

**Tax Increment Financing and Adjacent Value: A Spatial Evaluation of
Oklahoma City's TIF Spending from 2013 to 2024**

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Introduction

Tax Increment Financing (TIF) is a financial tool used by local governments in order to spur development in a given locality; usually there are requirements that such neighborhoods be considered “blighted”. Its mechanism works as such that any additional local property or sales taxes (or a certain portion of them) generated within certain geographical boundaries after the start of a TIF district are dedicated exclusively to use within such a district for a certain amount of years. As of 2023, there are over 10,000 TIF districts in the United States (King, 2023), although there is no exact accounting for what types of development are emphasized in said districts or how many dollars have been captured for and spent in TIF districts. Although exhaustive research exists on the influence of tax increment financing in TIF districts themselves or in the cities in which they exist, presently little literature exists in how the presence and use of TIFs affects their immediately surrounding neighborhoods that are not part of TIF districts. This is an important question as TIF’s selling points include a dual premise: the primary one is that at the sunseting of the TIF district, property and sales taxes in the former tax district would have been bigger than if the use of a TIF district had not happened. This premise includes an assumption that the developments in a TIF occurred (or occurred more rapidly) than without the use of TIFs. The second premise is that the effect of a TIF can be wide-ranging. Even if the rise of property values within TIF districts is captured to be used specifically in the TIF areas instead of joining the wider tax digest of a place, redevelopment spurred using TIFs might raise property values outside of TIF districts as well.

Tax Increment Financing was introduced to the state of Oklahoma in 1992 through §§850-869, entitled the “Local Development Act”. In Oklahoma, TIF districts can be set up for up to 25 years, in which incremental tax dollars are limited to use within the district. Areas can qualify for eligibility in the TIF program as Historical Districts, Reinvestment Areas, Enterprise Areas, or Blighted Areas. As of 2024, Oklahoma City specifically participates in 2015 active TIF districts, with the earliest of these having been started in 2005. The topic of using TIF money and other public resources in Oklahoma City for private development has throughout the past year come into some level of controversy: In August 2023, it was announced that the City Council had approved \$200 million in tax increment financing to be used towards what is slated to become the tallest skyscraper in the United States, at 1,907 feet tall; skeptics note that its ultimate construction is doubtful (Snider & Lackmeyer, 2024). In December 2023, it was announced that the City would use a new sales tax to fund \$850 million out of a needed \$900 million to be dedicated to a new arena for the Oklahoma City Thunder, the city’s National Basketball Association team (Murphy, 2023). In January 2024, it was announced that a planned soccer stadium in Downtown Oklahoma City would receive \$71 million in TIF funds (Fieldcamp, 2024). As the amounts of public money dedicated to private developments which promise future public revenues rises, it is important to understand the economic impact of TIF schemes more deeply so that these decisions can be better informed. Thus, the target audience for this paper is the planning and economic development in Oklahoma City. This paper asks: **To what extent have property values adjacent to TIF projects in Oklahoma City risen after TIF funds are spent on them, and what is the spatial distribution of any change in value?** This paper is

organized with a literature review debating past findings on the effects of TIFs in multiple American localities since their introduction; after a discussion on the quantitative methods used to evaluate the effects of TIFs on TIF district-adjacent neighborhoods, results will be presented and examined for any possible conclusions.

Literature Review

Tax Increment Financing has been active in many states for many years – consequently, plentiful literature exists concerning this financing mechanism. Being a tool which can be used in different jurisdictions while inactive in neighboring ones, it lends itself well to various experiments. The methods in which TIF can be deployed are also highly customizable, and the places and timings of such deployments are also largely up to the discretion of a locality’s executive and legislative branches. As such, observers (academics, activists, or the public, for instance) can interpret TIFs as being used for various purposes, whether that is a modern method of population displacement or gentrification, a valid tool of economic development, or simply tax breaks for corporations. The existing literature makes clear that throughout their implementation, TIFs have indeed been used for various purposes. A dynamic tool, they can influence their overlapping and surrounding jurisdictions in various ways - such as the future development types within them, or simply through the gradual altering of property values or other tax rates. Here, their purposes and post-implementation effects as written in the existing literature are explored.

How do TIFs influence property values?

Much of the literature examines the seemingly symbiotic relationship that exists between the establishment of TIF district and the prices of parcels in such districts; this topic’s most prolific researcher is the University of Illinois at Chicago’s Rachel Weber. With TIFs being especially popular in many areas of the Midwest as it was used as a reinvestment and

redevelopment tool in the face of deindustrialization, that is where much of the research is located. TIFs are, of course, located in various types of cities in districts composed of various zoning categorizations. The research on the influence of TIFs on parcel appraised prices does indeed touch on various types of locations. Weber et al. (2003) find that that without having yet controlled for other variables, industrial parcels inside TIF districts have lower sales prices than those outside of TIFs, even despite their on average larger areas.

Variable definitions and descriptive statistics for vacant parcels

Variable	All parcels		Parcel in TIFs		Parcels not in TIFs	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
<i>Dependent variable</i>						
Sale price (\$)	1 423 768	2 162 140	1 379 748	1 834 585	1 489 460	2 589 265
<i>TIF related variables</i>						
In-out TIF	0.599	0.492				
Industrial TIF	0.395	0.490	0.660	0.476	0.000	0.000
Mixed TIF	0.191	0.395	0.320	0.469	0.000	0.000
Months since TIF designation	16.994	28.164	28.381	31.682	0.000	0.000
<i>Site variables</i>						
Land area (sq ft)	258 594	1 003 638	362 646	1 282 367	103 317	162 375
<i>Location variables</i>						
North of Lake	0.438	0.498	0.392	0.491	0.508	0.504
Miles to CBD	4.077	3.268	3.487	3.007	4.957	3.463
Miles to expressway	0.594	0.603	0.573	0.516	0.625	0.717
Miles to CTA	0.624	0.866	0.513	0.720	0.789	1.032
Miles to TIF	0.111	0.312	0.000	0.000	0.276	0.446
<i>Neighbourhood variables</i>						
Percentage Hispanic	0.268	0.281	0.234	0.281	0.318	0.275
Percentage White	0.466	0.316	0.413	0.319	0.544	0.296
Percentage unemployed	0.141	0.112	0.158	0.132	0.117	0.067
EAV 89 (in \$millions)	24.70	16.70	23.70	15.30	26.20	18.60
Percentage change EAV	0.326	0.285	0.307	0.313	0.355	0.234
Demolition rate	2.233	1.442	2.178	1.424	2.315	1.477

Table 1 - Variable definitions and descriptive statistics for vacant parcels (Weber et al., 2008). Here, the authors demonstrate that even despite some relative disadvantages, parcels outside of Chicago TIFs (on average a quarter of a mile away from such a district) have historically sold for more money than those within a Chicago TIF. This is despite smaller average sizes, being further from the Chicago Loop and train transit connections, and expressways.

Weber also studies the relationships that TIF establishment has on nearby locations, investigating the spatial dissipation or enhancement that proximity to different types of TIFs can bring to a location. Weber et al. (2003, p. 2013) find that, “The coefficient on miles to TIF is negative and statistically significant, suggesting that being close to a TIF district raises the value of a parcel – perhaps because there are spillover benefits from infrastructure development within the TIF district. However, actually being located in a TIF district lowers a parcel’s value.” and “... the coefficient on Industrial TIF is negative and significant while the coefficient on Mixed TIF is positive but insignificant.”, meaning that a vacant parcel being located within a TIF designated for industrial use lowers its own value, which does not occur for locations within mixed-use districts. The authors also find through conversations with Chicago realtors and industrial developers that they largely assume that the demand for industrial properties rises when they can be converted into uses found in mixed-use districts, such as residential or commercial uses. Results from other researchers are mixed, however. In an earlier study, Man and Rosentraub (1998, p. 541), in a study of Indiana cities between 1980 and 1990, found that cities which adopted TIFs have increased by an additional marginal 11.4% their median owner-occupied housing values compared to what their growth would have been had they not adopted TIFs.

Tax Increment Financing’s Relationship with Urban Renewal

As mentioned above, TIFs can bring mixed results to different types of cities. As such, it is understandable that the establishment of TIFs can have affected various populations in different ways and that the promises of TIF benefits can be seen as threats to others who may be harmed. As a tool initially designed to be used in urban redevelopment, TIFs might

directly financially aid in funding a development which might end up displacing certain populations.

Jolin et al. (1998) performed an ethnographic study of displacement and challenges to TIFs in the 1990s in the Chicago area. They linked the passage of TIF expansions in Chicago's South Loop to a real estate boom in 1994; they then criticize the suburb of Addison (IL) for supposedly targeting two neighborhoods for redevelopment due to high Hispanic populations, arguing that they were "blighted" despite good maintenance standards. The authors criticize TIF as making that possible: "As already discussed, TIF allows municipal officials to use their power of eminent domain to redevelop blighted areas. In Addison officials decided to aim these powers at the village's only predominantly Hispanic areas" (p. 91). The authors advocate for multiple fronts of reform, of the type that hampered explicit urban renewal efforts in the decades prior. The first is in educating the public about the stakes of TIFs and the importance of organizing themselves to demand their voices serve as an input in any TIF decisions. The authors then urge more changes in statewide organizing regarding TIF financing laws, including more stringency in the "but for" provisions of TIFs, as well as in obtaining more citizen participation and oversight in how TIFs act through public meetings.

Additionally, Jolin et al. advocate that when TIFs are created, local governments find a way to benefit existing residents of TIF-designated areas, and that not all the benefits be concentrated to the newcomers of an area which is bringing in a redevelopment project. While TIFs can be studied through the lens of their actions on incumbent populations, of course their main direct beneficiaries are widely understood to be the companies which

directly receive tax breaks from such districts. Klemanski (1990) argues that TIFs work as a means of urban redevelopment but done through a private process in which the government gets to extract concessions through TIF-millage rate negotiations. This article had a particular deep dive (the Chrysler Corporation move to Auburn Hills, Michigan, in 1986) on a specific instance of TIF, and how governments can extract some concessions from developments while such developments receive tax abatements. It stated that while Chrysler received most of the benefits it wanted, the school districts in the area negotiated down the millages they conceded in this TIF from 100% to 50%, and brought suit against the use of TIF funds for the expansion of a parking lot. The article (p. 27) says that this agreement “may represent the beginning of a new relationship between the public and private sectors with respect to financing urban development projects in Michigan.” He concludes that TIFs and the fact that competing municipalities can use them as incentives sets up a sort of “trap” for cities from which they cannot extricate themselves.

The understanding and true intent of TIFs has also changed throughout time, argue some researchers. Briffault (2010, p. 71) argues that “as TIF proliferated, it also evolved, shifting from what was initially an urban renewal program targeted at depressed central city areas to a more general public investment and infrastructure financing scheme.” The author claims that TIF has become widespread throughout American local government systems because of four factors: decision decentralization, fiscalization of development policy, interlocal conflict, and entrepreneurial economic development. Of these, the latter is the most closely linked to a vision of urban renewal performed through private actors. The author finds that TIF was useful to local governments in that the program matched the

entrepreneurial nature that local politicians and governments wish to use in economic development. In wanting to find an effective economic development tool to lure large businesses to their areas, they have found it in TIFs.

What is the decision chain of local governments in deciding where to implement TIFs?

TIFs are not only tools that end up affecting their surroundings. There is a sequence of decisions passing through local governments, the private development sector, and consultants that may have incentives to implement TIFs in certain areas over others. In other words, TIFs do alter their surroundings, but they are also a product of them. Extensive literature exists on this topic, with researchers examining the conditions that precede the implementation of TIFs and at certain points attempt to explore the real purpose of a TIF based on where it was placed. As set up by Briffault (2010) above, the use of TIF is not necessarily fixed with a single purpose. As such, it is understandable that as their purposes change (and as the cities themselves where they are change throughout the decades since TIFs were first created) that different types of places create TIFs.

Man and Rosentraub (1998) in their analysis of TIF creation in Indiana found that cities that were more dependent on state aid funding had a lower probability of creating TIF districts. This could imply that a purpose of creating a TIF stems from what funding and how much funding a city receives from their state, and addressing the dedication of state funding to the types of projects deemed worthy by a locality. Judgment of TIFs and their true purposes, motivations, and outcomes, however, might not be simple and straightforward; Weber et

al. (2003) warn, regarding the purpose of TIFs and how to judge their results, that the success and efficacy of TIFs should not merely be judged on how property values grew. Other factors such as job-related growth, public works towards the improvement of an area, or other non-growth goals are valid reasons to implement TIFs.

Similar to Weber et al. (2003) above, Briffault (2010) criticizes the success of TIF's monetization hinging on the growth of property taxes alone. He states (p. 87) that, "Fiscalization has been sharply criticized by those who would like to refocus local planning and development policies on other goals, like job creation, improved service delivery, affordable housing, or preservation of quality of life. TIF reformers would do this by reviving and strengthening the blight and but-for tests and precluding the use of TIF for those projects most closely associated with purely tax-base-driven development policy." Briffault also stated that interlocal conflict is a large part of why certain localities choose to set up TIF districts. He is focused on the strains between overlapping jurisdictions and how they can compete for additional revenues. The main highlight of this section is overlapping jurisdictions fighting for their rights to set their own rules over what happens to their millage, with school districts spearheading this. Regarding competition, the author then says (p. 91) that municipalities might use TIFs simply because neighboring competing municipalities do so, ensuring that TIFs proliferate as a result.

