

ANALYSIS OF THE COSTS AND BENEFITS OF PROPERTY TAX INCENTIVES

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Summary of Key Findings

Revenue and Cost Impacts of Incentives

This study is in response to a request by Columbus City Council, with the support of Franklin County Auditor Michael Stinziano, to provide an assessment of property tax abatements. The centerpiece of this study is the creation of a model to estimate the benefits and costs of approving specific property tax incentives.

Incentives are pervasive: all 50 states and 95% of cities offer some sort of incentive at a total state and local cost of as much as \$80 billion. Property tax abatements reduce a specified percentage of the real property tax liability of a new or remodeled improvement. Tax Increment Financing (TIF) arrangements divert the property's tax payments into a special fund that is used to offset the cost of improvements that benefit the property or its vicinity.

The primary argument made in favor of incentives is that the "lost" tax revenue is not truly lost. Assuming that the development would not have occurred without the incentive, the tax on the increase in property value that is abated or diverted would not have been received in any case. Further, the enhanced property value will be fully subject to tax when the abatement expires.

Nearby property values can also increase as a result of a site being improved. Further, by incenting a business to locate in an economically challenged area, it can provide lower-skilled workers with suitable employment opportunities. The development of Rogue Fitness in central Columbus has had this effect. The increased economic activity of the user of the abated development also leads to additional activity of local suppliers and service providers in what are called multiplier effects.

If incentives affect location, they can result in companies choosing suboptimal locations and reduce economic output. However, the incentives offered in nearby municipalities especially can impact location decisions and result in significant disadvantages to a jurisdiction that decides not to grant them. But the impact of incentives offered by a jurisdiction in a different region will matter much less than available workforce, nontax business costs, infrastructure, available and affordable real estate, and state and local regulations.

An abatement may not have been truly necessary in attracting a development; the development might have occurred whether the abatement had been offered or not. This implies the criticism that tax incentives tend to redistribute public revenues to the private sector. There is evidence that this may often be the case.

Awarding incentives to some projects and not others involves municipal officials picking winners and losers. If this is done carelessly or on the basis of political preference rather than for valid economic reasons, the benefit of the abatement policy will be squandered. Further, given the short-term perspective of many business executives of publicly held companies whose main concern is with profitability in the current quarter and current year, a 10-year or 15-year incentive may be no more impactful than a much shorter one. Despite this, a shorter incentive may still be viewed unfavorably compared to a longer one offered by a competing jurisdiction.

Because incentives tend to be awarded to larger companies, they can crowd out business start-ups. This problem is of particular concern in central Ohio, where small business measures are much worse than average.

Are Incentives Really Necessary?

The critical assumption underlying the awarding of an incentive is that the development would not have occurred had the incentive not been granted. But there is no way for municipalities to know with certainty that the incentives were truly necessary. An incentive granted to a firm that was planning to locate in the municipality in any event is a deadweight loss to the municipality.

Although a tax incentive is unlikely to attract a firm from a distant region with more favorable economic and environmental characteristics, the characteristics of Columbus suburbs are similar to those of Columbus. Thus, the availability of incentives has a much larger effect within the region. This is illustrated with a case study of the development of the Rickenbacker area.

Principles of Incentive Evaluation

The benefits of a successful incentive are income tax revenues, the discounted value of the abated tax increment once the incentive expires, and in some cases the indirect and induced activity that the operations of the business creates.

These are benefits only if the incentive itself actually attracts the jobs. One way to address this is to multiply the benefits and costs by the percentage likelihood that the abatement is needed. Because this is unknowable, the break-even percentage can be calculated, and it can be subjectively determined whether the likelihood is greater or less than this percentage.

Any company will create supplier (indirect) and household (induced) impacts. These are estimated by an economic impact model, but indirect and induced impacts are a net benefit only if the potential relocation is to or from the Columbus MSA. A company locating anywhere within the MSA will provide indirect and induced benefits to Columbus that are identical or nearly so.

New construction and/or remodeling expenditures on the project provide direct, indirect, and induced earnings impacts for the Columbus MSA. Asset transfers, such as land and building purchases, create no economic activity aside from minimal real estate commissions and title and legal fees. Consequently, these are ignored. Furniture, fixture, and equipment expenditures are also ignored because they are assumed to be sourced from outside of the Columbus MSA, and thus have no impact.

Incremental property tax revenues are also a benefit to the school district and Franklin County. The county also receives sales taxes; these revenues are estimated from earnings.

Granting an abatement facilitates development of the parcel in the near term, which means that the parcel cannot be developed at a later date. It is assumed that if the abatement is not granted, the land remains undeveloped for five years and is then developed with an identical project with an identical abatement. Employment is the same, but the average wage is assumed to be equal to the Franklin County average, \$56,374. The effect is to benefit projects with relatively high wages in the calculations and penalize those whose wages are relatively low.

Some of the analyzed projects also involve a Tax Increment Financing (TIF) arrangement. These apply only to municipal and school district property taxes. However, the city has a policy of forwarding all school TIF revenues to the affected district. TIFs often enable construction expenditures; the income and sales taxes from these activities are an additional benefit.

The evaluation is a cost-benefit or net present value analysis. The present value of the benefits less the present value of the costs is the Net Present Value (NPV). This value is a rough estimate of how much better off or worse off the entity is today as a result of granting the abatement.

Factors that improve the desirability of a given abatement include the following:

- A greater likelihood that the abatement makes a difference in the applicant's decision to locate in Columbus.
- Higher construction expenditures and a greater share of any TIF devoted to construction and other expenditures that generate economic activity, employment, and earnings.
- Higher average wages, particularly if those wages are greater than the county average.
- The lack of favorable near-term alternative uses of the site.

Tax Incentive Programs in Area Municipalities

Tax incentive policies are discussed in 15 suburbs and nearby cities. Some of these, such as Groveport and New Albany are frequent users of incentives, while a few, such as Reynoldsburg and Upper Arlington, use incentives rarely or not at all. Unabated tax rates are also presented for 26 taxing districts in the region. Columbus has neither the highest nor the lowest tax rate in the region. Many Franklin County suburbs have higher rates, but rates are generally lower in the outlying counties – some markedly so.

Insights from Incentive Best Practices and Policies Elsewhere

Although this study argues that tax abatements in nearby municipalities are far more important in influencing location than are those in other regions, incentive policies elsewhere can be studied to identify best practices and policies that could be adapted for Columbus.

Pew Charitable Trusts (2017) proposed a three-step process for evaluating incentives: (1) Make a plan; (2) Measure the impact; (3) Inform policy choices. Questions to consider in this framework include: Which of these programs is the most effective at creating jobs and payroll? What are the benefits, costs, and tradeoffs of the incentive? What are the implications of this analysis for policy?

A survey of the economic development policies of 20 larger cities in Ohio, the Midwest, and around the country brought to light a number of innovative policies and approaches to economic development incentives. A number of the cities, including Austin, Indianapolis, Grand Rapids, and San Diego, are placing an emphasis on equity and inclusiveness in designing and implementing economic development policies and incentives.

Cleveland offers incentives to entrepreneurs wishing to establish for-profit urban farms. Cleveland and Washington, DC, target incentives to local retailers. Any locally owned, non-chain retail or restaurant business is eligible for Cleveland's incentive; the Washington incentive is available to supermarkets locating in food deserts. Retail incentives are rare because it is commonly argued that these businesses do not result in a net increase in jobs or wealth. However, these businesses improve neighborhoods and trap dollars that would leave the local economy were they to be spent at chains.

One municipality reconsidering incentives is Philadelphia. The city implemented a generous tax abatement program in 2000, but is currently in the process of scaling it back because of the dramatic increase in property values in the city. It is argued that the incentive is no longer necessary.

Conclusions and Recommendations

There are both benefits and significant costs in granting incentives. There are also costs in not doing so. However, this does *not* mean that every competitor's incentive bid should be matched. It depends on the benefits and costs of doing so, and with the recognition that the applicant may well be deliberately playing one municipality off against another to maximize the incentive.

A city that is easier to work with attracts more projects. It is essential that city personnel make the process of developing a project as straightforward and timely as possible, and that they continue to commit to providing outstanding customer service.

It is also important to focus tax incentives on the projects with the highest probability of success. These are generally projects in industries that are regional economic drivers – those that are more concentrated and with greater long-term growth.

TIF agreements divert funding from other municipal needs. Doing so can convey significant benefits to the site and its neighborhood, but it must be recognized that the TIF diverts funds from other worthy purposes. Rather than automatically granting TIFs for the maximum 30 years, it may be a good idea to set a shorter term with the understanding that the agreement will be evaluated and extended if there is a need to do so.

It is important to conduct a serious analysis of incentives before they are granted and check after the project commences to ensure that targets are being met. Fortunately, Columbus carefully evaluates projects before the fact, and created and retained employment, payroll, and investment are analyzed annually by a Tax Incentive Review Council.

Insights gained from the evaluation of incentive policies in 20 cities in Ohio and across the country include an emerging emphasis on equity and inclusiveness in formulating and implementing these policies. Although retail incentives are rare, they can be used to build a stronger urban infrastructure, and to prevent the leakage of sales dollars and impact to the distant headquarters of retail and restaurant chains.

Introduction

This study is in response to a request by Columbus City Council, with the support of Franklin County Auditor Michael Stinziano, to provide an assessment of property tax abatements and abatement policy. The centerpiece of this study is the creation of a model to estimate the benefits and costs of approving specific future incentives, including the possibility of a tax increment financing arrangement accompanying the abatement.

The study begins with an analysis of the benefits and costs of tax incentives on the municipal treasury and the broader community. Next is a discussion of the criticisms of incentives that economists and others have advanced, and whether or not incentives are really necessary at the community level.

These preliminary discussions set the stage for the specification of the cost-benefit model. The model provides estimates of the net present value of a specific incentive for Columbus, the school district or districts, the township (if applicable), and Franklin County and its agencies. The operation of the model is illustrated through 14 diverse examples of incentives that have been approved in the past. The following sections describe tax incentive policies of nearby communities and several communities elsewhere. A series of recommendations concludes the report.

The Benefits and Costs of Property Tax Incentives

Revenue and Cost Impacts of Incentives

A variety of tax-based and non-tax-based incentives are used by states and local jurisdictions as economic development tools to attract new businesses and facilitate the growth of existing businesses. Some incentives, particularly at the state level, are targeted to specific industries such as manufacturing, technology, or filmmaking. Some incentives reduce or eliminate sales taxes; this is an impact to state and county budgets in Ohio, but not those of municipalities. Other incentives may return to the business a share of the income taxes generated by the wages of new employees.

