

Research Brief

Too Much or Not Enough?

A Statistical Analysis of Tax Incremental Financing in Wisconsin

Tax incremental financing (TIF) is a mechanism that allows municipalities to use future property tax revenue to fund development projects. Now authorized in 49 states, TIF is the most widely used economic development tool among the nation's local governments. This report analyzes the relationship between TIF and property values at the local and regional level using economic data from all Wisconsin municipalities between 1990 and 2006.

Key Findings

- *TIF Growth.* TIF utilization in Wisconsin municipalities has grown considerably (400%) since 1990, especially in the southern and central areas of the state. More than one quarter of the municipalities using TIF are now over the statutory TIF value limit.
- *Who Uses TIF?* Medium-sized municipalities (those under 50,000) and those with growing property tax bases are using TIF more often than those with lower rates of property value growth, including Wisconsin's big cities. Although TIF was originally intended to spur economic development in struggling areas, TIF is being used more frequently by communities that are experiencing economic growth.
- *TIF Benefits.* TIF has the potential to be a useful economic development tool for villages and cities in redeveloping "blighted" properties and raising property values. Statewide, for every \$1 increase of TIF value, total property value is estimated to increase by \$6.
- *Differences Across Communities.* Differences in TIF use exist between Wisconsin's largest metropolitan cities and outlying municipalities. On average, outlying localities are at risk of over-utilizing TIF. The model utilized in this report estimates that if the average Wisconsin suburb were to increase its TIF amount by 10% (keeping all other factors constant), then its total property value likely would decrease by 0.2%. Meanwhile, Wisconsin's largest cities appear to under-utilize TIF. Our model indicates that a 10% increase in TIF value would likely increase property values by 2%.
- *Regional TIF Effects.* Within Wisconsin's metropolitan regions, greater TIF investment in suburban communities is likely to impair property value growth in the corresponding central city (i.e. Wisconsin's largest cities). According to our model, a 10% increase in suburban increment value likely would result in an estimated 1.1% decrease in central city property value.

Introduction

Now authorized in 49 states, tax incremental financing (TIF), which allows municipalities to use future property tax revenue to fund development projects, is the most widely used economic development tool among the nation's local governments. However, the impact of TIF on local and regional economies is still debated. Critics argue that TIF harms other local taxing jurisdictions, such as school districts (Weber 2003; Klemaski 1990; Grueling 1987; Hefner et al. 2000), and that there is little or no benefit for property value growth (Weber et al. 2003; Dye & Merriman 2000). Others cite case studies of TIF successes, including blight removal, urban redevelopment, brownfield remediation, and property tax revenue growth. Empirical evidence also is growing in support of TIF's positive influence on property values and job growth (Carroll 2008; Merriman et al. 2008; Man 2001; Man & Rosentraub 1998; Anderson 1990).

In southeastern Wisconsin, the debate is less pronounced. The use of tax incremental financing by Wisconsin municipalities is skyrocketing; TIF use has grown more than 400% over the past 18 years. TIF use in Wisconsin is one of the highest in the nation, and more than one in four municipalities using TIF in Southeastern Wisconsin has hit statutory TIF spending limits (Public Policy Forum 2008).

As a result of the recent economic recession and mortgage crisis, property values have decreased in several Wisconsin municipalities during the past year, interrupting a general upward trend over the past few decades. Consequently, it is particularly important at this time for municipal leaders across the state to understand how the use of TIF may impact property values in their own and neighboring jurisdictions.

As a result of the recent mortgage crisis, property values have fallen an estimated 5% in Milwaukee. With other Wisconsin municipalities experiencing similar declines in property values, it is important for municipal leaders across the state to understand how the use of TIF may impact property values in their own and neighboring jurisdictions.

Using economic data from across Wisconsin, this report explores the relationship between TIF use and economic growth at the municipal and regional lev-

els between 1990 and 2006. We use economic statistical modeling to estimate the average impact of TIF on property values in a way that might be useful for local officials in making economic development decisions. It is important to point out, at the same time, that the findings outlined in this report are only estimates, and that local officials should view the findings in perspective with other factors unique to their community.

What is TIF?

Tax incremental financing is an economic development tool used by local governments to redevelop "blighted" properties. Its basic function is to help generate equity for real estate ventures by leveraging future property tax revenues.

