Effects of the Coronavirus Relief Funds on Local Spending,

Cash Holdings and Debt Retirement

Abstract

In the first months of the COVID-19 pandemic, American state and local governments received $150 billion in federal relief funds through the distribution of the Coronavirus Relief Fund (CRF). We use this exogenous infusion of financial assistance on a per capita basis to larger localities to study how local governments used federal aid in the short and medium term. Using the U.S. Census Bureau and the U.S. Treasury data for American cities and counties over fiscal years 2017 – 2022, we set up the study as an RD analysis and exploit variation it the direct distribution of federal aid by government size and fiscal year to assess how the funds affected local government spending, fiscal reserves accumulation, and long-term debt management. We use the analysis of changes in the local government fiscal behavior in response to intergovernmental aid as a test of the flypaper effect and an opportunity to gain a more realistic understanding of effective pathways and unintended consequences of boosting local fiscal capacity in times of crisis.

Introduction

Along with the unprecedented social and economic disruption, COVID-19 and its handling by the federal government opened a window of opportunity to study subnational government responses to an exogenous infusion of intergovernmental financial assistance. In the first month of the COVID-19 pandemic, the U.S. Congress authorized federal relief funds for eligible state and local governments to address their social and economic needs. Such aid was welcome support for many and was originally intended to supplement rather than replace government revenues lost in the pandemic.

Working with the U.S. Census Bureau data for 2017-2021 and the U.S. Treasury data for 2020-2022, we examine how the fiscal behavior of municipal governments changed after the CRF receipt. Specifically, exploiting variation in the distribution of federal aid to governments by size and the start of the fiscal year, we study how this exogenous intergovernmental assistance affected government spending, reserves accumulation, and the management of long-term debt. We acknowledge that the control group was also "treated" with intergovernmental aid but indirectly, through transfers from larger governments.

The data allow us to test classical theories of budget maximization (Niskanen 1971, Brennan and Buchanan 1981), the flypaper effect (Oates 1971, Hines and Thaler 1995), and more recent perspectives on the determinants of fiscal reserves accumulation (Arapis and Chatwerjee 2022, Gorina et al. 2019). Preliminary findings show relatively weak positive effects of CFR on spending and debt retirement, while documenting no differences between out treatment and control groups in the effects of aid on cash balances. These findings are interpreted within the context of American fiscal federalism and contribute to the understanding of local responses to the unexpected boost of subnational fiscal capacity in times of need.

Background

In late March 2020, Congress expediently implemented a pandemic relief program for states, territories, tribal nations, cities, and counties through its first direct allocation program known as the Coronavirus Relief Fund (CRF) to address the social and economic needs of communities affected by COVID-19. Authorized by the Coronavirus Aid, Relief, and Economic Security Act[1] on March 27, 2020, the CRF provided $150 billion in direct payments to states, cities and counties with population exceeding 500,000. Out of the $150 billion appropriated, 73.76% of total funds was directed to states, and 18.33 % - to cities and counties.

<Table 1>

The funds were approved for all governments that submitted a certification by April 17, 2020 and were disbursed by June 17, 2020 (U.S. Department of the Treasury n.d.). Originally, CRF came with a deadline for spending of December 2020 but the deadline was later extended to December 2021.[2] The second relief program, known as the State and Local Fiscal Recovery Fund (SLFRF), was authorized by the American Rescue Plan Act (PL 117-2) in Spring 2021 and made additional $350 billion in direct aid available to subnational governments regardless of size. The first tranche of the SLFRF was made available to governments in May 2021, and the second tranche of funding was made available in May 2022 (ARP: Two Years In, 2023).

[1] Public Law 116-136: https://www.congress.gov/116/plaws/publ136/PLAW-116publ136.pdf

[2] Out of $149,956,359,982 of CRF grants distributed to states, territories, and local governments in 2020, cities and counties directly received $32,425,019,287. The legislation included a tight timeline for the funds to be spent (December 31, 2020). At the last minute, Congress passed an extension for governments to expend the CRF monies until December 31, 2021 (tribal governments received a further extension into 2022).

The relief funds were provided to governments through the U.S. Treasury, and the U.S. Treasury's rules for CFR use went through several iterations. The rules were purposefully flexible, as outlined by Congress (Booth, 2021) but originally disallowed the use of relief funds for just replacing revenue lost from the pandemic. Instead, the CRF monies were intended to supplement local revenues and cover previously unbudgeted expenditures that would be used to alleviate the unexpected burden of the pandemic.

The CRF program was a grant-in-aid program with few spending regulations. The U.S. Treasury did not require governments to submit a plan on how they were to expend the funds before or after receipt; instead, they relied on expenditure reports. Governments that received the direct allocation had discretion on how to use the funds and on what to use them. Even though the U.S. Treasury provided local governments with a list of suggested spending categories, the guidance did not make resource allocations alike. Figure 1 shows the distribution of spending by category over the following two years following the distribution and highlights that about half of the funds were directed to the spending category "other".

<Figure 1>

By August 2020, the U.S. Treasury published its first report on the use of funds showing that the timing of expenditure allocations varied widely. While some CRF recipients incurred substantial spending right after receiving the funds, others incurred spending at much lower rates. Figure 2 shows that on average, by August 2020, cities and counties incurred 20 percent of the allocated funds and that spending ranged from 0 percent allocations to 100 percent, with the median of 15 percent and the standard deviation of 21 percent suggesting a left skew and a wide spread.

<Figure 2>

Though many smaller local governments received aid to address the effects of the pandemic in 2020, they were subject to more varied and temporally distinct processes of aid disbursement through states, county and city governments rather than a direct U.S. Treasury allocation.

To study how the direct CRF allocation affected local government fiscal behavior, we use data for the full population of cities and counties that received CRF in 2020 and 2021 and compare them to the governments that were slightly smaller in size. This way, we invoke the classic RD design. Since we recognize that our control group could also have been treated with the distribution of federal funds as a trickle down from the states, we test if the direct distribution itself had an effect. The remainder of this paper proceeds as follows. The following section reviews theories on local government responses to intergovernmental aid and research on government savings behavior. Next, we describe data, methods, and results. The final section concludes with a reflection on the changing roles of intergovernmental aid in American fiscal federalism. The paper will still be substantially developed before the presentation.

Literature Review

To establish hypotheses for empirical testing, we draw from the literature on government responses to intergovernmental aid, the fungibility of public resources, and the determinants of fiscal reserves accumulation.

The Flypaper Effect. The use of intergovernmental aid by subnational governments has been studied by scholars of public finance and fiscal federalism since the sixties (Henderson, 1968; Gramlich, 1969, Oates 1988, Moffitt 1984). A body of work that includes over 3,500

articles on Google Scholar for the search term “flypaper effect” has used various approaches and samples to examine if intergovernmental aid increases the size of government and leads aid recipients to increase spending more when it is enabled by grants than when it is funded by local own-source revenues, an effect also dubbed as “money seems to stick where it hits” (Inman, 2008, Vegh et al. 2015). An influential metanalysis of the flypaper effect on government spending by Hines and Thaler (1995) gives a wide bandwidth for such increases in spending showing that for every $1 increase in grant funds, governments may spend between $0.25 and $1.