Incentives are pervasive: Jensen (2018) reported that all 50 states and 95% of cities offer some sort of incentive at a total state and local cost of as much as \$80 billion.¹ However, while most governments use incentives, not all do so routinely. In a study of tax incentive use in Michigan, Reese, Larnell, and Sands (2010) found that half of the state's 1,773 municipalities approved fewer than six abatements over their 26-year study period (1980-2006) and only 10% approved more than 46. The most prolific user was the City of Grand Rapids, which approved 522 abatements over the period – one every two weeks. On the other hand, 137 municipalities granted only a single abatement in 26 years. In central Ohio, some municipalities, such as Groveport, make liberal use of incentives while others, such as Reynoldsburg and Upper Arlington, use them only rarely.

This analysis focuses on municipal property tax-based incentives. Property tax abatements reduce a specified percentage of the real property tax liability of a new or remodeled improvement for a specific number of years. Tax Increment Financing (TIF) arrangements do not reduce property tax liability; rather, they divert the property's tax payments into a special fund that is used to offset the cost of improvements that benefit the property or its vicinity. This can be a way to enhance the property's

¹ Bartik (2019), however, estimates the total cost of state and local incentives at \$50 billion. More than one-quarter of these, \$14 billion, are due to local property tax incentives.

suitability for development, such as improving access. A given property can be covered by both an abatement and a TIF. Some abatement agreements include Payment in Lieu of Taxes (PILOT) provisions, whereby some property tax recipients – primarily school districts – are made partly or fully whole with payments equivalent to a share of the property tax that would have been collected on the unabated property. Obviously, this reduces the benefit of the incentive. PILOTS are not used in Columbus.

Property tax revenues support a variety of recipients. In Columbus, these include the city, the Columbus Metropolitan Library, and the Franklin County general fund and various county agencies. These agencies include Children’s Services; the Alcohol, Drug and Mental Health Board (ADAMH); the Board of Developmental Disabilities; Metro Parks; the Columbus Zoo; and Senior Options. But by far the largest recipient of property taxes is Columbus City Schools, which receive more than 70% of the total tax on an unabated commercial property.

The primary argument made in favor of incentives is that the “lost” tax revenue is not truly lost. Assuming that the development would not have occurred without the incentive, the tax on the increase in property value that is abated or diverted would not have been received in any case. Further, the enhanced property value will be fully subject to tax when the abatement expires. TIFs can provide the funds necessary to develop the infrastructure that can make the site usable for development.

There are other potential positive impacts of commercial development that can increase total tax revenues. A new development can increase the values of nearby properties, particularly if the newly developed property cures blight. Previous studies have found that a substantial fraction of the value of a residential property – perhaps 40% to 60% – is a function not of the property itself but of its neighborhood. The development can thus increase property values (and property tax receipts) in the surrounding neighborhood, promote neighborhood stability, and possibly increase employment opportunities for nearby residents. These increased employment opportunities can themselves lead to higher residential property values. Kang, Reese, and Skidmore (2016) found that industrial tax abatements can increase growth of both industrial and residential property values. There were no identifiable impacts of industrial tax abatements on commercial property, however. Some of these commercial properties are occupied by suppliers of the industrial operation; this highlights the tangential nature of indirect property value impacts discussed above.

A related benefit of abatements is that by incenting a business to locate in the central city, it can reduce the spatial mismatch between lower-skilled workers and suitable employment opportunities. As Wassmer and Anderson (2001) pointed out, these workers often live in central cities and inner-ring suburbs, but increasing numbers of lower-skilled jobs are located in outer suburbs. Examples are the distribution jobs at Rickenbacker, in Grove City, and in Madison County, and the Amazon warehouse in Etna Township. Many of these jobs are not accessible by public transportation, the only alternative available to many of these workers. One consequence of the recent closure of the Kroger Bakery on Cleveland Avenue, the 2001 closure of the Timken plant on East Fifth Avenue, and the loss of Columbus Castings, Techneglas, and other manufacturers on the South Side was the elimination of hundreds of jobs that were accessible by COTA. Wassmer and Anderson (2001) argued that although redeveloping a site in the central city is often more expensive than undertaking a greenfield project on the urban edge, the cost of public infrastructure is usually less. It also reduces public costs by decreasing commuting and mitigating sprawl.

The increased economic activity of the user of the abated development also leads to additional activity of local suppliers and service providers in what are called multiplier effects. Suppose an abatement

attracts a distribution warehouse. The warehouse earns revenues that are used to purchase supplies and business services. To the extent that these are provided by local suppliers, they lead to additional local economic activity, revenues, wages, and jobs. These are called indirect impacts. In addition, the employees of both the warehouse and its suppliers use their wages to make household purchases of all kinds, generating what are called induced impacts. Indirect and induced impacts can legitimately be credited to the warehouse because the revenues, wages, and jobs of the warehouse *cause* the indirect and induced impacts, which would not have occurred had that activity not occurred. The increased demand for labor can increase the general wage level through increased labor demand.

Multiplier effects most directly impact income taxes through increased wages; their link to increased property taxes is much less direct. Multiplier effects can increase property values and property tax to the extent that the increased supplier activity, supplier net income, and local wages lead to an increase in commercial development and commercial and residential property values. This impact is most likely to be measurable only in the case of a major new employer.

The increased activity, development, and employment leads to increased income, sales, and property tax revenues, but it also creates public sector costs. The development and additional employees create demands for public safety services (police, fire, and emergency medical services); trash, recycling, and other public services; parks and recreation; road repair and traffic management; and public education. The appropriate measure of these costs is the marginal cost: the cost generated by one additional worker, resident, or household times the number of additional workers, residents, or households generated by the development. Estimating a marginal cost involves separating variable costs – those that increase with an increase in workers, residents, or households – from total costs and converting the marginal cost to a per-person or per-household basis that can be multiplied by the relevant increase. This is necessary because only variable costs, such as the cost of fire and police runs, increases with an increase in population; fixed costs, such as the cost of the Mayor's Office, do not.² In particular, note that the widely-reported expenditure per pupil statistic is not a valid measure of the marginal cost of public education because it includes both variable and fixed costs.³

Bartik (2019) incorporated some of these points in suggesting an economic argument for using public funds to increase regional employment through incentives:

The private market doesn't produce enough job growth because jobs have social benefits: labor market benefits for state residents, and fiscal benefits that improve state and local governments' budget situations. Private employers ignore these social benefits, and therefore do not expand jobs as much as we would like to see in our society (p. 3).

This is essentially an argument that jobs have a *public good* aspect. Public goods are those whose benefits to society are significantly greater than the benefits to any entity that might produce them. The result is an underproduction of the good. The classic examples of public goods are roads and national defense. The benefit to U.S. residents of a standardized nationwide network of roads is much greater

² If the increase in employment or population is especially large relative to the previous total, fixed costs will also increase, but not in the same predictable way as the increase in variable costs. Fixed cost increases in these cases must be evaluated on a line-by-line basis. Per-capita variable costs might change as well – for example, a decrease in the per-capita cost driven by greater economies of scale.

³ For a more detailed discussion of the techniques of measuring marginal costs and a practical application, see Regionomics (2015).

than the alternative: a patchwork of fragmented, privately-owned roads with inconsistent standards, inconsistent maintenance and millions of tollbooths. Similarly, leaving national defense up to individuals would be far less effective than a centralized, well-trained military. The solution to the underproduction of public goods by the private sector is for government to use public funds to provide them. Although private employers certainly do reap significant benefits from creating employment, the spillover benefits suggest that government has a valid role in encouraging employment. These benefits could include the training and experience that makes workers more productive and more valuable to other employers and the reduced social costs of unemployment – public assistance, public health, addiction recovery, and public safety, for example. This argument suggests that the public good aspect of job creation might be better supported through job training grants than tax incentives, but this would probably put the municipality at a disadvantage relative to its tax-abating competitors.

A case study of the advantages of incentivizing a major employer to locate in the central city involves the employment impacts of Rogue Fitness, one of the developments whose property tax abatement is analyzed later in the report. Rogue opened a facility of more than 602,000 square feet on a vacant, environmentally blighted site at the corner of Cleveland and Fifth Avenues that had formerly housed a manufacturing facility for the Timken Company. Rogue supplied a ZIP code count of all 1,010 of its employees, which allowed employees to be allocated by geography. The results are shown in Table 1. This table shows counts of employees by residence, breaking out the number of employees in the immediate area of the plant (ZIP code 43201), other nearby ZIP codes within Columbus (43202, 43203, 43205, and 43215), other Columbus ZIP codes, and ZIP codes elsewhere in Franklin County and in other counties. Because ZIP code boundaries can cross city boundaries, these counts are somewhat rough, but still give insight into where the employees of this new facility live.

Of the 1,010 Rogue employees, 67, or 11.5% of all employees who live in Columbus, reside in the 43201 ZIP code. According to statistics from the Census Bureau's American Community Survey, this ZIP code accounts for only 3.7% of the population of Columbus, so a disproportionate number of Rogue employees live nearby. According to the American Community Survey, the median income in the 43201 ZIP area during 2013-2017 was \$29,915, 60% of the Columbus median and 53% of the Franklin County median. Rogue is thus making a positive contribution to this economically challenged area. Another benefit of this facility is that around 42.5% of Rogue workers live outside of Columbus. These employees contribute income taxes to Columbus without demanding public services to the same extent as a resident. They are thereby subsidizing the public service needs of Columbus residents.

Table 1
Residence of Employees of Rogue Fitness

Residence	Number	Percentage of total
Columbus		
Immediate vicinity (43201)	67	6.6%
Adjacent Columbus ZIP codes (43202, 43203, 43211, 43215)	107	10.6%
Other Columbus ZIP codes*	407	40.3%
Columbus total	581	57.5%
Franklin County outside of Columbus		
Columbus inner ring suburbs	118	11.7%
Other Franklin County	157	15.5%
Total Franklin County	856	84.8%
Other Columbus MSA		
Delaware County	53	5.2%
Farifield County	18	1.8%
Hocking County	4	0.4%
Licking County	16	1.6%
Madison County	2	0.2%
Morrow County	3	0.3%
Perry County	1	0.1%
Pickaway County	10	1.0%
Union County	7	0.7%
Total Columbus MSA	970	96.0%
Other Ohio counties		
Auglaize County	1	0.1%
Champaign County	1	0.1%
Clark County	2	0.2%
Columbiana County	1	0.1%
Crawford County	1	0.1%
Cuyahoga County	2	0.2%
Fayette County	1	0.1%
Greene County	3	0.3%
Knox County	6	0.6%
Lorain County	1	0.1%
Lucas County	1	0.1%
Marion County	1	0.1%
Muskingum County	2	0.2%
Richland County	3	0.3%
Ross County	2	0.2%
Trumbull County	1	0.1%
Wayne County	1	0.1%
Total other Ohio counties	30	3.0%
Out of state	10	1.0%
Total employment	1,010	100.0%

Source: Regionomics analysis of Rogue Fitness records.