More directly regarding what types of projects TIFs fund and whether the true purpose of TIF laws can be learned from how their funds are applied, Briffault (2010) argues that TIF programs are far too decentralized to have a common theme throughout the nation. His article argues that the decisions that municipal governments can make regarding TIFs are

not typically constrained by the “red tape” that can constraint many other types of economic action. Their article highlights how TIFs have been used to fund developments from sports facilities to new corporate headquarters to mixed-use developments to museums throughout the country, with little or no connection between the types of projects created. This is attributed by him to the program’s flexibility.

While the use of TIFs might be too flexible for direct apples to apples comparisons between them, nearly all TIFs are located where school districts are also located. This is important (and will be touched upon later in this literature review) as school districts are often the types of governmental entities that forego the most revenue through the establishment and acceptance of TIFs. He et al. (2022), in their analysis of Cook County, IL from 2009-2015, do find some common themes around school districts with TIFs and those without. Their article states that TIFs are usually in areas that are less advantaged than those without TIFs, with lower incomes and homes in poorer conditions. While these findings cannot be extrapolated to imply that urban renewal is the intent of TIFs, it does find that neighborhoods which are more economically depressed are most often those that are chosen for TIF designation.

Summary Statistics for School Districts with TIF and School Districts with Non-TIF Areas from 2009 to 2015

Variables	School Districts with TIF					School Districts without TIF					t-test	
	Total Obs	Mean	SD	Min	Max	Total Obs	Mean	SD	Min	Max	Difference	P-value
Total Revenue (in million \$)	547	54.7	49.3	2.1	252	454	24.5	21.8	2.0	184	30.2	0.000
Adjusted Revenue (in million \$)	547	48.5	48.4	2.1	252	454	28.5	22.9	2.0	182	20.0	0.000
EAV (in million \$)	547	1,460	1,970	17	12,300	454	725	991	17.1	7,160	735	0.000
EAVPA (in \$)	547	191,949	133,761	9,961	670,846	454	244,325	163,719	12,080	1,074,255	-52,375	0.000
MEDHOUSE (in \$)	547	245,991	116,576	40,200	825,400	454	326,547	215,489	19,000	976,200	-80,556	0.000
IPC (in \$)	547	29,456	16,582	8,213	118,979	454	31,929	17,948	7,116	122,846	-2,473	0.022
School Area (in Acre)	547	8,239	9,270	487	46,881	454	3,883	4,432	416	46,881	4,356	0.000
EXPP	547	13,554	3,111	8,034	25,166	454	13,110	3,459	7,097	27,125	444	0.037
TAXRATE	547	0.034	0.013	0.012	0.117	454	0.032	0.017	0.012	0.177	0.001	0.048
LOWINCOME	547	2,410	2,370	41	12,972	454	1,050	1,209	10	12,687	1,360	0.000
ADA	547	3,232	2,788	190	12,744	454	1,536	1,280	172	12,577	1,695	0.000
POP	547	74,512	59,113	2,852	421,305	454	33,921	32,569	1,923	259,918	-40591	0.000
PSENR	547	0.135	0.053	0.037	0.473	454	0.149	0.046	0.032	0.351	-0.014	0.000
PCHILD	547	.242	0.048	0.082	0.405	454	0.243	0.044	0.109	0.377	0.002	0.441
PWHITE	547	0.603	0.269	0.005	0.997	454	0.716	0.251	0.010	0.993	-0.113	0.000
HIGHS	547	0.669	0.058	0.455	0.875	454	0.674	0.049	0.514	0.843	-0.005	0.000
HPLUM	547	0.016	0.022	0	0.142	454	0.010	0.018	0	0.112	0.006	0.000
BUILDAGEE	547	64.7	101.3	11.5	1,227.8	454	52.1	72.3	17.5	1,356.6	12.5	0.155

Note: Total of 1001 observations of 143 school districts from 2009 to 2015.

Table 2 - Summary Statistics for School Districts with TIF and School Districts with Non-TIF Areas from 2009 to 2015 (He et al., 2022). Here, the authors demonstrate many relative differences between school districts with or without TIFs, most of which show that TIFs are located in comparatively disadvantaged areas. They have lower average home values (\$245,991 vs. \$326,547), lower per-capita incomes (\$29,456 vs. \$31,929), more low-income students, and a larger non-white population.

Most states have laws restricting how much of a city (or school district, or other types of overlapping jurisdictions) are allowed to be in a TIF. These restrictions can take the part of limitations on TIF encompassment based on geographical areas or appraised values, for instance. As such, it is logical that with parts of cities within TIFs and parts outside them, that the effect of such districts would be distinct for both parts and for the city at large. Regarding this topic, Dye and Merriman (2000) conclude (p. 327) that “municipalities that elect to adopt TIF stimulate the growth of blighted areas at the expense of the larger town.” Their article has no explicit judgment on the motivations and purposes behind enacting TIF districts, but it could be learned from their analysis that a motivation behind them might be

as a form of place-based policy for disinvested (blighted) areas to experience a form of “catch-up” growth, even if the city at large would grow less quickly.

TIF districts are rarely coextensive with other jurisdictions such as municipalities, counties, or school districts. As mentioned above, part of the premise behind the setting up of a TIF are the benefits received by whatever jurisdiction the TIF district happens to be located within upon the expiration of the period during which taxes are not raised in the parcels covered by the TIF district. Plentiful literature exists on the spillover effects of TIF districts in jurisdictions that are adjacent to but not coextensive with TIF districts, with the most common one being their relationship with school districts.

How do TIFs impact school districts?

As mentioned above, school districts are large jurisdictions that are often very dependent on an area’s property tax revenues for their continued operational expenses. Thus, once the establishment of TIFs “freeze” the amount of money that a school district receives until the TIF sunsets (or however a TIF deal is structured in case it differs from its usual setup), it is widely understood that schools - which often have high tax millages compared to county and municipal property tax millages – forego a large part of their revenue increases. This aftereffect of the altering of the revenue formula for schools in an area given the creation of TIFs is a topic that has been widely studied throughout time and in many states. Bossard et al. (2011) studied Minnesota school district property values in the 1990s, comparing districts that had high and low TIF intensities near them. Their paper (p. 183) “... finds some evidence in support of spillovers from TIF on non-TIF property value growth within school

districts, but the overall finding is mixed. These spillovers are positive with low levels of TIF intensity but negative with high levels of TIF intensity.” While the authors find that most school districts in the state are benefiting from TIF, but that there is an optimal amount of TIF after which municipalities and their school districts stop benefiting from TIF intensity. They find that many districts in Minnesota find themselves in this position. While Bossard et al. above found mixed results depending on TIF intensity, that was not always the case. Weber (2003) found that districts without the use of TIFs have grown more in terms of property tax revenues, have changed more in terms of how much state aid they used, have had less of a change in effective tax rates. They are also richer in terms of per capita income and what percentage of children are poor.

Cook County School District Characteristics, Means, and Standard Deviations (in parentheses)

<i>Name</i>	<i>Definition</i>	<i>No TIF</i>		<i>TIF Covers Portion of District's Base</i>	
TAXREVCHG	Percentage change in property tax revenues, 1989-1999	35.0	(22.9)	32.0	(32.7)
STAIIDCHG	Percentage change in state aid, 1989-1999	61.1	(70.2)	56.2	(86.8)
ETRCHG	Percentage change in effective tax rate, 1989-1999	12.3	(20.8)	16.5	(18.3)
TIFINT	TIF intensity (%), 1999 ^a	0		7.17	(21.1)
YEARS	Years elapsed since TIF enacted and 1999	0		11.1	(4.1)
ADACHG	Percentage change in average daily attendance, 1989-1999	30.7	(19.4)	19.1	(23.4)
EAVCHG	Percentage change in equalized assessed value of district property, 1989-1999	11.4	(18.2)	6.1	(16.5)
COMINDSH	Share of district property value commercial and industrial, 1989	6.45	(40.8)	.64	(1.2)
PCI	Per capita income, 1989	\$24,286	(14,070)	\$17,582	(5,804)
POOR	Percentage poor children, 1990	7.8	(13.6)	10.9	(11.5)
EXPCHG	Percent change in operating expenditures, 1989-1999	44.0	(22.8)	52.0	(22.9)
TAXRATE	District property tax rate, 1997	3.24	(1.18)	3.35	(0.98)
FORMULA A	Dummy for state school aid category Formula A (difference grant)	15		42	
FORMULA B	Dummy for state school aid category Formula B (sliding scale)	18		40	
FORMULA C	Dummy for state school aid category Formula C (flat grant)	16		20	
<i>N</i>		49		102	

NOTE: TIF = tax increment financing.

a. Defined as the ratio of the incremental equalized assessed value (EAV) within the school district, which is the difference between EAV in the TIF the year it was designated and the TIF EAV in 1999, over the EAV of the school district as a whole in 1999.

Table 3 - Cook County School District Characteristics, Means, and Standard Deviations (Weber, 2003), where the author compares school districts without any TIFs within them and those with TIFs. She finds that school districts with TIF have grown less rapidly (19% vs. 31% between 1989-1999), have smaller per capita incomes (\$17,582 vs. \$24,286), have received less money in state aid, have grown their property tax revenue base slower, but have had a larger increase in their charged tax rates (16.5% vs. 12.3% increase between 1989-1999).

As for the topic of schools foregoing revenue increases once TIFs are created, Weber (2003) found that between 1989 and 1999 an inverse relationship between the implementation of TIFs and how much property taxes that were usable by school districts was, with every 1.0% increase in TIF intensity being associated with a 0.78% decrease in property tax revenues (p. 634). She also found that municipalities that used TIFs more intensely than those that did not ended up resulting in their school districts becoming more dependent on state aid for funding.

A downstream effect of what Weber (2003) found is that (p. 640) “school districts have very short-term time horizons, and TIF appears to have created an atmosphere of mistrust between school districts and municipalities and between schools and residents.” She writes that this atmosphere of distrust has led to a formalization process in how municipalities and their school districts interact, intensifying the use of lawyers for their conversations and negotiations, and the abandonment of doing business through more informal discussions.

Rachel Weber is not the only researcher to find evidence of this diminishment of school district revenues once TIFs are established. He et al. (2022, p. 795-796) found in a study of data from Cook County, IL school districts in 2009-2015 that “... with every additional TIF district in the school district, the school district receives about 0.2 percent, or \$80,600 less revenue.” and “The significant coefficient for INTENSITY suggest that a one percentage point increase in the tax base on which taxes cannot be levied resulted in a 6.9% reduction in school district revenues, ...” and “The windfall effects are evident ... the first model suggests that the school district receives an incremental revenue of 2.4% or \$967,200 for

every TIF district expires within its boundary.” In summary, they found that revenues between 2009 and 2015 in Cook County were generally more reduced in school districts that contained TIFs. Like Weber (2003), however, He et al. (2022) have an important caveat in their findings: They largely study TIFs and schools while TIFs are active. The literature does not include studies on school revenues that encompass periods once the TIF has been retired. In other words, the dual premise of a TIF is that revenues will be foregone for a period of time; at the conclusion of that period, once the TIF retires, there will be a jump in local millage revenues. That is because of the premise that TIFs exist where development would not have naturally occurred without the help of the TIF structure. Thus, a study of TIFs and school revenues during the first period of that premise (the period with foregone revenues) is naturally incomplete as it does not cover the time period where the TIF-spurred development pays a normal millage, although it is understandable that such studies would be very challenging as they would depend on very long time horizons and would have an immense amount of confounding variables. In conclusion, Klemanski (1990), in his analysis of TIF concessions in Michigan in the 1980s, advises caution in implementing TIFs: He says that the state has had to step in to aid school districts to the tune of \$14 million in 1985 and \$19 million in 1986 (p. 27). As Weber (2003) points out, however, it is not immediately clear that only financial impacts should be used as a measure of TIF success.

What are the spillover effects of TIFs on nearby property values?

Multiple researchers also study the spillover effects of TIFs outside their official jurisdictions on property values. As mentioned above, the premise behind TIF laws in

multiple states is that TIFs are to be used for redevelopment or investment in areas where the lack of a tool such as TIF would have made investment difficult or unfeasible. As such, TIFs are a tool of development, meaning that some sort of physical change in the district is to be expected. Of course, the type of changes that occur as a result are the consequence of multiple variables: local zoning regulations, market conditions, and the explicit authorization of individual TIF projects by the responsible authorities which approved them. With development occurring, it is logical that the behavior of parcel values in areas near such developments would be different than the behavior of parcels not near TIFs. Weber et al. (2007), in studying property values of single-family homes in Chicago that sold multiple times between 1993 and 1999, found (p. 266) that “Houses within one-half mile of the closest TIF district appreciated an average of 32%, which is more than the 20% appreciation of houses where the closest TIF district was between 1-1.5 miles away.”

Appreciation by 0.5-mile rings measuring distance to closest TIF district for small sample

Distance to closest TIF	Percent increase in sale price between first and final sale				
	N	Mean	Std. Dev	Min	Max
0-.5 mi	370	31.58	57.24	-12.24	668.29
.5-1 mi	335	24.84	34.93	-8.80	383.49
1-1.5 mi	162	19.64	21.95	-37.25	192.94
1.5-2 mi	46	15.95	12.36	-10.78	48.98
2-2.5 mi	26	19.77	14.86	-1.23	58.82
2.5-3.0 mi	25	19.01	25.24	-2.71	114.00
>=3 mi	27	11.71	9.54	-2.56	36.31

Table 4 - Appreciation by 0.5-mile rings measuring distance to closest TIF district for small sample (Weber et al., 2007), comparing homes that were sold multiple times between 1993 and 1999. Here, the authors find that by and large, homes near TIF districts appreciated significantly more than those further away – houses less than a half mile away from TIFs appreciated by 32% between their first and final sales, while those between 0.5 and 1 mile in distance only appreciated by 25%. This inverse rise in value to distance-from-TIFs relationship holds for the two subsequent measured distances (1-1.5 mi and 1.5-2 mi away from TIFs), but is not constant for homes more than 2 miles away from TIFs.