Vegh et al. (2015) outline five groups of explanations of the observed “flypaper effect” from the literature and add a sixth of their own. It may be observed because 1) researchers do not correctly understand the data and confuse matching (conditional) grants with lump sum aid (unconditional); 2) researchers do not model some potential determinants of government spending and their work results in the omitted variable bias; 3) the representative voter perceives benefits from the income effect of public spending and may not behave rationally, 4) governments represent their constituent preferences for spending inefficiently; 5) taxation has distortionary effects; and 6) the flypaper effect is a function of an insurance model where subnational governments have two sources of income (private income and fiscal transfers) and rely on precautionary savings to stabilize finances in economic downturns.

Research on the flypaper effect of the COVID 19 intergovernmental transfers offers some early evidence on local preferences for non-local funds to expand expenditures over the pandemic (Wati et a. 2022), as well as positive effects of aid on annual pension contributions of underfunded plans (Brang et al. 2024), and a positive effect of financial officer professionalism on the speed of federal aid absorption (Shybalkina 2024). Work on the effects of the post-COVID

19 intergovernmental aid on school finance by Gordon and Reber (2020), similar to earlier papers by the authors, finds the flypaper effect in the distribution of aid to school districts while also observing that the stickiness of intergovernmental grants wears off over time. In the context of equalization goals of federal K-12 grants, the crowding out of local spending that Gordon and Reber (2020) following the distribution of aid actually defies policy intent. Similarly, though the "flypaper effect" is often considered to be an undesirable deviation from the financial management outcomes in the literature, in the contest of the stimulatory intent of federal Covid-19 CRF transfers, it would be desirable to observe the flypaper effect local government use of federal funds, similar to the K-12 context.

Fiscal Reserves. Fiscal slack can be defined broadly as "fiscal resources reserved in various governmental funds that are used to compensate for unexpected revenue shortfalls and to prepare for potential fiscal difficulties" (Wei and Denison, 2019). Fiscal reserves enable local governments to respond to revenue and expenditure fluctuations serving as a budget stabilization tool in times of need (Wolkoff, 1987). Since fiscal slack is a function of managing fiscal risks and of the opportunity costs of keeping funds in reserve, the management of CRF grants by local government offers an opportunity to analyze the practical application of those tradeoffs.

Thompson et al. (2017) consider local government revenue, expenditure, and savings management as "continuous-time stochastic processes", in which governmental budgets are an optimal-control problem, and spending rates are proportional to net assets and the present value of net revenues (Dothan and Thompson, 2009; Thompson et al, 2017). In the context of balanced budget requirements that apply to local governments in the U.S., city administrators hedge against this risk of revenue shortfalls or expenditure increases through savings.

The risk of a fiscal shock is acknowledged by practitioners as the strongest driver of fiscal reserves (Marlowe, 2006). Empirical work after the Great Recession supports this perspective by showing that after the Great Recession, governments increased their reserves (Arapis & Reitano, 2017, Gorina et al, 2019) and governments with low levels of reserves were more likely to experience fiscal distress (Gorina et al, 2018, Park & Maher, 2020). Environmental shocks such as natural disasters may also increase savings (Arapis and Reitano 2022). Other factors such as city size, form of government, revenue structure, revenue capacity, median voter characteristics, and institutional constraints may also have their independent effects on reserves (Arapis and Reitano 2016; Duncombe and Hou 2014; Gore 2009; Stewart 2011, Wei 2021). Recent work by Gorina et al. (2019) distinguishes between the "need to save" and the "capacity to save" sets of factors showing that cities tend to be less responsive to the risks associated with the volatility of their revenue structure (need to save) than to the opportunities to store reserves (capacity to save). In a study of Massachusetts localities, however, Wei (2021) finds that local governments are strategic. She zooms in on voter pro-spending preferences, government budgetary gaps, and managerial structures as factors that influence reserves to find that internal management actually buffers that is counteracts the negative effects of voters' pro-spending preferences on savings and imposes stronger savings in response to budgetary gaps due to revenue shortfalls (Wei 2021).

Hypotheses

The pandemic was an environmental stressor for governments, with uncertainty and economic effects drawn out over time and space. Local governments were forced to take stock at their fiscal resources, environments, and inherent risks to revenues and increased expenditures. They had to make difficult choices between providing services, accessing reserves, and

remaining financially solvent. An increase in COVID-19 related expenditures including expenses related to public health, public safety, protective equipment, and service delivery changes, had to be paid for from existing funds or CRF monies.

How local governments used the intergovernmental aid distributed by the federal government over the pandemic will likely be reflective of government responses to intergovernmental fiscal transfers in other settings. In line with the "flypaper effect" proposition, according to which local governments will increase spending more after they receive intergovernmental aid than they would from own-source revenues, we expect to see a higher spending increase for governments that benefitted more from the distribution of aid (**H1**).

At the same time, we acknowledge likely variation in government capacity to absorb COVID-19 relief funds and expect that relatively few constraints in funds use would permit governments to allocate CRF distributions beyond general spending needs. To this end, we formulate the hypothesis that expects a positive effect of CRF on the accumulation of fiscal reserves (**H2).**

In the context of CRF distributions, we also test whether CRF recipients were able to direct more financial resources to debt retirement (**H3**). In this respect, our intuition is alike to Braig et al. (2024) who examine whether governments directed their unexpected excess resources to the additional funding of long-term obligations. The fungibility of public funds has long been acknowledged (McGuire 1975, 1978, Zampelli 1986) and would predict that CRF distribution could cover spending needs in a way that could free up resources for debt refinancing or advance the retirement of long-term obligations.

Data

The dataset for this study combines the U.S. Census Bureau's data from the Annual Survey of Local Government Finances for years 2017-2021 with the U.S. Treasure data on CRF distributions to states and localities 2021-2022. The CRF data states the award amount of funds received by each eligible entity, the amount spent, and the categorical use of funds[3]. The Census Bureau surveys all counties, municipalities, townships, special districts, and school districts every five years - on years ending in "2" and "7" (U.S. Census Bureau, 2023). For the other years, data is collected from a sample of local governments.

The original U.S. Treasury dataset includes 152 CRF recipients – 37 cities and 115 counties with population over 500K. From the treated group, we only remove Washington DC because it is an outlier in its spending per capita of 25K. We also remove New York because it is an outlier with population over 8 million. Finally, we remove two counties with missing data.

