

Local Response to School Finance Equalization: Wealth or Place?

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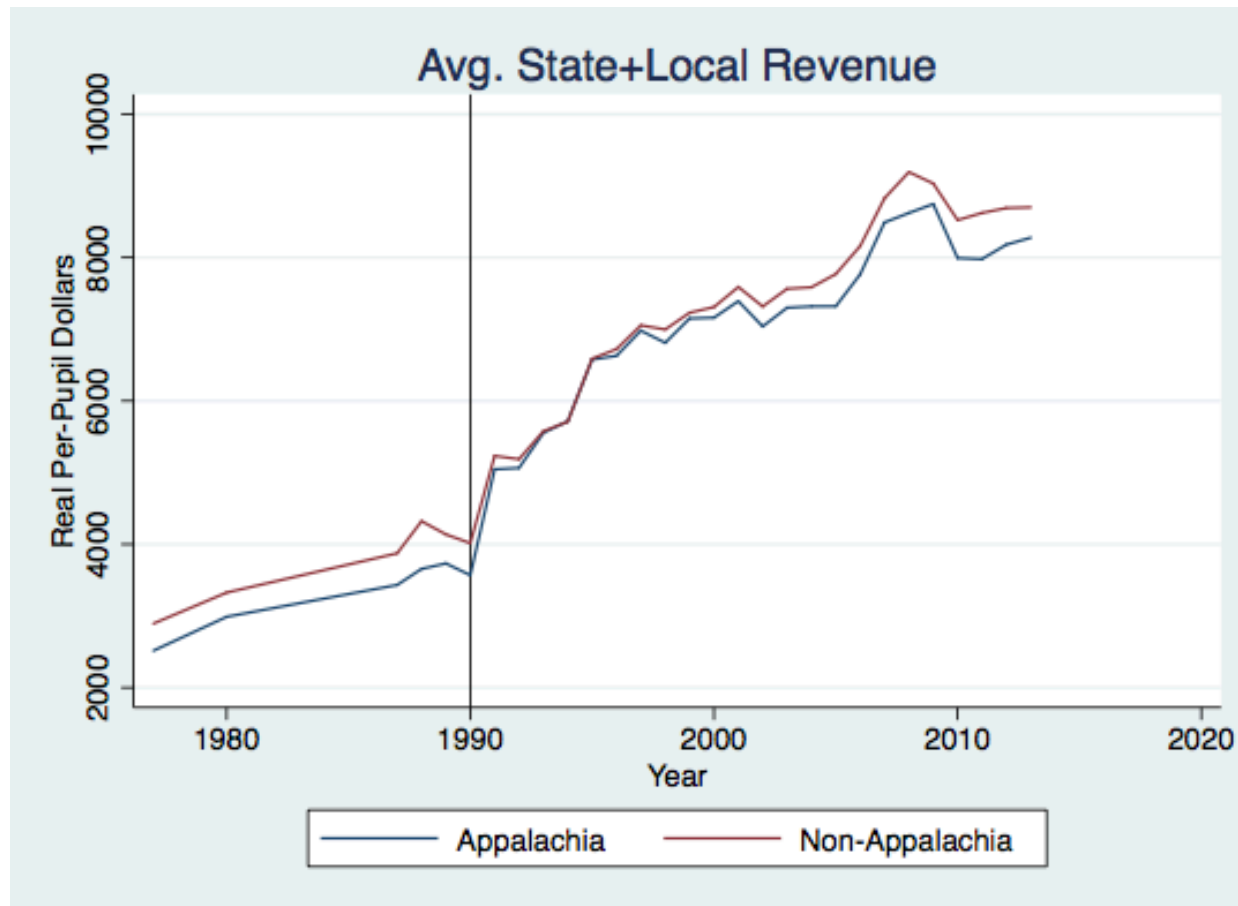
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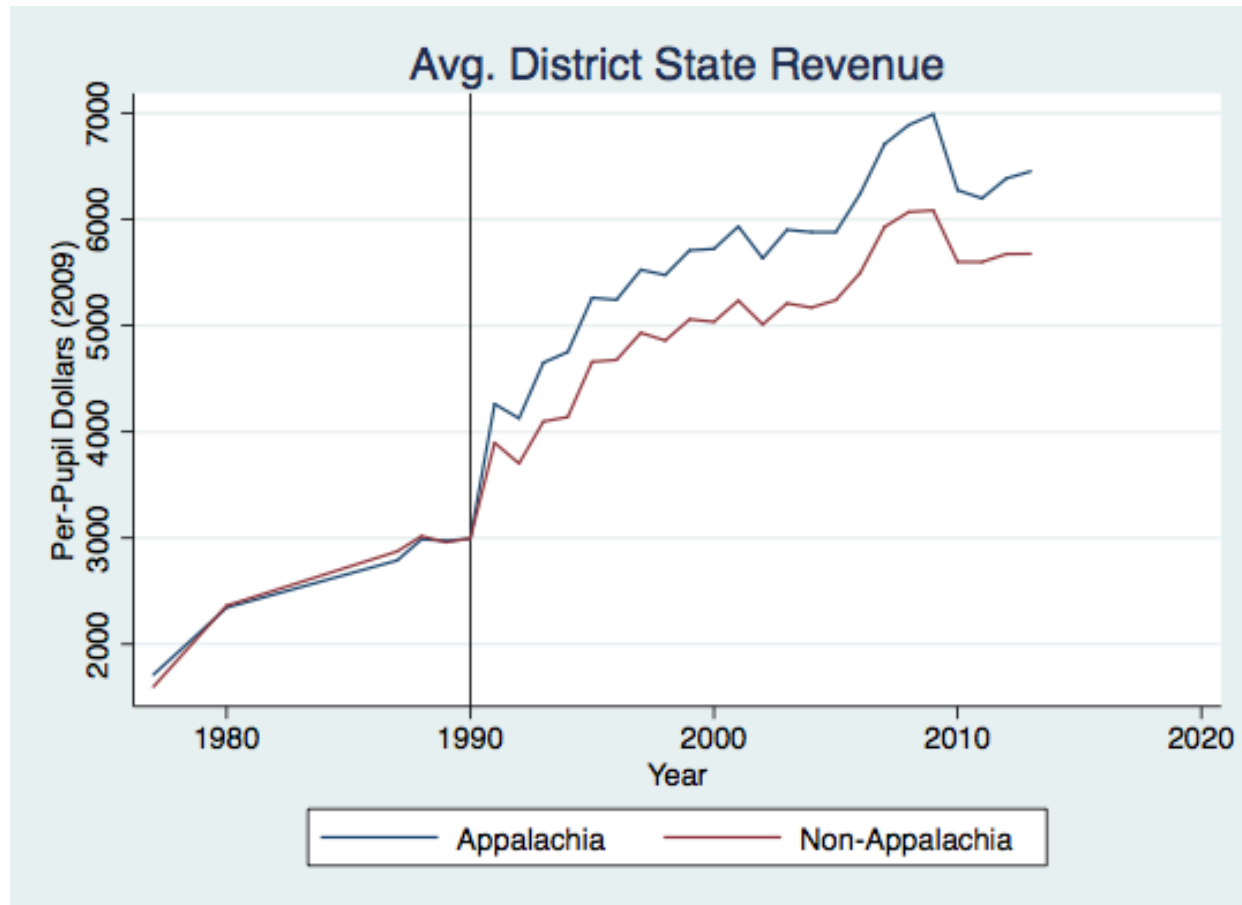
Introduction