Criticisms of Incentives

From an economic standpoint, there are valid concerns regarding the broader impact of incentives. To the extent that abatements influence business locations, they may induce a development to occur in an economically suboptimal location. If incentives make a difference – and there is some evidence that they do – then a generous incentive may induce a company to locate in a community with a less-than-optimal workforce, infrastructure, public policy, or supplier access. The result would be a less efficient, less profitable operation, and a reduction in gross domestic product. However, it will be demonstrated later in the report that the difference in incentives between Columbus and other municipalities likely affected the development pattern in the Rickenbacker area, and disadvantaged Columbus relative to the other municipalities that were attracting warehouse and distribution operations in the area. While tax incentives may not be good public policy in their own right, it is unwise to disarm unilaterally.

Reese and Sands (2006) argued that tax incentives only make a difference at the margin in business location decisions. This is because taxes represent only one relatively minor element of the effectiveness and profitability of a business. The quality of the workforce and the availability of the specific skills needed by the business are vital. Also important are nontax business costs; proximity to suppliers and markets; the quality of the local road, rail, air, and information infrastructure; availability and affordability of appropriate real estate; and the state and local regulatory environment. If these attributes are unfavorable, Reese, Larnell, and Sands (2010) argued that the availability of a tax abatement will not be at all sufficient to overcome the negative impact of unavailable workforce or the inability to access services or markets. Bartik (2019, p. 11) estimated that the typical business incentive offer is equivalent to subsidizing 3% of the firm's wages for 20 years. This is a subsidy that can easily be offset by modest changes in wage levels or productivity, or by minor differences in the cost of doing business in one location versus another.

Another criticism is the earlier point that an abatement may not have been truly necessary in attracting a development; the development might have occurred whether the abatement had been offered or not. This leaves the decision to offer incentives open to the Reese and Sands (2006) criticism that tax incentives tend to redistribute public revenues to the private sector. Bartik (2019, p. 26) estimated the percentage of development that would have occurred with or without the incentive at 75%. (This percentage should be lower within a region than between regions. The differences in the non-tax business environment are less, so the impact of differences in incentives is greater.)

A related criticism is in at least some jurisdictions, incentive policies are overly lax. Khan, Reese, and Sands (2006) found that only 30% of jurisdictions in Michigan had formal, written guidelines for granting incentives, 30% had no guidelines at all, and 32% granted unconditional abatements with no performance requirements. Further, abatement requests were seldom or never rejected in 88% of the responding jurisdictions. Khan, Reese, and Sands (2006) argued that the implication is that even when formal guidelines and conditions were in place, these were present not to screen proposed abatements, but only to provide political justification for an affirmative decision that the jurisdiction had every intention to make.

Similarly, Jensen (2018) studied applications for abatements under a statewide incentive program in Texas, and concluded that few companies receiving these incentives had been likely to locate anywhere other than Texas. Some applications to the program admitted this. Some listed only Texas cities among the areas that they were evaluating. Others, such as petrochemical projects locating along the Gulf

Coast, had few alternatives. Some projects had already broken ground and admitted this in their application. One wind project was fully completed prior to the application. While these cases are probably as much a problem with the administration of these particular incentive programs than with the incentives themselves, this does highlight the need to consider carefully whether the incentive is truly needed for the development to occur. As will be discussed later, the City of Columbus is far more diligent in evaluating prospective incentives.

By necessity, awarding incentives to some projects and not others involves municipal officials picking winners and losers. If this is done carelessly or on the basis of political preference rather than for valid economic reasons, the benefit of the abatement policy will be squandered. Principles to consider when evaluating particular types of abatement candidates are discussed in the recommendation section.

Even in cases where a given development would not have occurred without an abatement, fiscal impacts of Ohio property tax abatements are more negative for school districts than for the municipalities that provide them. Both school districts and municipalities gain the present value of the future property tax inflows after the abatement expires in 10 or 15 years. However, the municipality gains income tax revenue as soon as the incentivized firm begins operations. Unless there is a PILOT agreement, the school district gains prior to the expiration of the abatement only if there is a school district income tax. While the argument was made earlier that the school district receives the same non-abated, undeveloped property value that it would have received without the abatement (assuming that the development would not otherwise have occurred) it must still bear the cost of educating the children of the employees attracted by the development.

Bartik (2019) made the argument that incentives may be longer-lasting and more costly than they need to be. Many business leaders are focused on profitability in the short term – particularly if their firm is publicly traded. Consequently, the incentive in year 10 or year 15 probably does not affect their location decision. A five-year incentive would probably be seen by the CEO as equally attractive. The difficulty with this argument, though, is that incentives are customarily 10 to 15 years in duration. A five-year incentive would be seen as inferior in comparison regardless of the planning horizon of decision-makers.

Another problem is that a successful incentive that leads to the development of a parcel determines the use of that parcel for years to come, and precludes its later development in a way that might have been more favorable in the longer term. Predicting the long-run development of a parcel five or ten years in the future is, of course, extremely difficult, but the proposed use should be consistent with the area plan, but it may or may not be the highest and best use of the parcel currently.

Several authors, e.g., Wassmer and Anderson (2001) and Bartik (2019), have discussed the political considerations that can influence the awarding of incentives. For example, voters may see the offering of incentives as an indication that city officials are making proactive efforts to grow the local economy. On the other hand, there can be a perception that the powerful and well-connected are being rewarded in ways that others are not; this can lead to voter resentment. As a result, local officials are either encouraged to offer incentives or discouraged from offering them for reasons that have nothing to do with the validity of the incentive itself.

A particularly troubling problem with incentives was uncovered in research by Partridge, Tsvetkova, Schreiner and Patrick (2019): incentive deals can crowd out business start-ups. Tax incentives are usually directed at larger projects rather than small businesses; as Bartik (2019) noted, the administrative costs of incentives covering a few large employers are less than those covering many small employers with

the same total job count. The analysis of Partridge et al. (2019) revealed that incentives were negatively related to business formation both in the subsidized industry and in total. As the authors discussed, small firms and self-employment are associated with faster economic growth rates and higher income multipliers.

But a more serious problem caused by a dearth of small firms (particularly locally owned, locally serving retailers, restaurants, and personal service firms) is a leakage of spending and economic impact from the local economy. In order to maximize efficiency and standardize service, a typical chain centralizes its inventory, supplies, and business service functions; local managers and franchisees make purchases from and remit franchise fees to this central location. These dollars leave the local economy immediately and the economic impact of the underlying sales is zero. In contrast, a locally owned establishment typically makes a far greater share of its purchases locally and retains executive salaries and profits in the local area as well. The multiplier effects discussed earlier are thus much greater for the locally owned firm.

The difference in these impacts is substantial. Civic Economics (n.d.) has conducted studies of local retail and restaurants in 17 communities across the country since 2012. These studies found that chain retailers retain an average of \$13.60 out of every \$100 in sales for at least one additional round of spending, while local retailers retain an average of \$47.70. Chain restaurants retain on average \$30.40 per \$100 in sales, compared to the \$64.90 retained by local restaurants. LaFayette (2016) measured the impact of the retailers and restaurants in the North Market using an approach similar to that of Civic Economics. The result was that North Market retailers collectively retained \$79.04 per \$100 in sales for at least one additional spending round, while restaurants and food stands retained \$86.98. Both these estimates are at the upper end of the ranges in Civic Economics' 17 local studies.

The problem of chain-induced impact leakages is of particular concern in central Ohio, where small business measures are much worse than average. Unpublished analysis by the author reveals that among the 100 largest Metropolitan Statistical Areas (MSAs) in the United States, the Columbus MSA ranks 85th in the percentage of all workers who are self-employed, 86th in the percentage of all firms that have fewer than 20 employees, and 81st in the birthrate of establishments with fewer than 20 employees. These troubling statistics imply that the leakage of consumer impacts from the Columbus area is greater than average, resulting in multiplier-driven income, activity, and job growth smaller than average.⁴ The implication of this argument is also that, contrary to standard economic development theory, retail and restaurant businesses do have an economic impact as long as they are locally owned.

Are Incentives Really Necessary?

The critical assumption underlying the awarding of an incentive is that the development would not have occurred had the incentive not been granted. If this assumption is false and the development would have occurred in the absence of the incentive, then its net economic impact is zero and it represents a deadweight loss of tax revenues. Unfortunately, there is no way for municipalities to know with certainty that the incentives were truly necessary in a particular case. There is certainly motivation for those applying for the incentive to give the impression that it is critical. The Jensen (2018) study of the incentives awarded in the Texas program is a cautionary tale. Economic development staff should

⁴ The percentage of self-employed workers in the Columbus MSA is 7.4% compared to the national average of 9.6%. The share in Franklin County is even less: 6.7%.

certainly consider the likelihood that the project would move forward within the city without an incentive.

The earlier point that incentives have only a marginal impact on firm costs implies that if a particular development is inappropriate for the Columbus region, an incentive offer will probably not be successful in attracting the development from another region that – because of its specific economic and environmental characteristics – is more appropriate. This is as it should be. If the firm is attracted to Columbus despite an unfavorable environment for that firm, this will cause the firm to be less competitive and less profitable than its counterparts elsewhere. This will lead to weak growth and possibly the closing of the firm and the loss of jobs, either through its departure or its failure. Behind this argument is the point that not all firms in all industries are a good fit for the Columbus region. This point is discussed in the recommendations section below.

While competition among regions and the ability to attract and retain companies is driven much more by favorable or unfavorable regional characteristics than by incentive policies, many of these characteristics are common to Columbus and the other municipalities of central Ohio. This is particularly true of those that are in or near Franklin County. This implies that incentives do matter in cases where a potential employer can benefit by locating in a nearby suburb rather than Columbus – possibly only across the street – if the suburb's incentives are more favorable. Substantiating this argument, Wassmer and Anderson (2001) cited a number of previous studies and conducted their own analysis showing that the impact of taxes and public expenditures on business location is greater within a region than between regions.

Tax and incentive policies of central Ohio municipalities are cataloged later in the report. The conclusion is that most local jurisdictions – as is true of most jurisdictions across the country – offer incentives of some sort. Consequently, eliminating all incentives would certainly cost the city some projects, and offering incentives only in certain cases would raise questions of fairness and legality. In other words, despite the fact that there are strong theoretical arguments against incentives in general, it would be extremely unwise for the city to disarm unilaterally. A firm relocating or expanding from outside the city and region may have a preference for Columbus but may be enticed to locate in a nearby suburb by the incentives offered by that suburb. Even a firm currently located in Columbus seeking to expand its operations could potentially relocate to a suburban city if the incentives to do so are sufficient.

The 2011 relocation of Bob Evans Farms from South High Street in Columbus to New Albany is one example of an incentive battle that Columbus lost. According to Wince (2011), New Albany offered a 100%, 15-year income tax abatement, income tax credits totaling 25% contingent on environmentally friendly technology and health and wellness initiatives, a \$250,000 income tax credit repayable over two years to defray moving expenses, a \$1 million, 10-year interest-free loan, and a 25% credit on building inspections and fees. This one move cost Columbus 360 jobs at an average salary of \$65,000, and \$585,000 per year in income tax revenue.

