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Analysis of Tax Increment Financing (TIF) Usage and State Requirements

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Abstract

Tax Increment Financing (TIF) is one of the most popular economic development tools in use, as well as one of the few economic development tools available to municipal governments. Although it was slow to be adopted by many states, currently every state, as well as the District of Columbia, has active TIF districts to back over \$35 billion in bonds across the country. Despite its popularity, there is no consensus on the ability of TIF to create a planned and measurable outcome. Because of this ambiguity, TIF usage is clustered across the country as state legislatures have put in varying requirements to restrict the ability of local governments to create districts. The purpose of this paper is to analyze current TIF usage by states across the country, as well the different requirements each state has for local governments to create districts and their effectiveness on limiting district creation. This study uses three linear regressions with each requirement in use by multiple states as an independent variables being tested against the total districts in each state, the total funding in each state backed by TIF revenue and the funding per capita in each state backed by TIF revenue. Findings indicate that requirements that were passed to limit TIF usage are not associated with decreased TIF usage. This study does find that additional planning requirements for district creation may be overburdensome for local governments. This study concludes that the requirements put in place by state legislatures may not matter as much as how each law was written for its ability to limit district creation.

Introduction

Economic development is a highly competitive field where governments compete against each other to be the home for large companies in the hopes of bringing jobs to citizens and tax revenue for themselves. Traditionally, the recruitment of these industries involves rolling out the

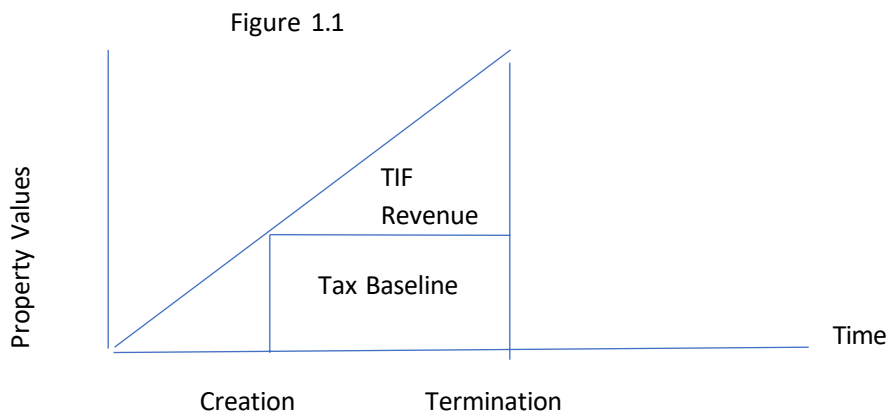
red carpet on recruitment trips and offering multi-million dollar incentive packages to businesses in exchange for relocating to their city or state for the expansion of jobs and operations if the firm is already located in the city. Ultimately, the goal of local economic development is not solely about the number of jobs created or money invested, it is the opportunity to improve the quality of life for their citizens. Cities want to ensure that their citizens can find jobs, make good wages, and live happily. While the recruitment of industry continues to be the ideal economic development process for local and state officials, Tax Increment Financing is a tool that is popular across the country.

The pursuit of creating a higher quality of life can come at a high cost to local governments who try to incentivize firms to come to their city. These incentives typically take two different forms, either as a direct cost out of the city budget, such as buying and developing land for an industrial park, general infrastructure improvements for firms, and workforce development programs. Cities also pay indirectly for these programs in the form of tax and other incentives. Both programs are aimed at assisting the firm as they attempt to maximize their profit by locating in that city, as that is the goal assumed for every firm¹. Unfortunately, most city governments do not have the ability to offer significant incentives because of limits on the amount of taxes they can impose as well as competition from cities in their region and across the country.

Tax Increment Financing (TIF) is a tool used by local governments, either alone or in coordination with state government, to help these firms maximize their profits. What makes TIF an attractive program for local governments is twofold. First, TIF, if implemented properly, can be revenue neutral for local governments. TIF works by collecting additional revenue from

¹ Timothy J. Bartik, *Local Economic Development Policies*, W.E. Upjohn Institute for Employment Research, 2004.

increased property values over time. To do this, when cities create TIF districts they allocate the same amount of property tax revenue, the base value, to the general budget every year for a specified amount of time, and the additional tax revenue, or the tax increment, goes into a separate fund to encourage development into the specified district. This works as long as the assumption holds that the public investment will generate more revenue and public benefit than cost². Figure 1.1, shown below, illustrates how TIF works.³ As property values rise each year, the amount over the base value is the tax increment that is used to pay for investments in each district.



