A Duration Analysis of Tax Increment Finance District Lifespans

The Case of Wisconsin

August 28, 2011

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A Catalyst for Development

Economic development is a worthy goal for any community. Well-developed areas claim many benefits including increased tax revenues, a healthy economic environment and a generally high quality of life. However, there are many instances in which economic development is either slow or stagnant. Areas lacking in development often need a catalyst to jump-start the process. The arrival of a new business, for example, may lead to additional businesses wishing to locate close to the first, as seen in retail stores and car dealerships. Improvements to a location tend to have positive effects on the value of adjacent locations. For municipalities, catalysts for economic improvement ultimately lead to increased property tax revenues due to the value they create.

Communities have a tool at their disposal to facilitate such catalysts, called a tax increment finance (TIF). A TIF allows a community to subsidize an improvement using the increase in tax revenue it expects to see as a result of the improvement. For example, assume a community collects $2 million in property taxes every year. The community wishes to use a TIF to apply a $1 million subsidy to the construction of a new retail location. The community expects to collect $2.1 million in property taxes each year after the improvements positively impact property values. The additional $100,000 tax incre-

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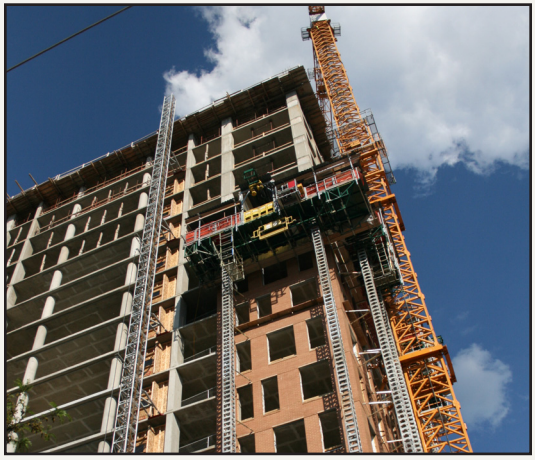
FUNDING PROVIDED BY LINCOLN INSTITUTE OF LAND POLICY



ment collected in property taxes is then used to pay for the initial $1 million TIF over a number of years. Once the value of the TIF has been paid, the tax increment can then be applied to local services.

A significant body of research examines the degree to which TIF promotes economic development. Generally, the faster the rate of growth within a tax increment district (TID), the sooner the revenues generated from the increment will be returned to the municipality's general fund (as well as to the overlying jurisdictions). In Wisconsin, these jurisdictions include school districts, county governments and technical college districts. As a result, revenues can meet the broader needs of the community. TID closure returns a significant portion of the tax base back to supporting the general funds of the municipality and other overlying jurisdictions. Understanding the factors that contribute to TID success (and ultimately closure) can project future revenues.

The lifespan of a TIF is dependent on the tax increment resulting from a local investment. Estimating the change in property tax revenue proves to be a challenge, as many factors outside the control of a community have an impact on economic development. As the nation emerges from its real estate crisis, it is clear that property value recovery will be slow. Further, in those communities where TIF is used as a development tool, it appears that the growth of increments will be much slower than anticipated. This in turn suggests that TIF lifespans will have to be extended, perhaps for many years in order for the increment to cover the cost of the initial TIF investment.

Using detailed data on TIDs in Wisconsin over the 1988-2009 period, we evaluate the factors that determine TIF lifespans. Evidence suggests TIDs introduced in the wake of a recession have longer lifespans, relative to TIDs created before or after a recession. TID lifespans are also influenced by factors such as the city share of the aggregate tax rate of all overlying jurisdictions, TID type (commercial, manufacturing, residential), and number of competing TIDs in the municipality.

TIF and the Business Cycle

An issue confronting those striving to understand the effectiveness of TIF policy is the potential importance of timing the creation of a new TID over the business cycle. The lifespan of any given TID depends on a variety of factors, only some of which are within the local authority's control. During periods of recession, the growth of property value is flat at best in subsidized TID areas, and may even decline. Thus, the growth path of property value within TIDs is, to some degree, dependent on broader economic circumstances.