One of the larger, more controversial relocations in recent years was the 2004 decision of BMW Financial Services North America to move its 750 employees from Dublin about a mile south to Hilliard. The company had outgrown its facilities, and received incentive offers from Dublin, Columbus, and Hilliard. Narciso (2004) reported that Hilliard offered the company incentives worth up to \$12 million, or \$16,000 per job. The incentives included a 100%, 15-year real property tax abatement, a 100% personal property tax abatement, an income tax credit of 36% for 17 years, and \$4.3 million in roadway and utility improvements at the new site. This offer was double the \$6 million in incentives offered by

Dublin. Wages and salaries of these jobs averaged \$59,534, for a total payroll of \$44.65 million (\$60.4 million in 2019-equivalent dollars). Because the company stated that it was also considering consolidating operations at its headquarters in New Jersey or in North Carolina, the state offered an incentive package worth an additional \$6.1 million.

A third illustration of the impact of incentive differences in nearby communities is the pattern of growth of the industrial development in the Rickenbacker area – defined for this analysis as generally south of Groveport Road, west of London-Groveport, Saltzgaber, and Pontius Roads, north of Port Road and Rickenbacker Parkway, and east of Lockbourne Road. This area is in three municipalities, Groveport, Obetz, and Columbus. Groveport and Obetz have typically offered 100% property tax abatements for 15 years for industrial development; Columbus has offered 75% abatements for 15 years in this area. Development in the Groveport portion of the Rickenbacker Industrial Park began in 1993 with the construction of a 1.5 million square foot warehouse for Spiegel. The first construction in Obetz and Columbus occurred in 1997; by this time, an additional 1.5 million square feet of development had occurred in Groveport.

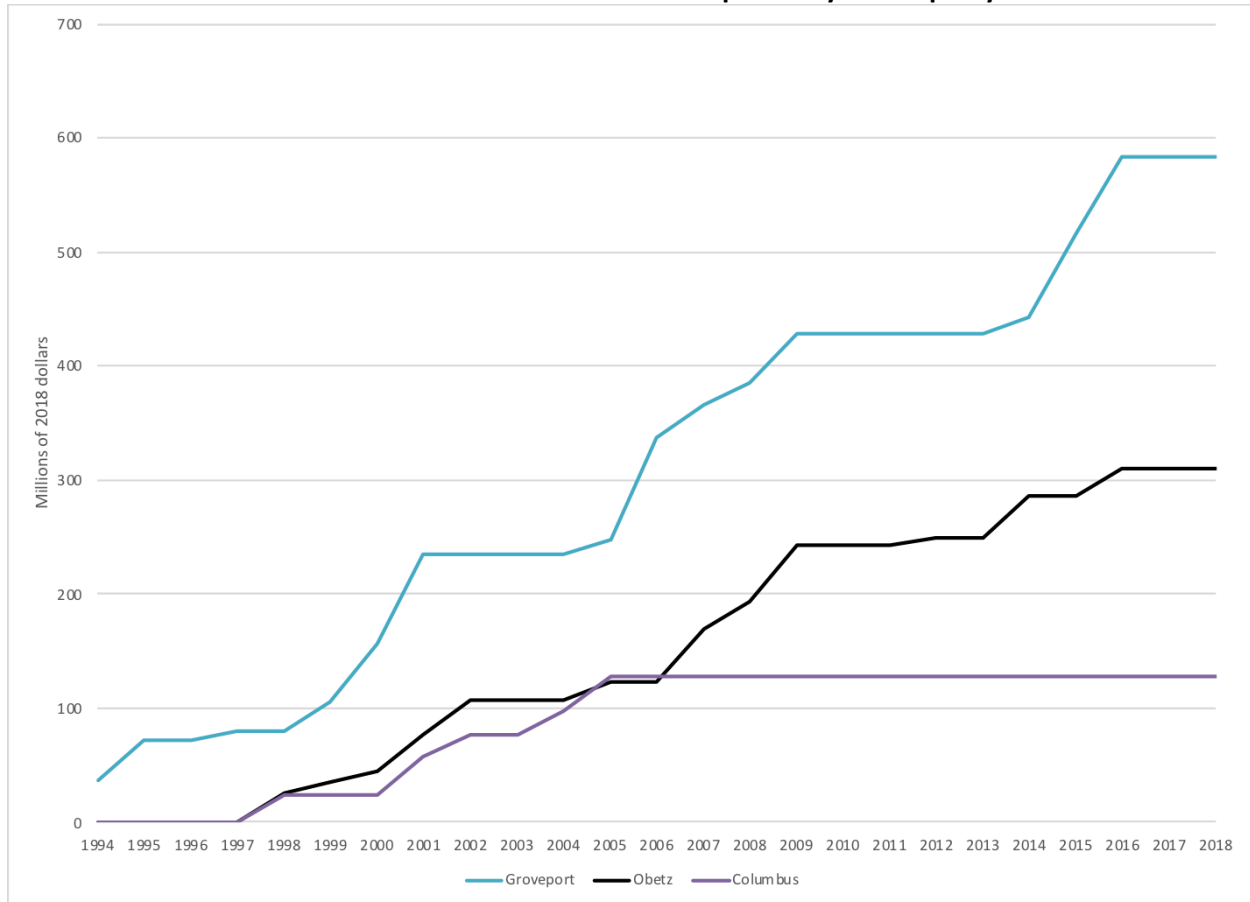
Currently, development in Groveport totals 16.3 million square feet at a total market value of \$582.7 million, and Obetz development totals 8.8 million square feet at a value of \$310.5 million. In contrast, Columbus development has reached only 3.8 million square feet – 13% of the 28.8 million square foot total – and a total value of \$127.7 million. No development has occurred in the Columbus portion of Rickenbacker since 2004. The cumulative impact of the difference in market value is graphed in Figure 1. This chart shows the market value of all development in the three municipalities from the Franklin County Auditor (2019a). The market value of all development in Figure 1 is measured at its current value to adjust for inflation and abstract from market value changes over time. Development enters the total in the year after its construction. Abatements have expired on \$235 million of Groveport value, \$107 million of Obetz value, and \$77 million of Columbus value.

There is also a potential impact on Columbus income tax revenues. To illustrate, wages and salaries generated by these developments are estimated. Total employment in each municipality's development is estimated based on Regionomics' previous estimates of employment per 1,000 square feet of distribution space and the 2018 average wage in warehousing and storage for Franklin County from the Bureau of Labor Statistics (\$44,498). The result is that space in Groveport accommodates around 12,200 jobs at a total annual payroll of \$543.4 million. There are around 6,600 jobs in the Obetz development and a payroll of \$310.5 million. The Columbus development is home to approximately 2,800 jobs generating \$126.4 million in payroll, less than half the wage and salary total in Obetz and one-quarter the total in Groveport.

There is no way to determine how much of the development in Obetz and Groveport would have come to Columbus had the abatement terms been comparable. But a total of 321 largely undeveloped acres lies directly north and west of the Columbus development along London-Groveport Road. This land is valued at less than \$6,000 per acre, compared to the \$52,700 per acre land valuation applied to the developed parcels immediately to the east. A portion of the undeveloped acreage is subject to Current Agricultural Use Valuation (CAUV), reducing property tax revenue further.⁵

⁵ CAUV is a provision in state law allowing parcels of 10 acres or more to be valued at a lower rate in determining property taxes. Valuation is based on soil type rather than usual factors such as sale prices of comparable properties nearby. The values for more than 3,500 soil types are applied statewide and range from \$350 to \$3,420

Figure 1
Market Value of Rickenbacker Development by Municipality



Source: Compiled from Franklin County Auditor (2019a).

These three cases illustrate the potential consequences of setting incentives below those offered by nearby municipalities in cases where the differences in nontax costs and characteristics are not significant. Especially in the Rickenbacker case, differences among Columbus, Groveport, and Obetz are likely inconsequential. Note, however, that this says nothing about whether the development benefit of a 100%, 15-year abatement exceeds its cost.

The conclusion is that the incentive policies of distant municipalities are often less important in a rational company's expansion or relocation decision than are considerations of workforce, operating costs, available real estate, and the business environment. The policies of nearby communities loom larger because the differences in these other considerations are much smaller. There is also the non-financial consideration of image: as Bartik (2019) argued, incentives give the impression of a business-friendly community. By eliminating incentives while they continue to be offered elsewhere -- especially within the region -- Columbus would put itself at a distinct disadvantage. A continuing program of incentives is thus probably a necessary evil.

per acre and average \$877 per acre. For additional details and the current CAUV table, see Ohio Department of Taxation (2020).

Evaluating the Benefits and Costs of Incentives

The assignment was to evaluate the benefits and costs discussed above with the objective of constructing a model that Columbus can use to assess future incentive offers. However, there seems to be no published tax incentive impact model, so one must be constructed. As a means to this end, city staff provided information on 14 successful incentive offers over the past decade and a half. These samples include different types of projects with different benefit and cost characteristics. This section will discuss modeling the costs and benefits of incentives in general terms and then proceed to specific discussions of each of the 14 projects.

Principles of Incentive Evaluation

The primary fiscal benefits of a successful incentive are the income tax revenues generated by the jobs that the incentive attracts, the discounted value of the abated tax increment once the incentive expires, and in some cases the indirect and induced activity that the operations of the business creates. Clearly, these are benefits only if the incentive itself actually attracts the jobs. One way to approach this problem is to multiply the projected benefits by the probability that the applicant would not locate in Columbus without the incentive. Bartik (2019) mentioned that previous research found that incentives were the determining factor in location decisions in only about 25% of the cases. He called this the “but-for” percentage. However, Bartik cited no specific research to substantiate this percentage claim. Neither did he indicate whether the percentage is measured at the local or state level. Drawing from the previous discussion, this is a material distinction.

The development pattern in the Rickenbacker area and the corporate relocations discussed above suggest that in cases where the competitors are adjacent municipalities, the but-for percentage is much higher than 25%. Of the 61 projects analyzed, Columbus captured only 10. This might suggest that the loss of 84% of the projects was due to the fact that abatements offered by Groveport and Obetz were more generous than those offered by Columbus, but other factors could be at play. The original 1.5 million square-foot Spiegel development occurred at the corner of Alum Creek and Spiegel Drives, well within the boundaries of Groveport. Given the infrastructure required for a viable distribution facility, it was more economical to cluster the early developments within Groveport. That does not, however, address the fact that all development since 2004 has occurred either in Groveport or Obetz, and not Columbus. Given the fact that the internal deliberations of incentive applicants are unknown, the but-for percentage cannot be determined. As a first pass, it is suggested that all benefits be multiplied by 50%. Because this is a guess, it is important to do sensitivity analysis by reducing the multiplier to determine the point at which the costs begin to outweigh the benefits.