Empirical Strategy

With the 500K population threshold for CRF disbursement, we set up the study as a sharp regression discontinuity design to compare the fiscal behavior of local governments with and without the direct CRF distribution. In the sharp Regression Discontinuity design, the assignment

[3] These categories include payroll for public health and safety employees, budgeted personnel and services diverted to a substantially different use, improve telework capabilities of public employees, medical expenses, public health expenses, distance learning, economic support, expenses associated with the issuance of tax anticipation notes, administrative expenses, nursing home assistance, housing support, small business assistance, personal protective equipment, food programs, unemployment benefits, COVID-19 testing and contact tracing, workers' compensation, other COVID-19 related expenses, and all items not listed above. These categories have been combined into similar functions: internal expenditures, community support, COVID-19 expenditures, unemployment benefit, and other. Cities and counties that received one allocation for both were included in county totals.

to treatment should be exogenous with no opportunities to manipulate treatment. The conditional independence assumption is:

$$E\,[Y0i \mid Xi\,,\, Di\,] = E\,[Y0i \mid Xi\,].$$

Once we control for confounder Xi – population in the case of CRF distribution - treatment assignment is as good as random. The running variable fully determines the treatment according to the cutoff rule:

$$Di = \quad 1 \text{ if } Xi > X0$$

$$0 \text{ if } Xi < X0$$

For observations close to the discontinuity, we effectively have an experiment. RD estimates are local to the cutoff. The analysis of the effects of CRF simplifies to the estimation of β_1:

$$Y_i = \beta_0 + \beta_1 D_i + e_i,$$

We explore two thresholds around the cutoff point. First, we examine the effects for the sample within the 250K bandwidth of the cutoff of 500K. Using this approach, we work with groups of local governments that are more alike in size and scope of service responsibilities that may affect their spending, reserves and debt patterns. Through this truncation of data, however, we lose several larger treated units. Then, we set the population cutoff over 200K, which keeps all treated units in the sample and includes a slightly larger control group of local governments than the first scenario. We do not differentiate between cities and counties theoretically (e.g. we expect the effects to be driven by similar factors) but we still control for the type of government with a binary variable.

In Figure 3, we present our analysis of the timing of the distribution of CRF funds relative to when this spending would be reported in annual comprehensive financial reports that would later be used as a source of the U.S. Census Bureau's data. We know that the distribution of the CRF funds occurred between April 17 and June 17 of 2020, which corresponded to the middle of the fiscal year for governments with the fiscal year end on December 31 and to the end of the fiscal year for governments with the fiscal year end on June 30. As a result, we observe governments treated for different periods of time in FY 2020 and FY 2021 out of the full 20 months of available CRF use (May 2020 – December 2021). Using the end of the fiscal year and the aid distribution timing, we create the duration or 'dosage' of treatment variable, which ranges from 0 to 20 and models differential effects of aid depending on the duration of CRF exposure. Table 3 presents the shares of the sample by fiscal year end.

<Table 3>

Effects of the CRF on Spending, Cash Balances and Debt

Expenditures per capita. We begin the analysis with the models for spending in fiscal year 2021 in the sample of cities and counties after the CRF distribution. Figure 5 suggests relatively pronounced differences in the levels of spending by treatment group: smaller cities tend to have larger per capita expenditures than larger ones. Very large cities, however, also have high spending per capita. Cities and counties with over 500K in population close to the cutoff appear to have lower spending per capita than the others. The effects of the CRF on spending are not clearly pronounced graphically.

<Figure 5>

A summary of the regression model for the smaller sample (S1) and the larger sample (S2) suggests that the effects of CRF are positive and not significant in the smaller sample while being positive and significant in the larger sample. (We apologize for the way the results are presented here. In the full version of the paper, we will present carefully created tables and specifications. The current findings are very preliminary and incomplete.)

$$S1\text{: } Y_i = \$\mathbf{3615}\ ***\ + \$111\ CRF_i + \$\mathbf{1307}\boldsymbol{City_i}\ ***\ - \$\mathbf{124}\boldsymbol{Dosage_i}\ ***\ + e_i,$$

$$S2\text{: } Y_i = \$\mathbf{4145}\ ***\ + \$\mathbf{613}\boldsymbol{CRF_i}\ ***\ + \$\mathbf{1555}\boldsymbol{City}\ ***_{\boldsymbol{i}}\ -\ \$\mathbf{156} * \boldsymbol{Dosage_i}\ ***\ + e_i,$$

In the larger sample, the CRF funds increased spending per capita by $613 on average, whereas the earlier exposure to CRF (dosage) was associated with lower spending in FY 2021, meaning that CRF funds are likely to have been expended in the previous fiscal year (FY 2020). In further analysis, we will carefully examine changes in spending over time from the start of available data in 2017. The graphical patterns also suggest that the RD design will need to be complemented by DID analysis. Given the differences in the original pre-Covid-19 levels between groups, are the differences in spending after the pandemic still the same?

Cash Balances. Figure 6 presents findings on the effects of CRF on cash balances and shows no statistically significant effects of aid on the accumulation of fiscal reserves. These results again compel us to examine difference-in-differences specifications for governments over time to gauge if we are observing similar use of reserves over time.

<Figure 6>

Debt per capita. Models for the retirement of capital debt per capita show that cities and counties treated with CRF distributions retired more debt per capita when examined in the large sample only, suggesting that the effects we observe may be due to the largest municipalities. Given the likely differences in the scope and scale of capital projects handled by cities of different size, we cannot be certain that the effects were due to CRF. The preliminary effects of CRF on debt in the models resemble those in the expenditure analysis, with the CRF variable being significant only in the large sample.

$$S1\text{: } Y_i = \beta_0 + \$7\ CRF_i + \$\mathbf{577}\boldsymbol{City_i}\ ^{***} - \$\mathbf{16}\boldsymbol{Dosage_i}\ ^{***} + e_i$$

$$S2\text{: } Y_i = \beta_0 + \$\mathbf{113}\boldsymbol{CRF_i}\ ^{**} + \$\mathbf{502}\boldsymbol{City_i}\ ^{***} - \$\mathbf{3}\boldsymbol{Dosage_i}\ ^{***} + e_i,$$

The analysis presented in this first draft will be complemented by DID models and classical fixed effect models. The timing, duration, and magnitude of the CRF distributions will be modelled not only with the dichotomous variable for the treatment and control groups but also with the actual aid amount from the U.S. Treasury data.

Discussion

Examining changes in local government fiscal behavior upon CRF receipt by FY 2021, we find statistically strong positive effects of CRF on spending only the larger sample. The sample is powerful for gauging the effects statistically but also possibly too heterogeneous in the treatment and comparison group characteristics than the close-to-cut off sample for us to be able to confidently attribute the effects to the CRF distributions. All things considered, using RD analysis, we find relatively weak support for H1. Next, the effects of CRF on cash balances are not statistically significant, yet again this analysis leaves us wanting to complement the RD

analysis with the DID to control for pre pandemic differences in the fiscal reserves behavior of governments. As of now, H2 is not supported.