A TID formed at the peak of a business cycle is less likely to experience significant appreciation early in its life; it will require a longer period over which to generate an increment sufficient to pay back the initial investment in a TID. Conversely, a TID formed during a period of growth might realize relatively rapid rates of appreciation and will require a shorter period to pay back the initial investment.

As the country emerges from the recent real estate crisis, communities across the country must not only react to the sudden decline in property values, but also to the reality that projections about future growth suggest an anemic and slow recovery. As a result, communities can expect to see longer TID lifespans.

In the context of the most recent recession, anemic growth in TIDs driven by national forces can exacerbate an already difficult fiscal environment as it may prolong the duration of TIDs and thus the period over which the local governments do not have access to that portion of the tax base for general purposes. As a result, broader economic forces may lead to outcomes unanticipated by consultants, planners and local officials.

In some cases, a TID might not generate an increment sufficient to cover the investment, thus risking failure. In a reaction to the bursting of the real estate bubble, policymakers in the State of Wisconsin recently altered TIF laws, allowing municipal authorities to extend the payback period to 40 years, and/or to apply the excess revenues produced by successful districts to those that have been less successful.

Determinants of TID Lifespans

To determine the factors that affect TID duration, we turn to a hazard analysis. This analysis includes 362 TIDs created in Wisconsin between 1988 and 2009, although only the closure of TIDs created in the earlier years of the data set can be observed. National trends, community characteristics and specific TID characteristics are considered as factors of TID duration.

We observe one mild recession in 1991. To capture the effect of a TID's creation in the wake of the recession, a dummy variable indicating if a TID was created within two years immediately following the recession is included.

Turning to community-specific factors, the tax rate may impact TID lifespans. An extensive body of research has shown that all else equal, higher tax rates tend to deter development. Thus, communities with relatively high tax rates may have lower rates of property value appreciation in the jurisdiction as a whole, as well as within TIDs. On the other hand, if the subsidy is sufficient to generate a significant increment, a higher tax rate applied to the increment could generate more revenue than in communities with lower tax rates. The effect of the tax rate is therefore uncertain.

Finally, the characteristics of the TID may also determine the length of the pay-off period. Two factors are considered. First, when a municipality decides to use a TID for the first time, it may select properties that have the greatest potential pay-off in terms of property value growth. If this is the case, TIDs adopted early might generate a higher increment, and close successfully in a relatively short period of time. Along the same lines, TIDs introduced in subsequent years might require a longer payoff period because they

had lower potential returns. On the other hand, over time TIDs have become more common such that use has increasingly extended beyond just redevelopment. Thus, it is possible that TIDs created in later years might have shorter lifespans. The type of TID may also influence the TID property value growth. Commercial TIDs have higher returns than residential or manufacturing TIDs. Thus it is possible that commercial TIDs will have shorter lifespans, all else equal.

Empirical Analysis

To estimate the lifespan of a TID given its unique characteristics, we turn to a method called duration analysis. Detailed information on TID comes from the Wisconsin Department of Revenue. The average lifespan of TIDs in the sample is about 12 years. However, there is considerable variability which provides an opportunity to examine the underlying characteristics that determine TID closure.

Three equations were constructed for the duration analysis. The first includes two control variables (population and property value per capita) along with two community policy variables (property tax rate and the city's share of the aggregate property tax rate). The second equation builds on the first, adding a variable indicating a recession on the opening of the TIF. The third equation builds on the first two, adding TID-specific characteristics, including the type of TID (residential or commercial) and the TID rank (the number of the TID in question divided by the total number of TIDs in the district). The results for the third equation are as follows (coefficients above 1 indicate that a positive change in the variable will lengthen the life of the TID):

Consider first the coefficients on property value, property tax rate, and the city share of the overall tax. We find statistically significant coefficients on per capita property value, indicating that TIDs have shorter lifespans in municipalities with higher property values. However, the magnitude of the coefficient is small and it is not always significant. The tax rate variable is not statistically significant either. Property tax rates are not an important determinant of TID lifespans. However, TIDs in cities that have a larger share of the overall tax rate tend to have shorter lifespans, as expected. This result suggests that municipal authorities are willing to accept a longer payback period if the TID investment is more heavily subsidized by the other overlying jurisdictions.