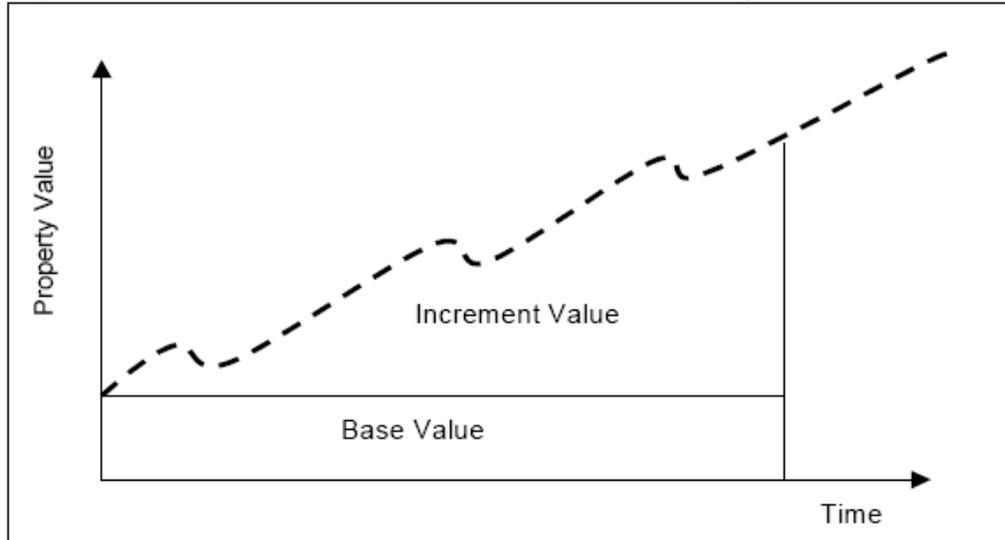
A TIF district is drawn around the site of the proposed development, the assessed base value of the property within the district is frozen, and an estimate about the development's impact on the future assessed value is determined. Based on the projected growth in assessed value within the district, the increased tax revenue attributable to that growth is determined. Those future property tax revenues are then used as up-front equity for the project.

Typically, a municipality will issue general obligation bonds at the beginning of the project and use the funds raised for public infrastructure improvements and/or developer incentives. All new property tax revenue (based on the TIF district's increment value) is then used to pay off the initial bonds, and the TIF district is retired after the investment is repaid. At that time, all property tax revenues from the district return to the general tax rolls. Figure 1 further illustrates how TIF works.

During the TIF period, all incremental property tax revenue, including tax revenue that normally would go to other local taxing jurisdictions, is allocated toward repaying the TIF. For example, school districts, water/sewerage districts, and county governments (as well as the municipal government issuing the TIF) do not receive the incremental property tax revenue from the incremental value within the TIF district until it is retired. Because of this dynamic, representatives from the other local taxing jurisdictions must approve all TIFs within their boundaries. Once the individual municipality approves the TIF, a joint review board made up of all other taxing juris-

dictions affected by the proposed TIF must approve the TIF plan. Once the TIF is retired, all new property tax revenue is distributed to the districts as it would have before the TIF was created.

Figure 1. Illustration of the Tax Incremental Financing Mechanism



Source: Wisconsin Department of Revenue

Limitations of TIF

TIF operates under certain statutory restrictions, and not all Wisconsin municipalities are allowed to use TIF. First, only cities and villages have full privileges with respect to TIF; towns were recently granted limited TIF powers in 2003. Second, TIF districts must be retired within 20-27 years (depending on the type of TIF) of the start date. Third, municipalities are restricted from using more than 12% of their total property value for TIF, although incremental value from within TIF districts can legally grow beyond 12%. The regulations exist to safeguard municipalities from taking excessive risks with TIF, as well as to safeguard communities from overdevelopment.

While the rules above are clear-cut, other regulations are more ambiguous. First, TIF projects are supposed to be limited to those properties a municipality deems “blighted.” A statutory definition of blight exists but is broad and difficult to operationalize. Many communities measure blight with property values. A property can be designated a “blight” when, for example, its assessed value is under 50% of the average municipal market value, it has a history of building code violations, or it is simply underutilized.

In addition, TIF use is limited to those projects that would not be developed “but for” the TIF assistance. In other words, the development would not otherwise occur. The difficulty in applying this rule is that

there is no statutory rubric for evaluating whether or not a development would or would not proceed minus the TIF. Many communities justify using TIF by suggesting that the development as *it currently exists* would not happen but for the TIF. In other words, the development still might happen without the TIF – but not the exact same development. For example, a less expensive building material might be used without TIF support, or the financing package might change.

In light of the perceived broad and ambiguous nature of TIF rules, some environmentalists and urban activists are questioning the use of TIF in Wisconsin. They argue that TIF rules promote much easier development over green spaces and encourage suburban sprawl, both of which are viewed as deleterious for central cities and traditional urban main streets (1000 Friends of Wisconsin 1999). They suggest that broad interpretations of blight designations and “but for” tests allow municipalities to designate almost any property “blighted.” Critics further maintain that changes to the TIF statute in 2003 provide municipalities even greater latitude in creating “sprawl” TIF districts, and that TIF has strayed far from its original intent as an urban redevelopment tool (Maryl 2005).

TIF Utilization Patterns in Wisconsin

Wisconsin passed its first TIF law in 1975. By 2008, there were nearly 1,000 active TIFs worth over \$15 billion in assessed value throughout the entire state. Variation has occurred, however, in terms of where TIF districts are located, how many TIF districts are adopted by municipalities, and the scale of individual TIF districts.