Finally, we find an inkling of a positive association of the CRF distribution with retired debt per capita (H3) but only in the large sample. After receiving the CRF aid, local governments could have expanded spending and debt retirement and did not exploit aid fungibility to obfuscate slack.

Seemingly lackluster responsiveness to aid - which will still be carefully tested using available data and more careful modelling – at first blush - suggests that the flypaper effect was not particularly strong. Given that the grants were unconditional and that the revenue non-replacement condition was relaxed over time, it is likely that governments ended up replacing local revenues with federal transfers rather than expanding the size of the public sector. The direct distribution of CRF as a determinant of aid use - which we initially considered as a strong institutional factor that would be associated with more streamlined accountability in comparison with indirect distributions - does not appear to make much difference in the take up of aid (the effects on spending within 250K of the cutoff are null). This analysis encourages us not only to supplement RD with thorough DID analysis but also to turn attention to variables that would help us answer additional questions such as whether the CRF distribution helped local governments maintain budgetary balances and prevent fiscal distress. An argument that the per capita distribution was inequitable to smaller economically weaker localities might also be worth exploring.

Further research can also study how CRF and SLFRF monies were used to cover loss of revenue from the pandemic and how the funds were used to supplement budgets. The direct distribution of intergovernmental support may have been perceived by the recipient governments

as an invitation to find solutions and encouraged out-of-the-box decision-making. Funds were expediently absorbed and directed to broad community needs that went beyond crisis management. Future work could examine longer-term evidence of the effects of covid relief programs on other outcomes such as innovation and local entrepreneurship.

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Figure 1: Percent of the Covid Relief Fund (CRF) incurred by August 2020

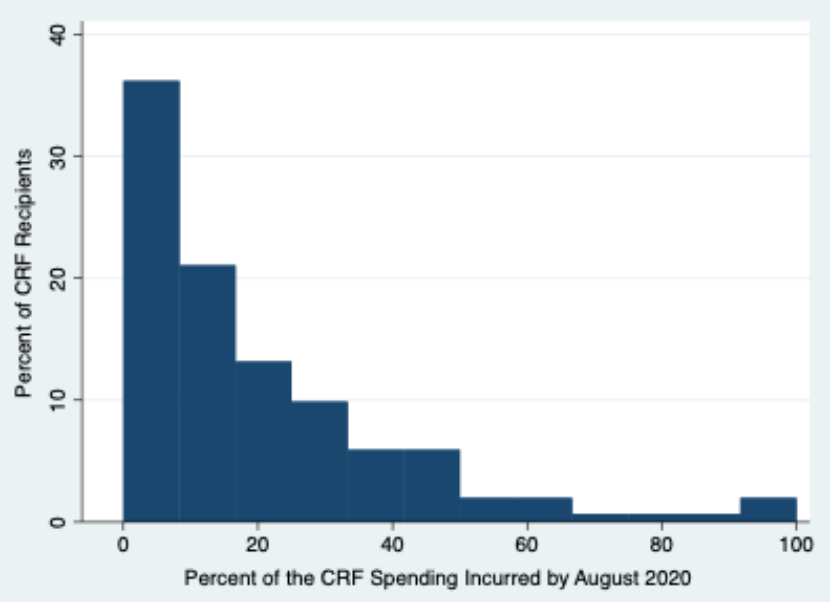


Figure 2: Distribution of the CRF Spending by Government over 2020-2021

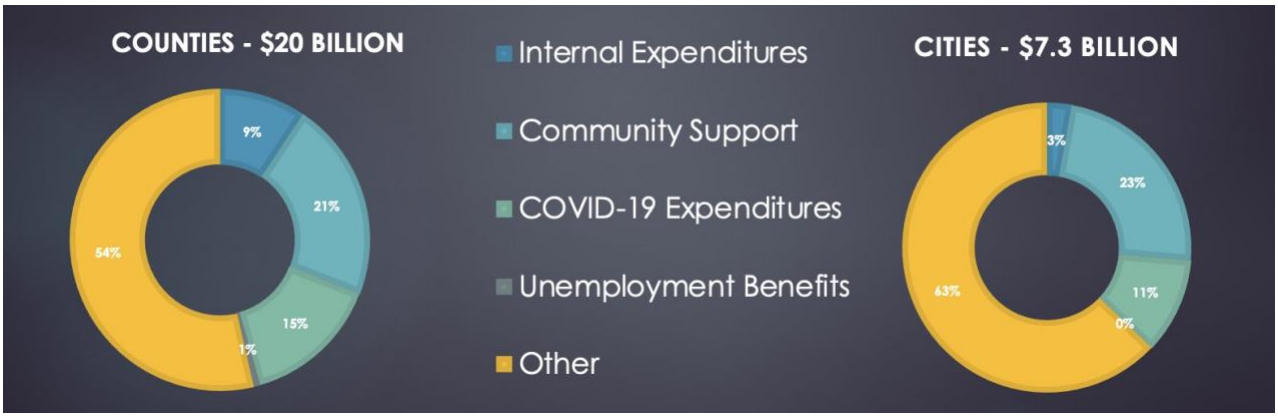


Figure 3: Timing of the CRF and SLFRF Disbursement



Table 1 CRF Expended by Entity Type

States	$	110,492,930,634	73.76%
Tribal	$	9,434,347,880	6.30%
Territories	$	2,409,629,268	1.61%
Cities	$	7,351,124,594	4.91%
Counties	$	20,109,640,015	13.42%
	$	149,797,672,391	

Table 2: Timing of the End of the Fiscal Year

FY End	Freq.	Percent
228	1	0.24
430	1	0.24
630	**173**	**41.79**
731	1	0.24
831	2	0.48
930	**83**	**20.05**
1031	1	0.24
1130	9	2.17
1231	**143**	**34.54**
Total	414	100

