

## Current Issues in Practice

# The Fiscal Impact of Local Property Tax Abatement in Indiana

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*Property tax abatement is widely used by local governments in the U.S. with the goal of attracting and retaining businesses. This analysis examines the efficacy of such abatement using data on Indiana counties from 2002 through 2011. The analysis suggests that local tax abatement tends to be correlated with higher effective tax rates in a county. These correlations exist in the absolute size of abated property relative to the existing assessed value of property taxes and in the frequency of use of tax abatements. In addition, there is not a strong relationship between abatement and the growth of assessed value over time. The implication is that, on average, the use of abatements as a tool for growing a property tax base is not particularly effective. These findings cast doubt on the ability of Indiana's system of property tax abatements to increase the tax base or control property tax rates.*

Keywords: Property Taxes, Tax Abatement, Local Government, Indiana

This article contains data and analysis on Indiana's local property tax abatement from 2002 through 2011. Earlier work on Indiana tax incentives (Faulk & Hicks, 2013) focused primarily on state tax incentives. The magnitude and relatively poor performance of local tax incentives in Indiana as reported in that study motivated this more in-depth treatment of these incentives. That report included estimates that Indiana's counties have increased their abatement to as much as \$8 billion in property value annually, representing a large share of total assessed valuation growth and that these abatements perform poorly as job creation tools. This analysis provides a more in-depth analysis of local property tax abatement first by explaining the scope and type of local tax abatements in Indiana, which is followed by a brief review of existing research on local tax incentives in Indiana and elsewhere. This is followed by a history and analysis of the fiscal impacts of tax abatement offered by local governments in Indiana.

### Existing Local Tax Abatement in Indiana

The legislature has authorized several types of tax abatement for use by local governments. These include abatement of real and personal property taxes for qualifying firms. There are also credits on personal income tax for firms investing in specific locations or activities (see table 1). Data on the magnitude of these tax abatements in any given year are provided at the county level by the Department of Local Government Finance (DLGF). These abatements have the clear intent of incentivizing firms to locate (or remain) within the geography in which abatements are offered. While the most often-stated purpose appears to be local job creation, the eventual increase in taxable property is often part of the consideration for offering limited-term property tax abatement. Though other reasons may exist for attracting firms to a region, the bulk of the existing analysis of the issue focuses on these two items.

In Indiana, local property tax abatement is granted for new construction or improvements to real property in an economic revitalization area (ERA), enterprise zone (EZ), or newly installed personal property in an ERA or EZ. For each of these forms of abatement, assessed value is reduced by the amount of the abatement. The value of the abatement in lost tax revenues is the

**Table 1.** Local Tax Abatements in Indiana, 2013

Tax Abatements	Description
Enterprise Zone Deductions	Deductions for personal income tax on one half of income earned up to \$7,500.
Personal Property Business Investment Deductions	Deductions for existing businesses against personal income tax for qualified investments.
Personal Property Business Veteran Deductions	For qualified veteran-owned businesses.
Personal Property Economic Revitalization Deductions	Abatements on all new personal property (up to 10 years).
Real Property Business Investment Deductions	Deductions for existing businesses against personal income tax for qualified investments.
Real Property Economic Revitalization Deductions	Abatement value is a percentage of the increase in assessed valuation that results from rehabilitation or redevelopment.

Source: Department of Local Government Finance (2012)

tax rate multiplied by the reduction in assessed value, which is not available in the reported data. Property tax abatements shift the property tax burden onto other property owners, including other businesses or residents. In Indiana, business property tax abatements are approved by local city and/or county councils for a maximum of 10 years for real property and personal property in ERAs and up to four years in an EZ. Abatement that is granted for multiple years is reduced each year according to a sliding scale. For example, real property improvements receiving a 10-year abatement would be able to deduct 100 percent of the AV of the improvement in the first year, 95 percent of the AV of the improvement in the second year, 80 percent in the third year, etc. Personal property has a slightly different abatement schedule. (These abatement schedules are shown in tables 2 and 3.) Businesses in manufacturing and research and development industries are eligible to apply for abatement in an ERA. Newly installed manufacturing or research and development equipment are the types of personal property eligible to receive abatement.