Second, TIF encourages the cooperation of the private and public sector, leading to more Public-Private Partnerships (P3s) and more efficient investments because of enhanced communication. TIF works by allowing local governments to capture the future increases in property value, or the tax increment, to pay for investments, most often in partnership with the private sector. The important elements of TIF are that the investments take place in a designated

² Bridget Fisher, Flavia Leite and Lina Moe, *What is Tax Increment Financing (TIF)?*, The Schwartz Center for Economic Policy Analysis, June 9, 2020.

³ David Merriman, *Improving Tax Increment Financing (TIF) for Economic Development*, Lincoln Institute of Land Policy, 2018.

geographic district, over a defined duration period, with an expenditure for economic investment, and expected real estate appreciation that will create higher property values⁴.

Tax Increment Financing began in California in 1952 as a way for cities to raise matching funds for federal grants to combat blighted properties. It was slow to spread. By 1970 only seven states had passed legislation allowing TIF districts. However, more states allowed TIF districts as local governments saw it as an economic development option beyond a tool to invest federal funds and fight urban blight. It grew into a way to fund development projects without increasing taxes, increasing the city's debt limit, or requiring a vote. Today 49 states (all but Arizona) and the District of Columbia allow the creation of new TIF districts, however, requirements for creation vary greatly by state⁵.

TIF projects are similar to more common economic development practices. The traditional way cities pay for infrastructure improvements, general obligation bonds (G.O. Bonds), are traditionally cheaper than bonds purchased for TIF projects because they are fully backed by the local government. Because of this, the revenues raised by TIF are not used for large infrastructure projects. They are designed for specific projects that require financing upfront, which is why it is regarded as a tool for coordination between the public and private sector⁶.

Supporters of Tax Increment Financing view it as a way to allow cities to develop more efficiently by increasing cooperation between the public and private sector, fixing budgeting difficulties for cities attempting to undertake projects, and a way to allocate capital more

⁴ David Merriman, *Improving Tax Increment Financing (TIF) for Economic Development*, Lincoln Institute of Land Policy, 2018.

⁵ Larry Marks, *The Evolving Use of TIF, Review*, Summer 2015.

⁶ Joseph Blocher and Johnathan Q. Morgan, *Questions About Tax Increment Financing in North Carolina*, University of North Carolina School of Government, August 2008.

efficiently. This comes from governments' cooperation with the private sector to find the specific capital improvements that a firm needs or desires, allowing them to maximize their profit. This is done in a self-funding way as long as the TIF district is planned correctly. This self-funding ability is key to city governments that struggle to balance their operational budget, allowing them to assist in economic development without cutting services that their citizens rely on.

Opponents of TIF view it as another way for the government to subsidize corporations. They view the capital expenditures as unnecessary; if they were worth the cost then the corporations would pay for them themselves. More vocal critics take these claims a step further, arguing that the lack of oversight by most states allows TIF to be subject to corruption. Another common criticism is how TIF can take money away from other local governments because they only get to collect property taxes at the established level, meaning they do not get to collect extra revenue as property values go up. Lastly, there is the argument that TIF does not generate economic growth by itself, instead, it simply moves growth from one area of a city to the designated TIF district⁷.

Literature Review

Research on TIF has produced reports that show mixed results of Tax Increment Financing. Some show positive outcomes in economic development factors such as job growth and increased tax revenue, others show negative effects for the same indicators. Most papers conclude that the impacts of TIF are inconclusive or mixed⁸.

⁷ Dave Swenson and Liesl Eathington, *"Tax Increment Financing Growth in Iowa"* (2006). Economics Technical Reports and White Papers. 25

⁸ Komla Dzigbede and Rahul Patrick, *"Tax Increment Financing and Economic development"* Brookings Institution.

Perhaps the most expansive piece of research on TIF comes from the Lincoln Institute of Land Policy, by David Merriman (2018), *Tax Increment Financing (TIF) for Economic Development*. Dr. Merriman explores the history of TIF, some of the most famous examples of TIF districts, and reviews the successes and failures of TIF. When reviewing the successes and failures of TIF Dr. Merriman points out the difficulty in evaluating TIF because the variations of laws and regulations differ greatly from state to state⁹.