Figure 4: Effects of CRF on City and County Spending per Capita

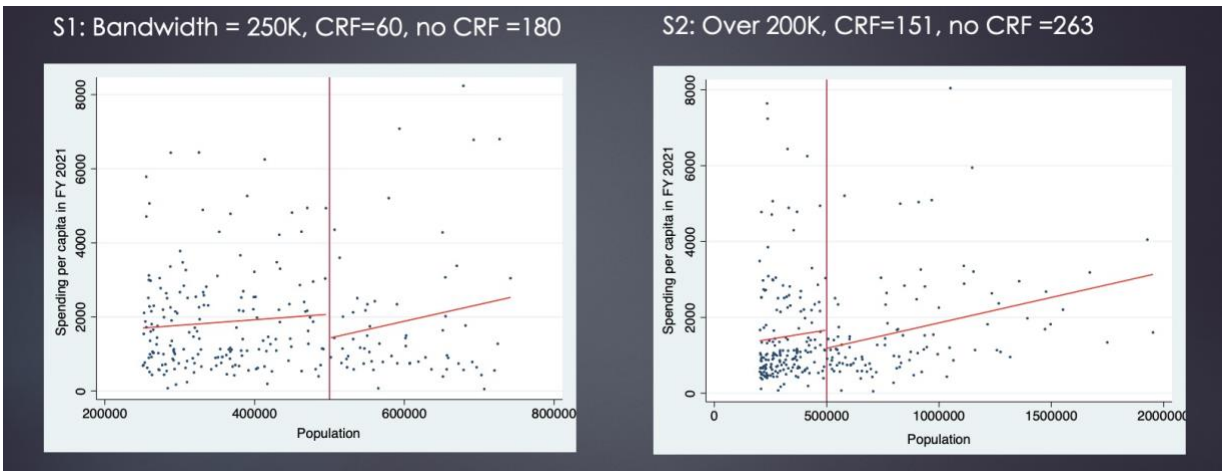


Figure 5: Effects of CRF on City and County Cash Balances per Capita

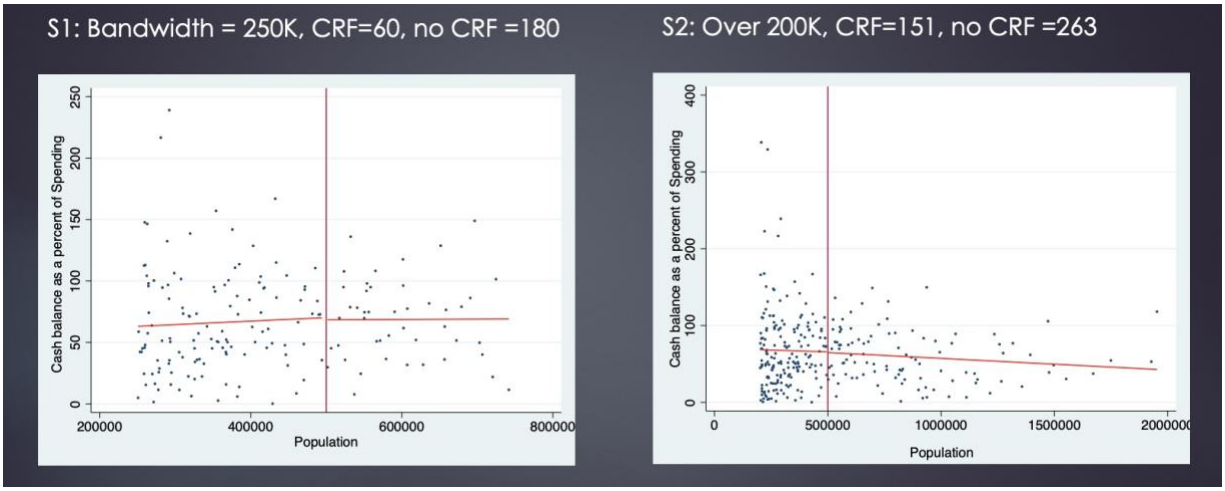
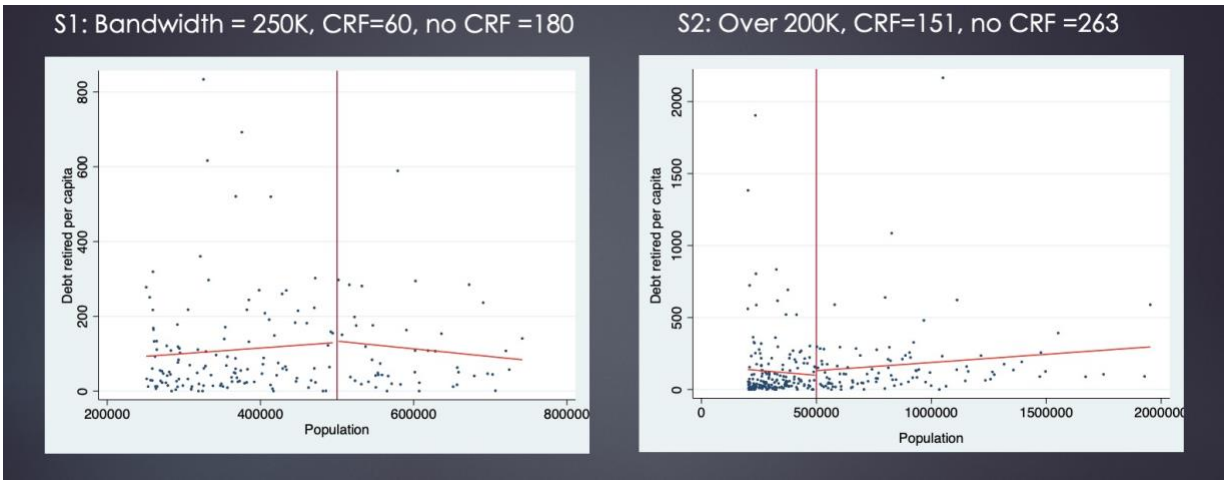


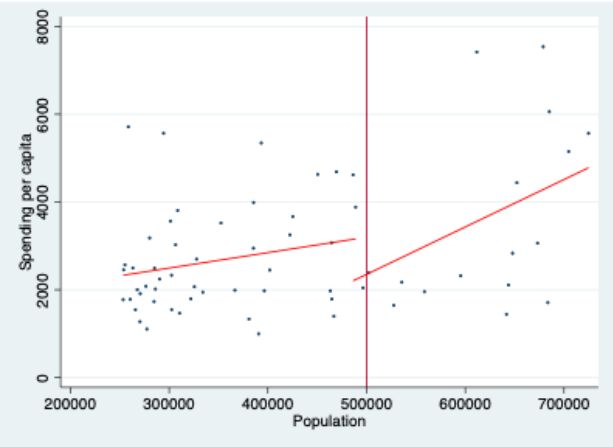
Figure 6: Effects of CRF on City and County Debt Retired per Capita