The recession variable shows that TIDs introduced in the years following the 1991 recession (1991-1993) tend to have longer lifespans. Relative to TIDs opened prior to or after the recession, TIDs that opened in the wake of the recession lasted about a third longer relative to expansionary TIDs. For the average TID

in the sample, this increases the lifespan from about 12 to 17 years. This result suggests that TIDs opened during the wake of the most recent recession are likely to have significantly longer durations than those created in prior years. As noted earlier, this is only a rough approximation of the effect of the recession on survival time. Further, the results might be sensitive to the period defined as being a recession. There is a challenge in getting the timing of the recession correct such that changing expectations are considered. Also considered are the lagged effects on links between changes in GDP, employment/unemployment, and property values, as well as the lag between property value changes and assessment changes.

TIDs introduced first within a community tend to have longer lifespans than later TIDs (TID Rank). One interpretation of this result is that in the later years municipalities possessed more TID site selection experience. They also used TID to enhance development in places that generate returns sufficient to recover the TID investment more quickly. Finally, commercial and residential TIDs (relative to manufacturing TIDs) had shorter lifespans.

A question of interest is the degree to which TID creation over the business cycle affects lifespan. This analysis suggests that TIDs opened in the wake of the Great Recession are likely to have significantly longer durations than TIDs created in previous years. Given current predictions about the slow property value recovery, it appears that TID increments in general will lag behind original and anticipated projections. If, as a result, it is likely that a number of TIDs will languish for years, the 2010 extension of the allowable TID life was necessary and warranted.

Conclusions

These finding offer new insight into the factors that determine TID lifespans. Serving as the first study to focus specifically on this issue, this study offers a general contribution to the existing body of research on tax increment finance. In addition, this research also informs policies in Wisconsin and in other states where there is a concern about languishing TIDs in the wake of the Great Recession. In 2010, Wisconsin policymakers expanded the allowable lifespan of TIDs to 40 years if the TID met the specified criteria. While this study does not offer estimates precise enough to inform the appropriate length of the expansion, it does provide evidence that TIDs created during recession periods tend to last longer than those created during periods of growth. In this context, these findings affirm legislators' concerns.

Other states may also want to consider expanding the allowable lifespan

of TIDs in order to avoid placing undue hardship on municipalities. On the other hand, unnecessary TID lifespan extensions can cause strain on the overlying jurisdictions as it prolongs the period during which their tax revenues are diverted to TID debt repayment. When first introduced in Wisconsin, TID debt and interest was required to be paid and TID property value returned to the general fund tax base within 20 years. Today, for some TIDs this period can last up to 40 years. The challenge is in creating a policy where extensions are made available only to those TIDs that are truly in distress. Otherwise, TID captures resources for a longer period during which non-TID programs such as public schools, public safety, and public recreation suffer.

This research presents evidence showing that TIDs opened in the wake of a recession tend to have longer lifespans. TIDs opened during the relatively small recession of 1991-1992 have lifespans that are about six years longer, on average, than those opened prior to or after the recession. Given the severity of the most recent recession, and its effects on property values that are expected to continue for years to come, it is expected that TIDs created during this period will languish for years. Given that revenues from the property value growth are not likely to improve very much in the years to come, extending the allowable life of TIDs may have been necessary to avoid placing an additional layer of fiscal stress on already highly stressed cities. However, it is important to acknowledge a trade-off: The other overlying jurisdictions must manage affairs for a longer period with a narrower tax base.

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