Another review of Tax Increment Financing was done by Hakyoon Lee (2020) in his *Essays on Economic Development Policies*. In his paper he explores the argument that TIF has become a zero-sum development practice, showing that individual Tax Increment Financing districts are not the only areas that receive the benefits, and it could be shared with nearby districts. Because of this, he justifies the intervention for upper levels of government, such as states, to ensure economic development is taking place in an organized and planned matter¹⁰.

Professors Dave Swenson and Liesl Eathington (2006) of the Iowa State University Economics Department reviewed the effectiveness of TIF districts in the state of Iowa. This study is important because as they claim in their paper “It is widely considered by researchers studying this topic that Iowa has one of the most lenient and lucrative statutes for TIF usage in the U.S.” Also, at the time of this study Iowa was experiencing extreme growth in the number of TIF districts in the state, from 746 districts in 1991 to 1,014 districts in 1997, and 2,238 districts in 2006. Their evaluation of the success of TIF is inconclusive. The majority of tax revenue growth is concentrated in the larger cities of the state, indicating that TIF has been successful. Smaller cities and rural areas have not had as much success raising revenue, with evidence

⁹ David Merriman, *Improving Tax Increment Financing (TIF) for Economic Development*, Lincoln Institute of Land Policy, 2018.

¹⁰ Hakyoon Lee, *Essays on Economic Development Policies*, The University of Kentucky, 2020.
https://uknowledge.uky.edu/msppa_etds/36/

saying that the revenues they did raise were captures from other local governments. There were also signs that TIF districts did not create any new growth by themselves, instead, they only moved growth from one area of the city to new areas of the city. Overall, the researchers were hesitant to make any judgments on TIF districts in Iowa, but they did say that the average Iowa city raised \$2 in TIF receipts for every \$1 spent¹¹.

The Office of Community and Rural Affairs at Purdue University published a report in December 2016 reviewing how TIF is being used in the state of Indiana. They found that Urban centers have a higher quantity of TIF districts as well as increasing frequency compared to the rural areas of the state. They attributed this to the difference in city quantity and population between rural and urban areas, as well as rural areas having fewer non-agricultural industries and employment, which are the typical target of TIF expenditures. Overall, in 2015 7.3% of assessed net assets in Indiana were assessed TIF values, showing how extensive TIF usage is in the state¹².

Overall, the research into Tax Increment Financing is very specific, focused on the results from individual districts or cities. There has not been any study into how TIF affects the nation on a more macro level. This is partially due to the nature of TIF, as it has a specified goal within a well-defined geographic boundary. However, TIF's ability or inability to create an economic benefit has not been studied outside of a local or statewide level.

¹¹ Dave Swenson and Liesl Eathington, "Tax Increment Financing Growth in Iowa" (2006). Economics Technical Reports and White Papers. 25

¹² Larry DeBoer, "The Use of Tax Increment Financing by Local Iowa Governments," Office of Community and Rural Affairs at Purdue University, December 2016.

Question

This paper is not about the efficacy of Tax Increment Financing on local economic development, unlike the previous studies. The focus of this paper is on the availability of TIF to be used by local jurisdictions and if different requirements for the creation of TIF districts by states impact TIF availability. The basic principles of TIF operation are consistent across districts but the ability of local governments to create TIF districts is not. It is up to the legislature of each state to set the conditions for TIF districts to be established with differing levels of oversight by each state¹³. The purpose of this paper is to analyze the different requirements by states that affect the total number of TIF districts in each state, the total borrowing in each state that is backed by TIF revenue and the borrowing per capita of each state that is back by TIF revenue.

Daphne Kenyon, Adam H. Langley and Bethany P. Paquin (2012) reviewed the different state requirements to create Tax Increment Financing District in a report reviewing property tax incentives for the Lincoln Institute of Land Policy. They identified the presence of blight, a “but for” test, a feasibility study, a cost-benefit analysis, a project to be consistent with the local government’s comprehensive or development plan, a project plan, a finding of public benefit, a finding of development potential and “other” requirements as the most common by states¹⁴. This report was updated by David Merriman (2018) who included the estimated number of Tax Increment Financing Districts per state in a policy focus report as a part of the Lincoln Institute of Land Policy. Merriman found that the most common requirements for district creation were the same as they were in 2012.

¹³ David Merriman, *Improving Tax Increment Financing (TIF) for Economic Development*, Lincoln Institute of Land Policy, 2018.

¹⁴ Daphne Kenyon, Adam Langley, Bethany Paquin, *Rethink Property Tax Incentives*, Lincoln Institute of Land Policy, 2012.