Whether the indirect and induced impacts are an economic or fiscal benefit depends on whether the potential relocation is to or from the Columbus MSA. If a company is entering the region, the benefits will be gained; if the company is departing, the same level of benefits will be lost. However, a company locating anywhere within the MSA will provide indirect and induced benefits to the city that are identical or nearly so; the company will still purchase a significant amount of goods and services from Columbus companies and will still employ a significant number of Columbus residents. This suggests that if the company is only considering locations within the Columbus MSA, only the direct impacts are relevant, but if locations outside of the MSA are also being evaluated, indirect and induced benefits are also relevant. The alternative locations being evaluated may not be known, however.

Indirect and induced impacts generating income tax benefits for the city of Columbus cannot be calculated directly. Impacts can only be assessed for single counties or contiguous groups of counties (including MSAs). The approach is to use the U.S. Bureau of Economic Analysis's RIMS II economic impact model to calculate indirect and induced output, income, and employment by industry sector that the company's activities provide (or would provide) to the Columbus MSA⁶ and multiply these sector-level totals by the percentage of that sector's MSA employment or payroll that is within the city. (The payroll share is used for income and the employment share is used for jobs.) Table 2 provides the most recently available shares of MSA sector employment and payroll within Columbus. Although these totals are now three years old, they are probably close to the current level.

Table 2
Employment and Payroll by Industry Sector, Columbus and Columbus MSA, First Quarter 2017

Sector	Columbus city	Columbus MSA	Columbus share
Employment			
Total	485,063	996,916	48.7%
Agriculture, forestry, fishing and hunting	80	2,292	3.5%
Mining	200	648	30.9%
Construction	14,330	33,909	42.3%
Manufacturing	24,929	71,434	34.9%
Trade, transportation, and utilities	85,875	195,232	44.0%
Wholesale trade	15,636	35,552	44.0%
Retail trade and utilities	47,567	111,611	42.6%
Transportation and warehousing	22,672	48,069	47.2%
Information	8,059	15,931	50.6%
Finance and insurance	31,209	59,990	52.0%
Real estate and rental and leasing	8,233	13,558	60.7%
Professional and technical services	26,662	58,662	45.5%
Management of companies and enterprises	20,375	36,810	55.4%
Administrative and waste services	27,510	71,146	38.7%
Educational services	10,538	17,601	59.9%
Health care and social assistance	72,869	134,696	54.1%
Arts, entertainment, and recreation	5,331	11,854	45.0%
Accommodation and food services	44,016	88,921	49.5%
Other services and government	104,847	184,246	56.9%
Other services	14,350	28,796	49.8%
Federal government	4,773	14,345	33.3%
State government	51,846	58,394	88.8%
Local government	33,878	82,711	41.0%
Payroll (thousands of dollars)			
Total	7,584,228	13,776,205	55.1%
Agriculture, forestry, fishing and hunting	1,008	21,005	4.8%
Mining	3,966	9,794	40.5%

Continued

⁶ Although impacts can also be calculated for Franklin County, it would be incorrect to use these because of the significant employment within Columbus but in adjoining counties (such as employment at Polaris in Delaware County).

Table 2 (continued)
Employment and Payroll by Industry Sector, Columbus and Columbus MSA, First Quarter 2017

Sector	Columbus city	Columbus MSA	Columbus share
Construction	242,079	515,315	47.0%
Manufacturing	467,205	1,157,110	40.4%
Trade, transportation, and utilities	1,059,506	2,199,312	48.2%
Wholesale trade	260,486	593,714	43.9%
Retail trade and utilities	426,356	940,043	45.4%
Transportation and warehousing	372,664	665,555	56.0%
Information	151,624	314,566	48.2%
Finance and insurance	988,411	1,497,203	66.0%
Real estate and rental and leasing	109,414	172,069	63.6%
Professional and technical services	548,470	1,147,543	47.8%
Management of companies and enterprises	807,550	1,242,633	65.0%
Administrative and waste services	233,860	618,427	37.8%
Educational services	98,227	166,530	59.0%
Health care and social assistance	882,596	1,519,683	58.1%
Arts, entertainment, and recreation	67,391	112,723	59.8%
Accommodation and food services	216,925	400,565	54.2%
Other services and government	1,705,996	2,680,906	63.6%
Other services	164,937	286,666	57.5%
Federal government	86,858	247,947	35.0%
State government	952,357	1,049,882	90.7%
Local government	501,844	1,096,411	45.8%

Source: Ohio Labor Market Information Bureau (2018 and 2020).

The profits of the business occupying the abated property and the associated indirect and induced activities also generate income taxes. All of the direct income taxes and a share of the indirect and induced taxes accrue to the city. The revenues and profits of the business are not collected in the abatement questionnaire. Revenues can be estimated by the economic impact model as a function of earnings or employment.⁷ Profits, however, cannot. Accordingly, this revenue impact must be ignored.

Another benefit of the incentive is the new construction and/or remodeling expenditures on the project. These expenditures provide direct, indirect, and induced earnings impacts for the Columbus MSA. Impacts are calculated from the budgeted construction total. In some cases, expenditures for land and building acquisition, furniture, fixtures, and equipment are also provided. Land and building acquisition is always ignored in impact calculations because this is the transfer of an asset. Asset transfers create no economic activity aside from minimal real estate commissions and title and legal fees. Furniture, fixture, and equipment expenditures are also ignored because they are assumed to be sourced from outside of the Columbus MSA, and thus have no impact. The share of earnings from construction expenditures applicable to the city is calculated, and the result multiplied by the assumed but-for percentage. Again, the associated business income taxes must be ignored.

⁷ It is necessary to calculate revenues to enable the economic impact model to allocate earnings and employment among the industry sectors.

Taxes on the incremental property value that is not abated accrue during the abatement period, and are a benefit. Once the abatement expires, the property tax revenue on the entire property value accrues. These are benefits arising from the abatement only if the abatement was necessary, however. Consequently, this benefit would also be multiplied by the but-for percentage.

Property taxes are the primary source of revenue for school districts, and school district taxes are typically the largest component of property taxes. The benefit for the school district of the abatement is the flow of non-abated incremental property taxes during the abatement period and the taxes on the entire property value after the abatement expires, multiplied by the but-for percentage. Additionally, it is the policy of the city of Columbus to share with the school district one-half of all income taxes on created earnings greater than \$1 million. Where applicable, this is an additional benefit to the schools of the abatement, and a deduction from the city's benefit. The one cost of the abatement to the school district reflects the possibility that the abatement is unnecessary: the abated property tax times one minus the but-for percentage. It is *not* appropriate to ignore this cost and focus only on the benefits. This cost represents the risk that the abatement was made needlessly, and the school district shares in this risk.

As discussed earlier, property taxes also help to support the Franklin County general fund and the operations of a variety of county agencies. As before, the non-abated property taxes are a benefit during the abatement period and the property taxes on the full property value are a benefit afterward. The abated property taxes are a cost if the abatement was unnecessary.

Another benefit to Franklin County is the sales tax revenues that are earned as the result of the new operations of an expanding or relocating business, and also by the spending of the wages of direct and possibly indirect and induced employees on taxable goods and services. The share of household income spent on goods and services taxable in Ohio is fairly easy to estimate from an analysis of detailed data from the Bureau of Labor Statistics' Consumer Expenditure Survey. For a typical household, this is 23.7%. This percentage is multiplied by the applicant's created payroll to estimate taxable sales. Retained payroll is only included if there is a risk that the applicant would move out of the county (not merely out of the city) without the abatement. Given that workers of Columbus businesses reside throughout the MSA, some taxable purchases will be made outside of Franklin County. This impact is reflected by multiplying taxable sales by the percentage of Columbus MSA workforce residing in Franklin County, 63.5%.⁸ This result is in turn multiplied by the Franklin County sales tax rate of 1.25% to determine the tax revenue. The resulting effective tax rate on income is less than 0.2%, so this impact tends to be small. This result is multiplied by the but-for percentage.

Businesses also pay income taxes. The share of business revenues spent on taxable goods and services, however, is not as easily estimated as is the share spent by households. This share is likely to vary widely on the basis of spending patterns of individual industries and sales tax exemptions for specific goods and industries under Ohio law. The detailed business spending data that would permit the calculation of a percentage of business revenues analogous to the percentage of household sales taxes are not available.

Granting an abatement facilitates development of the parcel in the near term, which means that the parcel cannot be developed at a later date. To reflect this notion, it is assumed that if the abatement is

⁸ Given that individuals are working in Franklin County and probably making some purchases near work, this percentage is probably an understatement.

not granted, the land remains undeveloped for five years and is then developed with an identical project with an identical abatement. Employment is the same, but the average wage is assumed to be equal to the Franklin County average, \$56,374. The effect is to benefit projects with relatively high wages in the calculations and penalize those whose wages are relatively low. This implies that the full income tax revenues from the contemplated project's operating earnings are a benefit for only the first five years. It also implies that the tax revenues on earnings from construction of the later building are a cost because the construction of that building is precluded.

Five of the projects analyzed below are subject to a Tax Increment Financing (TIF) agreement. A TIF is established by a local jurisdiction under state law. It directs part or all of the unabated property tax increase for terms up to 30 years to a fund supporting the cost of infrastructure improvements that benefit the parcels covered by the TIF. These improvements in turn can make the parcels more valuable, can cure blight, and may make an undevelopable parcel developable.

TIFs in Ohio apply only to municipal, township, and school district property taxes. However, the city has a policy of forwarding all school TIF revenues to the affected district. Thus, municipal property taxes are the only taxes that are diverted.

The evaluation of TIFs needs to include the income tax impacts of the activities that they finance. In one sense, the TIF is diverting tax revenues from other public sector activities. But assuming that the public infrastructure improvements are necessary, the city would have had to bear their cost in any case. The TIF simply provides a funding mechanism. This implies that the TIF-funded outlays are a cost of development, offset to an extent by the income taxes generated by the construction activities funded by the TIF. Because TIF diversions do not depend on the strategy of the applicant for the abatement, TIF payments and the associated income tax impacts are not adjusted by the but-for percentage.

In summary, the benefits to Columbus of granting an incentive are the following:

- Income tax on direct, indirect, and induced earnings from the construction/rehabilitation costs, excluding land purchase and costs of furniture, fixtures, and equipment, multiplied by the assumed but-for percentage.
- Income tax on direct created and retained earnings generated by project operations multiplied by the but-for percentage. Any school district income tax revenue sharing is deducted from this total. In cases where the abatement applicant is likely to be evaluating locations outside of the MSA, indirect and induced taxes are also included.
- In cases where there is a substantial chance that the prospect is evaluating locations outside of the MSA, income tax on indirect and induced created and retained earnings generated by project operations multiplied by the but-for percentage.
- Income tax on business operations – cannot be measured.
- The increase in property taxes generated by development, multiplied by the but-for percentage.
- If there is a TIF, the direct, indirect, and induced income taxes generated by the construction activities funded by the TIF.