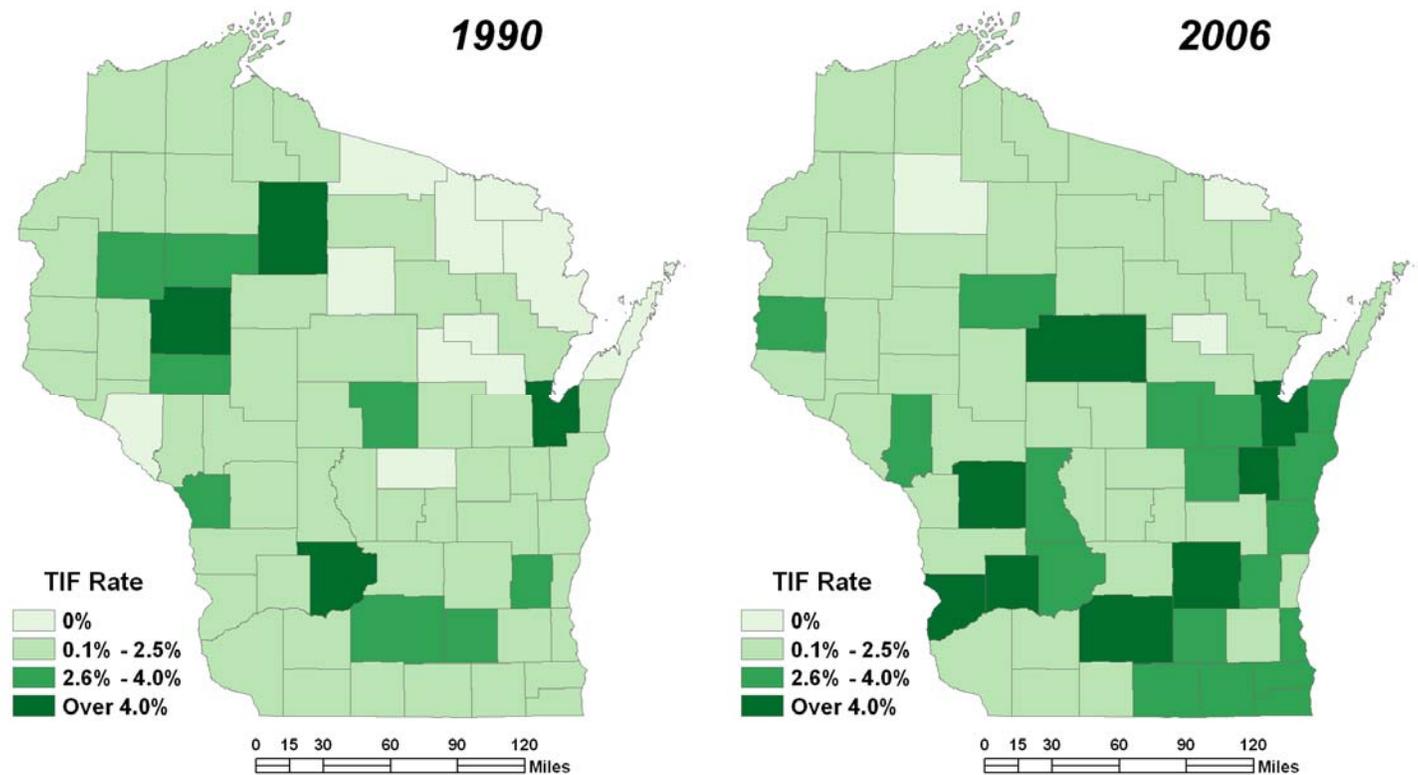
The extent to which a locality uses TIF is measured by its TIF utilization rate. This rate is calculated by summing all TIF increment value within the locality and dividing it by the total assessed value in that community.¹ The utilization rate represents the amount of property taxes dedicated to paying off the municipality's TIF obligations as opposed to the general tax levy. For example, in 2008, the City of Milwaukee's TIF utilization rate was 3.7%, up from 2.1% in 2000.

TIF has become such a popular method of economic development that many communities now exceed their state-imposed TIF limits. Wisconsin cities and villages are not allowed to TIF more than 12% of their total equalized value. The municipality's utilization rate may grow above 12% as property values fluctuate, but it is restricted from further TIF use after hitting the 12% limit. Of the 385 cities and villages using TIF in 2008, more than one in four (27%) now exceeds the state's TIF limit.

For example, the village of Warrens in Monroe County has a TIF utilization rate of 79%, the highest rate in the state. Meanwhile, the village of Ashwaubenon in Brown County (home to about 18,000 residents) contained the state's largest TIF district in 2008, with an individual increment value over \$420 million. Ashwaubenon officials recently retired the state's largest TIF at the end of 2008 and since have adopted two additional districts, one near Lambeau Field and the other over farmland in the southwestern quadrant of their municipality, putting their TIF utilization rate at 19%. For better or worse, these high levels of TIF use (especially in smaller communities) suggest that TIF has moved beyond its original intent of redeveloping blighted, urban properties and is now a core strategy of smaller but growing communities.

TIF utilization rates also can be calculated by county and used to track rate changes over time throughout the state. Figure 2 presents a map of TIF use by

Figure 2. County TIF Utilization Rates in Wisconsin



Source: Center for Urban Initiatives & Research, University of Wisconsin-Milwaukee

¹TIF Utilization Rate can be calculated in two different ways. The first method is to divide total increment value by total property value of the municipality, county, region, or state. The alternative is to divide total increment value by *eligible* property value. For example, some estimates exclude townships (since they are not legally authorized to use TIF) as well as those cities and villages that have not used TIF. This report uses the first method of calculating TIF utilization.

county between 1990 and 2006 in Wisconsin. Two major findings emerge. First, TIF use has increased dramatically in the state (as indicated by deeper colors in the 2006 state map than in the 1990 map). The state's total value of TIF increment jumped from just under \$3 billion in 1990 to more than \$13 billion in 2006. In 1990, there were 10 counties that did not use TIF, but only three such counties in 2006.