Analysis of Requirements

The presence of blight is the most common requirement, required by 34 states. This is the most common requirement by states because the goal of TIF is to create economic growth or shift existing growth from one area of the city to another. Requiring the presence of blight is a way for states to ensure that growth is happening in a more equitable and targeted way. The presence of blight also offers a higher probability that property values will appreciate as more dilapidated properties will have a higher potential to grow¹⁵.

The second most popular requirement for Tax Increment Financing District creation is for local governments to conduct a “but for” test. This is currently required by 17 states. A “but for” test is a requirement where the local government must find that in their opinion, backed up by research, that development in the proposed TIF district would not happen *but for* the use of TIF. Typically, the purpose of this test is to prevent the excessive use of TIF and to protect overlapping governmental units, as TIF diverts revenue away from those units. Typically to satisfy this requirement local governments must prove that developments would not happen solely through private investment in the reasonably foreseeable future and the induced development will yield a net increase in market value compared to what would happen without the presence of TIF in their own opinion¹⁶.

A feasibility study is almost as popular as a “but for” test, currently required by 17 states. As defined by the Illinois legislature a feasibility study is a “preliminary report to assist a municipality to determine whether or not tax increment allocation financing is appropriate for the effective redevelopment of a proposed redevelopment project area.” These feasibility studies are

¹⁵ Missouri Department of Economic Development, *Local Incentive Programs*, <https://ded.mo.gov/community/local-programs#LocalTIF>

¹⁶ Minnesota Legislature, *The But-For Test*. <https://www.house.leg.state.mn.us/hrd/issinfo/tif/butfor.aspx>

often defined in very broad ways that do not have strict requirements for local municipalities to study. Typically included is the ability for TIF to support existing businesses, recruit and attract new businesses, community interest including greenspaces, public gathering spaces and enhanced aesthetics, bond financing cost, expected revenue and other factors that the local municipality decides is relevant to study the feasibility of a TIF district¹⁷.

A cost-benefit analysis is the only other requirement that is required by over ten states. The cost-benefit analysis that is required by states is not just the typical quantitative analysis that is conducted to compare the relevant costs and benefits of projects used across a variety of fields. While this is included and required by certain states, there is also an emphasis on the qualitative impacts that are hard to quantify in traditional cost-benefit analysis. For example, the state of Nebraska requires a local jurisdiction to fill out a questionnaire as an attachment with each cost-benefit analysis that can be answered in a strictly qualitative way¹⁸. As explained by the Nebraska Unicameral Legislature (2020), a cost-benefit analysis should analyze tax shifts resulting from the division of taxes, public infrastructure and community public service needs impact and local tax impacts, impacts on employers and employees of firms locating or expanding within the boundaries of the area, impacts on the student populations of school districts within the city, any other impacts determined by the authority to be relevant to the consideration of costs and benefits arising from the redevelopment project¹⁹.

¹⁷Illinois General Assembly, *Tax Increment Allocation Redevelopment Act*, <https://www.ilga.gov/legislation/ilcs/ilcs4.asp?DocName=006500050HArt%2E+11+Div%2E+74%2E4&ActID=802&ChapterID=14&SeqStart=213100000&SeqEnd=215400000>

¹⁸ City of Omaha, Nebraska, *Howard TIF Redevelopment Project Plan Cost-Benefit Analysis- From the TIF Application*. https://planninghcd.cityofomaha.org/images/TIF_Documents/2019_CBA/14_Howard.pdf

¹⁹ Nebraska Legislature, *Nebraska Revised Statute 18-2113*. <https://nebraskalegislature.gov/laws/statutes.php?statute=18-2113>

Another requirement that is not common is for projects backed by TIF revenue to be consistent with the certified comprehensive or development plan for the local jurisdiction. It is not required for local municipalities to include TIF districts specifically in their comprehensive plan, but instead the use of lands in a TIF district to be consistent with the comprehensive plan²⁰. Comprehensive plans are local governments' guide to community, physical, social and economic development. Included in these plans are land use analysis as well as projections for future land use, with which projects backed by TIF revenue must comply in four states.

Required by three states is for local municipalities to conduct and publish a project plan before tax increment funds can be spent. A project plan is a more specific version of a capital improvement plan. It is required to make sure the costs of the public projects are paid within a reasonable extent of the proposed TIF district's remaining life and to protect the public interest in relation to reimbursement for the cost of public infrastructure²¹.