Weber and her coauthors (2007) also found that the kinds of TIF districts that homes neighbored mattered too, with houses in close proximity to mixed-use TIF districts gaining more value than those that were far from such areas. In contrast to that, homes nearest to

commercial and industrial TIFs gained less value over time than homes which were relatively more distanced.

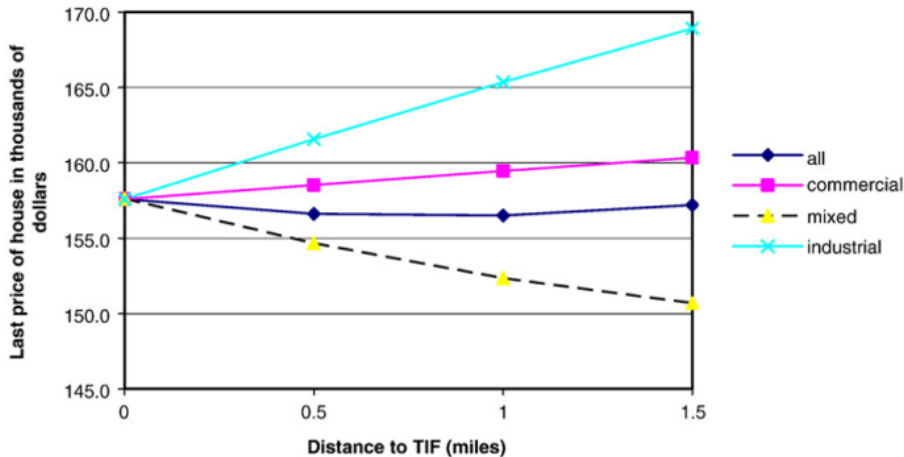


Figure 1 - Last price of mean-priced house as a function of distance to TIF-continuous distance (Weber et al., 2007), where the authors explore the distance to different types of TIFs and a predicted price of a house in Chicago. They find that being more approximate to industrial and commercial TIFs reduces the predicted sale value of a home, while proximity to mixed-use TIFs is predicted to raise home values.

The literature also finds effects of TIFs in values across large jurisdictions such as entire cities, as opposed to only basing analysis on block-by-block locational data such as Weber et al. (2007) above did. Dye and Merriman (2000) found that TIF adoption had a “devastatingly negative impact on municipal growth” (p. 319) based on an analysis of the equalized assessed property value growth in 235 cities. The two groups had similar growth rates in the pre-TIF-adoption (1980-1984) period (4.94% annual growth for adopters vs. 4.47% for non-adopters), However, they diverged by an annual factor of 48% (7.38% annual growth for non-adopters vs. 4.96% for adopters) in the 1992-1995 post-adoption period (see Table 5 below).

Mean Annualized Growth Rates in Total Municipal EAV
for Pre-Adoption and Post-Adoption Periods
by TIF Adoption Status

		TIF status group	
		TIF adopters (<i>n</i> = 81)	Non-adopters (<i>n</i> = 154)
Period	Pre-adoption (1980–1984)	4.94	4.47
	Post-adoption (1992–1995)	4.96	7.38
	Growth in non-TIF portion of municipal EAV: Post-adoption (1992–1995)	4.57	

Table 5 - Mean Annualized Growth Rates in Total Municipal EAV for Pre-Adoption and Post-Adoption Periods by TIF Adoption Status (Dye and Merriman, 2000). This table is helpful in visualizing that in the sample of cities studied by the authors, cities that ended up adopting or not adopting TIFs were growing at similar rates. However, while those that adopted TIFs continued growing at their previous growth rate, cities that did not adopt TIFs proceeded to grow faster than adopters.

They conclude that TIF-adopting cities grew slower after adopting TIFs than those cities that did not adopt them. The authors find that adopters grew 0.79% per year less than non-adopters after controlling for many variables, and that there was a clear tradeoff of higher growth in TIF districts for lower growth everywhere else. Of course, motivations and reasoning are difficult to glean from these results, and it is entirely possible that such a tradeoff is justified. A TIF could have made feasible a company or operation with a high employment multiplier which had favorable downstream effects, or perhaps in an industry with sentimental value or an identity that is important to the place where the TIF was situated.

What are the spillover effects of TIFs on subsequent government actions?

Spillover effects of TIFs do not only affect property values or the funding of school districts. TIF districts seem to also have downstream effects on the actions of governments in relation to their structuring of local tax rates. The establishment of TIF districts clearly affects the millage tax collection calculations in an area. Revenues derived from certain specific geographies are “frozen” or paused for a period, and they resume after the TIF

district sunsets. However, these periods can be relatively long, with TIFs in states such as Georgia being allowed to last multiple decades. In the meantime, the operations of civil society continue - agencies such as fire stations and park departments continue operating; schools stay open. Citizens of localities have demands upon their governments, and it is logical that their governments react by modifying their millages and behavior once their fiscal situation (the establishment of TIF districts within them) changes. Regarding this, Skidmore and Kashian (2010) wanted to examine how property tax rates responded to tax base changes resulting from TIF activity. They found that rates escalated when TIFs are created and decreased when they are closed. However, municipalities dropped them as they created TIFs, and increasing them when they close. Overall, they “find some weak evidence that TIF introduction and growth in the TIF increase property taxes as a whole, though not statistically significant, TIF introduction and increment growth appear to increase tax rates by just less than 1% for the average community, However, TIF closure reduces overall property tax rates by about 1.5%.” (p. 411).

Tax rate regressions.

Independent variable	Dependent variable: municipal property tax rate, other jurisdictions property tax rate, and overall property tax rate					
	Estimation method: fixed effects, cluster					
	OtherRate	OtherRate	MuniRate	MuniRate	OverallRate	OverallRate
TIF	0.09** (2.018)	0.04 (0.869)	-0.07** (-2.054)	-0.09** (-2.454)	0.02 (0.339)	-0.04 (-0.674)
TIF valve	0.10270*** (5.512)	0.09472*** (4.643)	-0.06512*** (-5.144)	-0.07232*** (-5.854)	0.03924 (1.599)	0.02534 (1.006)
ElapsedTIF	-0.443*** (-5.071)	-0.548*** (-6.777)	0.101 (1.437)	0.114 (1.581)	-0.356*** (-3.800)	-0.446*** (-4.372)
Ln(PropertyValueExcludingTIF)[-1]		0.008*** (3.989)		-0.005** (-2.314)		0.003 (0.941)
ResShare[-1]		-1.668* (-1.711)		-1.927* (-1.956)		-3.215** (-2.273)
Ln(Pop)[-1]		0.000** (2.548)		0.000 (1.351)		0.000*** (3.042)
Adjusted R ²	0.899	0.901	0.824	0.826	0.832	0.833
Number of observations	6849	6829	6849	6829	6988	6868

Note: All regressions control for fixed municipality and time effects. The t-statistics associated with the estimated coefficients are shown between parentheses.

* Indicates significance at the 90% confidence level for a two-tailed test.

** Indicates significance at the 95% confidence level for a two-tailed test.

*** Indicates significance at the 99% confidence level for a two-tailed test.

Table 6 - Tax Rate Regressions (Skidmore and Kashian, 2010). Here, the authors demonstrate six regressions which all have as a dependent variable the municipal property tax rate (equations 3 and 4), other jurisdictions property tax rate

(equations 1 and 2), and overall property tax rates (equations 5 and 6). The overarching finding herein is that the origination of TIFs increase to increases in property tax rates of overlying jurisdictions.

The authors found that use of TIFs is somewhat neutral in raising or lowering overall tax rates (equations 5 and 6 on Table 6 above), This is due to the fact that while TIF use is linked to decreases in municipal tax rates, it is also linked to increases in other tax rates. They then find that residents of a municipality that has seen the introductions of TIFs are not likely to see a change in their overall tax rate, but that the composition of what makes up that tax rate would have changed. They do find, however, that residents of municipalities just outside of TIF districts will see an increase in their aggregate tax rate, with that increase composing part of the subsidies towards development in the area that makes up the TIF district.

What has been explored about TIFs in the state of Oklahoma?

As explored above, TIFs were originally set up as an investment and redevelopment tool that was closely linked to the industrial sector in particular. As a consequence of that, the Rust Belt and Midwest are especially represented in the existing literature concerning TIF districts. Most of Rachel Weber's TIF-related articles, for instance, concern themselves with Northeast Illinois and Chicago specifically. Briffault (2010), however, expands on the constantly changing purposes and locations seen in the establishment of TIFs – the concept has successfully expanded beyond the industrial sphere and onto other diverse geographies and landscapes with different economic bases. This being an article about TIFs in Oklahoma City, it is worth noting that Oklahoma largely does not fit in this

aforementioned group of states with a legacy industrial base; a consequence of that is that the existing literature does not address TIFs in the state. As such, besides news items such as those mentioned in the introduction as to how TIFs are used in Oklahoma City, the state's laws as written are the sole primary source of knowledge about the workings of TIFs in the state. Oklahoma's 1992 62 O.S. §§850-869, the "Local Development Act", provides details on TIF districts' aims, provisions, and limitations in the state. According to it, the Oklahoma laws find that TIF laws therein are largely in line with what is common practice throughout the country. For instance, it includes a "but-for" provision (Section 852) that states that TIFs are to be used in cases where investment, development, and economic growth are difficult but possible if with the act. Sections 853 establishes additional guidelines on where TIFs can be located – including areas where over half of structures have an age of 35 years or more (a sign that the area is blighted, according to the law). Section 856 establishes some limits on where TIFs can be located; for cities or towns, no more than 25% of the net assessed value of taxable property in them can be in a TIF (that value is 15% for counties and 25% for school districts). Finally, the allowable timelines of TIFs in Oklahoma are also in line with what is found across the literature – Section 861 delineates that TIFs there cannot exist for more than 25 years. In conclusion, Oklahoma's TIF laws are largely in line with what is normally seen in the TIF literature as hallmarks of TIF legislation across the country: a "but-for" provision that ensures development would occur through TIFs where it normally would not without the TIF; it has limits on where TIFs can be and how long they can last, and detailing on the desired purposes and uses of such laws. The gaps in the literature that this paper seeks to answer are how the property values have

behaved in Oklahoma City since the introduction of TIFs to the city. This paper will explore how values have risen or fallen depending on their proximity to projects that have received TIF funding in the city, and how that might vary according to what type (industrial, commercial, etc.) of development was funded.

Methods

This paper will seek to evaluate the extent to which property adjacent to TIF projects in Oklahoma City fluctuate after development happens within TIF districts, and the special distribution of this change. This will be done through multiple difference-in-difference (DID) analyses according to the distance from the project which received TIF funds.

The difference-in-difference method essentially separates what it observes and measures in two periods – before an intervention and after treatment. In this case, each intervention is the introduction of TIF funds to a project, and the measurement in question is the rise of property values near a TIF project. This method is especially helpful in discerning what change can reasonably be attributed to the intervention, as it also measures a treatment (comparison) group before and after the treatment that it did not receive.

In this case, we are measuring the effect of TIF funding on TIF projects in Oklahoma City. More specifically, for each TIF project, we will be measuring three populations of parcels:

- Group 1: parcels which are closest to TIF projects (within a half quarter of a mile from each project);
- Group 2: parcels which are close but not adjacent to each TIF project (within a half mile from each project). These parcels are a control group to Group 1 – providing an in-neighborhood comparison group to it.
- Group 3: all other city parcels located in Oklahoma County which are not a part of Groups 1 or 2.

Oklahoma has fifteen active TIF districts, with no officially inactive districts. This paper will focus on the projects which expended funds between 2013 and 2024, regardless of district. Comparisons are made between each analyzed area in which TIF funds are spent, although no attempt is made to equate neighborhoods which received and spent TIF funds with those which did not. Applying the Central Place Theory in Oklahoma City, this paper recognizes that Oklahoma City is a monocentric city and that factors seen in the city's Downtown neighborhoods are unique and not necessarily replicable in other parts of the city.

Oklahoma City spends TIF funds on two types of expenses. The first and main type of expense is on physical transformations in a TIF district. This can be funds that are directly paid to a business to cover infrastructure costs, build a new space, or rehabilitate a building into a new use, for instance. The second type of usage of funds is on "soft" costs that do not mean physical change has been brought about to the TIF project as a result of an expenditure. These uses encompass efforts surrounding the marketability and commercialization of products produced in the Oklahoma Health Center. For instance, funds are spent in this manner on the Oklahoma Health Center (TIF #1), Biosciences (#7), and Innovation (#11) districts. Every district sees some sort of "Administration" or "Debt Service" cost. These are excluded as only expenditures concerned with physical transformations of specific projects are included in the analysis.