- Growing inequality within countries persists
- School finance equalization (SFE) has reduced variance in school resources
- Reduced variance in economic outcomes will follow...mixed evidence
- Re-examine financial effects of SFE decades later
- Emphasis on local revenues, demand

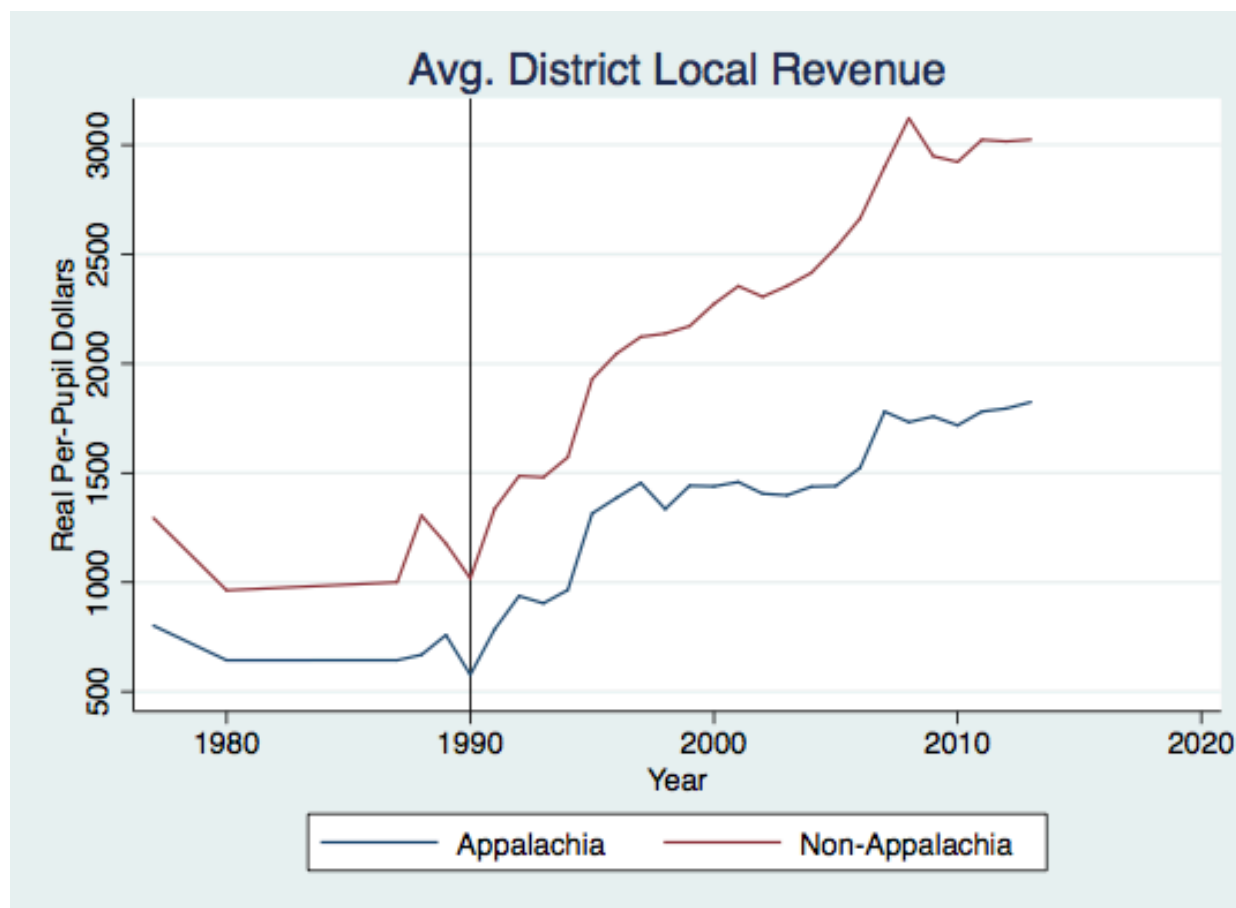
Kentucky District Revenue Trends



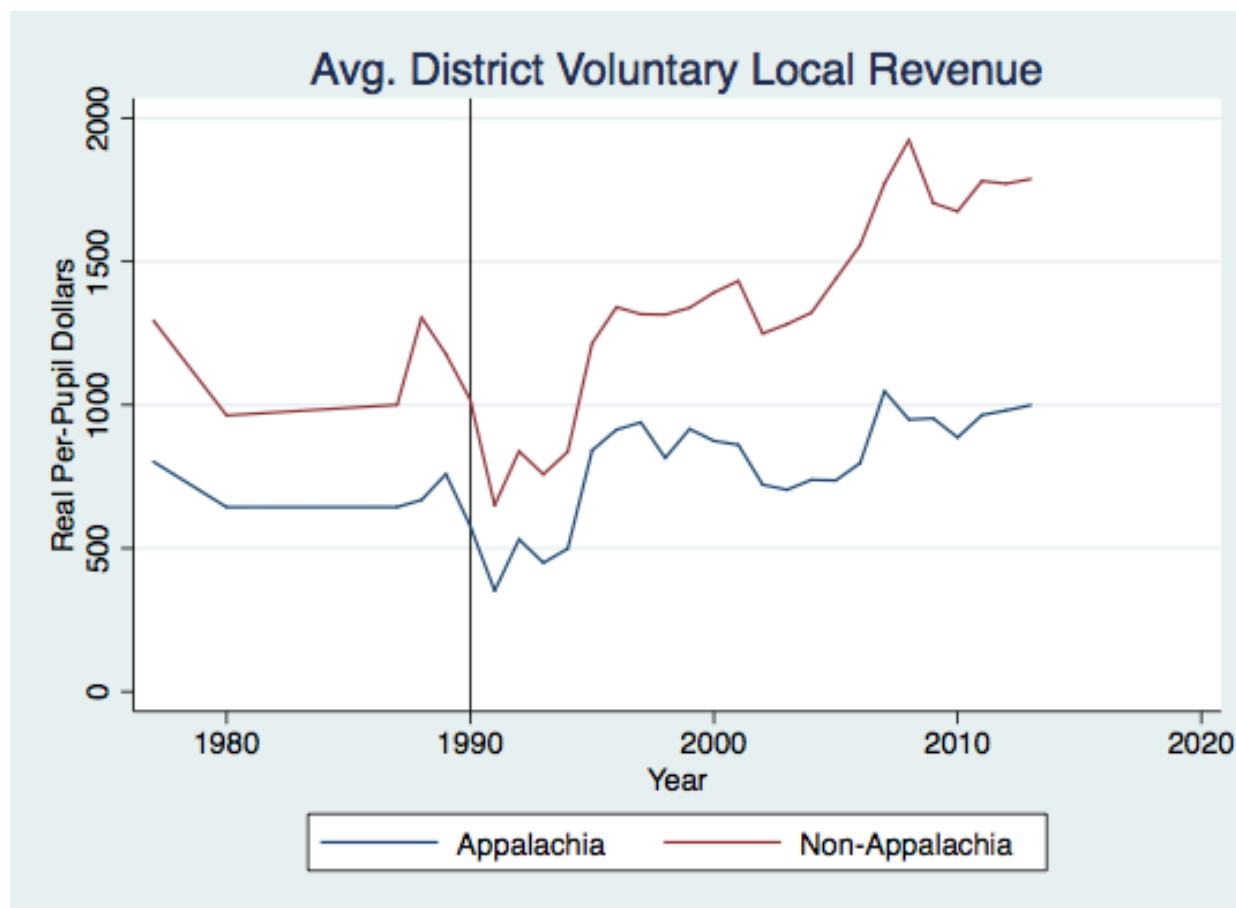
Kentucky District Revenue Trends



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Purpose of this paper

- Has reform removed the influence of property wealth on K-12 education resources?
- Has SFE changed latent demand for education in Appalachia?