Second, TIF use was most concentrated in the southern and central regions of the state in 2006, seemingly in the metropolitan counties with higher populations. In 1990, TIF was much less concentrated in any one particular region and more scattered throughout the state. In southeast Wisconsin, TIF use was relatively low compared with other areas of the state. Crawford County in western Wisconsin leads the state in countywide TIF utilization with a rate of 7.1%.

Figure 2 is limited in that it does not account for individual variation with respect to each Wisconsin *municipality*. For example, while the overall Milwaukee County TIF utilization rate seemed relatively low compared with the rest of the state, the City of Milwaukee's utilization rate was 3% in 1990, dropped to a 20-year low of 1.3% in 1997, and returned to a 20-year high of 3.7% in 2008.

In the pages that follow, we analyze how changes in municipal TIF use have affected economic development within municipalities and regions. In particular, we seek to determine whether and to what extent TIF impacts property values.

Who Uses TIF?

Identifying TIF patterns across the state does not answer the question of which types of municipalities are creating TIF districts. Is it small communities or large cities? Are TIF districts created by municipalities that have large or small property value bases? Are they being created by those that have stagnant property value growth or high property value growth over the years?

Several major variables were analyzed in order to determine which communities are more likely to create TIF districts, including type of municipality, population, population growth, total property value, and property value growth.² We investigated data from 1990-2006. Each variable was analyzed to reveal whether it was related to a municipality being more or less likely to create a TIF district. Every variable was found to either positively or negatively impact a municipality's likelihood of creating a TIF district.

Note on methodology

Statistical analyses in economics and political science often use multiple regression analysis to determine the independent impact of one variable on another (dependent) variable. It does so by measuring the variation of the dependent variable in response to the variation of the independent variable. The impact of the independent variable is then calculated as a function of the dependent variable, seen in the model below. Regression analysis also controls for the impact of other variables.

$$EAV \leftarrow \alpha + \beta_1 TIF + \beta_{2,\dots,N} \text{Control Variables} + \varepsilon$$

Regression analysis estimates the impact of each individual variable, its statistical significance, and the overall model fit. In this report, multiple regression analysis is used to estimate the impact of TIF values on property values. Different regression techniques are utilized in different sections of the paper and are noted in footnotes. Regression results for each model are excluded from this report but are available upon request.

Coefficient elasticity estimates are also calculated to predict to what extent increases or decreases in TIF levels (such as TIF) would impact property values. This is calculated as the value of the partial derivative of the equation evaluated at the sample mean. An estimate can then be made about the potential impact of a 10% increase of TIF on property values, in terms of a percentage increase or decrease. *Again, since the coefficient elasticity figure is calculated using averages, individual municipalities are cautioned from using these statistics in evaluating TIF projects.*

²This paper utilized binomial logit regression in this section of the analysis, with a dichotomous dependent variable measuring whether the municipality has a TIF utilization rate over 0%. The independent variables include: population, population growth, total property value, property value growth, and a dummy variable for whether the municipality was a city (0 = no, 1 = yes). All variables were statistically significant at the $p < 0.001$ level, and the chi-squared test was $p < 0.000$.

Our statistical analysis indicates that, everything else being equal, cities are much more likely than villages to use TIF. In addition, bigger municipalities – in terms of population – are more likely than smaller ones to do so. However, a difference exists in the frequency with which mid-size and larger municipalities use TIF: medium-sized municipalities (between 5,000-50,000 residents) use TIF at a higher rate than larger cities (over 50,000 residents).³ Also, municipalities experiencing rapid population growth are more likely than those experiencing slow population growth to adopt TIF.

The findings regarding property values (defined here as total municipal property value) are particularly interesting. We found that municipalities with higher total property values use TIF *less* than lower valued municipalities. However, the higher the rate of growth in a municipality’s property values, the higher the probability that it has adopted TIF. In other words, big, slow-growth communities, such as Milwaukee or Green Bay, use TIF less than their smaller and medium-sized counterparts like Glendale or Ashwaubenon. The findings suggest that economically-stagnant municipalities are not utilizing TIF as much as growing communities.

The City of Glendale’s use of TIF to support the recent redevelopment of Bayshore Mall is a noteworthy example. While Glendale’s population actually declined since 1990 to fewer than 13,000 residents, its existing property value base was comparatively high, and its property value base had continued to grow over the years. In 2008, its TIF utilization rate exceeded 22%, compared with a 3% rate in the much larger city of Milwaukee.

As a reference, Table 1 shows the variables analyzed in this section of the study along with each variable’s overall impact on a municipality’s probability of adopting TIF. Green cells containing a “+” sign mean that the variable increases the likelihood that a municipality will use TIF. For example, cities, compared with their village and town counterparts, are more likely to use TIF. Thus, the impact cell has a green “+” sign. A cell with a red “-” sign indicates that the variable in question decreases the likelihood of using tax incremental financing.