A full list and map of Oklahoma City tax increment districts and their locations can be seen below:

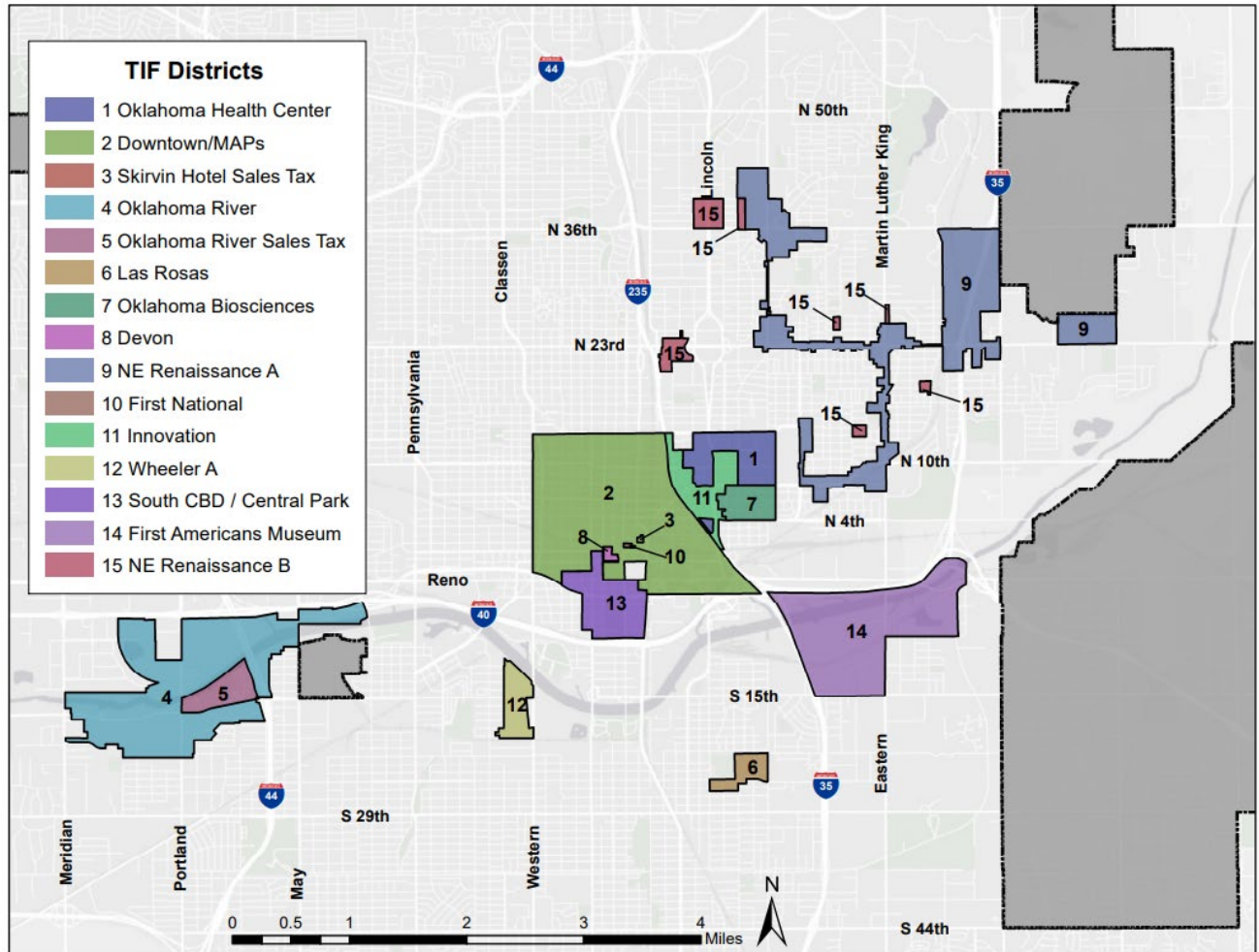


Figure 2 - Oklahoma City's 15 TIF District. Source: City of Oklahoma City Economic Development Department

The remaining resulting TIFs analyzed are as follows:

Table 7 – Oklahoma City Tax Increment Financing Districts analyzed

District	Year First Created	Purpose(s)
TIFs #1, #7, and #11: Innovation District	1993	<ul style="list-style-type: none"> • To promote development in and around the University of Oklahoma Health Sciences Center. • To spur private investment in the area by the healthcare, bioscience, and technology industries. • Note: expenditures were also made in this district prior to the analysis period of 2013-2024.
TIFs #2 and #3: Downtown/MAPS and Skirvin Hotel Sales Tax	2000	<ul style="list-style-type: none"> • To support the MAPS (Metropolitan Area Projects) vision in Oklahoma City, supporting redevelopment in the inner core of the city. • To promote the redevelopment of the historic Skirvin Hotel in Downtown Oklahoma City. • Note: expenditures were also made in this district prior to the analysis period of 2013-2024.
TIFs #4 and #5: Oklahoma River Sales Tax	2005	<ul style="list-style-type: none"> • To support redevelopment (commercial, office, retail, recreational, residential) along the Oklahoma River • To support the development of a 68-acre Dell Computers corporate campus. • Note: expenditures were also made in this district prior to the analysis period of 2013-2024.
TIF #8: Devon World Headquarters	2008	<ul style="list-style-type: none"> • To support infrastructure improvements around the Devon Energy Center tower in Downtown Oklahoma City. • Note: expenditures were also made in this district prior to the analysis period of 2013-2024.
TIFs #9 and #15: Northeast Renaissance A and B	2015	<ul style="list-style-type: none"> • To reduce and eliminate blight conditions, reverse economic stagnation, create employment, and stimulate businesses in Northeast Oklahoma City, mainly along Northeast 23rd Street.
TIF #10: First National Center	2016	<ul style="list-style-type: none"> • To support the renovation of the First National Center art-deco skyscraper in Downtown Oklahoma City.

TIF #12: Wheeler District (Western Gateway)	2017	<ul style="list-style-type: none"> To transform 150 South Oklahoma City acres abutting the Oklahoma River, formerly an airport, into a mixed-use neighborhood. To support public infrastructure, gathering spaces, and residential development in South Oklahoma City.
TIF #13: Core to Shore (Convention Center District)	2018	<ul style="list-style-type: none"> To support the revitalization of blighted areas to the south of Oklahoma City's downtown.

Table 7 - Oklahoma City Tax Increment Financing Districts analyzed. Source: City of Oklahoma City Economic Development Department

The remaining TIF districts were consequently not analyzed:

District	Year First Created	Reason(s)
TIF #6: Las Rosas	2005	<ul style="list-style-type: none"> No applicable expenditures were made between 2013-2024.
TIF #14: First Americans Museum	2018	<ul style="list-style-type: none"> Expenditures were first made only in 2024.

Table 8 - Oklahoma City Tax Increment Financing Districts not analyzed. Source: City of Oklahoma City Economic Development Department

Each TIF district above has had a different purpose and timeline which will be further discussed in the Results section. As seen above, the TIF funds generated in each applicable increment district were used to purposes as conventional as residential development and infrastructure, corporate campuses, blight removal, and as novel as helping fund the building of a riverside waterpark and resort. In total, there have been 105 projects financed in-part or in-full by the eight analyzed TIF districts between 2013 and 2024.

The data used consisted of:

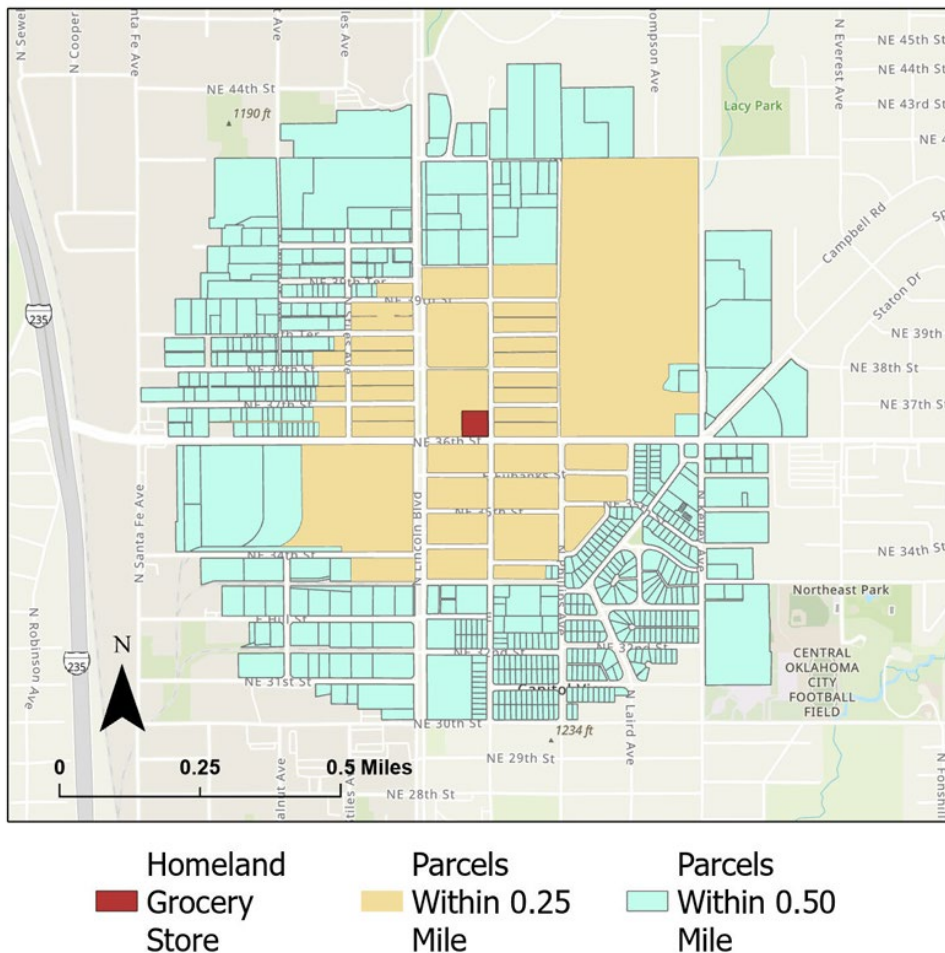
- Tax Increment District Annual Reports. Each year, Oklahoma City publishes a report detailing how much in TIF funds was spent on which specific project. These reports were provided by Oklahoma City's Economic Development Department. The reports from 2013 to 2024 follow a format which clearly distinguishes what kinds of interventions funds were spent on (physical, administrative, and to what specific end and project). Reports prior to 2013 do not make this specification clear, and thus were not used.
- Shapefiles with parcel information for Oklahoma County, provided by the Oklahoma County Assessor's office. The vast majority of Oklahoma City is located in Oklahoma County, with some few parcels of rural land permeating into Cleveland, Pottawatomie, and Canadian counties. Only Oklahoma County parcels were used in this analysis.

Two concentric circles will be drawn around each TIF-funded project, representing quarter-mile and half-mile distances from each location. Parcels will be assigned to either distance-based group, or to a group representing locations within the city which are not in proximity to a TIF-funded project. Representative sampling will be conducted in each concentric circle to analyze changes in property values, resulting in TIF District-specific graphs showing cumulative changes in values according to year. Map visualizations displaying these value fluctuations will accompany the analysis.

For instance, in the fiscal year 2021, Oklahoma City spent \$3,500,000 in funds from TIFs #9/#15 to support the development of a grocery store from the Homeland chain. The rationale for the expenditure of funds on grocery store was that the historically African-

American Northeast Oklahoma City area had become a food desert (Dickerson, 2019). A nearby new corporate campus for Homeland was jointly announced, and so was a new publicly-built wellness center for Oklahoma Citizens aged 50+ which was built next-door to the grocery store (Dickerson, 2019).

Map 1 – Parcels surrounding Homeland Grocery Store (Northeast Renaissance TIFs #9/15)



In the above case, the expenditure of \$3.5 million in 2021 is seen as the intervention in the DID scenario. Property values are observable through the Oklahoma County Assessor’s

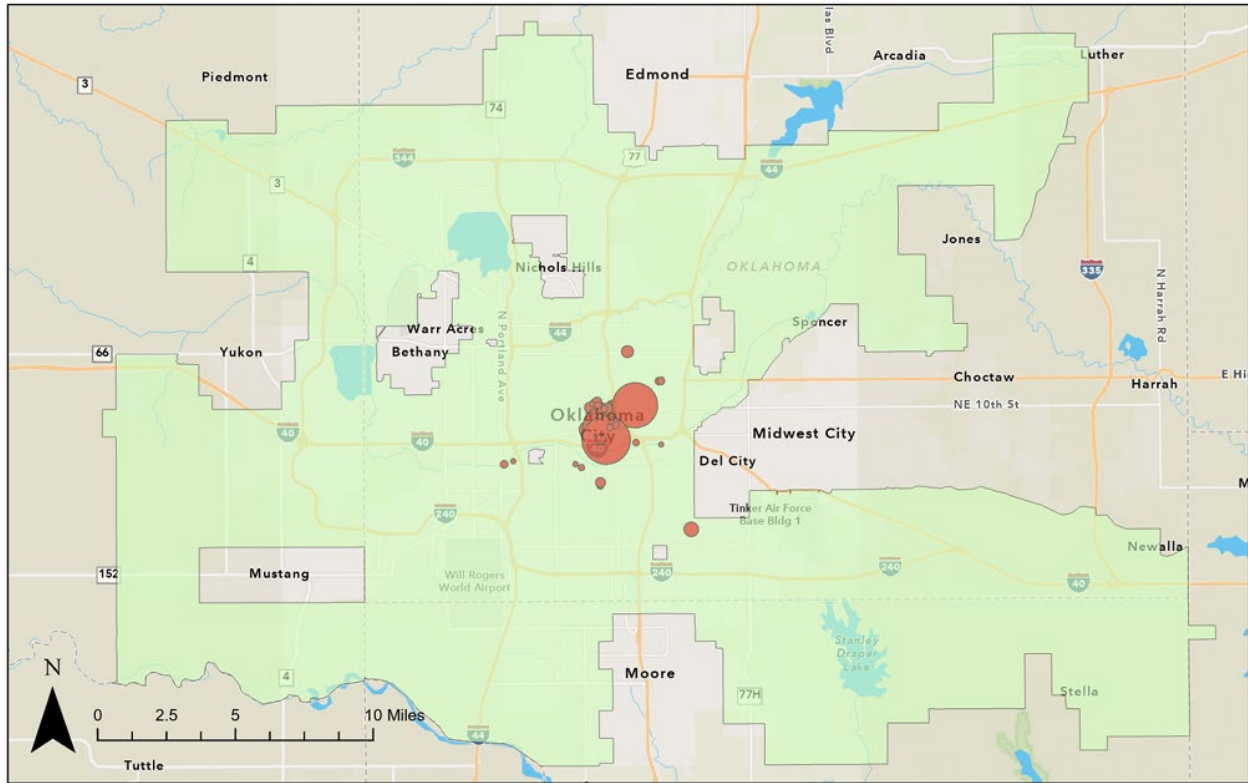
portal from 2001 to 2024. Sampling would be done in both groups of parcels (those within 0.25 and those within 0.50 miles of the project's site). Growth rates for properties in each group would be calculated from 2001 to 2021 (the pre-intervention period), along with from 2021-2024 (the post-intervention period). The resulting divergence of growth trajectories, should there be any, would be the rate attributable to the intervention. Both of the aforementioned groups of parcels would be compared to a sampling of all parcels in Oklahoma City to understand the growth trajectory of the project's vicinity in relation to the growth of the city's property values at large.