The costs to the city are as follows:

- The abated property taxes multiplied by one minus the but-for percentage, reflecting the possibility that the abatement was unnecessary.
- The inability to use the property in a different way at a later date at a possibly more favorable wage level. This is measured as the assumed income taxes on construction and operating

earnings from this hypothetical later project. Operating earnings assume the average Franklin County all-sector wage.

- If there is a TIF, the municipal TIF payments.

The benefits to the school district are:

- The non-abated incremental school property tax.
- One-half of Columbus income taxes on any annual wages greater than \$1 million.
- If there is a TIF, the transfer of school district TIF payments.

The sole cost to the school district is the abated property tax multiplied by one minus the but-for percentage.

Benefits to Franklin County and its agencies include:

- The non-abated incremental property tax.
- Direct, indirect, and induced household sales taxes generated by construction earnings.
- Household sales taxes generated from the earnings from project operations. Because it is assumed that if the project is not developed in Columbus, it will be developed in a nearby suburb, only taxes on created jobs from direct activities are relevant.
- Business sales taxes from construction and operations – cannot be measured.

Franklin County costs are the following:

- The abated county property tax multiplied by one minus the but-for percentage.
- Household sales taxes from the created operating employment of a precluded later development.

All benefits and costs are expressed in present value terms. The evaluation is thus a cost-benefit or Net Present Value (NPV) analysis. The present value of the benefits less the present value of the costs is the NPV. This value is a rough estimate of how much better off or worse off the entity is today as a result of granting the abatement. Prospectively, an abatement with a significantly negative NPV should not be granted. Cash flows are discounted to the year that the abatement is approved.⁹ The assumed discount rate is 5%, the approximate rate on a mid-grade corporate bond. This discount rate reflects both the time value of money and the risk associated with providing a specific company with an abatement. Present values are calculated for each impact for the term of the abatement plus 10 years.

Finally, because cash flows occur over time, they must be expressed in inflation-adjusted terms. Previous years' cash flows are inflated to 2019-equivalent amounts using the Bureau of Labor Statistics' Consumer Price Index for All Urban Consumers (CPI-U).

Case Studies of Abatement Evaluation

The city provided details on 14 projects receiving abatements over the past 12 years. The following sections provide details on the 14 projects analyzed, the approach to estimating economic impacts, and the impact results. The results are tabulated in the Appendix.

⁹ Earnings and tax revenues for 2019 and later years are equal to the 2018 totals. This implicitly adjusts the later years' totals for inflation.

AirSide One LLC

AirSide One LLC is a real estate developer and owner, primarily specializing in distribution and office projects. This 10-year, 75% enterprise zone incentive was awarded April 7, 2014, for the construction of a \$6 million, 100,000 square-foot speculative distribution and office building at John Glenn Columbus International Airport. Prior to construction, the land was owned by the Columbus Region Airport Authority and was exempt from property taxes. The incremental taxes are thus equal to the unabated taxes.

Table A-1 in the Appendix itemizes the present value of the benefits and costs at a 50% but-for percentage. Direct, indirect, and induced construction earnings are generated by the RIMS II model under the nonresidential construction industry. The operating employment is evaluated in the RIMS II warehousing and storage industry.

The city's NPV of \$992,424 is how much better off the financial position of Columbus was in present value terms as a result of granting the abatement – assuming a 50% chance that the abatement was necessary, and the project would not have proceeded without it. The Columbus impact remains positive for but-for percentages as low as 5%, meaning that whether or not the abatement was needed was not a crucial consideration for the city. The Gahanna-Jefferson Public Schools impact is also positive; a net improvement of the School District's position of \$107,500. However, this NPV is negative at a but-for percentage of 40%, meaning that the School District has a much larger stake in the necessity of the abatement than does the city. Franklin County is close to break-even, with an NPV of \$52,600. Recall, however, that sales taxes generated by tenants of this project and the businesses benefiting from the indirect and induced impacts are not captured in this analysis, so the County's NPV is understated. The city, the school district, and the county are \$1.153 million better off as a result of the success of this abatement.

Coulter Properties, dba Rogue Fitness

Coulter Properties is the real estate holding company of Coulter Ventures, which does business as Rogue Fitness, a major manufacturer of fitness equipment. There is a 100%, 10-year Environmental Protection Agency (EPA) abatement on the incremental land and building value covering two of the three parcels of the site. This abatement results from the environmental remediation of the site, and runs from 2016 through 2025. A 75%, 10-year enterprise zone tax abatement was enacted by City Council June 8, 2015, to run from 2017 through 2026. Although the city had no authority to approve or deny the EPA abatement, it is still included because it impacts the cash flows from the project.

Rogue employed 337 at the end of 2018, and pledged to create 90 more positions as a result of the abatement. The project is also within the Milo-Grogan TIF District. Although the TIF was created December 14, 2015, no revenues had been received as of December 31, 2018, so these impacts must be projected based on the projected municipal TIF receipts. Those receipts are intended to support the improvement of streets, sidewalks, public utilities, and green spaces, so the two RIMS II industries highways and streets, and architectural, engineering, and related services are relevant. It is assumed that the construction expenditures, indirect and induced impacts, and associated income tax receipts will occur over time as the municipal TIF payments are received. However, it is likely that these expenditures will include land and easement purchases, reserves, contingencies, and other expenditures that do not generate economic activity, worker earnings, or income tax revenues. Analysis of available itemized budgets for other TIF districts suggests that construction could be 70% of the total expenditure

and engineering expenditures could be 4%. Note that TIF receipts and expenditures are not impacted by the possibility of an abatement being unnecessary, so the but-for percentage does not apply. Also note that the TIF continues 10 years after the period of analysis, so the present value of these impacts in total is larger than that reported here.

Table A-2 summarizes the impacts assuming a 50% but-for percentage. Municipal TIF payments (with the present value of taxes on earnings as a minor offset) reduce the abatement-driven Columbus net present value, but the abatement-driven impacts lead to an overall city impact of \$2.75 million. This impact remains positive at any but-for percentage. Columbus City Schools' \$113,000 positive NPV is positively impacted by the receipt of TIF payments, and to a lesser extent by the sharing of half of Columbus income taxes on payroll greater than \$1 million. NPV becomes negative at any but-for percentage less than 50%. The Franklin County impact is negative \$393,000 because of the large impact of a potentially unnecessary abatement. A 75% likelihood that the abatement is necessary is required for the county's NPV to be positive.

It is also important to recall this project's non-quantifiable benefits, including the rehabilitation of a previously blighted site and the relocation of a significant number of jobs to a site in the center city, easily accessible by transit. These omitted benefits make the abatement an even better deal for the city.

CSE Leasing/Contract Sweepers and Equipment Company

CSE Leasing is the real estate holding company for Contract Sweepers and Equipment Company. This 10-year, 75% enterprise zone tax abatement was originally approved March 2, 2015, but was amended on May 1, 2017 to revise the abatement period from 2016-2025 to 2017-2026. The abatement is to support the relocation of company headquarters from the Brewery District to North Linden. The company proposed to redevelop and expand a 1950s warehouse. The 75% incentive applies to the new construction, not the existing structure, so the incentive was less than 36% of the total market value of the building at the inception of the abatement.

Contract Sweepers is the largest sweeping service provider in the Midwest. The company was founded in Columbus in 1960. Although its service area has expanded to several other nearby regions, Contract Sweepers' base is central Ohio. Although the company certainly could have been attracted to suburban locations, a relocation outside the Columbus MSA was unlikely. Consequently, indirect and induced construction and operating impacts are not considered because an approximately equal share of these impacts would have accrued to Columbus in any case. Indirect and induced construction impacts are irrelevant only because it is assumed that the company would have developed a new local headquarters whether the incentive had been provided by Columbus or by another municipality. Because these impacts are not included, no economic impact calculation is necessary for operations. Tax impacts arising from direct construction employment and direct created and retained operating employment (subject to the but-for percentage) are still relevant, however. These are generated by the RIMS II model as above.

The NPV is positive, meaning that Columbus was better off as a result of approving the abatement. The primary factor is the tax receipts on the retained jobs; the created jobs total only three and their wage is a very low \$15 per hour. The cost of the later jobs (assuming that the site is not developed by CSE Leasing) is not a substantial offset to the retained jobs because Contract Sweepers' average wage is close to the Franklin County average. However, if there is less than a 40% chance that the incentive was necessary, the impact of Contract Sweepers' retained jobs declines and the impact of the later jobs

increases, resulting in a negative NPV. Given that a new headquarters was necessary, and many suburbs would doubtless have offered an incentive, the but-for percentage may well have been higher than 50%. Also consider the likelihood that the revitalization of this previously dilapidated site may have resulted in increases in the value of nearby properties that would translate to increases in property tax receipts. This positive impact is not included.

The Columbus City Schools and Franklin County impacts are also positive but small. Both impacts become negative at any but-for percentage less than 35%. Again, however, the likelihood that this incentive was needed to prevent a relocation to a suburb was probably quite high.

DSW, Inc., and 4300 Venture 34910 LLC

This 10-year, 75% enterprise zone tax abatement was approved July 24, 2006, to support the relocation of DSW's corporate headquarters. The company was in need of a larger facility to support its continued growth. The company was considering relocating to New Albany, Kentucky, or Pennsylvania. Because of DSW's status as a national company, it is certainly reasonable to believe that locations outside of the MSA were under serious consideration. As a result, taxes from indirect and induced activities are relevant.

The abatement ran from 2008 through 2017. DSW agreed to create 75 new positions in addition to its then-current 195 jobs. Economic impacts are calculated for the management of companies and enterprises industry. Because the abatement has expired and job creation was far greater than promised, two different calculations are performed. A prospective calculation uses the employment and average wages projected in the abatement application, while a retrospective calculation uses the employment and payroll totals that actually occurred.

Considering first the prospective results in Table A-4, the NPV calculations show that Columbus benefits to the tune of \$1.9 million from offering the abatement if the but-for percentage is 50%, and remains positive for percentages greater than 35%. It is highly likely that there was a greater than 35% chance that the abatement mattered in DSW's decision-making. The impact for Columbus City Schools is positive but small compared to the Columbus impact, and the Franklin County impact is small and negative. Given the conservative nature of the assumptions made and the unmeasurable impact of business sales taxes, this impact too is probably positive.

The difference in the scale of these impacts is due to the substantial impact of the retained payroll, which has no impact on the schools. It also has no impact on the county because of the conservative assumption that if DSW relocates, it relocates to a suburb. Under this assumption, Franklin County continues to receive sales taxes from the earnings of retained jobs at substantially the same rate as it did before the relocation.