Data

- District-year panel 1977-2013
- Reform occurred in 1990

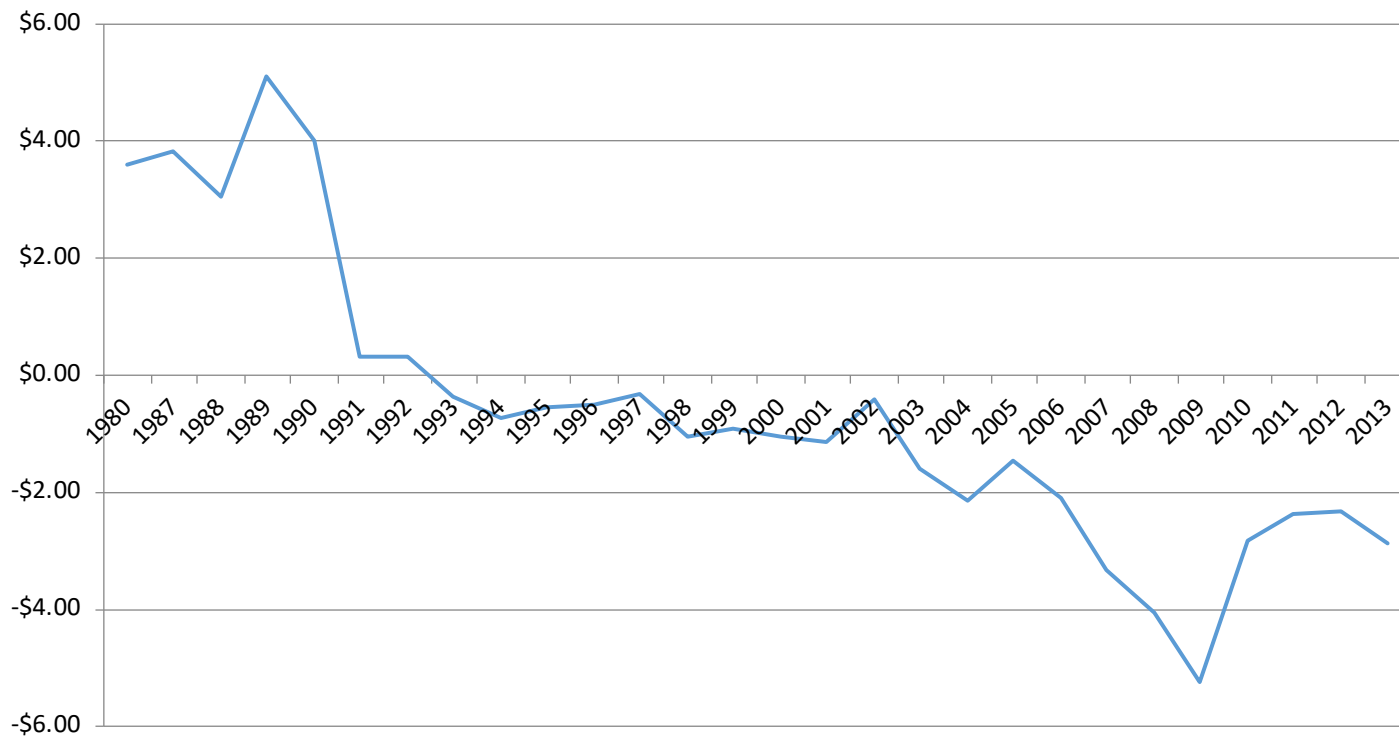
Variable	Mean	SD	Min	Max
State Revenues Per Pupil	\$4,867	\$1,442	\$679	\$11,357
Local Revenues Per Pupil	\$1,781	\$1,155	\$165	\$21,086
Voluntary Local Revenues Per Pupil	\$1,097	\$814	\$33	\$20,266
Home Value Per Pupil	\$94,886	\$74,678	\$7,770	\$919,859
Median Household Income	\$34,320	\$12,757	\$12,084	\$159,895
% Bachelor's & Higher	13	6.2	3.7	40.1
Coal Dependency	0.29	0.89	0	9.95
District Population	23,301	57,850	1,000	744,000
% African American	4.07	5.25	0	32.09
% Poverty	20.54	8.34	1.67	49.73
% Unemployed	6.71	3.59	0.96	24.77
% Pop. Age 65 or Older	10.4	4.08	-3.81	22.29
% Homeownership	71.48	10.55	36.39	97.33
Appalachian County	0.42	0.49	0	1

Model

- $R_{it} = \mu_i + T_t + \beta_1 V_{it} + \beta_2 V_{it} * T_t + \beta_3 X_{it} + u_{it}$
- R = revenue variable for district i in year t
- V = real home value per pupil
- T = time dummies
- X = covariates
- μ = district fixed effect