Results



This section details the results from measuring changes in market values around investments in TIF projects in Oklahoma City from 2013 to 2024. This section also describes the spatial distributions of TIF projects in that timespan, and what parts of the city received the most investment in TIF funds. Projects were also ranked according to value spent in this timespan, and these rankings were displayed in this section. Based on the spatial patterns that emerged through the maps made, TIF projects were clustered together in order to find changes of property values around them. These changes of values were subsequently graphed and examined in detail.

Mapping Oklahoma City's TIF expenditures from 2013 to 2024 yields the results seen on Map 2.

Map 2 – Oklahoma City TIF Expenditures Scaled by Amount



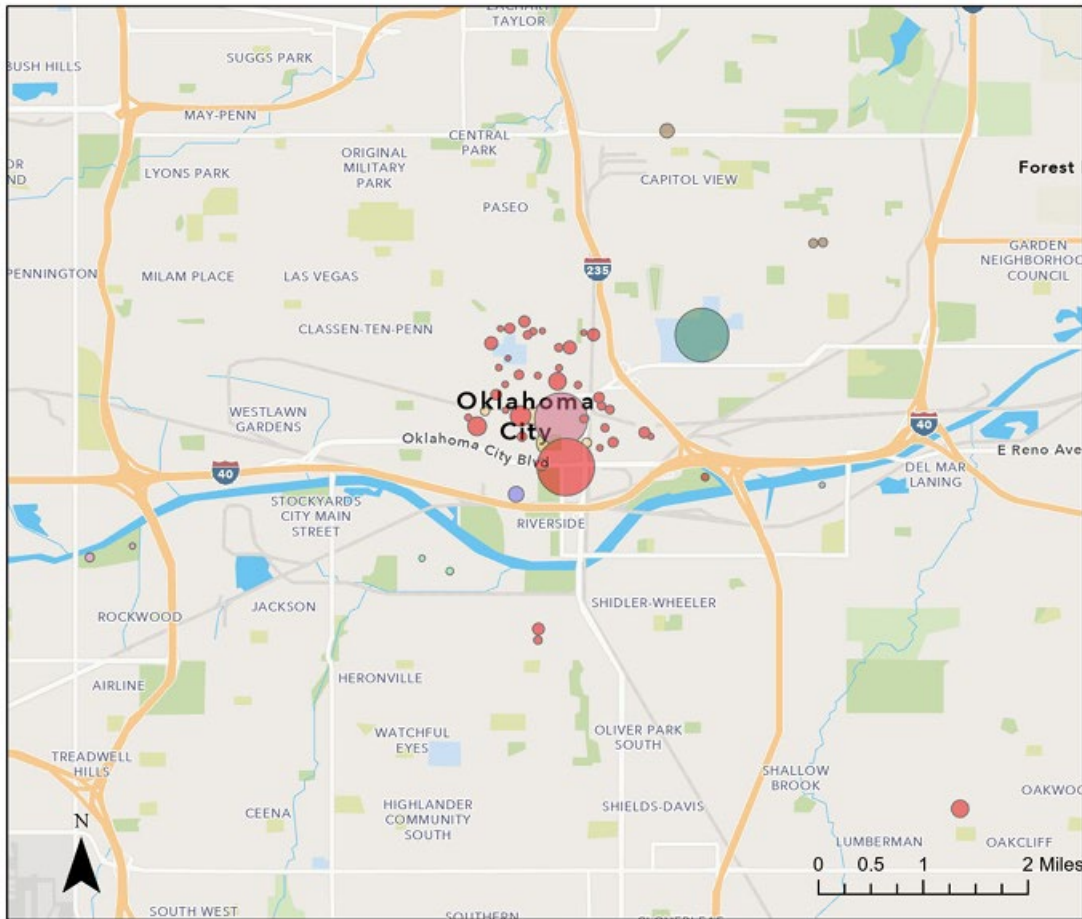
Legend

-  TIF Projects Scaled by Spending (2013- 2024)
-  OKC Boundary

Sources: Oklahoma County Assessor Office, City of Oklahoma City Economic Development Department

Due to Oklahoma City’s size of 620 square miles, a larger scale map is necessary in order to discern specific spending clusters. This is done on Map 3. No TIF spending through Oklahoma City’s TIFs is done outside of its urban core. However, other TIF districts which are not examined in this paper do exist within Oklahoma County. These districts are found in the smaller cities of The Villages, Warr Acres, Edmond, Harrah, Choctaw, Midwest City, and Bethany.

Map 3 – Oklahoma City TIF Expenditures by TIF, Scaled by Amount



Legend

- TIFs 1, 7, and 11
- TIF 8
- TIF 12
- TIFs 2 and 3
- TIFs 9 and 15
- TIF 13
- TIFs 4 and 5
- TIF 10
- TIF 14

Sources: Oklahoma County Assessor Office, City of Oklahoma City Economic Development Department

Clearly, a pattern emerges, as the Downtown area of the city sees the most spending. The Downtown neighborhood is home to the city’s oldest TIFs. This is relevant as the increment can accumulate for longer periods of time in older TIF districts – thus, the current property values in those areas have had more time to grow in relation to their base upon the

establishment of the TIF. Accordingly, these are the city’s TIF projects that have had the most spending during this time span:

	Project	Reference Code	TIF(s)	Area	2013-2024	Spending
1	Convention Center Hotel	(ED0259, ED0900)	2, 3, 8	Downtown	\$	26,880,000
2	Medical and Innovation District Placemaking	N/A	1, 7, 11	Downtown	\$	19,545,687
3	First National Building	ED0510	10	Downtown	\$	19,284,693
4	Myriad Gardens	ED0855, ED0856, ED0811, ED0820, ED0848, ED0835, ED0819, ED0860	8	Downtown	\$	8,302,888
5	Arts Festival Relocation	ED0256	2, 3	Downtown	\$	5,993,262
6	21c Hotel	ED0243	2, 3	Downtown	\$	5,300,000
7	Journal Record Building	ED0232	2, 3	Downtown	\$	4,750,000
8	MetroTech Educational Center	ED0261	2, 3	South OKC	\$	4,700,705
9	City Hall Lawn	ED0826	8	Downtown	\$	4,559,469
10	OK County Annex Building Project	ED0851	8	Downtown	\$	4,447,992
11	Convention Center/Central Park	ED1301	13	Downtown	\$	4,000,000
12	Homeland Grocery Store	ED0505	9, 15	Northeast Renaissance	\$	3,500,000
13	10th & Shartel Apartments	ED0244	2, 3	Downtown	\$	3,000,000
14	Midtown Garage	ED0231	2, 3	Downtown	\$	2,999,938
15	Quiet Zone Crossing Improvements	ED0217	2, 3	Downtown	\$	2,650,000
16	Crosstown Land Acquisitions (Oklahoma City Boulevard)	ED0269	2, 3	Downtown	\$	2,599,938
17	Oklahoma City Community College Capitol Hill Project	ED0229	2, 3	Downtown	\$	2,500,000
18	Edge Apartments	ED0230	2, 3	Downtown	\$	2,300,000
19	Steelyard Apartments	ED0250	2, 3	Downtown	\$	2,151,824
20	Century Center	ED0233	2, 3	Downtown	\$	2,050,000

Table 9 - Top 20 Expenditures by TIF Projects, 2013-2024. Source: City of Oklahoma City Economic Development

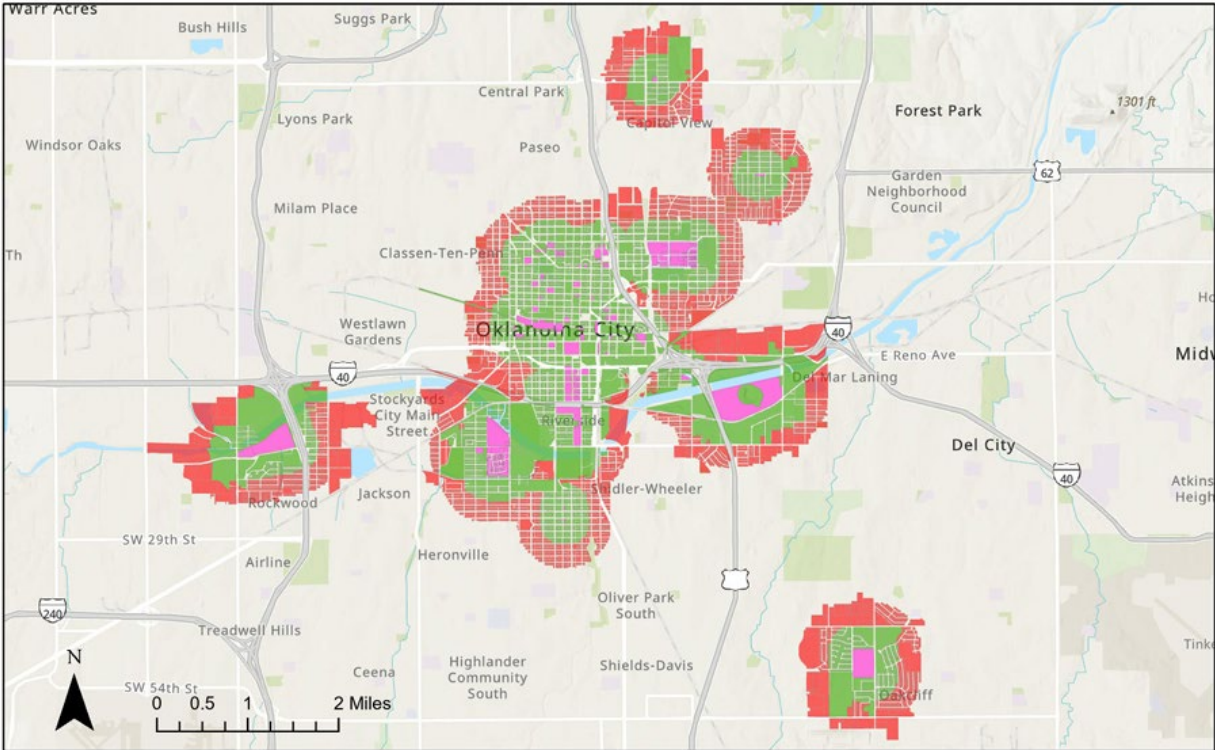
Department

All but two of the top twenty programs (ranked by spending from 2013-2024) are in the central core of the city. In this analysis, areas that are functionally adjacent to Downtown but in common parlance are referred to by other names (mainly Oklahoma City’s Midtown and the University of Oklahoma Medical District) are grouped with Downtown due to their proximity to the area. Notably, the MetroTech project (#8), despite not being located physically in OKC’s Downtown, used funding from the “Downtown TIFs”, TIFs 2 and 3.

As mentioned in the *Methods* section of this paper, an analysis will be made comparing the fluctuations in market values as determined by Oklahoma County Assessor. The analysis would compare the areas closest to a TIF project (within a quarter mile of it) with the areas

next closest to it but not in the project's immediate vicinity (between a quarter mile and a half mile of a project). Furthermore, the growth in market values around these funded projects would be compared to the growth in market values for the city of Oklahoma City as a whole. The time of analysis depends on each TIF-funded project. A visual analysis of the pattern of TIF projects which spent monies between 2013 and 2024, along with the parcels included in each surrounding ring (either 0.25 or 0.50 mile) is included on Map 4.

Map 4 – Oklahoma City TIF Projects and Concentric Layers of Parcels 0.25 and 0.50 miles away, 2013-2024



Legend

- TIF Funded Project Parcels
- Parcels within 0.25 mile of TIF project
- Parcels within 0.50 mile of TIF project

Sources: Oklahoma County Assessor Office, City of Oklahoma City Economic Development Department

As seen above and previously, Oklahoma City’s TIFs expenditures for the period between 2013 and 2024 are all clustered in its urban core. However, they form distinct patterns which broadly but not neatly follow the logic of the TIF Districts that such projects belong to. Notably, the Capitol Hill public project improvements (a branch of the city’s library

system and OCCC, the city’s community college) and the MetroTech project improvements were funded by the Downtown TIFs despite not being physically located within the Downtown core of the city. The distinct clusters that the pattern of funding follows are presented in Table 10.