Businesses applying for abatement must file a statement of benefits form to apply for abatement and a compliance form for each year that abatement is received. The statement of benefits (application) form includes information on employees and salaries resulting from the project, estimates of the cost and assessed value of proposed property improvements, and estimates of solid and hazardous waste conversion. The annual compliance forms that are filed by the business include information on actual employment, salaries, project costs, assessed values, and waste conversions. The actual amounts are compared with the estimates that were provided in the original application. Once granted, it is rare for a local government to adjust or revoke abatement even if there are discrepancies between the promised benefits initially stated in the application and the actual benefits shown on the annual compliance form.

**Table 2.** Economic Revitalization Area Deduction (Abatement) for Real Property

Year	1	2	3	4	5	6	7	8	9	10
1st	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
2nd	0%	50%	66%	75%	80%	85%	85%	88%	88%	95%
3rd		0%	33%	50%	60%	66%	71%	75%	77%	80%
4th			0%	25%	40%	50%	57%	63%	66%	65%
5th				0%	20%	34%	43%	50%	55%	50%
6th					0%	17%	29%	38%	44%	40%
7th						0%	14%	25%	33%	30%
8th							0%	13%	22%	20%
9th								0%	11%	10%
10th									0%	5%
11th										0%

**Table 3.** Economic Revitalization Area Deduction (Abatement) for Personal Property

Year	1	2	3	4	5	6	7	8	9	10
1st	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
2nd	0%	50%	66%	75%	80%	85%	85%	88%	88%	95%
3rd		0%	33%	50%	60%	66%	71%	75%	77%	80%
4th			0%	25%	40%	50%	57%	63%	66%	70%
5th				0%	20%	34%	43%	50%	55%	60%
6th					0%	25%	29%	38%	44%	50%
7th						0%	14%	25%	33%	40%
8th							0%	13%	22%	30%
9th								0%	11%	20%
10th									0%	10%
11th										0%

**Literature on Local Tax Incentives**

Local governments have long used property tax abatement to promote business expansion and attraction. These incentives are part of a large body of research examining the relationship between tax incentives and economic development, the most germane of which were reviewed in Faulk and Hicks (2013). This research analyzes the role and impact of various tax incentives, and we recommend the reading of that analysis. Here we focus on reviewing those studies that focus on local property tax abatement. The existing research focuses heavily on the determinants of abatements (what leads to their use) and the impact of those abatements.

*Determinants of Property Tax Abatements*

Several studies have revealed that locations suffering from economic distress offer higher levels of property tax abatements. Byrnes, Marvel, and Sridhar (1999) examined the determinants of the generosity of property tax abatements to businesses in Ohio’s enterprise zones based on location characteristics and firm characteristics. They examined 859 EZ abatement contracts in 230 school districts in 1993 and 1994, finding that school districts that enter into more abatement contracts, districts with lower house values, and districts with higher business millage rates all offer more generous abatement. They also found that firms with higher credit ratings and firms that provide more new jobs receive more generous abatement offers from the district than firms proposing to retain jobs. Byrnes et al. (1999) concluded, “...cities do seem ‘rational’ in their negotiations with businesses, offering more favorable tax abatement packages

to 'better' firms. ... it appears that Ohio cities that must overcome negative location characteristics offered higher abatements" (p. 817).

Anderson and Wassmer (1995) focused on the timing of abatements, analyzing when abatements are first utilized by local governments following their approval at the state level. Using a hazard model and 1974–1992 data for 112 municipalities in metropolitan Detroit, they reported that the median household income and the property tax price of local public services (median house value/total property tax base) are the primary determinants of the timing of abatement offers (length of the non-abatement spell) and that first-time abatements are offered in response to offers in other jurisdictions (emulation effect). Jurisdictions with higher median household income and higher property tax price wait longer to grant abatement, which suggests that distressed areas are more likely to offer abatements.

Reese (1991) studied abatements in Michigan cities with populations greater than 10,000 people, asking whether more prosperous cities are more likely to grant abatements and investigating the political factors that influence abatements. Using data from the 1970s and early 1980s, she found that cities with larger or growing populations, higher income levels, and more new development grant more abatements. This suggests that growing, rather than distressed, areas may offer more abatements. She also reported that "... professionalism in the economic development arena, noncompetitive mayoral elections, and reformed governments" (p. 30) are associated with lower abatement levels.