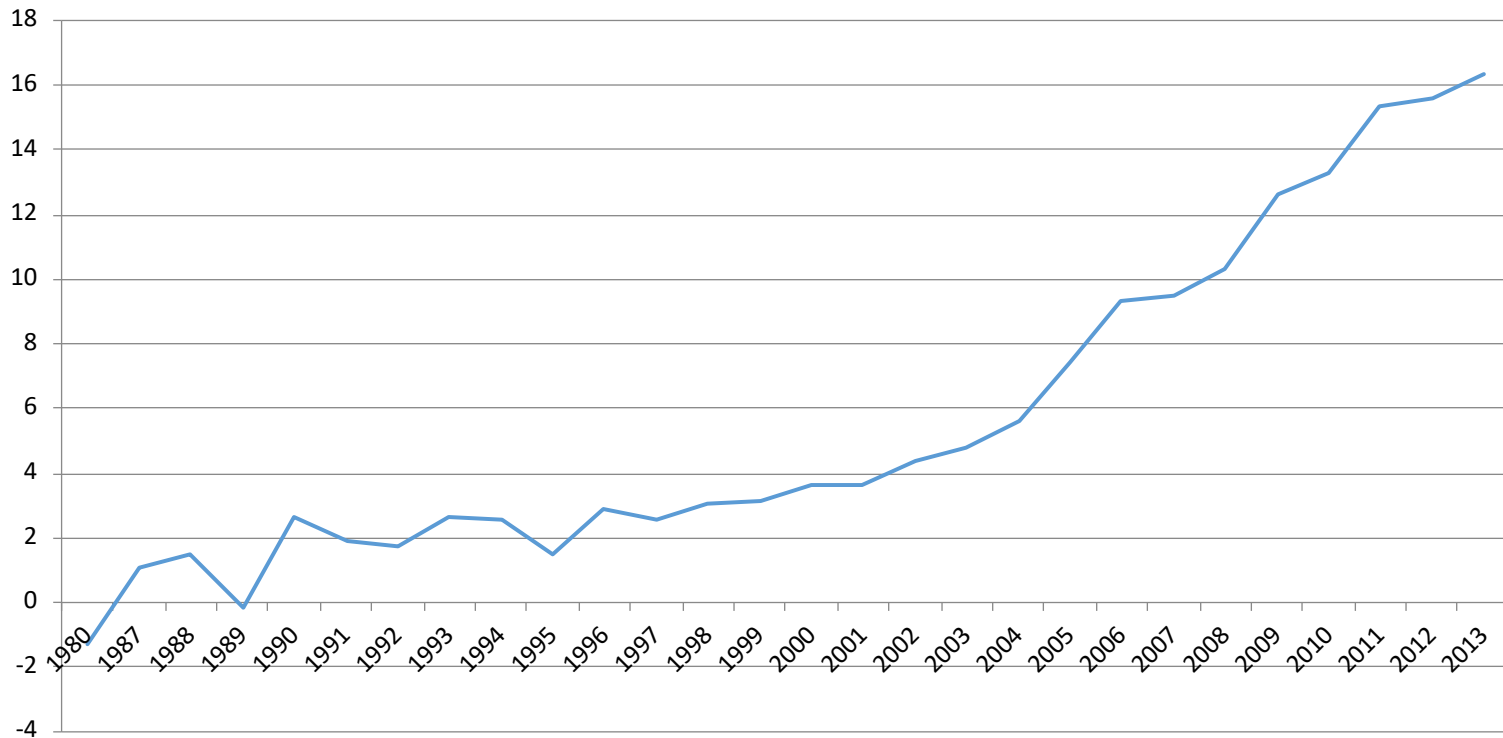
Results – State Revenues

Effect of \$1,000 increase in home value



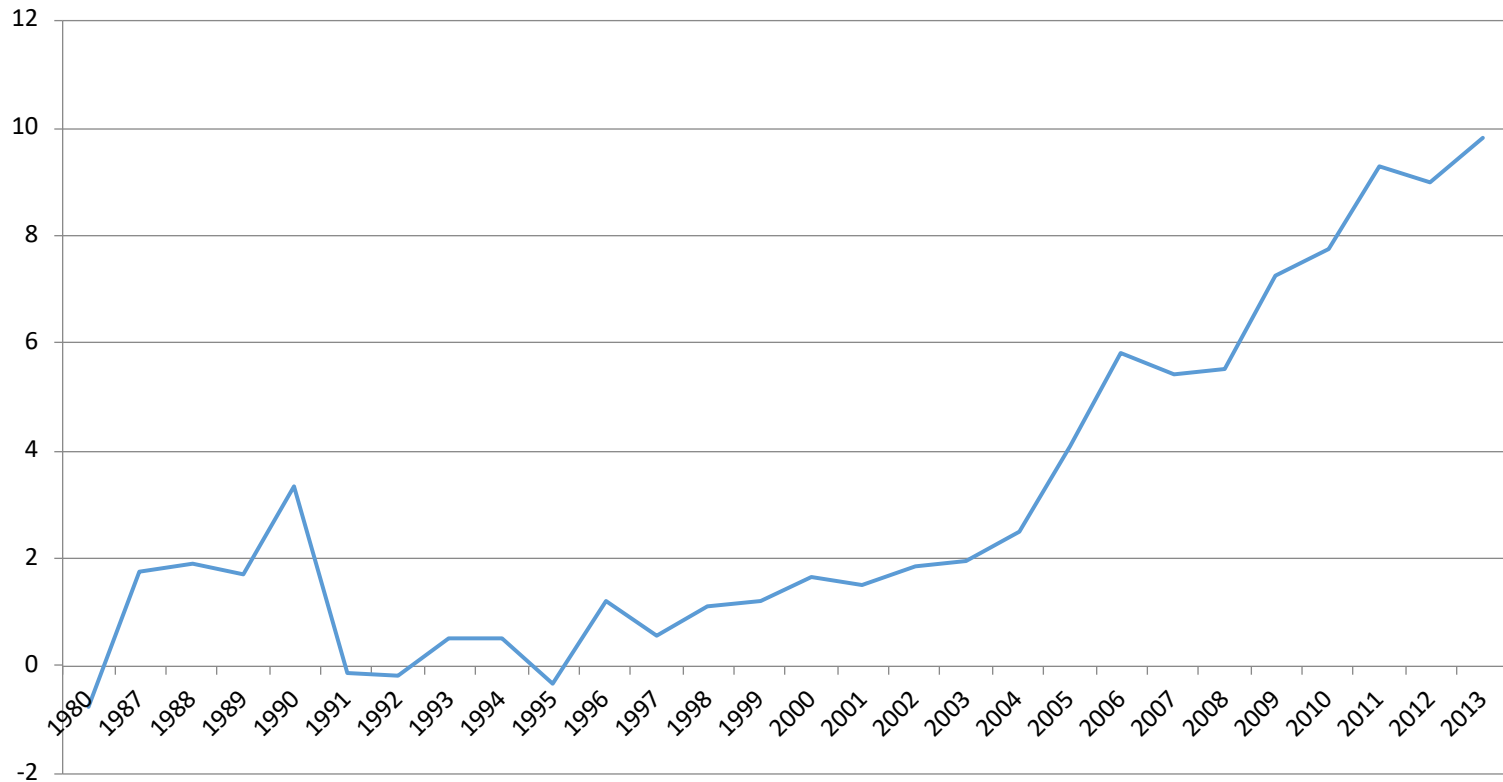