Table A-5 provides the retrospective impact. The NPVs are still evaluated as of 2006, but the table shows the impact of the abatement given the much higher job creation and retention payroll that actually occurred. In contrast to the 75 jobs that were pledged, 549 jobs had been created by the expiration of the abatement in 2017. That year's payroll for those created jobs was \$36.9 million (or \$35.1 million in 2019 equivalent dollars); the projected payroll was \$4.5 million. Retained jobs' payroll was \$25.6 million compared to an unrealistically low \$6.5 million goal. Because the relocation has occurred and the abatement has expired, the impacts of a possible later development of the property are a moot point. However, the later development impacts are replicated from the prospective development to maintain

consistency with the prospective results. The but-for percentage is still relevant, however, because there was still a possibility that the incentive was unnecessary, and the abated taxes were needlessly foregone.

All three NPVs measured retrospectively are substantially larger than the prospective impacts because the results were so much better than projected. The better-than-expected results impacted city income tax revenue, the income tax share to Columbus City Schools, and the sales tax receipts of Franklin County. The Columbus NPV is \$10.1 million, the Columbus City Schools' impact was \$1.4 million, and Franklin County's impact is \$704,000.

Hamilton Crossing/Big Lots

A 10-year, 100% CRA abatement was approved July 18, 2016 for the relocation of Big Lots' corporate headquarters from Phillipi Road to the intersection of Route 161 and Hamilton Road. The company pledged to construct a 300,000 square-foot headquarters building and one or more parking decks for both DSW and projected future office and hotel development. The site is within the Hamilton-161 CRA, a post-1994 CRA, so the 100% abatement was not a legal requirement.

One factor positively affecting the tax increment is that most of the site was actively farmed before its development and was subject to Current Agricultural Use Valuation (CAUV). As discussed earlier, CAUV reduces land valuation and property taxes significantly. The three CAUV parcels were valued at \$2,372 or \$3,001 per acre. Once developed, the land became fully valued.

Big Lots is a Fortune 500 company that had 750 existing employees at the time of its abatement application. Although its pledged job creation was only five positions, the point made regarding DSW is relevant here: Big Lots' corporate scale meant that its relocation choices were certainly not limited to Columbus or central Ohio. The loss of its \$65 million payroll would have cost the City \$1.6 million annually.

The project site lies within the Dublin-Granville West TIF area. This TIF was established December 7, 2015, to provide funding for area infrastructure improvements. The developer has so far spent \$9.4 million for the parking garage. Although future expenditures of up to \$26 million are possible, these are not included because their nature and timing are unknown. Future development sufficient to reimburse the developer for the \$9.4 million is assumed, and the income taxes from the direct, indirect, and induced activity are included as a benefit.

Table A-6 displays the results of the impact calculations. There is a positive \$6.3 million NPV including the TIF impact. This impact remains positive for any but-for percentage 10% or greater, suggesting that the abatement conveyed a positive benefit unless it was completely unnecessary. This is partly a function of the 2019-equivalent average wages of \$73,800 for the few created jobs and \$88,200 for the retained jobs – both much greater than the \$56,374 Franklin County average – and of the pre-development CAUV status of much of the site. The large number of high-wage retained jobs has a substantial effect on the Columbus impact, but not on the Columbus City Schools or Franklin County impact. The payroll of the created jobs is not sufficient to provide revenue-sharing to the schools, and retained jobs are not included in the county's sales tax estimates. Nevertheless, there is an estimated \$8 million impact for the three entities.

Huntington National Bank

A 10-year, 75% enterprise zone abatement was approved December 12, 2016, to support Huntington Bank's consolidation and expansion of its operations center at 5555 Cleveland Avenue, a former Meijer store. Huntington pledged to create approximately 1,000 new positions with a payroll of approximately \$60 million. These jobs are assumed to ramp up over a three-year period.

Although the bank is headquartered in Columbus, as are the vast majority of its back-office operations, a few are located in Akron (Huntington Bancshares Incorporated, 2019, p. 36). These include compliance, consumer and private bank technology, corporate sourcing, bank operations, indirect lending, and information security services. Nevertheless, because the vast preponderance of Huntington's operations are located in central Ohio, it is assumed that locations outside of the MSA were not considered. This suggests that the purpose of the abatement was primarily to keep the operations within Columbus city limits, and indirect and induced operating earnings are consequently not a factor. The implicit assumption is that Huntington's remaining in their two current locations was not an option, and that the company would have relocated the jobs in any case.

Another non-quantifiable benefit of this project is the adaptive reuse of an abandoned big-box store. These "grayfields" are not as environmentally harmful as brownfields, but they still represent underused, deteriorating space that negatively impacts nearby property values. Reusing these properties rather than demolishing them reduces the environmental impact of the development.

Results of the analysis are shown in Table A-7. Because of the approval of the abatement at the end of 2016, the present value is measured as of 2017. The city is much better off as a result of enacting the incentive – to the tune of nearly \$6.2 million – as it is for but-for percentages 15% or greater. The \$54,400 inflation-adjusted average wages of the retained and the \$61,100 average for the created jobs are close to the Franklin County average of \$56,400. But the largest factor in the positive NPV is the large number of jobs involved: 1,179 current jobs and 1,000 additional jobs to be created. The facility at full strength would generate more than \$3 million in annual income taxes. The impact of income tax sharing is a great benefit to Columbus City Schools, leading to an NPV of \$1.1 million. The sales taxes from those direct jobs increase the Franklin County impact. The total impact is more than \$7.5 million.

MSC Industrial Direct Company/SID Tools Company

MSC Industrial Direct Company is a major North American distributor of industrial tools and supplies. This 10-year, 75% enterprise zone abatement was to support the construction of a 400,000 square-foot regional distribution center for SID Tools Company, an MSC subsidiary that distributes web-based software to manage sports teams and leagues, and a new business in the region. The abatement was approved July 30, 2012, and is to run from 2015 through 2024. The job creation commitment was reduced from 300 new jobs to 198 on March 14, 2016. As of the end of 2018, the company's employment had reached only 150. It is assumed that the employee count will reach 198 by 2021, at the same inflation-adjusted average wage as in 2018.

MSC operates distribution centers throughout North America, but SID Tools' customer base seems to be predominantly in Ohio (SID Tools, 2018). Because SID Tools' products are software and support, however, the company is not limited to locations in the Columbus MSA. Thus, indirect and induced impacts are relevant. These are estimated for custom computer programming services, which includes

the development of web applications. Indirect and induced alternate employment is estimated on the basis of the broader professional, scientific, and technical services category.

As Table A-8 makes clear, the NPV of the abatement is close to break-even. This is primarily because SID Tools' average wages are substantially lower than the Franklin County average – \$35,121 versus \$56,374. Even though development of the alternative use is not expected to occur until 2018, with operations beginning in 2019, the much higher assumed wage of the alternate jobs leads to a present value not much lower than that of the SID Tools jobs.

The standard rule in evaluating NPV is that the project should be accepted (i.e., the abatement granted) whenever the result is positive, regardless of how small. However, the likelihood that the abatement is truly necessary (the but-for percentage) plays a large role in determining the NPV, and this percentage is assumed to be 50% in all these calculations because it is unknowable. Consequently, the honest judgment of the Economic Development Department is important in a case such as this. How likely is it that the abatement really is necessary in inducing the prospect to locate within the city? If there are better than even odds that SID Tools would have gone to a suburb without an abatement, the NPV would be higher. How likely is it that the site would be developed in five years by a company that would pay higher wages? If this likelihood is relatively low, then the abatement should be granted. On the other hand, if this is a relatively desirable site, the abatement application should probably be rejected, all else equal.

NetJets, Inc./FlightSafety International

This project was initiated by NetJets for the benefit of FlightSafety International, both wholly owned subsidiaries of Berkshire Hathaway. The project proposed expanding FlightSafety's aviation training facility to an aeronautical campus, adding approximately 415,000 square feet to the existing NetJets facility at John Glenn Columbus International Airport. The expansion would more than double the number of flight simulators, creating the largest concentration of simulators in the U.S. The facility was expected to attract a large number of pilot trainees from outside Ohio.

The request was for a 10-year, 75% enterprise zone tax abatement, which was approved July 14, 2008. The abatement was to run from 2012 through 2021. The company also requested job creation tax credits and a jobs growth initiative, which are beyond the scope of this study.¹⁰ A particularly lengthy three-year construction period, January 2010 through December 2012, was budgeted. Because detailed project phasing is not available, all construction expenditures are loaded in 2011. (As usual, only construction and building improvements are included, not the more that \$100 million budgeted for equipment.)

This incentive is substantially completed, so it can be analyzed both prospectively and retrospectively. The employment totals were substantially greater than projected: 208 at year-end 2018 versus the 19-job goal. However, inflation-adjusted average wages in 2018 were much lower: \$37,226 compared to the goal of \$78,209. Fortunately, the job creation total was so much greater than the projected total that total payroll in 2018 was more than five times that year's goal.

¹⁰ The analysis of these other incentives is analogous to that of the property tax initiative: the expected annual reduction in income taxes (multiplied by a possibly different but-for percentage) is discounted to the date of the initiative's approval, and deducted from the net present value of the property tax initiative.

FlightSafety has a well-established existing facility in Columbus. The abandonment of this facility and the relocation of the existing jobs are highly unlikely if the incentive were to be rejected, so existing jobs are not relevant to the analysis. However, one material benefit that is not included in the analysis is the visitor spending by flight trainees. This generates lodging tax for the city and county, and supports jobs that generate income tax. The information is not sufficient to estimate this impact, however, so it is not included in the estimates.

The total payroll of the created jobs is substantially greater than \$1 million, so revenue-sharing with the schools is required. Part of the project site is located in the Columbus City Schools area and part is within the boundary of Gahanna-Jefferson City Schools. In situations such as this, the revenue share is allocated according to the percentage of total site improvements in each district. Here, Columbus receives 78% of the revenue share and Gahanna-Jefferson receives 22%. NPVs for both districts are estimated.

The prospective results are shown in Table A-9. The NPV for Columbus is small, slightly less than \$200,000. Similarly, the NPVs for both school districts and Franklin County are positive and small. The Columbus City Schools and Franklin County NPV go negative at 40% but-for percentage, and the Columbus NPV goes negative at 25%. The Gahanna-Jefferson impact declines but remains positive at any but-for percentage.

The retrospective impacts are in Table A-10. The benefit of this abatement turned out to be much greater than that from the pledged job creation, even though the average wage is less. The Columbus NPV is \$1 million, five times the prospective NPV. The present value of the direct, indirect, and induced tax revenue is more than four times as great as that from the pledged earnings because of the larger employment. The NPV remains positive even if the chance that the abatement was not truly necessary was 5% or less. All other impacts increase as well, but not to the same degree as the Columbus impact. Again, the larger realized earnings are a primary driver of the difference between prospective and retrospective impacts, and this difference impacts Columbus to a much greater degree than the school districts and the county.