Table 1. Impact of Various Municipal Variables on Likelihood of TIF Use

Variable	Definition	Impact
Cities	Cities, as opposed to villages and towns	+
Population	Bigger municipalities (population)	+
Population Growth	High population growth municipalities	+
Total Property Values	Higher value municipalities (total property values)	-
Property Value Growth	High property value growth municipalities	+

The findings in this section point to a high rate of TIF use in suburban Wisconsin communities with relatively healthy economic foundations, not those communities with more sluggish local economic growth. It calls into question whether TIF is creating a competitive disadvantage among municipalities. Is it possible that excessive TIF use by some municipalities can hurt the economic development of others? It is first necessary to explore the individual impact of TIF *within* municipalities.

Municipal-Level Impact of TIF

This section first looks at the overall impact of TIF use on property values. Then, differences across municipalities are investigated. Finally, we examine municipalities’ TIF levels from a standpoint of allocative efficiency in order to determine whether it is possible for cities to over- or under-utilize TIF.

We developed a model using panel data of nearly all 1,800 of Wisconsin’s towns, villages, and cities between 1990 and 2006. Economic and demographic data was obtained from the Wisconsin Departments of Administration (DOA) and Revenue (DOR), the University of Wisconsin-Extension’s Local Government Center, the United States Census, McGraw-Hill, Inc., and several other sources. Most of the information regarding each municipality comes from the individual municipalities, as reported by statute to the DOR in the annual Financial Report Forms. Random confirmation of municipal expenditures

³The difference between rates is most likely due to relatively comparable project costs. A smaller municipality may max out its TIF limit in pursuing a project, while a similar project in a larger city would not put that city over the TIF limit. The important difference here is that medium-sized cities tend to pursue TIF at a higher rate than larger cities.

were made via interviews with the appropriate budget or elected officials. All figures have been adjusted for inflation into 2006 dollars with the Consumer and Producer Price Indexes.

The economic indicator we wish to explain (i.e. the dependent variable) in this analysis is total municipal property values, as measured by equalized assessed value (EAV). EAV captures the value of all taxable property within municipal boundaries, including residential, commercial, industrial and agricultural properties. The main independent variable is total municipal increment value, or the value within all TIF districts in a municipality that has been generated subsequent to the creation of each TIF district.

In the model, EAV is led by one year in order to capture any potential causal link over time. That is, the impact of TIF in 1990 cannot realistically impact EAV in the same year, since property values are calculated at the beginning of the year and TIF operates throughout the year. The model thus must consider the potential impact of TIF in one year on EAV in the following year. For example, the model estimates the average impact of TIF in 1990 on EAV in 1991.

Table 2. List of Independent Variables Included in the Analysis

Variable	Definition	Source
Population	Total municipal population	WI Dept. of Administration
Tax Rate	Municipal property tax rate per \$1,000 of assessed value (mill rate)	WI Dept. of Revenue
Capital Expenditures	Total municipal capital expenditures	WI Dept. of Revenue
Operating Expenditures	Total municipal operating expenditures	WI Dept. of Revenue
New Residential Construction	Total new residential construction starts in thousands (by county)	McGraw-Hill, Inc.
New Non-residential Construction	Total new nonresidential construction starts in thousands (by county)	McGraw-Hill, Inc.
Per Capita Income	Per capita personal income (by county)	WI Dept. of Revenue

The model looks at these relationships between 1990 and 2006.

In order to determine the exact relationship between TIF and EAV, and not imply a spurious relationship between the two that is actually due to other factors, it is important to include several control variables in the analysis. These controls include a variety of socioeconomic and financial variables commonly associated with property value growth (Deller & Maher 2005): population, local tax rate (mill rate), capital expenditures, operating expenditures, value of all private residential and nonresidential (e.g. commercial, industrial, hospital, etc.) construction costs (by county), and per capita personal income (by county).

The result is a complex picture of TIF use by Wisconsin municipalities.⁴ The findings reveal that TIF has a strong correlation with economic growth, as measured by property values, but the findings are not the same across all municipalities. All else being equal, for every dollar increase in TIF increment, EAV has the potential to grow by over \$6. However, in Wisconsin's largest metropolitan cities (or central cities),⁵ every dollar increase in TIF translates into more than \$13 of EAV growth.

It is important to note that the findings reported in this analysis are only estimates of average TIF effects. By no means should local officials use the estimates in this report in calculating the potential TIF effects specific to their communities. Further research could provide more reliable estimates for individual municipalities.