Analyzed Spending Cluster	Region	Corresponding TIF Districts	TIF Expenditures 2013-2024
Downtown	Downtown OKC	1, 2, 3, 7, 8, 10, 13	\$157,547,460
Wheeler District	South OKC	12	\$908,797
Dell Office Park and River Parks	Southwest OKC	4, 5	\$1,502,123
Capitol Hill	South OKC	2, 3	\$3,626,349
MetroTech	South OKC	2, 3	\$4,700,705
Northeast Renaissance	Northeast OKC	9, 15	\$6,175,000

Table 10 – Clusters of Spending in OKC TIF Projects, 2013-2024. Source: City of Oklahoma City Economic Development Department

Each of the above clusters is analyzed separately through a differences-in-differences style approach which notes the funding received every year in service of each TIF cluster.

1. Northeast Renaissance

The Northeast Renaissance TIF District was first established in 2015. Three projects have received and spent funding in the analyzed time period. They include helping fund neighborhood retail (\$1.4M in TIF funds spent), a community-focused medical services clinic (\$1.3M in TIF funds spent), and help toward the establishment of a Homeland grocery store (\$3.5M in TIF funds spent).

The patterns of market value growth (indexed to 2015) of the areas surrounding the above projects as well as the growth in market value of the city as a whole are presented in Figure 3.

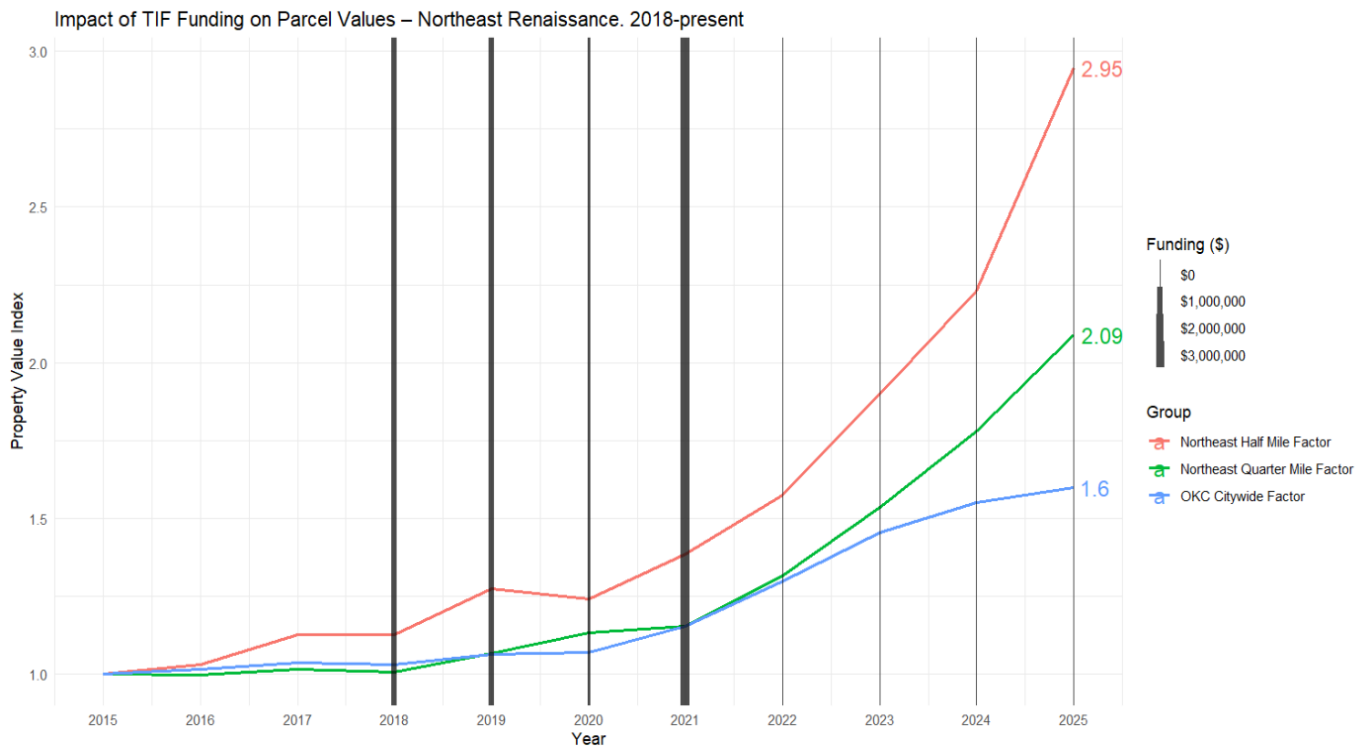


Figure 3 - Expenditures by Year and Parcel Value Change, Northeast Renaissance TIF Cluster (2013-2024). Sources: Oklahoma County Assessor Office, City of Oklahoma City Economic Development Department

2. Wheeler District

The Wheeler District TIF District (TIF 12) was first established in 2017. Two projects have received and spent funding in the analyzed time period. They include helping fund improvements to the Western Gateway Elementary School (\$227 thousand in TIF funds spent) and improvements to the Wheeler District (\$682 thousand in TIF funds spent).

The patterns of market value growth (indexed to 2018) of the areas surrounding the above projects as well as the growth in market value of the City as a whole are presented in Figure 4.

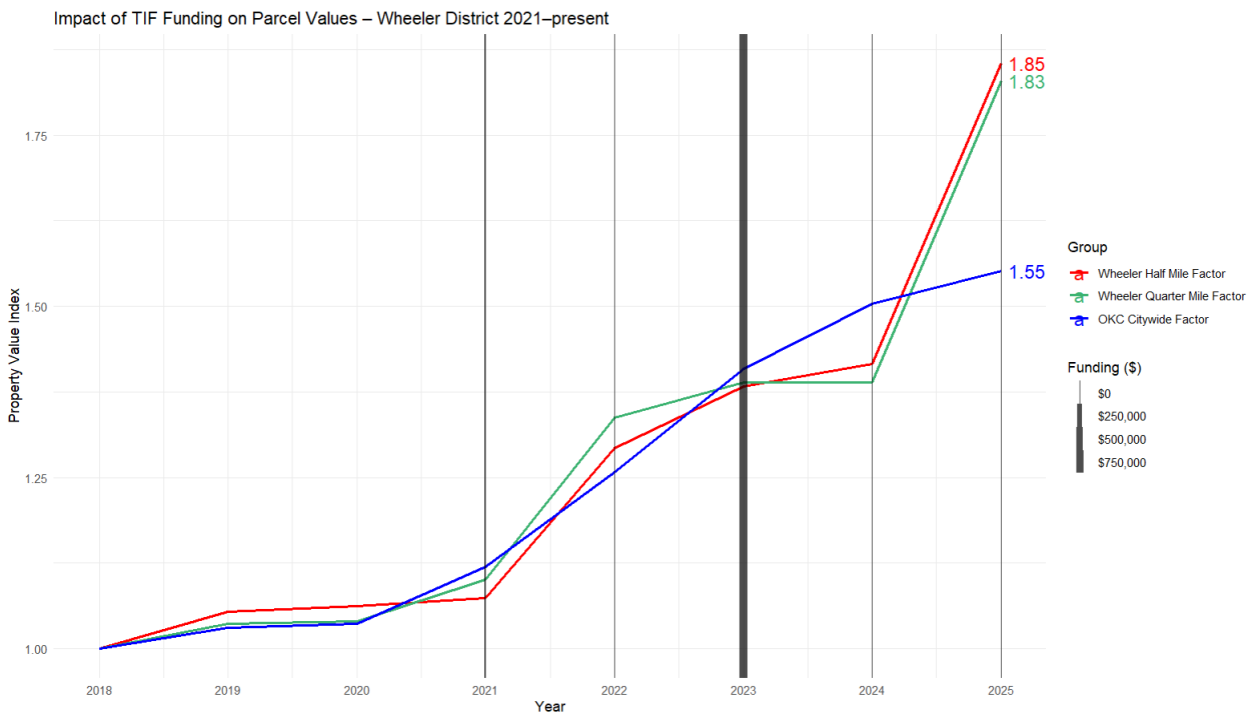


Figure 4 - Expenditures by Year and Parcel Value Change, Wheeler District TIF Cluster (2021-2024). Sources: Oklahoma County Assessor Office, City of Oklahoma City Economic Development Department

3. MetroTech Educational Center

As previously mentioned, the MetroTech Educational Center funding hailed from the Downtown TIFs 2 and 3, which were first established in 2000. As seen below, funding for the vocational education center was first spent in 2018, with subsequent rounds of funding observed through 2023. Through 2024, over \$4 million in TIF funds had been allocated to and spent in service of this project.

The patterns of market value growth (indexed to 2015) of the areas surrounding the above project as well as the growth in market value of the city as a whole are presented in Figure 5.

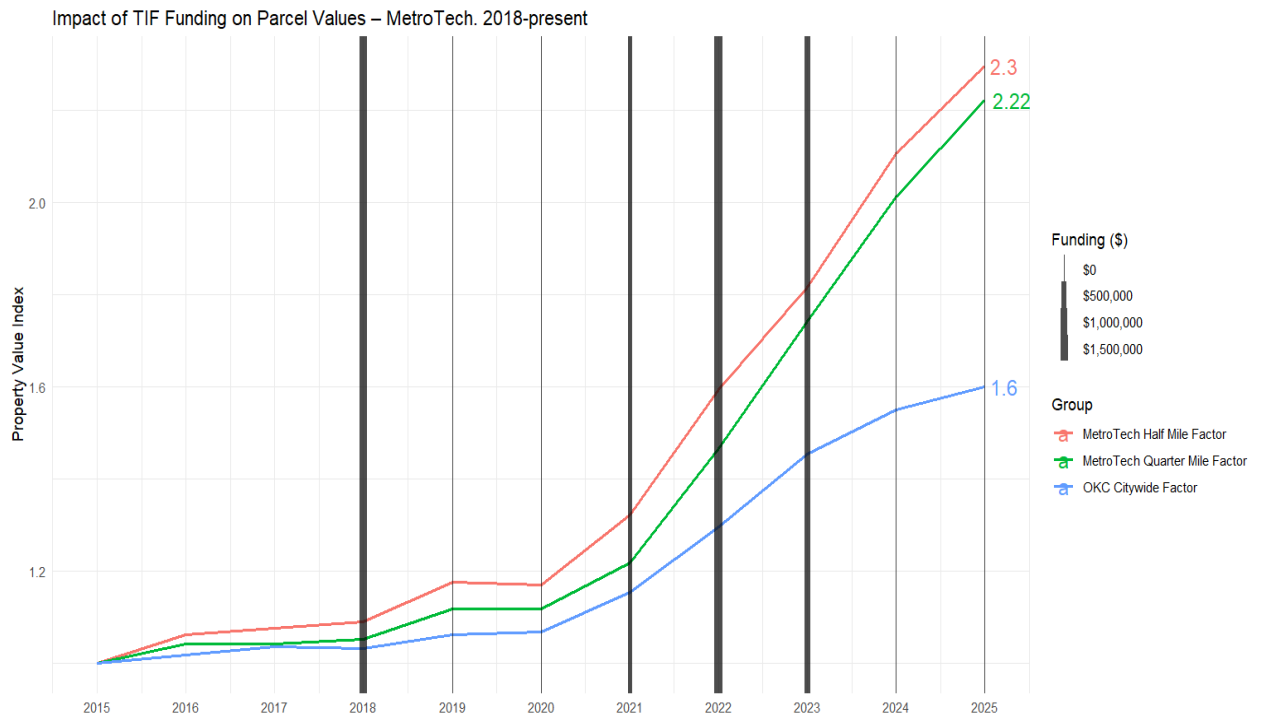


Figure 5 - Expenditures by Year and Parcel Value Change, Metro Tech (South Bryant) TIF Cluster (2018-2024). Sources: Oklahoma County Assessor Office, City of Oklahoma City Economic Development Department

4. Capitol Hill Projects

As previously mentioned, funding for the projects in the neighborhood of Capitol Hill hailed from the Downtown TIFs 2 and 3, which were first established in 2000. As seen below, funding for the Capitol Hill Library (\$1.1M in TIF funds spent) and the OCCC Capitol Hill Branch (\$2.5M in TIF funds spent) happened from 2015 through 2017.

The patterns of market value growth (indexed to 2012) of the areas surrounding the above projects as well as the growth in market value of the city as a whole are presented in Figure 6.