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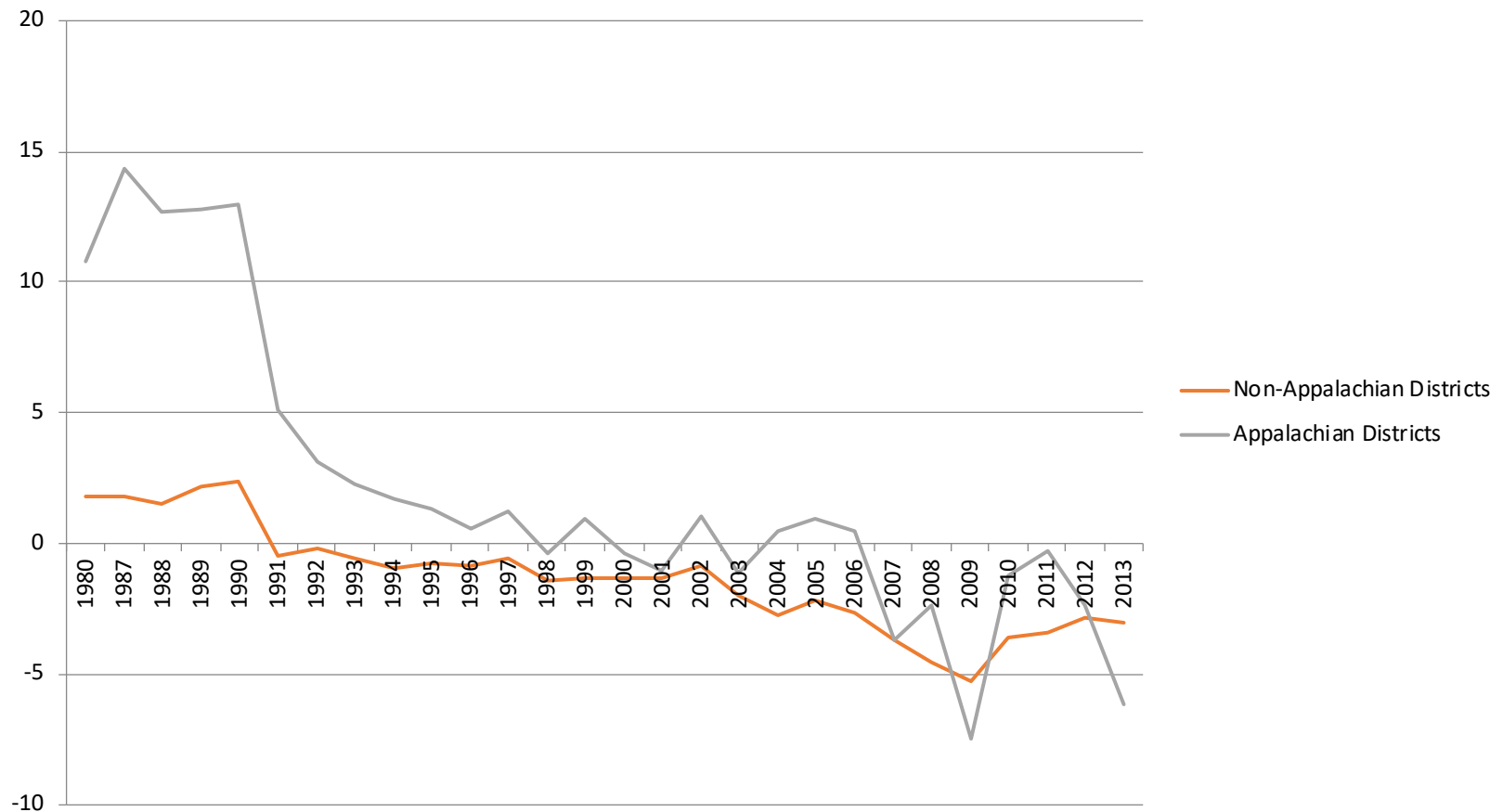
Results – Voluntary Revenues