Efficient TIF Use

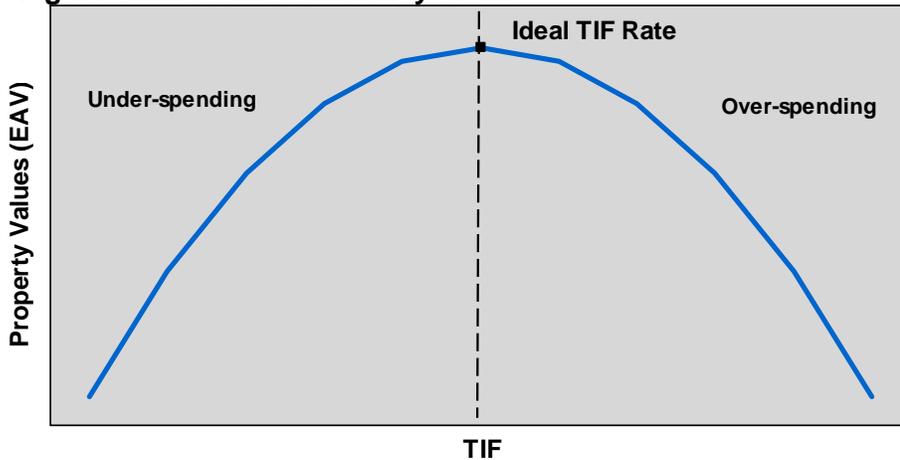
Although the basic model above shows that, on average, TIF has the potential to stimulate property value growth, it is still possible that the level at which a community uses TIF might change its economic benefits. That is, if TIF is used too much or too sparingly, will its impact on property values change?

In exploring this possibility, we turn to Brueckner (1979, 1982, 1983) and Deller & Maher (2005), who

⁴Generalized least squares (GLS) regression with correlated disturbances is used in this section, with the overall model meeting statistical significance ($p < 0.00$). Full regression results are available upon request.

⁵Wisconsin's central cities are the most populous cities within the state's metropolitan statistical areas (MSAs), as defined by the US Census, including: Milwaukee, Waukesha, West Allis, Racine, Kenosha, Madison, Janesville, Beloit, Green Bay, Fond du Lac, La Crosse, Wausau, Sheboygan, Oshkosh, Appleton, and Eau Claire.

Figure 3: Allocative efficiency of TIF



offered economic models of property value maximization that take into account public spending levels, referred to here as Brueckner effects. Their models suggest that municipalities have ideal rates at which they spend in such areas as operating and capital expenditures. This report builds on those models by analyzing how municipalities allocate TIF resources. The central question becomes: are municipalities using TIF optimally with respect to property values?

Theoretically, a municipality, like a business, might overspend in the pursuit of its goal of property value maximization. In other words, an assumption is made here that local officials make decisions that will maximize property values. Sometimes mistakes (or decisions with unintended consequences) are made that negatively impact property values. The same relationship theoretically holds for TIF. A smaller community may over-TIF simply by leveraging too much in relation to its property tax base. Consider an inverted “U” curve relating TIF levels with property values (see Figure 3). The ideal rate of spending for any given municipality exists at the very top of the curve, where property values are at their maximum. Under- and over-spending thus can result in a situation where property values are not maximized. Municipalities that are under-utilizing TIF can be found left of the peak, while those over-using TIF are found to the right of the peak. Note that while TIF use may be either under or over the peak rate, a positive impact on property values still is possible.

To incorporate Brueckner effects and determine whether Wisconsin municipalities use TIF optimally, three new public spending variables are added to the model: TIF increment squared, operating expenses squared, and capital spending squared. The analysis reveals that small and medium-sized Wisconsin municipalities tend to over-utilize TIF.⁶ If the average Wisconsin municipality were to increase its TIF amount by 10% (keeping all other factors constant), then its EAV would be estimated to decrease by

0.2%. Contrary to the conventional wisdom about TIF, this finding suggests that several Wisconsin communities may be using TIF past its optimal level, and that this has the potential to be detrimental to their property values.

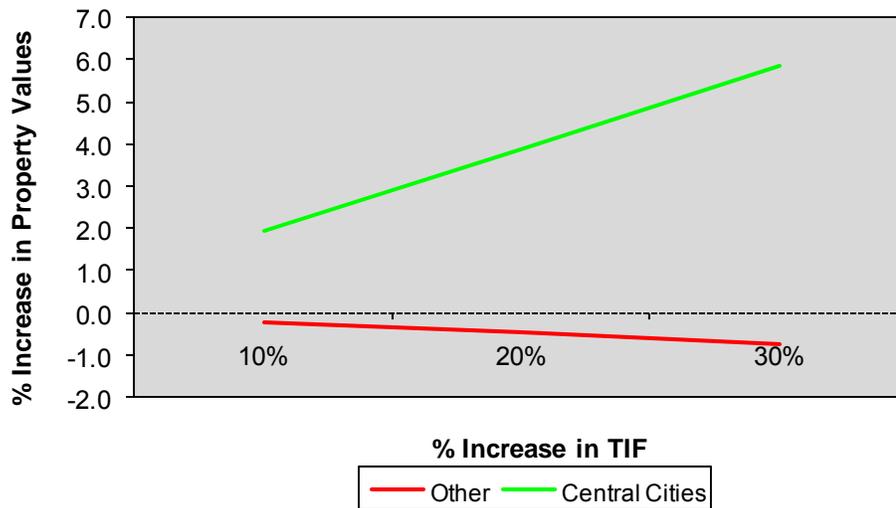
However, a key difference is found again between Wisconsin’s largest metropolitan cities (referred to here as “central cities”) and all other municipalities. Central cities seem to have not yet reached their equilibrium limit, as opposed to other municipalities. If central cities were to raise their TIF increment totals by 10%, their expected growth in property values would be 2%.