In an effort to combat TIF overuse, four states require a finding of public benefit before they can create a TIF district. This is not a standalone requirement, but instead a finding through a feasibility test or a cost-benefit analysis. This is a very vague finding as there is not any specific level of benefit but instead that a proposed TIF district will bring benefits to the public at the local jurisdictional level²². Very similar is the requirement for a TIF project to have development potential. This is required by three states to ensure that public funding is used for projects that will lead to increased revenue eventually.

²⁰ The Delaware Code, *Title 22 Chapter 17. Municipal Tax Increment Financing Act*. <https://law.justia.com/codes/delaware/2019/title-9/chapter-54/section-5415/>

²¹ Wisconsin State Legislature, *Chapter 60 Statutes*. <https://docs.legis.wisconsin.gov/statutes/statutes/60/IV/23/32>

²² Vermont Legislative Joint Fiscal Office, *An Examination of the State of Vermont Tax Increment Financing Program*, January 2018. <https://ljfo.vermont.gov/assets/docs/reports/79f1f110da/Final-TIF-Report-January-24-2018.pdf>

Twelve states have other requirements. Most of the other requirements are related to the need for funds to be spent on infrastructure (Georgia, Montana and Virginia), additional planning (California, Illinois and Maryland), or revenue requirements (Maryland and New Mexico).

Summary of Tax Increment Usage

There was an estimated 15,694 TIF districts across the United States in 2018²³. About 65% of all districts are located in just six states, Illinois, Wisconsin, Ohio, Texas, Minnesota and Iowa. Iowa contains the most TIF districts by a considerable margin, 3,340 compared to the next closest state, Minnesota, which has 1,719 districts. The American Midwest is the region that has adopted the use of TIF the most, as Texas, Pennsylvania, Maine, Florida, California, and Colorado are the only states in the nation that have over 100 districts and are not located in the Midwest. When the population is taken into account the Midwest continues to be the most popular location for TIF districts. The states with the most TIF districts per capita include Iowa, Nebraska, Maine, Minnesota and Wisconsin. Iowa contained the most TIF districts per capita by far, with over one TIF district per 1,000 individuals. Nebraska is the next closest state with one district for every 2,300 individuals.

Twelve states have less than 10 TIF districts, not including Arizona, which is the only state that does not allow for the creation of Tax Increment Financing Districts. Delaware and Hawaii do not have any TIF districts in their states, while Alaska only has one. The Northeast and Southeast are the regions with the most conservative TIF states. In the Northeast, Delaware, Massachusetts, New York, Connecticut, Rhode Island, and Vermont all have less than 10

²³ Daphne Kenyon, Adam Langley, Bethany Paquin, *Rethinking Property Tax Incentives for Business*, Lincoln Institute of Land Policy, 2012. <https://staging.community-wealth.org/sites/clone.community-wealth.org/files/downloads/paper-kenyon-et-al.pdf>

districts. In the Southeast, Virginia, North Carolina, Louisiana, and Arkansas have less than 10 TIF districts. Alaska is the only other state with less than ten districts. Even when the population is taken into account, the Northeast and Southeast continue to be the most conservative TIF users. The bottom ten states with TIF users per capita that have districts include Alaska, Alabama, Arkansas, Connecticut, Louisiana, Massachusetts, North Carolina, New York, South Carolina and Virginia.

There is more variety of total funding backed by TIF by state. California, Colorado, Illinois, Minnesota and Missouri. California has invested the most money into TIF districts, with a total of \$25 billion from 2000-2014. Colorado has the second-most, with \$1.5 billion over the same period. California also has the most amount of dollars invested per district, with an average of \$33 million. However, this is very close to Connecticut and Kansas, with \$32 million invested per district. This is almost over double the next closest state, Colorado which invests an average of \$11 million per district. Even when the population is taken into account, California is still the state with the highest rate of investment per capita with a million dollars invested for every 1,587 individuals. Colorado has the second-highest investment per capita with a million dollars invested per 3,703 individuals.

Eleven states have invested less than one million dollars in TIF districts between 2000 and 2014. Of those 11, five have more than 10 TIF districts which are Wyoming, Washington, New Mexico, New Jersey and New Hampshire. Of the states that have invested at least one million dollars, Ohio has the lowest funder per district at just \$40,000 per district. Kentucky, Nebraska, Iowa, South Dakota, Wisconsin and Maine all have investments of less than \$100,000 per district. The state that has the least amount of TIF funding per capita is North Carolina who

invests \$1,000 for every 1,000 residents. Tennessee, Virginia, Maryland, Louisiana and Hawaii all have invested less than \$10,000 per 1,000 residents.