Effect of \$1,000 increase in home value



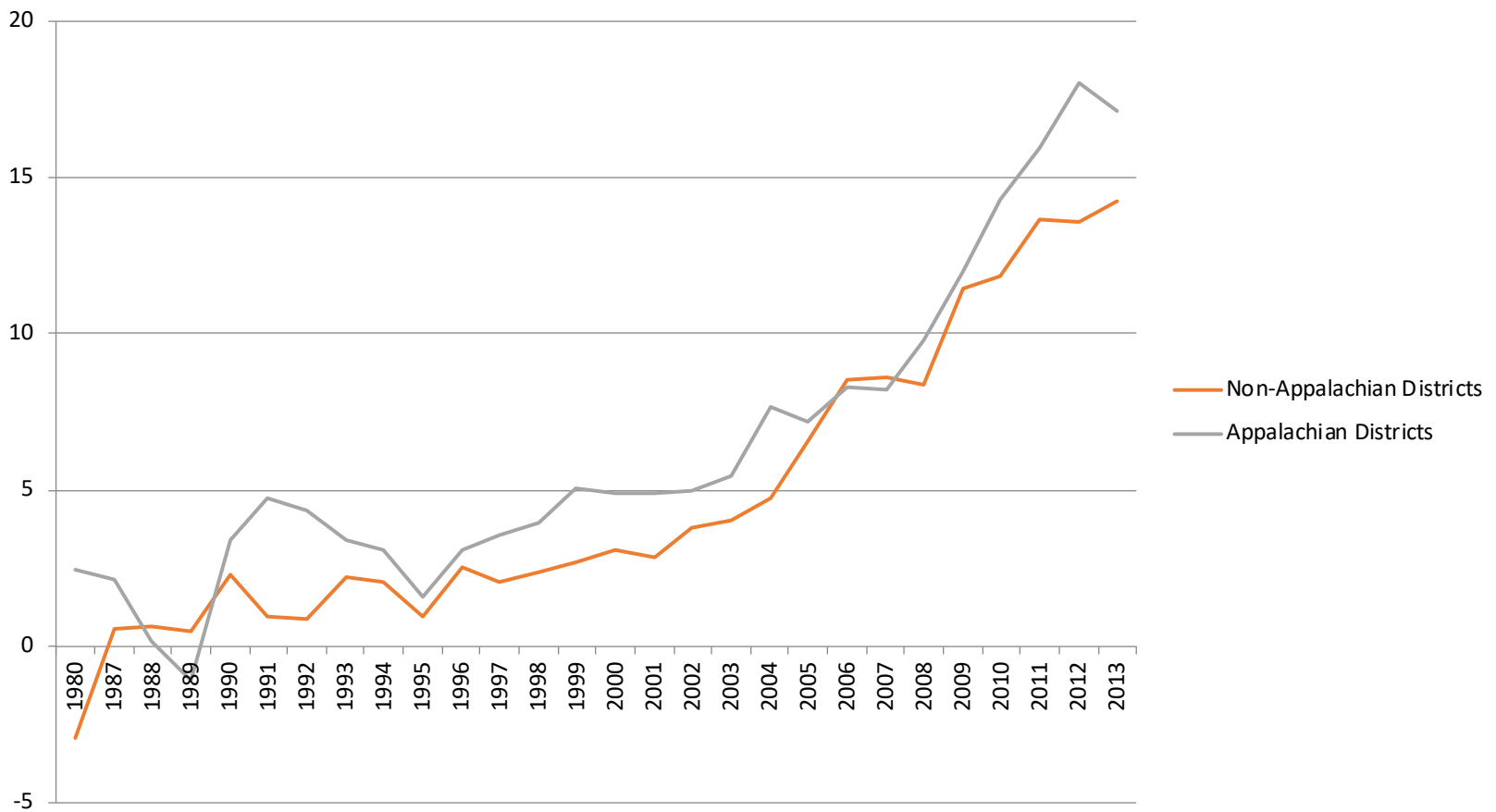