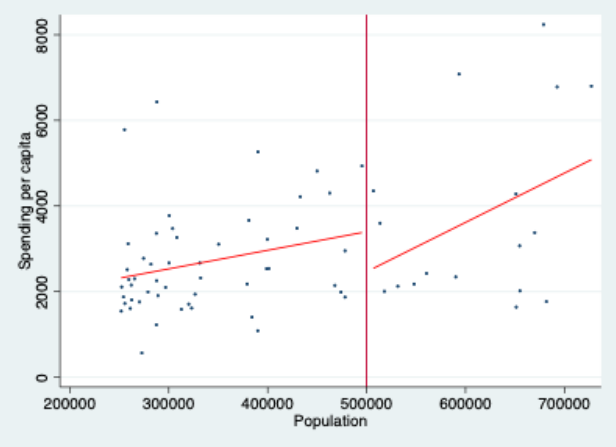
Appendix

SPENDING PER CAPITA

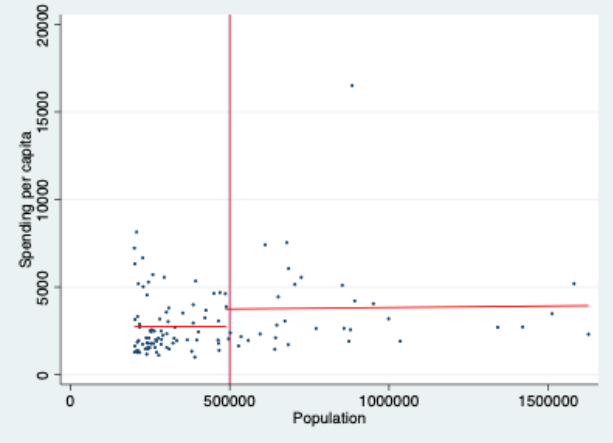
Cities, small band, 2019



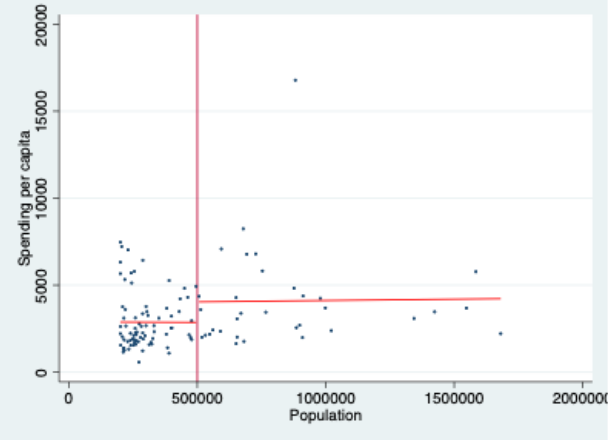
Cities, small band, 2021



Cities, large band, 2019

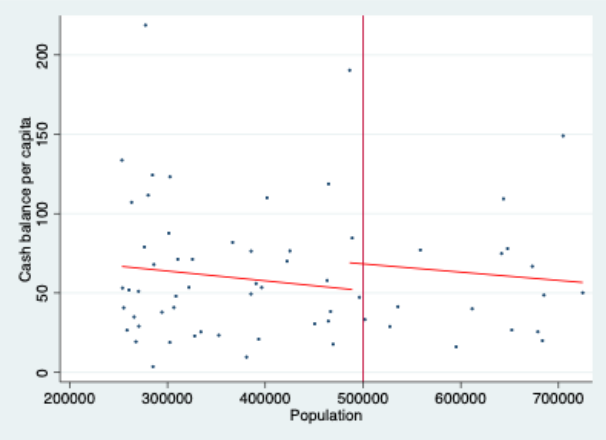


Cities, large band, 2021

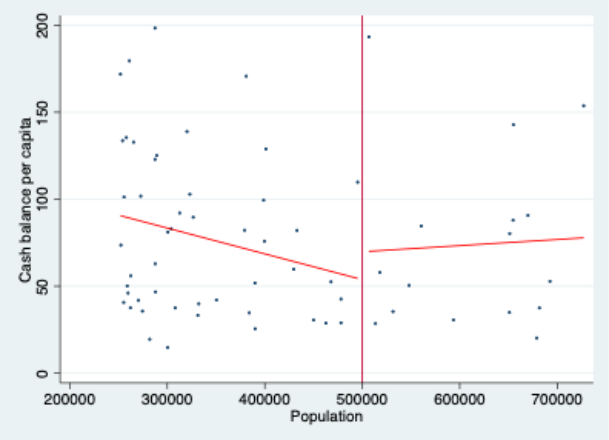


CASH BALANCES PER CAPITA

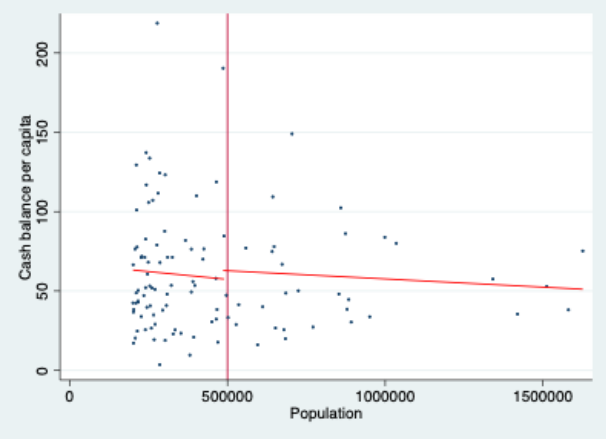
Cities, small band, 2019

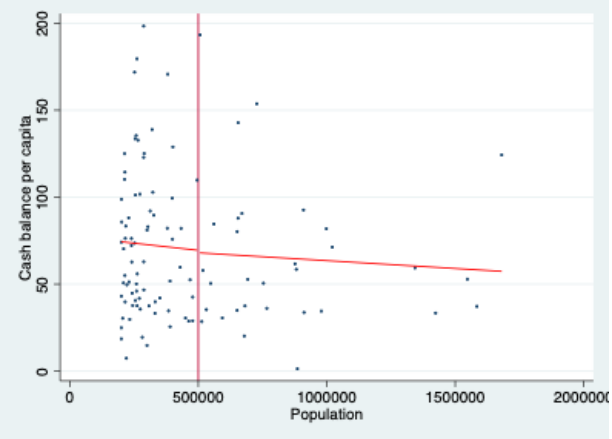


Cities, small band, 2021



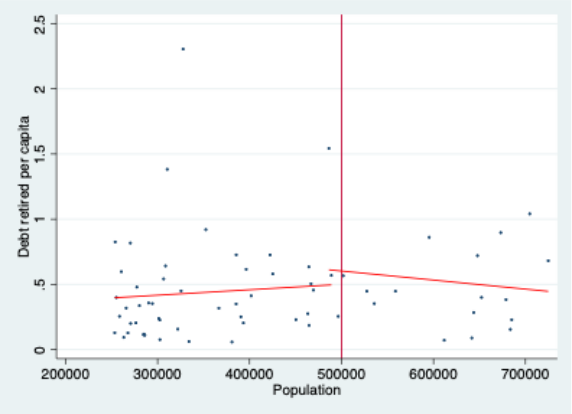
Cities, large band, pop>200k & pop<2mil, 2019 - Cities, large band, pop>200k & pop<2mil, 2021