Analysis

The design for my research will be three linear regressions. Each is focused on how the common state requirements affect the number of Tax Increment Financing districts, the total borrowing from 2000-2014 from TIF district and the borrowing back by TIF revenue per capita. These variables were chosen because they are the most likely to define the impact of TIF for each state. The number of districts is important because it potentially shows the number of projects and thus the scope of TIF in that state. However, the amount of financing in each state also tells an important story as well because it is a measure of the effort to jump-start economic development in districts. The funding per capita is an important measure to analyze more evenly how different state requirements affect the TIF borrowing for each state.

The results from these tests will be used to see if there is a causal connection between the different requirements of each state and the use of TIF in each state. This will help answer the question of why the amount of TIF districts vary widely between states, as well as lead to a better understanding of how state requirements, some of which are designed to limit district overuse, impact the number of districts in each state. The total amount of districts does not tell the full impact of TIF or address all the concerns. The amount of funding tells a more impactful story because it is more comprehensive. Depending on each jurisdiction, they could create one district for a variety of projects or a district for each project if the borders do not overlap. The funding does not change based on the number of districts, just the number of projects. States will attempt to limit the total funding as well as the number of TIF districts if they want to prevent

TIF overuse. The study of funding per capita is important to show how more of the smaller states limit funding.

The output variables will be scaled to account for other factors. The total number of TIF districts will be scaled by the total square miles in each state to account for states size and the total funding backed by TIF revenue will be backed by the total size of each sates' budget. In particular, there is a large correlation between the total TIF back funding in each state and state budget size at 74%.

The following equations will be used to estimate TIF usage across the country, by state.

Y_1 is the total number of TIF districts in each state scaled for the total square miles in each state,

Y_2 is the total funding in each state backed by TIF revenue scaled for the states total budget and

Y_3 is the total funding per capita in each state backed by TIF revenue.

$$Y_1 = \beta_1 \text{Blight} + \beta_2 \text{ButFor} + \beta_3 \text{Feasability} + \beta_4 \text{CostBenefit} + \beta_5 \text{CompPlan} + \beta_6 \text{ProjectPlan} + \beta_7 \text{PotBenefits} \\ + \beta_8 \text{DevPotential} + \beta_9 \text{Population} + \varepsilon$$

$$Y_2 = \beta_1 \text{Blight} + \beta_2 \text{ButFor} + \beta_3 \text{Feasability} + \beta_4 \text{CostBenefit} + \beta_5 \text{CompPlan} + \beta_6 \text{ProjectPlan} + \beta_7 \text{PotBenefits} \\ + \beta_8 \text{DevPotential} + \beta_9 \text{Population} + \varepsilon$$

$$Y_3 = \beta_1 \text{Blight} + \beta_2 \text{ButFor} + \beta_3 \text{Feasability} + \beta_4 \text{CostBenefit} + \beta_5 \text{CompPlan} + \beta_6 \text{ProjectPlan} + \beta_7 \text{PotBenefits} \\ + \beta_8 \text{DevPotential} + \beta_9 \text{Population} + \varepsilon$$

Table 1: Regression of the number of TIF districts per sq. mile on various requirements and population				
Sample size: 49, overall r square: .166, F-test of the regression: 1.61				
Independent variable	coefficient	std error	t	p
Blight	.0026	.0024	1.11	0.274
But for	.0032	.0025	1.31	0.198
Feasibility study**	-.0043	.0021	-2.04	0.048**
Cost-Benefit	-.0007	.0023	-.029	0.774
Comprehensive plan*	-.0026	.0015	-1.7	0.097*
Project plan**	-.0073	.003	-2.35	0.024**
Potential benefits	-.0037	.0057	-0.64	0.523
Development potential	-.0023	.0068	-0.32	0.748
Population (1,000)	1.76	1.17	1.51	0.140
Constant	.0029	.0021	1.37	0.177
*=p<.1,**p<.05,***p<.01				

When testing how the common state requirements affect the total number of TIF districts in each state there are three that have statistical significance. One is the completion of a feasibility study. Another is for each jurisdiction to pass a project plan for each district. The project plan requirement has a strong effect, with states that require a project plan having .0073 districts/square miles less than those that do not. As local governments have limited resources to either finance or write their own plan, requiring municipalities to write additional capital improvement plans can be, perhaps intentionally, burdensome. Requiring a feasibility study, intentionally or not, can be burdensome for local governments as states that require feasibility studies have .0043 districts/square miles. These plans are not designed to limit the number of districts in each state, instead, they are supposed to be guides for local governments throughout the preliminary phase of district creation.