In a more recent study, Cassell and Turner (2010) examined the generosity of property tax abatement offered to firms in Ohio's enterprise zones and found that, as more local jurisdictions have been authorized by the state to offer abatements, the abatements have become more generous, indicating an increased level of competition among local governments to attract and retain businesses. They also found that distressed communities offer larger incentives than affluent areas.

### *Effects of Property Tax Abatements*

Research on property tax incentives has examined the impact on employment, investment, property value, and other indicators. Much of the analysis to date shows that abatement has limited effects. Some examples specific to Indiana include a study done by Papke (1994), which showed that EZ designation in Indiana decreased unemployment claims in the zone by 19 percent and led to increases in the value of firm inventories by 8 percent. Coffin (1982) examined whether tax abatements offered in Indianapolis have led to an increase in new investment or simply altered the location of investment to areas that qualify for tax abatements. He estimated that property tax abatement reduces the investment costs on structures by 1.88 percent to 7.85 percent, depending on use. However, he drew no firm conclusions about other impacts of tax abatement.

Wassmer (1994) examined the effects of five types of incentives—industrial property tax abatement, commercial property tax abatement, Downtown Development Authority (DDA), tax increment financing (TIF), and industrial development bonds—for 112 cities in the Detroit metropolitan area using data at five-year intervals from the mid-1900s through the 1980s. He found that the effect of incentives depends on how development is measured and the type of incentive used. Industrial property tax abatements "can induce an elastic response in real manufacturing value added" if local conditions that "repel industrial firms are large enough" (p. 11). This suggests that distressed areas are more likely to offer abatement to compensate for negative local characteristics so that abatement increases manufacturing value added.

Another issue is the proposition that local governments offer abatement as a result of competitive pressure from other local governments. Wassmer and Anderson (2001) examined the effect of various economic development incentives on manufacturing property value, commercial property value, the residential employment rate, and the poverty rate using panel data (1977, 1982, 1987, 1992) for 112 cities in the Detroit metropolitan area. They reported that local offers of manufacturing property tax abatements had a positive influence on manufacturing property value in 1977—the first year examined. In other years, the impact was negative or not significant, indicating that, as more local governments began to offer abatement, the impact diminished. Commercial property tax abatements exerted a negative effect on commercial property values in each of the four years examined. The authors suggested that this relationship results from communities experiencing decreases in local property values offering more abatement.

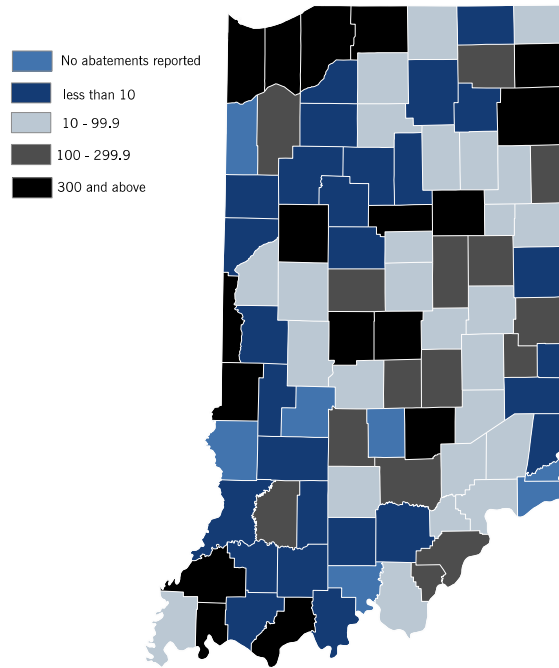
Studies of enterprise zones (EZs) are of interest because one of the primary benefits of locating in an EZ is property tax abatement. The empirical literature on the effectiveness of enterprises zones is mixed. Bollinger and Ihlanfeldt (2003) examined the effect of fiscal and transportation policies on employment in enterprise zones. In particular, they examined the distribution of employment in Atlanta neighborhoods, as defined by census tracts, that are in commercial-industrial enterprise zones, housing enterprise zones, or that qualify for job tax credits. Using panel data for the years 1985 through 1997, the authors found that these policies are positively related to the neighborhood's share of employment.