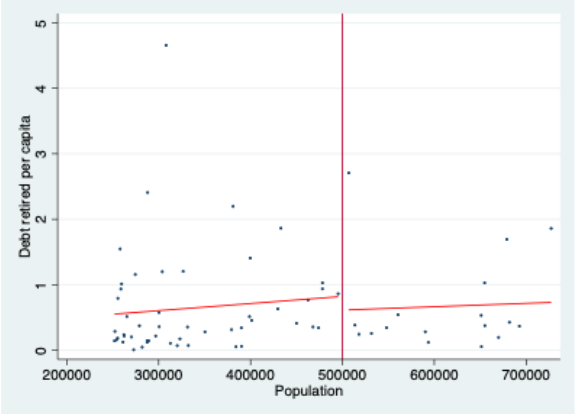


DEBT RETIRED PER CAPITA

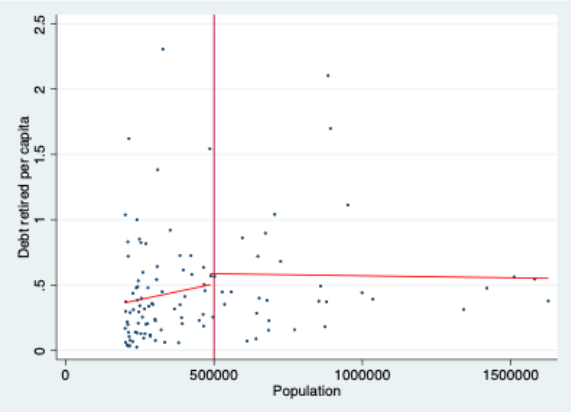
Cities, small band, 2019



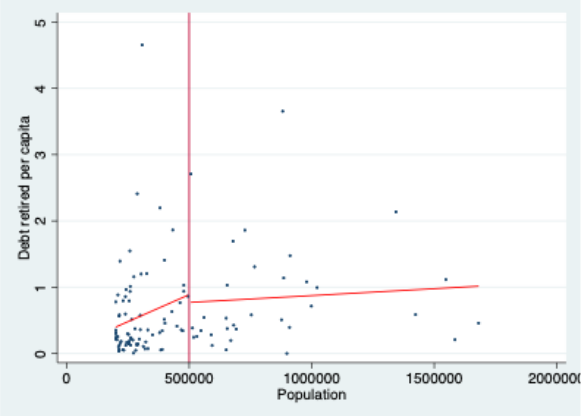
Cities, small band, 2021



Cities, large band, 2019



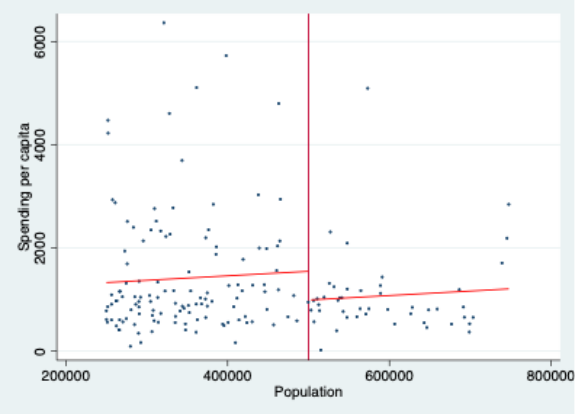
Cities, large band, 2021



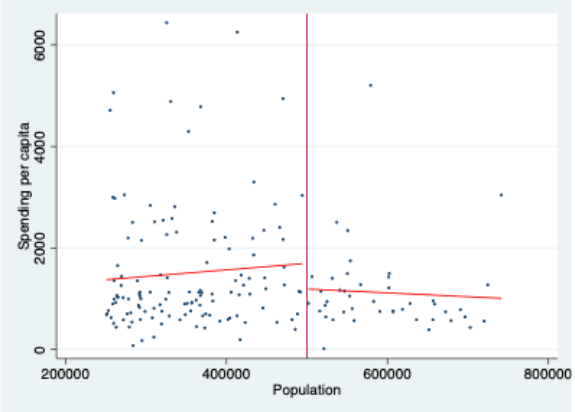
COUNTIES

SPENDING PER CAPITA

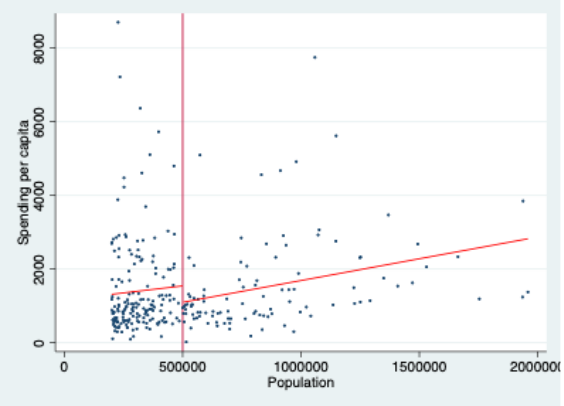
Small 2019



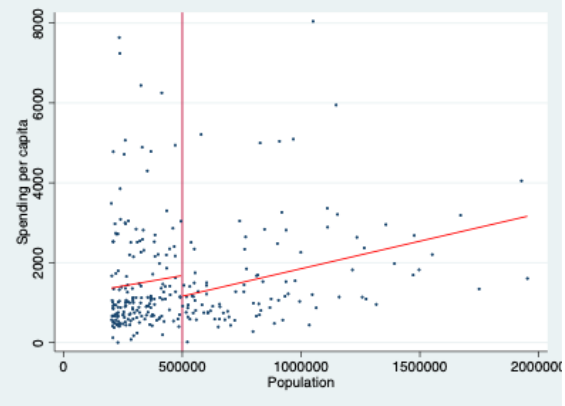
Small 2021



Large 2019



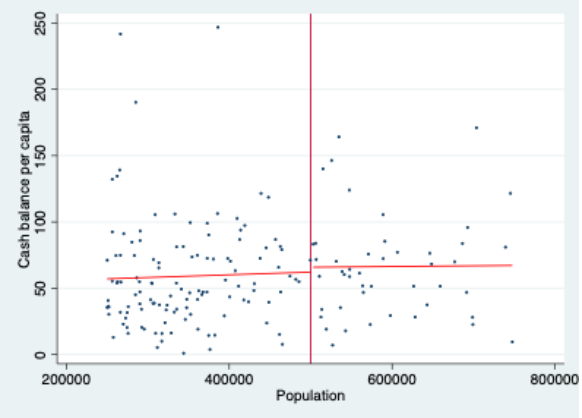
Large 2021



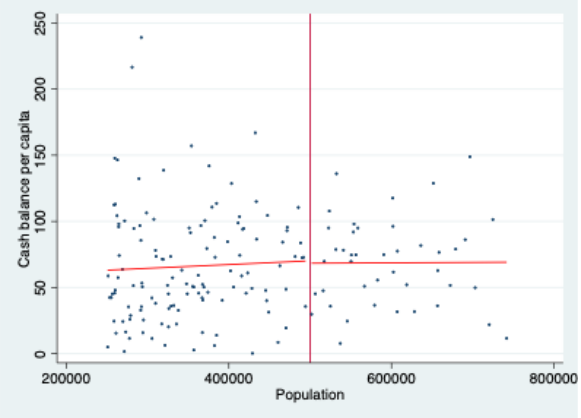
CASH BALANCES PER CAPITA

Small 2019

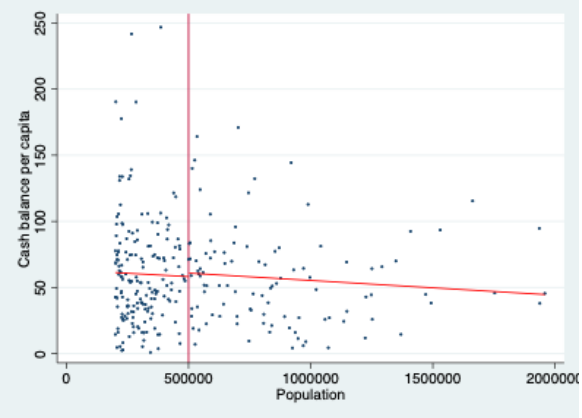
Small 2021

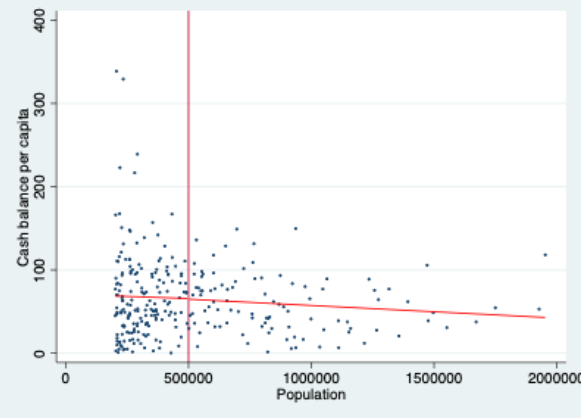


Large 2019



Large 2021

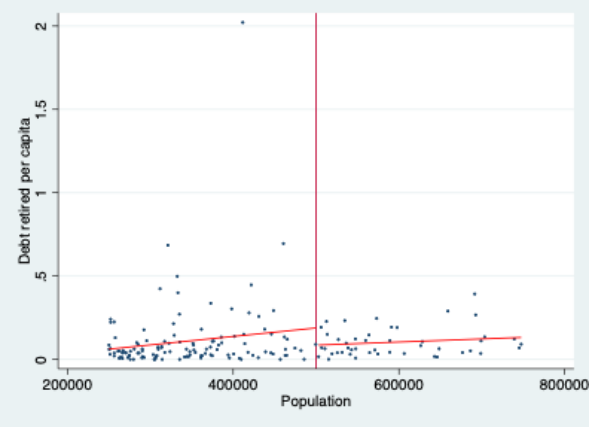


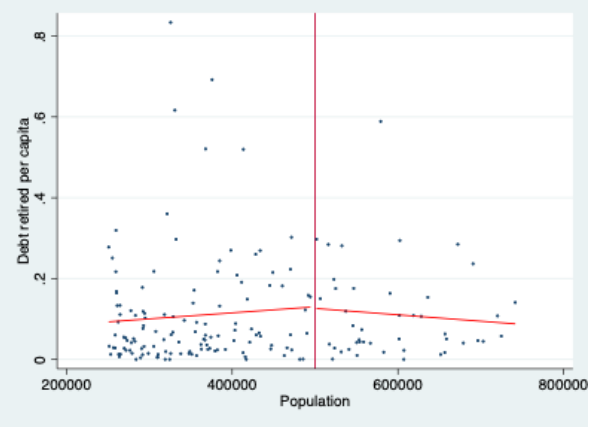


DEBT RETIRED PER CAPITA

Small 2019

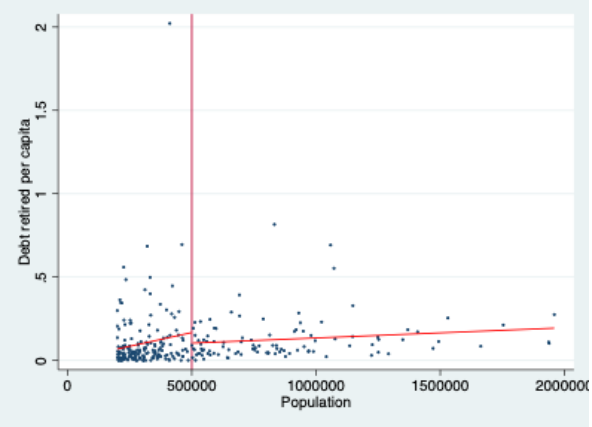
Small 2021





Large 2019

Large 2021



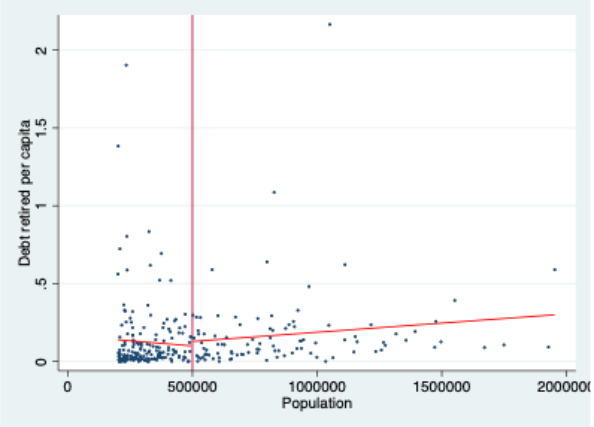


Table x - Cities and Counties Per Capita Spending