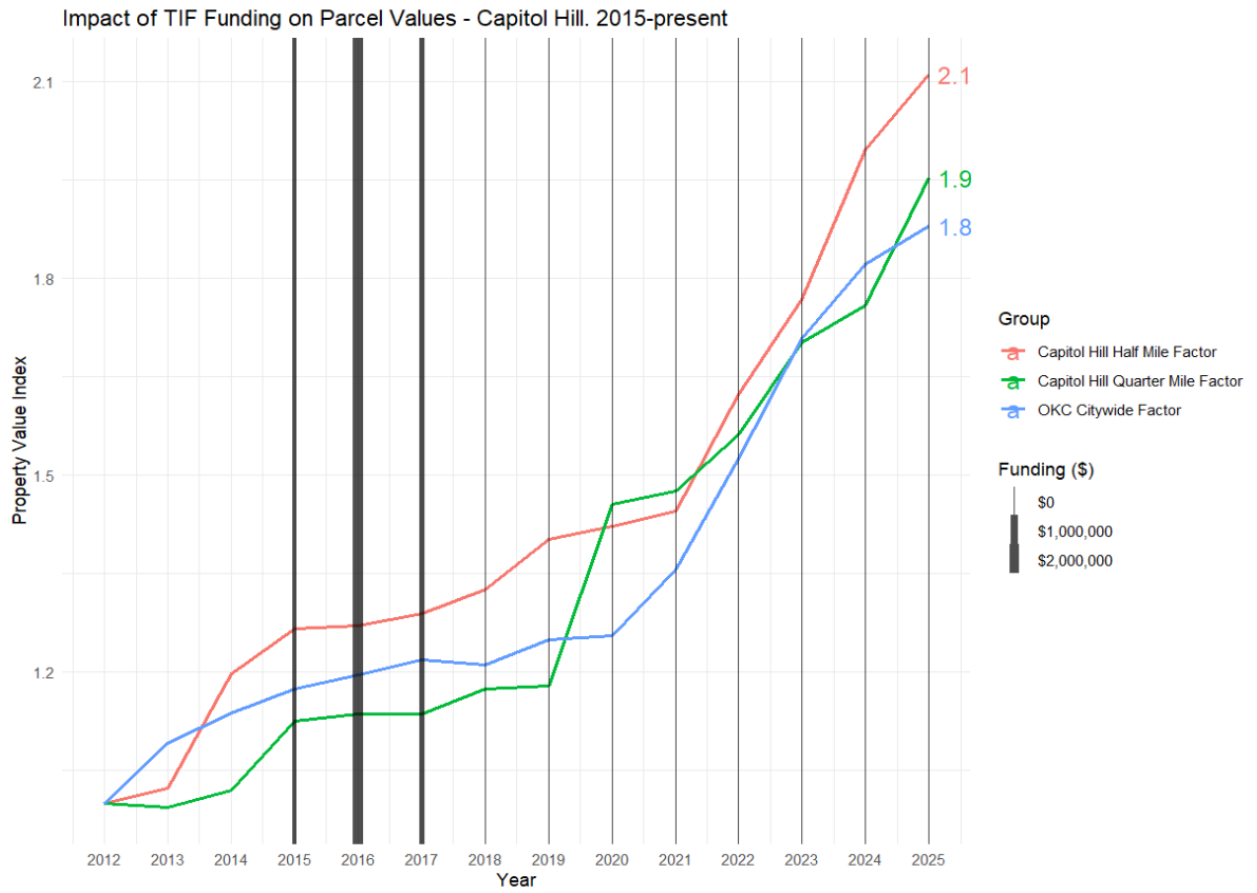


Figure 6 - Expenditures by Year and Parcel Value Change, Capitol Hill TIF Cluster (2015-2024). Sources: Oklahoma County Assessor Office, City of Oklahoma City Economic Development Department

5. Dell Offices and River Parks

The TIFs (4 and 5) for the following projects were first created in 2005. Consequently, the majority (over \$17M) of the TIF monies spent here were spent before this paper's period of analysis. This investment was made in service of the establishment of a corporate presence for Dell Computers in the area, as well as improvements in access to the Oklahoma River.

Three projects did receive and spend TIF funding in the analyzed time period. They include further land acquisitions (\$175 thousand in TIF funds spent) and further shoreline improvements (\$1.4M in TIF funds spent), as well as \$5 thousand toward the Dell project.

The patterns of market value growth (indexed to 2015) of the areas surrounding the above projects as well as the growth in market value of the city as a whole are presented in Figure 7.

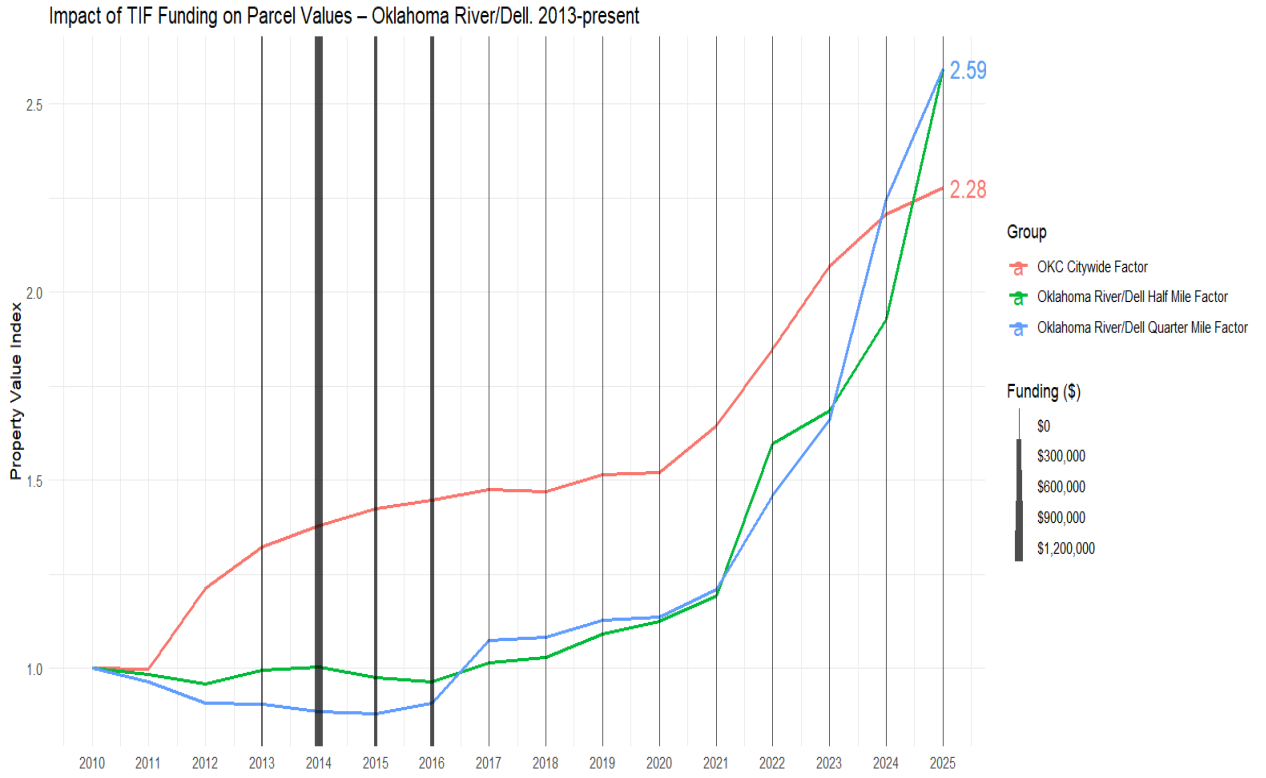


Figure 7 - Expenditures by Year and Parcel Value Change, Oklahoma River/Dell TIF Cluster (2013-2024). Sources: Oklahoma County Assessor Office, City of Oklahoma City Economic Development Department

6. Downtown

The areas considered as Downtown in this paper are varied. As seen earlier in this section, most of the TIF funds spent within Oklahoma City were in this part of the city.

The types of projects funded are also varied, ranging from improvements to public areas, to private areas, to placemaking efforts. For instance, the projects which have spent the most in TIF funding are efforts devoted to building a private hotel next to the city's convention center (private use), placemaking efforts surrounding the University of Oklahoma Medical Center (public-private use), rehabbing the art deco First National Building skyscraper (private use), and making improvements to the Myriad Botanical Gardens (public use).

This pattern of more funds being spent in this area is logical, as the TIF Districts here are large in area (involving many more parcels than the other clusters) and older. The Downtown TIFs were first established in 1993 (around the Medical Center), 2000 (in the Central Business District), 2008 (in the Myriad Gardens area), 2016 (for the district consisting solely of the First National Building), and 2018 (for the Convention Center area).

The patterns of market value growth (indexed to 2010) of the areas surrounding the above projects as well as the growth in market value of the city as a whole are presented in Figure 8.

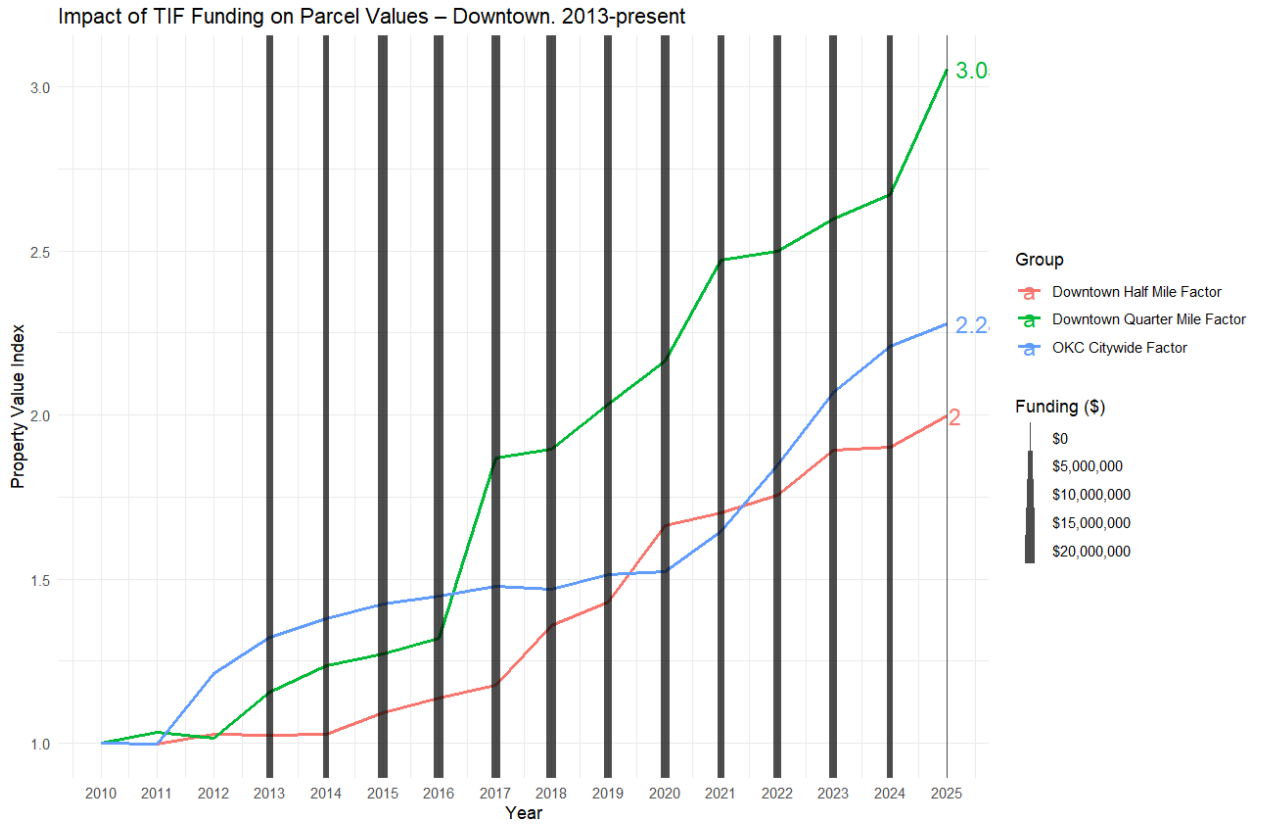


Figure 8 - Expenditures by Year and Parcel Value Change, Downtown TIF Cluster (2013-2024). Sources: Oklahoma County Assessor Office, City of Oklahoma City Economic Development Department

Results Discussion

The changes observed from TIF cluster to cluster are not uniform. In the areas surrounding the Northeast Renaissance projects, growth had been unequal before TIF funding arrived in the neighborhood. The area immediately surrounding the TIF-funded projects were growing in value at the same pace as Oklahoma City in general, while areas a half mile away were growing in value faster than that. Following the area's largest injection of funding in 2021, both groups of parcels (those 0.25 and 0.50 miles away from the funded projects) started becoming more valuable than previously. Oklahoma City in general also saw a kink in its growth curve, albeit a smaller one than those in the Northeast Renaissance cluster. The quarter-mile buffer area saw a 25% premium compared to the city at large, while the half-mile buffer area experienced an 81% premium over the period analyzed.

The story of parcel value growth surrounding the Wheeler District cluster is harder to dissect. All three groups of parcels analyzed (those 0.25 miles away from funded projects, those 0.50 miles away, and the city in general) were growing at a similar rate from 2018 to 2023. Following the largest round of TIF fund spending in this cluster, parcels surrounding the district seemed to slow down in growth but rapidly passed the rate of the city's growth from 2024 to 2025. Ultimately, both the 0.25 mile and 0.50 mile buffers saw a 20% premium in value accretion when compared to all of Oklahoma City.

The trajectory of parcel values around the MetroTech educational center follows a simpler trajectory. The parcels around the vocational education center (both those 0.25

and 0.50 miles near it) were already growing in value at a faster rate than the city in general. As MetroTech got the brunt of its funding between 2021-2023, the pace of value change accelerated. From 2015-2025, both the 0.25 and 0.50 mile buffers saw a 40% value increase premium when compared to the city at large.

Parcels around the Capitol Hill projects grew in value from 2012 to 2025 at a marginally faster yet nearly indistinguishable rate than the city. While the pace of value change did accelerate after the library and the community college got their funding between 2015-2017, this was not significantly different than the rate of growth of the city in general. The quarter mile buffer ultimately saw a small 5% premium over the city in general; the half mile buffer had a larger 17% premium from 2012-2025.