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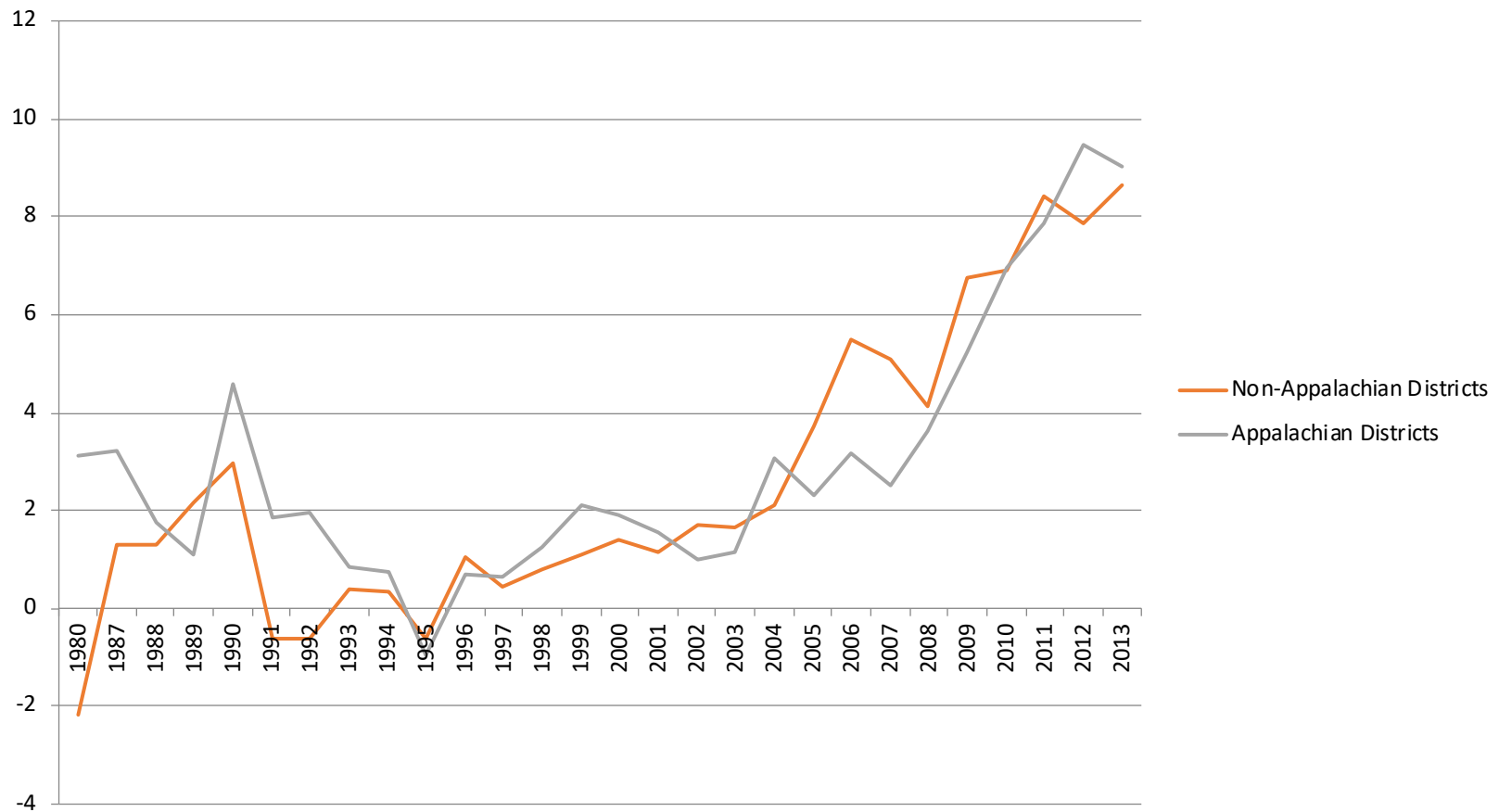
Results – Local Revenues

