Does Public Investment Lead to Better Community Outcomes?

The Political Economy of Urban Communities

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Research Question

This research thesis investigates if government fiscal policy affects the living standards of a community. The specific research question is - does an increase in public Investment expenditure lead to positive living standards. Public investment was broken down into categories of highway spending and education spending, as well as public investment as a whole. The research was conducted using regression analysis of the relationship between the independent variable of public investment in the dependent variables of of public investment and the dependent variable of violent crime statistics, small businesses birthed and unemployment stiatistics.

Theory

I hypothesize that crime statistics can be lowered by an increase in expenditures for public investment in the forms of highways, public welfare and education spending. Transportation systems and an increase focus on education translates into greater opportunity for financial gains. Both of these outcomes leads to a greater ability to work, which in turn correlates with higher earnings. Finally, this connects back to my premise, an increase in job opportunities leads to lower crime rates. In this study, lower crime rates, high amount of small business openings and unemployment rates will serve as a dependent variable. These categories also serve as signals to high community living standards. High living standards is when a neighborhood is seen as a desirable place to live long term. This is the desired outcome because it would confirm that an increased in public investment could lead to community revitalization.

Methodology

In my research, I conducted a state level analysis to statistically prove that public investment influence positive living conditions through its effects on violent crime statistics, creation of small business, and unemployment rates at the state level. The method I will utilize is a multiple regression analysis. More specifically, because the data is pooled data, being drawn from the same states multiple times across the years. In each regression public investment was the independent variable. Public investment is disaggregated into areas of education spending and highway spending. This distinction was used in the violent crime regression because there is a theory that education spending would have a stronger effect on violent crime.

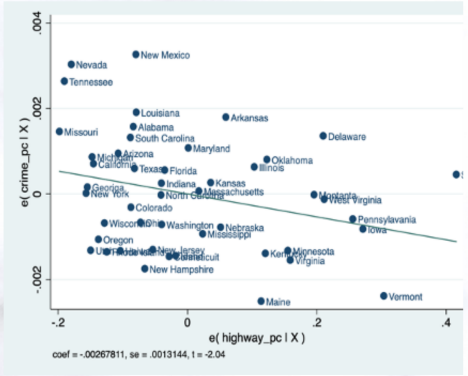
Violent Crime

Highway Spending

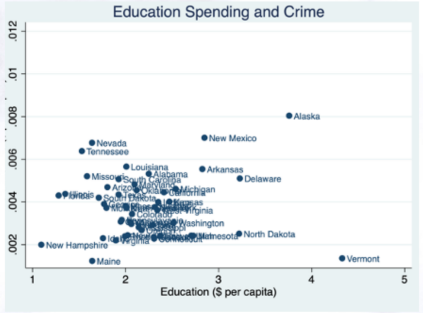
Highway Spending and Crime

VARIABLES	(1) all data	(2) drop outliers	(3) with control variabl
highway_pc	0.000278	-0.00268**	-0.00272**
	(0.000717)	(0.00131)	(0.00123)
Land area			4.04e-09
			(3.80e-09)
income			-5.48e-08***
			(1.89e-08)
Constant	0.00367***	0.00488***	0.00779***
	(0.000403)	(0.000589)	(0.00133)
Observations	49	47	47
R-squared	0.003	0.084	0.263

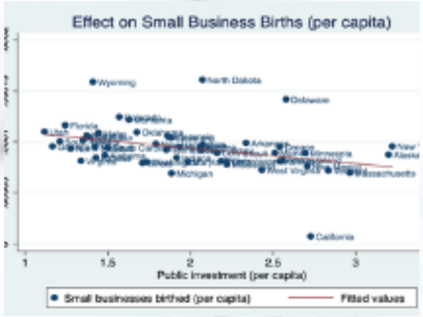
Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1



Education Spending



Small Business Births



Results

The initial results show little correlation between violent crime and highway spending. In table 1 the results from the regression with all data not controlled for land did not show a significant relationship. After controlling for land area, the graph becomes much cleaner. The relationship also becomes significant when controlled for outliers. Further, the data on education and crime spending is not statistically significant. Alternative to my hypothesis, one could argue that there is a positive relationship between education and crime. That is, as education spending increases by a dollar, crime rises.

The regression of public investment and small business birth showed a negative trend. This is in direct opposition of my theory that public investment will increase small business birth. An outlier in this trend is California. Because of this, California was controlled for in table 3 column 2. (not shown). After this result, income was added as a control variable. The relationship is still significant. However, the R square value in this analysis is 0.133, since approximately 13 percent of the data is explained through this analysis, there is room for alternative interpretations of the theory.

My hypothesis of a negative relationship between public investment and unemployment was proved unfounded. I hypothesized a negative correlation between public investment and unemployment, it seems that the relationship is positive. This figure was not shown because my theory is structurally flawed for two reasons. One can argue that unemployment itself drives public investment, rather than public investment drives unemployment rates. This would mean that my theory is working backwards. Another contention is that some states public investment totals could incclude unemployment benefits. That is, an increase in public investment may be linear with unemployment rates. For these reasons, the figure was taknot included.

Conclusion

Initially, after evaluating the results of the analysis each of my theories were proved unfounded. After controlling for data such as income and land area, the relationship becomes more signficiant. Rationale for this is states vary in terms of population and land area, which can have a direct effect on aggregate public investment expenditures by state. This is why data was compiled in per capita terms. The only theory that seems to be misplaced would be the relationship between public investment and unemployment rates. Since public investment expenditure typically includes unemployment benefits, by intuition these variables will have a linear relationship. In theory, as unemployment rise, government spending will increase.

In this research, much of my theory was basead on the American Economic Recovery Act, which was introduced in 2009 to create job opportunities after the great recession. The passing of this act is used as an example of the effect of an expanisve public investment program can have on an ailing community/ In my research, the public investment data is itemized by state. The returns from the project would be magnified if this were to be implemented on the federal level.

Future Research

As public investment characterizes an investment in social programs it would be reasonable that this would impact the marginal individual who needs social security to stabilize their living conditions. With this being said, it is more likely that an individual in this situation would engage in nonviolent misdemeanor theft, rather than violent crime. In this research violent crime was characterized by the four offenses: murder and non-negligent manslaughter, forcible rape, robbery and aggravated assault. In further research on the relationship between public investment and crime statistics it may be useful to use property crimes as the dependent variable, as opposed to violent crime statisitcs since it is likely that property crime would be more influenced by public investment thatn violent crime statistics.

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