Figure 4 displays the comparison of TIF effects between central cities and all other municipalities. It shows that, all things being equal, as central city TIF values increase, aggregate property values also experience growth. TIF effects actually are negative for all other communities. *Thus, excessive TIF use (by non-central city municipalities) is creating a scenario which may be impairing property value growth in the state.*

Why is there a difference in TIF effects between central cities and other Wisconsin municipalities? The outlying municipalities may be interpreting the “but for” and “blight” requirements differently. These communities might be creating TIF districts that meet the state’s TIF law requirements but are not actually blighted, or perhaps the market would have developed the project without TIF assistance. In re-

⁶A generalized least squares (GLS) regression analysis is conducted and a coefficient elasticity statistic is created for TIF effects for the average Wisconsin municipality as well as for central cities. Again, regression results are available upon request.

Figure 4. Comparison of TIF Effects Between Central Cities & All Other WI Municipalities



ality, their growth in property values is likely due to causes other than TIF, such as private investment and/or other kinds of public spending. Also, property value growth within TIF districts may be drawing development away from non-TIF areas (Merriman et al. 2008). For many communities, TIF may not be the economic development tool local officials perceive it to be; it may not be the best method of stimulating property value growth. At the very least, local property values, especially of suburban and rural/small town areas, may benefit from more scrutiny in adopting future TIF districts.

Regional Impact of TIFs

Given our findings regarding the difference between central cities and outlying municipalities, it is logical to inquire whether TIF use among outlying municipalities may be impacting central city property values. Specifically, when outlying municipalities in Wisconsin utilize TIF at higher rates, is there a measurable impact on central city property values?

Using the same dataset as in the earlier analysis, we

investigate Wisconsin's major regions. Wisconsin regions are defined here as census-designated Metropolitan Statistical Areas (MSAs). Because only Wisconsin data is available, the analysis is limited to the eleven MSAs whose boundaries are completely within the state.⁷ La Crosse and Kenosha are therefore excluded from the model.

The dependent variable in this section is total central city property values, or central city EAV.⁸ The major explanatory variable is TIF value in all municipalities within the MSA but excluding the central city or cities (i.e. suburbs). EAV is again led

by one year to capture the causal impact of suburban TIF rates on central city EAV. The same control variables, including Brueckner effects, are included in the analysis as in the earlier section to help mitigate the chances of other factors influencing central city property values.⁹

The findings reveal discernable regional effects of TIF. For every additional dollar increase in suburban TIF increment, central city EAV is estimated to decrease by \$2.16. Or, put another way, our analysis suggests that a 10% increase in suburban increment value would result in an estimated 1.1% decrease in central city property value.

Why would suburban TIF use affect Wisconsin's central cities? Theoretically, higher TIF utilization in suburban municipalities may create an artificial market that attracts development away from central cities, similar to how high TIF use in municipalities negatively impacts non-TIF area property values (Merriman et al. 2008). Instead of capital being invested in existing real estate, development capital is invested elsewhere. And as the demand for existing

⁷The eleven MSA regions include Appleton, Eau Claire, Fond du Lac, Green Bay, Janesville, Madison, Milwaukee-Waukesha-West Allis, Racine, Sheboygan, and Wausau. Wisconsin also has four MSAs overlapping its borders with other states which include central cities not included in this analysis; these include: La Crosse, Minneapolis-St. Paul-Bloomberg, Duluth, and Chicago-Naperville-Joliet. Omitting these four MSAs unfortunately excludes the central cities of La Crosse and Kenosha.

⁸The definition of central cities used in this paper is somewhat arbitrary. Central cities are the most populous city within the MSA, the other cities mentioned in the MSA name, as well as other big cities in Wisconsin that characterize typical urban areas (only Beloit is included in this category).

⁹Panel-corrected standard errors (PCSE) regression is used in this section, as opposed to GLS in other sections, because fewer observations are included in the dataset.

property in Wisconsin's big cities falls, so does property value. Utilizing TIF to promote real estate development outside of the central city thus has the potential to depress the value of central city property. Further research can help determine which metropolitan regions might be caught in this inefficient situation.

Key Findings

This report explored the impact of tax incremental financing in Wisconsin's municipalities using a property maximization model. A few key findings stand out in the analysis:

- *TIF Growth.* TIF utilization in Wisconsin municipalities has grown considerably since 1990, especially in the southern and central areas of the state. Additionally, more than one quarter of the municipalities using TIF are now over the statutory 12% limit, limiting their future use of TIF.
- *Who Uses TIF?* Medium-sized municipalities (those under 50,000 population) and those with growing property tax bases are using TIF more often than those with lower rates of property value growth. Although TIF was originally intended to spur economic development of struggling areas, TIF is being used more frequently by communities that are already experiencing economic growth.
- *TIF Benefits.* TIF can be a useful economic development tool for individual villages and cities in redeveloping "blighted" properties and raising property values. Holding other factors constant, every additional dollar of TIF increment within a community is associated with an increase in property values of \$6.
- *Differences Across Communities.* Differences in TIF use exist between Wisconsin's largest metropolitan cities and outlying municipalities. On average, outlying localities use TIF to the detriment of their property tax base. This report estimates that if the average Wisconsin municipality (excluding central cities) increases its TIF amount by 10% and keeping all other factors constant, then its EAV will decrease by 0.2%. Other factors such as private investment, city service spending, population and personal income explain growth in these communities.