Effect of \$1,000 increase in home value



Results – Voluntary Revenues

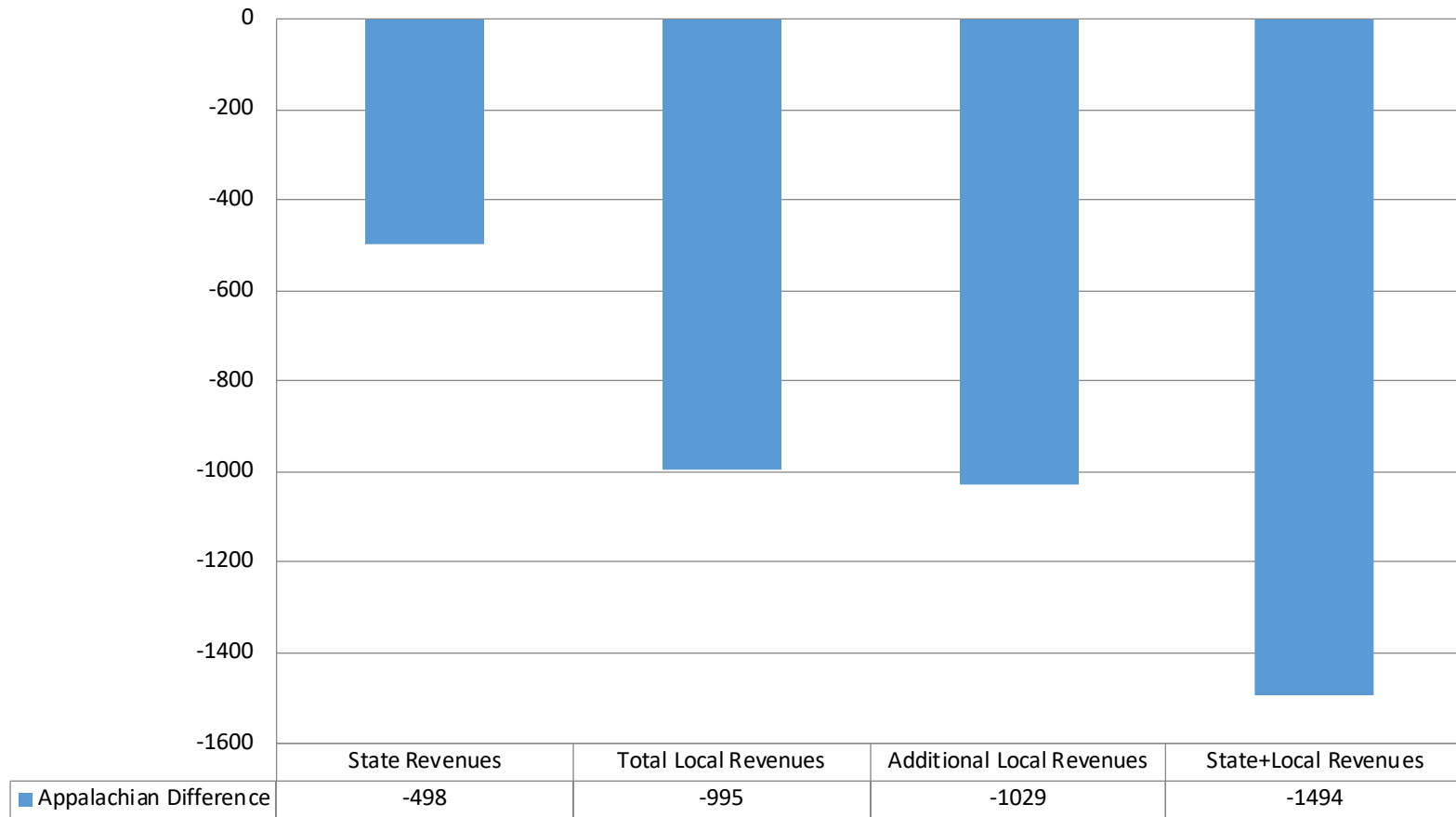
Effect of \$1,000 increase in home value



The Effect of Place: Appalachia

- Controlling for numerous factors, the fixed effect accounts for 60-90 percent of variation in revenues
- Estimated fixed effect
- Regressed the predicted fixed effect on Appalachian dummy variable
- Estimates the difference in panel-average revenues between Appalachian and non-Appalachian districts

The Appalachian Difference



Conclusions

- Relationship between wealth and school revenues is reverting back to pre-reform
- Disparity in local demand in education persists
- Much future research to be done
 - Endogeneity of home value or property assessment
 - Student outcomes
 - Student migration and the redistribution of returns on local investment in education

Appalachian Comparison

- $$R_{it} = \mu_i + T_t + \beta_1 V_{it} + \beta_2 V_{it} * T_t + \beta_3 V_{it} * A_i + \beta_4 V_{it} * T_t * A_i + \beta_5 X_{it} + \beta_6 T_t * A_i + u_{it}$$
- R = revenue variable for district i in year t
- A = Appalachian district dummy
- V = real home value per pupil
- T = time dummies
- X = covariates
- μ = district fixed effect