As a control for size, there is a strong correlation between population and the number of TIF districts in states. For every thousand individuals in each state, there is an estimated increase of 1.76 TIF districts per square mile in that state.

It is important to note that requirements, such as the “but-for” test, that were created and implemented to limit Tax Increment usage do not have a statistically significant impact on the number of TIF districts in each state. This could be due to the very vague way these requirements are written by state legislatures. In Minnesota, legislation states that to satisfy their “but-for” requirement, the findings are up to the “the opinion” of the municipality. The “but-for” test is only required for the first approval of the TIF plan. If there are changes to the TIF plan after the initial approval, the local municipality does not have to redo the test even if the changes are substantial, including changing the purposes for which the increment may be spent.

Table 2: Regression of the total amount of TIF backed borrowing in each state scaled to each states total budget on various requirements and population.				
Sample size: 49, overall r square: .347 , F-test of the regression: 1.15				
Independent variable	coefficient	std error	t	p
Blight	.0014	.0043	0.32	0.747
But for	-.0011	.0046	-0.25	0.803
Feasibility study	-.0043	.0051	-0.84	0.404
Cost-benefit	.0033	.0071	0.47	0.637
Comprehensive plan	-.0053	.0062	-0.86	0.393
Project plan	.0153	.0155	0.99	0.328
Potential benefits	-.0098	.0099	-0.99	0.328
Development potential	.0024	.006	0.39	0.696
Population (1,000)*	1.00	5.21	1.92	.062*
Constant	-259.4	388.7	-0.67	0.506
*=p<.1, **p<.05, ***p<.01				

When analyzing the total funding financed by TIF revenue there are no requirements that are statistically significant. Instead, funding backed with TIF funds are more correlated with each states total budget than the requirements that are passed by each state to create TIF districts.

Table 3: Regression of the total funding per capita on various requirements and population				
Sample size: 49, overall r square: .148, F-test of the regression: 1.66				
Independent variable	coefficient	std error	t	p
Blight	0.021	0.03	0.71	0.482
But for	0.114	0.031	0.36	0.716
Feasibility	-.071	.058	-1.21	0.23
Cost-benefit	0.071	0.085	0.84	0.405
Comprehensive plan	-0.024	0.029	-0.81	0.417
Project plan	.118	0.088	1.34	0.182
Potential benefits	-0.038	0.062	-0.6	0.547
Development potential	-0.17	0.27	-0.64	0.522
Population (1,000)	4.73	3.46	1.37	0.175
Constant	.023	.018	1.31	0.195
*=p<.1, **p<.05, ***p<.01				

There are no statistically significant state requirements when they are compared to the amount of Tax Increment backed funding per capita.

Policy Recommendations

State requirements and rules for Tax Increment Financing usage show that rules put in place to limit TIF usage are not associated with reduced TIF usage. It is clear that it is not just important what requirements are put in place by state legislatures, but how they are written. When states, like Minnesota, put in rules like the but-if test to specifically limit TIF overuse but leaves that decision up to the local jurisdiction it is not surprising that Minnesota would have one of the highest numbers of TIF districts as local governments seek new ways to finance projects.

Blight is another example of a requirement that can vary between states. Kentucky, one of the states with the least amount of TIF districts, requires that projects meet certain criteria in order to ensure the area is blighted, specifically listing seven blight conditions and requiring at least two conditions are met for the district to qualify²⁴. Iowa, on the other hand, leaves the definition of blight up to the local municipality that is evaluating their conditions²⁵. These differences in definitions are just as important as the requirement at all for allowing the usage or preventing the overage usage of TIF by state legislatures.

It is concerning that planning requirements such as project plans and feasibility studies are limiting factors for TIF usage. They were not designed to limit TIF usage, instead, they are supposed to guide how the projects should take place through additional planning. The purpose of a feasibility study is to be a preliminary report to help municipalities decide if TIF is a viable option to pay for projects. Every municipality that considers creating a TIF district has a similar study take place as they go through the creation process, however requiring a feasibility study limits district creation. Project planning is also a requirement that limits the number of TIF districts in each state. This could reflect the limited capacity of local governments to finance a capital improvement plan as project planning is undertaken by every municipality creating a TIF district, regardless of state requirements. Requiring a project funded by TIF to be consistent with the municipalities could also be a burdensome requirement showing the limited ability of local governments to plan effectively.