In contrast, Lambert and Coomes (2001) provided a detailed analysis of Louisville's enterprise zone. They used a quasi-experimental analysis comparing various socioeconomic indicators for Louisville's EZ with similar regions in the same county and found that the Louisville EZ is not particularly effective. Population, employment of zone residents, and the number of owner-occupied housing units decreased after controlling for national job growth and industrial concentrations. Employment growth did increase in the area around the airport, which experienced a major increase in federal, state, and local funding to expand the airport.

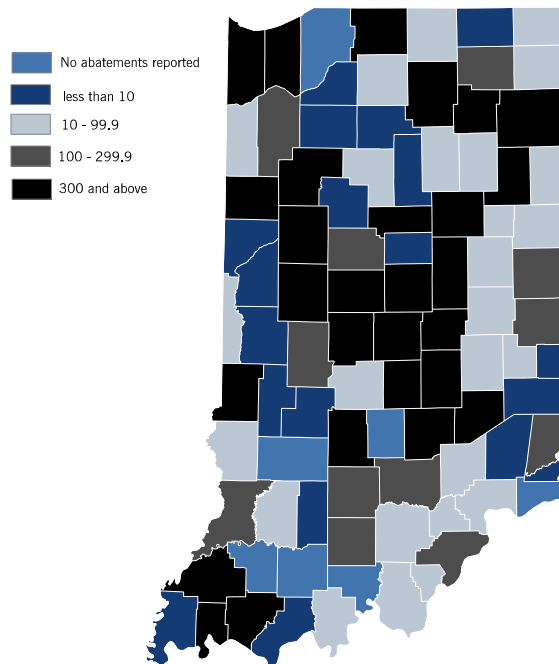
Papke (2000) used annual data for 1981–1982 through 1991–1992 for zones and non-zones before and after EZ designation to analyze the effect of EZs on inventory, machinery, equipment, and real estate values. Using a fixed effects model, she found that EZs have no significant effect on the value of real estate, while the value of inventories increased, and the value of machinery and equipment decreased. Her estimates suggest that inventory investments may have substituted for investment in machinery and equipment. Another point that she makes is that the EZ inventory tax credit is the most valuable incentive. In 2000, Indiana began a 10-year phase-out of the tax on inventories.

In a series of studies, Engberg and Greenbaum examined the effects of enterprise zones on various economic indicators. Engberg and Greenbaum (1999) concluded that zones do not increase housing values on average, but in tight housing markets they do have a positive impact. Greenbaum and Engberg (2004) determined that, on average, zones have little effect on employment, number of business establishments, shipments, payroll, or capital spending. However, analysis of gross and net changes shows that zones have a positive effect on new establishments and a negative effect on previously existing establishments.

**Figure 1. Assessed Value of Abated Business Property (millions of \$), 2002**



**Figure 2. Assessed Value of Abated Business Property (millions of \$), 2011**



**Table 4.** Indiana’s Abatement History

Year	AV of Abated Business Property		Reduction in Property Tax Revenue due to Abatement		Abatement as a share of the Net Tax Levy	
	5% Lower Bound (\$M)	100% Upper Bound (\$M)	Lower Bound (\$M)	Upper Bound (\$M)	Lower Bound	Upper Bound
2002	316.6	6,331	9.6	191.9	0.2%	3.6%
2003	506.1	10,123	9.7	193.7	0.2%	3.8%
2004	373.5	7,471	7.5	150.6	0.1%	2.8%
2005	360.9	7,218	7.6	152.0	0.1%	2.7%
2006	357.8	7,155	7.9	157.4	0.1%	2.6%
2007	425.2	8,503	8.9	178.7	0.1%	2.8%
2008	441.6	8,833	8.1	162.8	0.1%	2.8%
2009	435.8	8,717	9.5	189.1	0.2%	3.3%
2010	419.8	8,396	9.4	187.5	0.2%	3.2%
2011	414.2	8,284	8.6	171.2	0.2%	3.2%

Notes: Authors’ calculations using data from the Indiana Department of Local Government Finance (DLGF). M=Million