Direct (0/1) & Year	Coefficient	Robust std. err.	z	P>z	95% conf. interval	
0 2018	4.17	1.34	3.11	0.00	1.54	6.80
0 2019	8.19	2.11	3.88	0.00	4.05	12.33
0 2020	11.66	2.42	4.82	0.00	6.92	16.40
0 2021	17.49	2.85	6.14	0.00	11.91	23.08
1 2017	-5.08	10.81	-0.47	0.64	-26.27	16.11
1 2018	1.71	10.20	0.17	0.87	-18.28	21.71
1 2019	4.26	9.73	0.44	0.66	-14.81	23.33
1 2020	15.63	10.60	1.47	0.14	-5.15	36.41
1 2021	26.82	12.84	2.09	0.04	1.66	51.99
Constant	173.57	12.52	13.86	0.00	149.03	198.12

Table xx - County & City Slack as Percent of Total Expenditures

Direct (0/1) & Year	Coefficient	Robust std. err.	z	P>z	95% conf. interval	
0 2018	-1.13	1.84	-0.61	0.54	-4.75	2.48
0 2019	0.00	2.29	0.00	1.00	-4.49	4.50
0 2020	1.43	2.07	0.69	0.49	-2.63	5.49
0 2021	8.94	2.46	3.64	0.00	4.12	13.75
1 2017	-7.17	5.01	-1.43	0.15	-16.99	2.65
1 2018	-7.76	5.04	-1.54	0.12	-17.63	2.11
1 2019	0.13	4.64	0.03	0.98	-8.96	9.22
1 2020	27.91	23.68	1.18	0.24	-18.49	74.32
1 2021	10.65	6.07	1.75	0.08	-1.25	22.55
cons	60.97	2.87	21.22	0.00	55.34	66.60