance Statistics Compendium (Quanguo Di Shi Xian Caizheng Tongji Ziliao), Vol. 1994 - 2000; China Population Census (1990, 2000, 2010)

Table A8: Change in Population Aged between 20 and 49 (By Gender)

	Full Sample		± RMB 200		± RMB 100	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel 1: Change in Logged Population Aged between 20 and 49 (Male, 1990 - 2000)						
NP94	0.039	0.074	0.082	0.079	0.108	0.244
	(0.048)	(0.098)	(0.114)	(0.204)	(0.187)	(0.219)
County-level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Provincial Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Polynomial Order	2	3	2	3	2	3
Observations	1,766	1,766	930	930	528	528
Panel 2: Change in Logged Population Aged between 20 and 49 (Female, 1990 - 2000)						
NP94	0.019	0.004	0.038	0.090	0.104	0.188
	(0.042)	(0.084)	(0.091)	(0.172)	(0.155)	(0.175)
County-level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Provincial Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Polynomial Order	2	3	2	3	2	3
Observations	1,766	1,766	930	930	528	528
Panel 3: Change in Logged Population Aged between 20 and 49 (Male, 1990 - 2010)						
NP94	-0.074	-0.222	0.091	0.029	0.185	0.415
	(0.113)	(0.236)	(0.227)	(0.398)	(0.358)	(0.406)
County-level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Provincial Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Polynomial Order	2	3	2	3	2	3
Observations	1,754	1,754	929	929	528	528
Panel 4: Change in Logged Population Aged between 20 and 49 (Female, 1990 - 2010)						
NP94	-0.133	-0.368	-0.034	-0.129	-0.006	0.258
	(0.111)	(0.244)	(0.204)	(0.363)	(0.305)	(0.331)
County-level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Provincial Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Polynomial Order	2	3	2	3	2	3
Observations	1,754	1,754	929	929	528	528

Note: NP94 is an indicator variable that is equal to one if the county was designated as a National Poverty County in 1994. For each panel, National Sample includes all the counties in the dataset; ± RMB 100 includes only counties whose 1992 rural income per capita were RMB 100 above or below the cutoff point (RMB 400); ± RMB 200 includes only counties whose 1992 rural income per capita were RMB 200 above or below the cutoff point (RMB 400). County-level controls include minority county indicator, previous designated National Poverty County status, 1993 logged GNP per capita, 1993 logged government revenue per capita, as well as logged population and the illiteracy rate for population aged 15 and above calculated from the 1990 Population Census. Clustered standard errors at the county level are reported in parenthesis. *** $p<0.01$, ** $p<0.05$, * $p<0.1$
Sources: National Prefecture and County Finance Statistics Compendium (Quanguo Di Shi Xian Caizheng Tongji Ziliao), Vol. 1994 - 2000; China Population Census (1990, 2000, 2010)