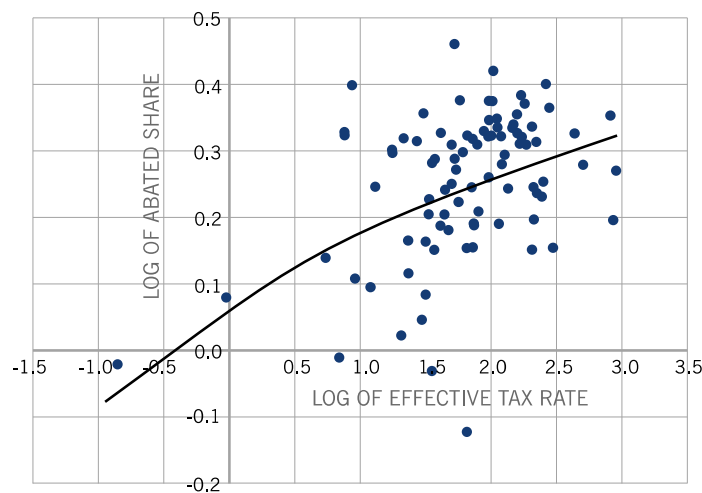
**Incentive Use in Indiana**

The research discussed above addresses several questions of interest for Indiana taxpayers. Among them are the size and scope, geographic variability, and potential impact of incentives. The data available for this analysis does not provide an unambiguous accounting of the size and value of abatements. The best that is possible is an estimate of the scale of abatements at the county level. The major impediment to a full accounting of abatements is that they are persistent, lasting for as many as 10 years. Because our data are only available from 2002 onward, we do not have a lengthy period from which to assess the full size of abatements. The data available from DLGF is the assessed value (AV) of property, which has been approved to receive real or personal property tax abatement. The value of the abatement depends on where each property is on the abatement schedule, the share of real and personal property that is abated and the property tax rate of the business. We do not have data on any of these and therefore provide two estimates that represent the upper and lower bounds for the level of property tax abated during the study period.

Table 4 illustrates the estimated value of abatements during our sample period. We provide two estimates that are the lower and upper bounds based on the extremes in the sliding scale abatement schedules (tables 2 and 3). The upper bound estimate is calculated under the assumption that 100 percent of AV is abated, and the lower bound is calculated under the assumption that 5 percent of AV is abated. The actual level of abatement is between these two extremes. Based on the data available, we believe that actual abatement is in the middle of these extremes because the aggregate level of AV eligible for abatement in the state has decreased since 2008. This suggests more business property is coming off of the abatement schedule than is being added, though this varies considerably by county. Figures 1 and 2 show the distribution of assessed value for abated business property in Indiana counties in 2002 and 2011.

To calculate the reduction in property tax revenue due to abatement, we multiply the assessed value of the abated property by the effective (average) property tax rate in each county. This is an imperfect measure of the taxable value of the abated property for several reasons. First, the new property growth may, in some years, have exceeded budget growth restrictions and so new property growth may, in some years, have exceeded budget growth restrictions and so would have simply reduced the rate for existing property taxpayers. Second, some of this property would not have been constructed without the abatement. Third, the actual rate for each piece of

**Figure 3.** Abated Share of Assessed Value vs. Tax Effective Rate, 2011



property will vary depending on the location of the property within the county, so the effective tax rate for the county would not be a fair representation of the actual tax rate on a piece of property. However, we believe this would most likely understate the tax rate because the effective tax rate calculation involves all property classes. For these reasons, this measure of potential tax losses associated with abatements is an imperfect measure of the actual lost taxes, which would otherwise be available to a community. Nonetheless, the magnitude of the value of the abated property provides an estimate of the level of economic activity that local governments have exempted from taxes.