However, Wisconsin's central cities continue to benefit from TIF investment in terms of their aggregate property values.

- *Regional TIF Effects.* Within Wisconsin's metropolitan regions, greater TIF investment in suburban communities impairs property value growth in the neighboring central city (i.e. Wisconsin's largest cities). Not only does extensive TIF use reduce property value growth in small- and medium-cities, but it does so in the surrounding municipalities as well. The model in this report predicts that, within a single Wisconsin region, a 10% increase in suburban increment value is estimated to result in a 1.1% decrease in central city property value.

Policy Options

Based on the general findings of this report and our predictive models, which provide evidence about TIF's relationship with property values, several policy options can be considered. Further research on TIF's impact on other economic indicators, such as job creation, unemployment, and personal income growth, might further help our understanding of this complex economic development tool and how best to regulate its use.

- *Greater scrutiny by municipal governments.* The evidence presented in this report suggests that while TIF districts may offer sizable equity leverage for real estate developments in many communities, municipalities may benefit from greater scrutiny of TIF-backed projects. Adopting formal TIF guidelines that are rooted in community-based goals is one alternative. Cities such as Minneapolis, Chicago, Madison, and now Milwaukee have either formal or informal guidelines for TIF.

Municipalities also may benefit from restrictions on certain TIF developments (for example, those developments that occur over greenfields or primarily agricultural land). Limiting TIF support for objectively-identified blighted properties and projects that would not occur "but for" the TIF would be one such tactic.

Similarly, local officials may benefit from third party analyses of redevelopment plans submitted to them for consideration of TIF assistance.

Many large cities hire consultants to review TIF applications to help them determine objectively whether the proposal meets the statutory “blight” and “but for” requirements, or if there are other options available to the local officials to help the development occur without TIF.

- *Changes in state TIF law.* Wisconsin’s TIF law does not currently offer a clear, objective measure for how communities should assess whether developments meet an appropriate “blight” definition. In contrast, the State of Minnesota defines blight more concretely than Wisconsin. Minnesota restricts TIF use to blighted areas in which: (1) over 70% of the district is occupied by buildings, streets, utilities, and similar structures, and (2) over 50% of the buildings within the district are structurally substandard (Minn. Stat. § 469.174). With TIF use increasing for development of open, “greenfield” properties in Wisconsin, local and state officials may wish to consider whether restrictions similar to Minnesota’s would benefit Wisconsin communities.
- *Reduce TIF value limit.* In light of our models’ predictions that extensive TIF use may actually impair property value growth within municipalities and that extensive TIF use within regions can impair property value growth in central cities, policymakers might consider reducing the state’s TIF value limit from its current 12% level to the pre-2003 level of 7%. Another policy alternative would be to scale the TIF value limits to minimize risk for small and medium-sized municipalities. For example, villages and cities under 50,000 might be given a 5% limit while central cities might be assigned a 7% limit.

It should be noted that some smaller communities are arguing for lifting the TIF cap. They argue that their communities reach the limit too easily because of their smaller property base. Our analysis, however, suggests that a lower TIF cap may be appropriate to reduce the risk of smaller communities using TIF in excess, which has the potential of impairing both their own and neighboring central city property values.

- *Prioritize central city development.* Our analysis indicates that Wisconsin’s largest cities may be

negatively affected by excessive TIF use among their neighboring communities. Blighted and vacant properties in central cities, which may remain undeveloped due to TIF projects in outlying areas, negatively impact central city economies. While there are several causes for disinvestment in Wisconsin’s largest cities, this report provides evidence that one such cause may be excessive TIF use in smaller, neighboring communities.

Regional growth can be enhanced by creating an accessible inventory of blighted, vacant central city properties and prioritizing their redevelopment above TIF use in outlying communities. In this vein, a potential policy alternative would be a change in the state TIF law to require municipalities to ask TIF applicants to make assurances about alternative (e.g. central city) site searches and/or proposals.

- *Regional oversight.* Because of the potential for excessive TIF use to impair property value growth regionally, policymakers may wish to consider mechanisms to increase scrutiny of TIF projects from a regional perspective. According to the state’s TIF law, all TIF projects must receive prior approval by a joint review board of affected local taxing jurisdictions. An alternative would be a revision in the state law that requires county government, a Metropolitan Planning Organization (MPO), or some other existing or newly created regional entity to review and approve all TIF proposals within their boundaries.

In this regional context, new controls might be considered to ensure appropriate scrutiny by county governments of their involvement in supporting TIF projects. In a few cases, municipalities have sought county guarantees of larger TIF deals in order to reduce the risk associated with such deals. Given our earlier findings that excessive TIF use has the potential to impair county property value totals just as much as municipal-level property values, county officials may benefit from greater scrutiny of future proposals to support outlying TIF projects via financial guarantees.

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