²⁴ Kentucky Economic Development Cabinet, *Just the Facts: Tax Increment Financing (TIF)*, May 2019. https://ced.ky.gov/kvedc/pdfs/tif_fact_sheet.pdf

²⁵ Iowa Legislature, *Chapter 403 Urban Renewal*. <https://www.legis.iowa.gov/docs/ico/chapter/403.pdf>

Conclusion

Tax Increment Financing is a very popular economic development tool and unique for its ability to be initiated by local jurisdictions as a self-financing tool. Between 2000 and 2014 there was an estimated \$37.5 billion in bonds backed by TIF revenue in the 49 states that allow TIF usage. In 2018 there was an estimated 15,694 active TIF districts across 49 states. This wide use is directly reflective of local governments' effort to expand their tax bases and encourage economic development in specific areas, typically those that have suffered from past disinvestment. When executed properly, TIF offers local governments the ability to finance bonds with the expected increased revenue from the projects they are financing. It is this thought process that has led so many local governments to create TIF districts as a way to increase investment for needed capital projects.

As diverse and unique as the usage of Tax Increment Financing are the opinions and research into the effectiveness of TIF districts to finance projects. Although the studies into TIF's ability to produce planned and desirable outcomes are numerous, it is difficult to reach a definite conclusion because each study typically focuses on specific programs and districts/regions. State legislatures have used this ambiguity to decide for themselves the amount of TIF they will allow, leading to inconsistent usages from state to state. States in the Midwest could allow more TIF usage than those in the Northeast simply because they believe in the ability to use TIF financing to create planned and effective outcomes. Midwestern states could use TIF more often because there has been a need to find new ways to finance capital projects because of decreases in tax revenue due to the disproportionate loss of manufacturing jobs that has led the region to be called the "rust belt." Apart from that, there may be other, unknown reason why the Midwest prefers to use TIF financing more than other regions.

There are rules and requirements that are put in place by state legislatures to prevent the overuse of Tax Increment Financing by local governments. However, as stated by David Merriman (2018) “to data, there has been no published academic work explaining why local governments in some states use TIF more extensively than others.” Outside of culture, the ease of local governments to create a TIF district could anecdotally be one of the strongest reasons why TIF usage is so inconsistent. Certain requirements are put into law to specifically prevent TIF overuse. This paper has found that none of those rules actually lead to TIF overuse. Additional requirements that were not designed, apparently, to limit TIF usage actually are limiting factors. Requiring local governments to partake in additional planning and to rely on their previous planning is the limiting factor for the number of TIF districts in each state. That may be an intentional burden intended to limit the overuse of TIF.

States have also been unable to limit Tax Increment Financing backed funding with their requirements for district creation and other planning requirements. This is not surprising considering that these same requirements did not limit the number of districts in each state. Of note is the requiring of additional planning does not lead to more funding.

There is mixed belief in the effectiveness of TIF. There are states that have a preference to use TIF and believe in its ability to plan and execute economic growth. These states do have rules for local municipalities to create districts but are often written in very broad ways that allow for the municipalities themselves to decide if they should be created, reflecting a culture that is more accepting of TIF. Other states have more specific requirements that require local municipalities to meet more strict criteria. Required local municipal planning has an impact on the amount of TIF districts as well as total funding. As the goal of TIF is to produce a planned and measurable outcome, states need to reevaluate the planning capability of municipalities to

ensure planning requirements are appropriately restrictive but permit municipalities to plan projects appropriately to ensure TIF projects achieving their goal.

Regardless of causal interpretation, it is clear that some stated rules either cause more or less TIF usage or are adopted in response to TIF usage. In either case, the rules adopted matter. The overall evaluation of TIF requires both adoption and effect of policy, here the success of TIF projects, considered in various literature, and the effect of TIF adoption rules.

Limitations

This study covers a short period of time, so the results could be limited by the macroeconomic environment at that time. The period considered had relatively strong economic growth.

The major limitation is the interpretation of causality. This study is meant to be descriptive, not causal. Rules may be adopted out of a sense that they are correct, then results follow, or rules can be adopted to be restrictive or loose. The finding that funding per capita is not much affected by rules suggests that the major effects are on the number of projects. Planning requirements clearly can be adopted to discourage overuse. Alternatively, they can be intended to focus on larger projects. In a longer-term study, the adoption of the rules over time could be considered as well as the time path of TIF usage over time.

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