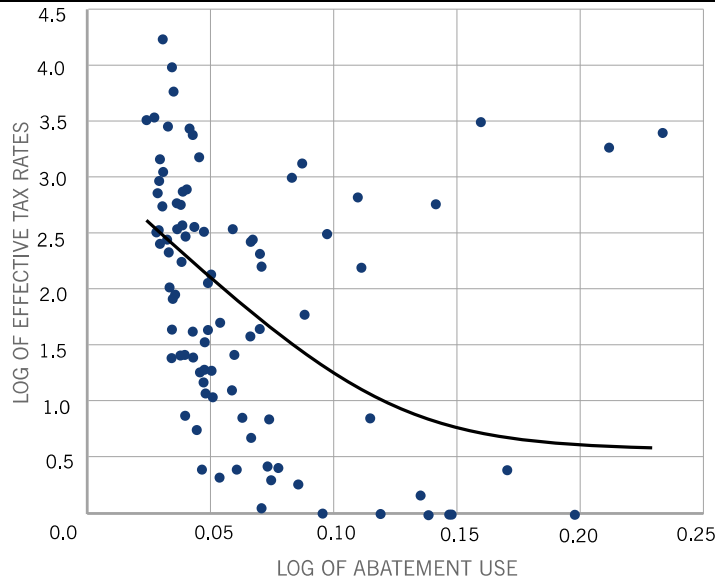
Given the peculiarities of Indiana's local property tax calculation methods, along with a significant change in assessment procedures and property tax caps, it is not directly clear whether the abatement had any effect on overall tax rates for existing residents. Moreover, at least in some instances, the business receiving the tax abatement would alter its investment decision. This could have resulted in choosing an alternative location or a reduced level of investment. In such circumstances, the abatement would not be highly correlated with lost local tax revenue. So, a simple accounting of abated property and effective tax rates cannot provide a direct estimate of fiscal impacts.

In order to understand how abatements may have influenced non-abated taxpayers, it is necessary to measure the sensitivity of effective tax rates to abatement activity. If effective tax rates are uncorrelated with abatement levels, then we can confidently conclude that abatement activity has not influenced overall tax burdens in a county. However, if abatements and tax rates are correlated, then we can potentially draw two different inferences regarding abatements and taxes. Either abatements increase local tax rates, or local governments with higher effective tax rates must engage in more abatement to lure businesses to their communities. To conduct this analysis, we place both the effective tax rate and the total abated share of assessed valuation in each county into the same scale through a logarithmic transformation. These are plotted with the best-fitting statistical line, as shown in figure 3.

This graphic strongly suggests a relationship between effective tax rates and the level of abatements within a county. A fitted statistical line reveals more detail on this relationship. A simple regression analysis of this type finds that each doubling of the abated share of assessed valuation increases the effective tax rate by more than 12 percent. As expected, this effect is



**Figure 4.** Effective Property Tax Rates and Use of Abatements, 2011



nonlinear, in that the impact on tax rates dampens as total abated share rises. This is expected because property tax caps may limit effective tax rates in many locations.

Another issue with local tax abatements is the frequency or consistency of their application. Counties that use abatements sparingly may have a single, large project, examples of which may include a large automobile assembly plant or wind turbine site. Other communities may abate a nearly constant level each year. The question of interest with respect to the frequency or “lumpiness” of the use of abatements is whether or not they are correlated with the effective property tax rate in a county. If the frequency of abatements is positively correlated with effective tax rates, then we have further evidence that the use of abatements increases the tax rate paid by the remaining residents and businesses of a county.

We use the coefficient of variation in abatements for each county from 2002 through 2011 to measure the frequency or “lumpiness” of abatement use. The coefficient of variation is a measure of variability that can be compared across counties. A low coefficient of variation implies a fairly uniform use of abatements, while a high coefficient of variation means that there are fewer, larger abatements—an occurrence that might be thought of as “lumpy.” For example, a county that had a one-time abatement for a new wind turbine farm would have a high coefficient of variation, while a county that abated \$3 million to \$5 million each year would have a low coefficient of variation. Both of these examples are drawn from actual experience in Indiana’s counties. To perform this analysis, we plot each of Indiana counties’ effective tax rates (vertical axis) against the coefficient of variation in abatement use (horizontal axis), as shown in figure 4, and perform traditional statistical analysis evaluating the correlation between tax rates and the application of abatements. The graphic portrays a strong correlation between these two factors. The relationship suggests that infrequent use of abatements is strongly correlated with lower effective tax rates, and high use (a low coefficient of variation) is correlated with higher effective tax rates. Counties that regularly use abatement have higher tax rates. Again, we are not able to distinguish whether these counties with higher rates offer more abatement to attract businesses or if the use of property tax abatement is causing rates to increase.