The rate of change in parcels in the area around the Dell offices and Oklahoma River shoreline improvements was unchanged based on whether parcels were 0.25 miles or 0.50 miles from TIF funded projects. These two groups actually saw the market values of their parcels diminish from their baselines in 2010 until 2017, while the majority of TIF funds spent in the time horizon analyzed came between 2014 and 2016. While the city's rate of market value improvements increased after 2020, this rate of change was steeper in the areas adjacent to the TIF funded projects. Ultimately, from 2010-2025 the parcels nearest to the projects grew marginally more than the city in general, seeing only a 14% premium.

Finally, the Downtown area had a pattern of value parcel growth different than all other five analyzed clusters. This area received and spent TIF funding nearly constantly during

the analyzed period, with periods of more intense funding coming between 2015-2018 and less intense spending happening after 2020. After 2016, the areas nearest (0.25 miles away) to the Downtown TIF funded projects had the largest final increase in value of all analyzed projects (a 3x increase in market values by 2025 compared to their 2010 baseline). However, areas in the periphery of these TIF projects (between 0.25 and 0.50 miles away from TIF projects) grew slower than the city in general. This was the only case in which an area in relative proximity to TIF projects grew slower than Oklahoma City in general. Ultimately, the quarter mile buffer area had a 36% premium over the city in general, while the half mile buffer area had a negative 10% premium.

The aforementioned growth rate premiums can be further distilled to a year-to-year basis, instead of relying on the final value increase each grouping of properties had in relation to the city in general. An annual assessment of growth rates by area since each cluster was first analyzed can be found on Table 11.

Cluster Area	Average Yearly Parcel Market Value Growth Rate						
	Downtown (2010-25)	Northeast Renaissance (2015-25)	Wheeler District (2018-25)	MetroTech (2015-25)	Capitol Hill (2012-25)	Dell Offices/ River Parks (2010-25)	Oklahoma City (2010-25)
Half-Mile	13.3%	29.5%	26.5%	23.0%	16.2%	17.3%	15.2%
Quarter-Mile	20.4%	20.9%	26.1%	22.2%	15.0%	17.3%	

Table 11 - Average Yearly Parcel Market Value Growth Rate. Source: Oklahoma County Assessor Office

Table 11 shows that each cluster had varying growth rates. While Downtown’s quarter-mile property grouping had the largest increase since its value tracking started, it grew at a slower rate than the quarter mile clusters around the Northeast Renaissance,

Wheeler District, and MetroTech funded projects. However, this analysis encompasses different time periods. When only analyzing the 2018-2025 timespan (which was the only timespan shared by all clusters), Table 12 is yielded. This table shows growth stories that are not evident on Table 11. For instance, the clusters around the Dell Offices/River Parks projects had the largest increases in values in this timespan, which happens to be long after the latest infusion of TIF capital in the area. The Downtown clusters are seen here as having average growth when compared to the rest of the city, and lagging growth when compared to the samples of properties in the other clusters in this paper. Of course, 2018-2025 encompassed the period of Covid-19, and an analysis of the pandemic effects are outside of the scope of this paper.

Average Yearly Parcel Market Value Growth Rate (2018-2025)							
Cluster Area	Downtown	Northeast Renaissance	Wheeler District	MetroTech	Capitol Hill	Dell Offices/River Parks	Oklahoma City
Half-Mile	21.0%	37.3%	26.5%	30.1%	22.7%	36.0%	22.2%
Quarter-Mile	23.0%	29.7%	26.1%	30.2%	23.8%	34.2%	

Table 12 - Average Yearly Parcel Market Value Growth Rate (2018-2025). Source: Oklahoma County Assessor Office

The land uses in each parcel cluster are not uniform as well. Oklahoma City is a sprawling capital with varied land uses. The characteristics of uses in each cluster are as delineated through Table 13.

TIF Parcel Cluster by Share of Land Use Types							
Land Use	Oklahoma City	Northeast Renaissance	Wheeler District	MetroTech	Capitol Hill	Dell Offices/River Parks	Downtown
Residential	87%	71%	78%	94%	66%	71%	51%
Commercial	6%	8%	5%	2%	17%	6%	21%
Exempt	4%	15%	8%	3%	11%	19%	20%
Industrial	3%	6%	9%	1%	5%	4%	7%
Public Service	0%	0%	0%	0%	0%	0%	1%

Table 13 - TIF Parcel Cluster by Share of Land Use Types. Source: Oklahoma County Assessor Office

Overall, nearly every cluster (with the exception of the area around MetroTech) was less residential in character than Oklahoma City in general. Downtown stands out as the only area with markedly different land use characteristics than downtown or the other areas. While the other clusters all have low numbers of commercial and exempt uses, Downtown is more balanced in its mix. Notably, some clusters (and the city in general) had some agricultural parcels as well, but no area had enough parcels classified as so as to register a percentage point.

Land Use Type	TIF Parcel Cluster by Share of Land Use Types												
	Oklahoma City	Northeast Renaissance		Wheeler District		MetroTech		Capitol Hill		Dell Offices/River Parks		Downtown	
		Half-Mile Properties	Quarter-Mile Properties	Half-Mile Properties	Quarter-Mile Properties	Half-Mile Properties	Quarter-Mile Properties	Half-Mile Properties	Quarter-Mile Properties	Half-Mile Properties	Quarter-Mile Properties	Half-Mile Properties	Quarter-Mile Properties
Residential	87%	71%	72%	83%	70%	94%	95%	73%	54%	78%	56%	72%	33%
Commercial	6%	6%	11%	4%	6%	2%	1%	8%	32%	7%	5%	6%	34%
Exempt	4%	16%	12%	6%	11%	2%	3%	13%	8%	9%	39%	16%	24%
Industrial	3%	7%	4%	5%	14%	1%	0%	5%	4%	6%	1%	6%	7%
Public Service	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%	0%	1%	1%

Table 14 - TIF Parcel Cluster by Share of Land Use Types, by Half- and Quarter-Mile from funded TIF projects. Source: Oklahoma County Assessor Office

As seen through Table 14, the characteristics of each analyzed TIF cluster are not uniform when analyzing them by separating the properties between those that are a half mile or quarter mile away from funded TIF projects. Except for the Downtown cluster, every half mile grouping of properties outpaced its corresponding quarter mile cluster. Perhaps not coincidentally, every half mile grouping is equally or more residential in character than their quarter mile group. This raises the question of whether the observed rises in property values are not merely reflecting a rise in a group of property types – residences, which heavily outweigh every other type of property type in every cluster above.

As described earlier in this paper, a rise in property values in properties within or adjoining TIF funded projects is not the only goal of TIF funding mechanisms. Therefore, the task of deriving insights from the analysis above is not clearly straightforward. Additionally, the

areas analyzed are not exactly like the rest of Oklahoma City. As seen in the maps above, the neighborhoods where TIF was implemented are much more urban in nature than the rest of the city. They are closer to the core of the city, are nearly all less residential in character, and except for MetroTech did not include areas that are clearly suburban in nature.

Overall, except for the parcels near but not adjoining Downtown, every group of parcel clusters within a quarter mile and half a mile from TIF funding saw faster growth than the city in general. However, except for Downtown, every TIF-funded parcel cluster saw the same trend: parcels between 0.25 and 0.50 miles away from TIF projects saw faster growth than those within 0 and 0.25 miles from such projects. The caveat in this analysis is that these two groups nearly always saw their valuations rise or fall in tandem with each other.

Lastly, causality can be difficult to interpret ex post facto. It is difficult to ascertain whether an area would already be primed for development and increases in values were it not for TIF funding or the promise of municipal buy-in to those neighborhoods. TIF legislation in Oklahoma does require a “but for” provision in projects funded through tax increment financing. This means that a project would not have been feasible were it not for help from TIF funding.

Policy Recommendations

This paper does not analyze many of the setbacks that TIF funding could potentially bring to a community. It does not assess if displacement happened in neighborhoods that received TIF funding, and it does not do a deep dive into the school funding formulas or budgets based on foregone tax revenues into the general fund of Oklahoma City and its schools. However, some lessons can be derived from the above exercise. These takeaways are categorized below according to subsections and provide recommendations for local officials in Oklahoma City and Oklahoma County.

Monitoring, Evaluation, and Transparency

Monitoring and evaluation of TIF projects and funding should be more accessible. A TIF dashboard, coupled with an interactive visualization of where Oklahoma City spends its MAPS (Metropolitan Area Projects) funds, would provide transparency to the population. This would also allow TIF-related decision-makers in the city to easily understand the spatial distribution of where money has been spent. This could be a task carried out by the Oklahoma City Department of Economic Development. A prime example of transparency in relation to TIF-related spending is the City of Chicago. The City of Chicago maintains multiple dashboards tracking TIF activity throughout Chicago:

- [Map tracking spending by project in Chicago;](#)
- [List of TIF district reports since 1997;](#)
- [Map tracking individual TIF District finances, including annual fund balances.](#)

I find in Capitol Hill and MetroTech that projects outside of TIF Districts were able to be funded through the increment generated elsewhere (since Downtown TIF funding was used for them). The city should make clear under what circumstances that may happen.

- A level playing field should be set for the approval of TIF projects. If the whole city is a candidate for TIF increments generated in Downtown, that should be made clear so that projects are not decided purely based on political favoring or maneuvering but through the merits of the projects. For information to be readily available to businessowners or civic leaders who want to petition the City Council for TIF funds, this information should be consolidated in the [City's TIF portal](#). A website which already has TIF information including recent TIF reports and maps for each district, this has the potential to become a one-stop destination for those interested in using TIF funds for their projects.
- These were cases where the transfer of increment funds was made from Downtown to South OKC, which is generally considered a less wealthy part of the city. However, if TIF increments can be spent outside of districts where they were created, this could potentially raise equity questions. As historically poorer parts of the city (such as the Northeast Renaissance area) have their own TIF districts (Districts 9 and 15), the potential of funds being generated and transferred from there to other better-off neighborhoods could be an issue.

Continuation of Research to Inform Better Civic Decision-Making

The data analyzed here bore out the results that Dye and Merriman (2000) found stating that cities which adopt TIF districts see enhanced growth in those districts while the rest of the city lags behind. As it stands, all clusters of parcels analyzed here outpaced the city in terms of parcel value growth. The city should work to analyze urban neighborhoods within the city which were outpaced by the city-wide average in the last decade (the timespan covered by this paper). Upon identifying if these neighborhoods could see enhanced value and quality of life to their neighborhoods if injected with TIF-funded projects that meet the “but for” provision, the establishment of dedicated TIF districts in these neighborhoods should be studied.

The city should study in a more granular fashion the question of whether tax increment financing yields more significant results when money is dedicated to public (such as the Myriad Gardens and Capitol Hill Library) or private (such as a Convention Center hotel) projects. As discussed above, the majority of large-scale projects funded with TIF funding in Oklahoma City between 2013-2024 were private developments. Any discrepancies between value-add should be accounted for and deliberated over when choosing whether to allocate funding to a project. This analysis could be done by the City’s Economic Development Department in partnership with the Oklahoma County Assessor Office, which houses the values for each property in the County in its records. Moreover, the shapefiles kept by the County contain what type of property is in each parcel. The aforementioned agencies could perform an analysis on value growth rates per type of land use. This would inform the city if the analysis performed herein tells a story of a certain

property type rising in value, or if certain land use mixes (for instance, residences which are near commercial uses) rise in value more than others given their locations.

- Ideally, this discernment and fine-tuning of what types of projects yield more profitable increments should occur in the near future. As the city's Downtown TIF Districts (Districts 2 and 3) expire in 2027 and 2030, the district's generated increment will return to the city's general tax digest. If this addition of funds returning to the city means larger potential for public investments, better information on what types of projects generate larger returns would result in smarter decision-making.

Conclusion

This paper finds that TIF projects in Oklahoma City have generally been associated with increases in nearby property values, though the scale, timing, and spatial effects of those impacts vary widely by neighborhood. The data shows that parcels both within a quarter-mile and half-mile of TIF-funded developments experienced faster growth than the citywide average (for projects funded between 2013-2024). However, in most clusters, the areas slightly further from projects (between 0.25 and 0.5 miles away) grew faster than those immediately adjacent – suggesting that the halo effect of TIF investments could have larger effects on certain property types than on others. This pattern was not consistent across all identified TIF clusters, with Downtown being the notable exception.

The results emphasize the complexity of evaluating TIF effectiveness in Oklahoma City. While increases in property values are one easily measurable possible metric of success, they do not capture the full picture. Possible displacement, opportunity costs of arguably diverted tax revenues, and the impacts on school districts are plausible consequences that civic leaders have to grapple with. This is especially the case if they believe that TIF projects do not meet the “but-for” provision, and development might still happen without use of TIF funds or the creation of a district. Additionally, the uneven distribution of project types and the observed clustering of funds in certain areas of the city suggest the need for greater transparency in how decisions about TIFs are made and how success is defined.

As Oklahoma City prepares for the expiration of its largest and oldest TIF districts, this is a crucial moment to reflect on what types of projects and under what circumstances the

greatest public benefit is generated, and where future investments should be prioritized.

Robust transparency tools that are accessible both to Economic Development staff in Oklahoma City, the City Council who decide on TIF projects, and the public at large would strengthen oversight. Targeted research into land-use specific impacts could inform smarter and more equitable planning decisions in the years ahead.

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