The data on tax abatements in Indiana from 2002–2011 provides some insight into the use and effect of abatements on tax rates. In particular, there is compelling evidence that the size and

uniformity of tax abatement use has a negative impact on property tax rates in Indiana counties. To test this further, we also perform a joint statistical test, where effective tax rates in 2011 are a function of past abatement (UPPER BOUND), the coefficient of variation of abatement, and the interaction of these two measures of abatement use. That test supports what we report in figures 1 and 2 but suffers the same problem of having an unclear direction of causation. So, it may be that places with higher taxes find that the use of abatements offsets some of the negative consequences of higher rates, a finding reminiscent of Byrnes et al. (1999).

In our recent study (Faulk & Hicks, 2013), we reported that, in a model of the impact of abatements at the state and local level, local tax abatements contributed to roughly one job for every \$30,000 in abated property taxes (UPPER BOUND). This type of modeling is useful because it permits us to isolate the effect of local tax abatements from other confounding effects such as existing industrial structure, existing tax rates, changes to state tax abatements, or recession-related activity. This level of impact on local employment is much lower than most contemporary estimates of tax incentive effects.

The role of tax abatements in affecting future total assessed property value also may affect assessed value in a county. For example, a county may abate taxes for an assembly plant with the expectation that a number of suppliers will locate regionally and therefore add to the countywide property tax base. To test this, we performed a basic statistical test comparing the growth of total assessed value to the growth of abated property value from 2001 through 2011. We find that, for every 1 percent increase in abatements in a county, the property tax base rose by 0.2 percent, which is a small impact. We have encountered no other research on the role of abatements in affecting the growth of assessed value, but it appears that this growth is largely the result of the actual abated property and not the additional assessed value from other businesses.

Our findings are consistent with those studies performed by Engberg and Greenbaum. This interpretation would be consistent with our findings regarding the effect of abatements on property tax rates. These findings of higher tax rates associated with more liberal use of abatements, along with the relatively expensive job creation effects, argue for considerable scrutiny of Indiana's local tax abatement policies and practices.

### **Summary and Recommendations**

The research presented in this study and in the much more detailed analysis of state tax incentives found in Faulk and Hicks (2013) finds that local tax abatement use tends to be correlated with higher effective tax rates on existing households and businesses within a county. These correlations exist in both the absolute size of abated property relative to the existing assessed value of property taxes and in the frequency of use of tax abatements.

We report findings that suggest that, as a job creation tool, local tax incentives in Indiana appear to be minimally effective. We also report that there is not a strong relationship between abatements and the growth of assessed value over time. The implication is that, on average, the use of abatements as a tool for growing a property tax base is not particularly effective in the short to intermediate term.

These findings cast significant doubt on the efficacy of Indiana's system of property tax abatements in creating jobs, increasing the tax base, or controlling property tax rates.

Consequently, we recommend several actions to be undertaken by various stakeholders in Indiana.

We recommend that a comprehensive review of data on local tax abatements be undertaken. In particular, more detailed data on the size and focus of these incentives should be made publicly available in a centralized location, such as on county-specific websites. The state should aggregate and report this information in an electronically readable form along with other local tax information. As noted above, the abatement information currently available is not sufficient to perform more detailed analysis of sub-county effects.

We recommend that a significant study of local tax abatements be undertaken, which involves not only the types of aggregate estimates provided or reviewed in this study, but also case studies of individual counties and projects in order to assess their effectiveness. This study also should involve the full gamut of efforts to better understand abatements, from county experience and anecdote, to a more involved technical analysis of local abatements and their effect on Indiana communities, businesses, and taxpayers.

### **Disclosure Statement**

The authors declare that there are no conflicts of interest that relate to the research, authorship, or publication of this article.

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### **Author Biographies**

**Michael Hicks** is the George and Frances Ball distinguished professor of economics and the director of the Center for Business and Economic Research at Ball State University. He previously served on the faculty of the Air Force Institute of Technology's Graduate School of Engineering and Management and at research centers at Marshall University and the University of Tennessee. Hicks' research interest is in state and local public finance and the effect of public policy on the location, composition, and size of economic activity. He has authored three books and more than 50 scholarly papers and is best known for his work on tax incentives and the impact of Walmart.

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