PEDC Property Management, Inc. & Midwest Motor Supply Co.

PEDC Property Management and Midwest Motor Supply Company operate under the same ownership. The latter does business as Kimball Midwest, a distributor of industrial maintenance products. The project was a 163,000 square-foot expansion of Midwest Motor Supply's headquarters and distribution center. The company pledged to retain 286 full-time jobs with a payroll of \$18.9 million and create 60 additional full-time positions paying a total of \$2.25 million. The 10-year, 75% enterprise zone abatement was approved April 7, 2014.

The expansion of Kimball Midwest's facility was necessary to accommodate the growth of its business, so it is reasonable to assume that a generous incentive from a nearby community could have resulted in a relocation and a vacant facility. Thus, it is correct to include income taxes from both created and retained jobs in the Columbus analysis. Results are in Table A-11. The NPV for Columbus is \$2.7 million, and remains positive at any but-for percentage. This is primarily because the average wage of the 286 retained jobs – an inflation-adjusted \$79,266 in 2018 – is much greater than the \$56,374 Franklin County average. This overcame the negative impact of the \$28,733 average of the 145 created jobs. The immediate impact of these jobs less than the impact of the alternative jobs, which are not assumed to begin until 2020. (Kimball Midwest's job creation commitment was only 60.)

The payroll of the created jobs is sufficient to result in a revenue share to the Hilliard Schools, but the very low wages of these jobs (\$28,733 in 2018) means that the impact of the prospective alternative development, measured at the \$56,374 Franklin County average, is much greater. The disadvantage of the created jobs negatively impacts the Franklin County impact through the low sales tax revenue. The high-wage retained jobs are not a factor in either of these impacts. The Hilliard Schools impact remains negative at any but-for percentage; even if the need for the abatement is a certainty, the schools remain worse off. The Franklin County economic impact, though, becomes positive at a but-for percentage of 55%.

Pizzuti Short North Office

This 10-year, 75% enterprise zone abatement supported the construction of an office and retail building and the Joseph Hotel on two surface parking lots on North High Street in the Short North. The project also included a \$4.5 million, 313-space public parking garage and redevelopment of the 1924 United Commercial Travelers building, vacant since 2008, into the Pizzuti Gallery. The abatement was approved September 24, 2012, to run from 2015 through 2024.

The parking garage provides badly needed parking space in the Short North and the Pizzuti Gallery is a unique community amenity. However, the pace of development in the Short North suggests that the five-year window for alternative development assumed in the other projects would underestimate the opportunity cost of this development on this site. Consequently, it is assumed that if this project had not been developed, a different project would have been developed on the site in three years. Further, the hotel and office and retail tenants were probably not evaluating alternative locations outside of the MSA and would have found alternative space locally if this were not available. For this reason, earnings from indirect and induced operating employment impacts are irrelevant.

The project site is in the Short North TIF district. The TIF payments from both this project and the Hub project at High Street and Hubbard Avenue supported the construction of parking garages at each site, with a minimum combined total of 500 spaces. The Hubbard project has generated \$15.8 million in reimbursable expenditures, while the Pizzuti project has generated \$10.3 million, 39.6% of the two-project total. Because the TIFs on each of the two projects support both garages, it is necessary to reflect a share of the activity generated by both garages rather than that of the Pizzuti garage alone.

The cost of the two garages together totals \$16.1 million. While these are actual costs, some expenditures generate economic activity and earnings while others do not. Land is a substantial non-activity-generating cost. An analysis of detailed construction budgets reveal a total of \$11.8 million in nonresidential construction and \$445,000 in engineering expenditures for the two garages. The earnings generated by each of these two activities as estimated by the RIMS II model, and the share of those earnings estimated to be received in Columbus, are summarized in Table 3. These impacts occur as the garages are constructed, but the payments from the TIF occur over time. These payments for both projects are assumed to be sufficient to cover the cost of both garages over the TIF's 30-year life. The share of payments and construction income taxes allocated to the Pizzuti project is the 39.6% of total expenditures owed to Pizzuti by the city.

Table 3: Short North Parking Garage Expenditures and Related Earnings Impacts

	Nonresidential construction	Engineering	Total
Total expenditures	\$ 11,793,800	\$ 445,000	\$ 12,238,800
Columbus MSA earnings impacts			
Direct	\$ 5,110,800	\$ 173,000	\$ 5,283,800
Indirect	1,004,300	75,600	1,079,900
Induced	2,204,300	89,600	2,293,900
Total	\$ 8,319,400	\$ 338,200	\$ 8,657,600
Columbus earnings impacts			
Direct	\$ 5,110,800	\$ 173,000	\$ 5,283,800
Indirect	474,800	75,600	550,400
Induced	1,202,500	89,600	1,292,100
Total	\$ 6,788,100	\$ 338,200	\$ 7,126,400

Results of the analysis are in Table A-12. The Columbus NPV is more than \$950,000. The NPV remains positive after the impacts of the TIF. The Columbus City Schools impact is \$1.86 million, thanks to the payments from the TIF. Property taxes and sales taxes arising from construction and created direct operating earnings contribute to a \$340,000 NPV for Franklin County. There are several additional identifiable but nonquantifiable benefits from this project and the TIF. These include the additional parking provided by the garages, which ease the parking congestion in the Short North and help to attract additional visitors. This increases employment, income taxes, and sales taxes in the district. The Pizzuti Gallery is another fine arts amenity for central Ohio and preserves a historic, architecturally significant building.

Time Warner Cable Midwest

This project was the construction of a 140,000 square-foot office building for Time Warner Cable (now Spectrum). A 10-year, 75% enterprise zone abatement was approved September 19, 2005, to run from 2008 through 2017. The facility was intended to consolidate Time Warner's Columbus operations. For this reason, it is assumed that development could have occurred outside of the city, but that no alternative locations outside of the Columbus MSA were under consideration. Consequently, indirect and induced created and retained jobs are not relevant. Because the incentive has expired, it is analyzed both prospectively and retrospectively.

The property is part of the Gowdy Field TIF, a 30-year TIF on 100% of incremental values. Now that the abatement has expired, most municipal and school tax payments are directed to the TIF – 97.8% of total 2019 payments. In a land exchange with Columbus Recreation and Parks, the previous owner of Gowdy Field, TIF revenues are dedicated to the purchase of parkland. Because land purchases generate no economic activity, the economic impacts of TIF expenditures are zero.

The prospective NPV estimates are in Table A-13. Although the NPV of the abatement-driven impacts is a positive \$579,000, the TIF impact reduces the overall NPV to a negative \$474,000. This is due partly to the lack of economic impact of the TIF expenditures and partly to the lack of projected created jobs. The NPV remains negative unless the probability that the abatement is essential is 85%. The positive \$1.6 million impact for the Columbus City Schools is largely driven by the TIF payments. However, the NPV of Franklin County's position is a negative \$337,000 because of the large abated tax impact, and

consequently the high risk of approving an abatement that is in fact unnecessary. A but-for percentage of 90% is required for the NPV to go positive.

Retrospective impacts are in Table A-14. As is true of the other prospective versus retrospective cases, the actual employment that the company achieved was far more than the employment that had been predicted. The Columbus NPV is more than \$5.6 million positive rather than the prospective impact's \$474,000 negative – even with an unchanged TIF impact. The large positive NPV of the Columbus City Schools becomes even greater. Only the Franklin County NPV remains negative, but less so. The negative impact of the possibly unnecessary abatement is much larger than the positive impact of the increased sales taxes.

V&S Columbus Galvanizing, Voigt & Schweitzer, and Hill & Smith, Inc.

This project was to build new facilities for three co-located businesses. V&S Columbus Galvanizing is a hot dip galvanizing operation, Voigt & Schweitzer is a new business producing concrete barriers, and Hill & Smith is the corporate headquarters for the other two businesses. A 10-year, 75% enterprise zone tax abatement was approved March 5, 2012 to run from 2014 through 2023.

V&S was founded in Germany in 1893 and currently operates eight facilities throughout the Eastern U.S. Consequently, it is reasonable to assume that the company could have relocated outside of the Columbus MSA, so indirect and induced jobs arising from the retention can be included in the analysis.

The impacts are reported in Table A-15. The city's NPV is a positive \$939,000, and it remains positive regardless of whether the abatement is necessary or not. A primary factor contributing to the positive NPV are the high incomes of the retained jobs in particular. These jobs earned an average of \$86,829 in 2018, more than half again as much as the Franklin County average. The average wage of the retained jobs is \$43,793, slightly below the county average. This negatively impacts the Franklin County NPV, which considers created jobs but not retained jobs. The NPVs of the project for Columbus City Schools and Franklin County are both positive but very small. Both go negative at any but-for percentage less than 50%.

Whirlpool Corporation/Penske Logistics

This abatement supported the construction of a 1.5 million square foot distribution center in the Rickenbacker area for Whirlpool, consolidating the operations of two existing regional facilities elsewhere. A 15-year, 50% CRA abatement was enacted July 23, 2007 to run from 2009 through 2023.

A 30-year, 100% TIF was created February 28, 2008, to support a variety of infrastructure improvements in the area. As of December 31, 2018, a total of \$14.5 million in reimbursable charges had been spent by the developer. Most of these were non-activity generating, however. These included such items as a U.S. Treasury rebate, debt payments and administrative costs, and debt reserves. The portion of the charges involving identifiable infrastructure upgrades, which do generate activity, totaled \$3.5 million. Of this total, \$2.4 million were construction costs and \$204,000 were engineering costs. Other activity-generating expenditures are likely over the course of the abatement, but their nature and timing are unknown.

The NPV analysis is in Table A-16. The site is located in both the city of Columbus and Hamilton Township, so impacts are calculated for both entities. The Columbus impact from the abatement itself is

a positive \$103,700 but the present value of 20 years of the 30-year stream of TIF payments of more than \$5.7 million leads to a \$5.6 million overall negative impact for the city. This stream of TIF payments is a substantial benefit to the schools, however, and results in a \$7 million NPV. Hamilton Township's sole benefit and cost is the flow of property taxes. The risk that the abatement is unnecessary outweighs the benefit at a 50% but-for percentage, but the Township enjoys a positive net benefit as long as there is at least a 70% chance that the abatement was necessary. The risk of granting an abatement that was in fact unnecessary also leads to a negative NPV for Franklin County, but the NPV becomes positive as long as the chance that the abatement was a determining factor was at least 75%.

Concluding Observations

The tool illustrated in these 14 analyses provides an estimate of how much better or worse off public entities are if the abatement under consideration is granted. Factors that improve the desirability of the abatement include the following:

- A greater likelihood that the abatement makes a difference in the applicant's decision to locate in Columbus.
- Higher construction expenditures and a greater share of any TIF devoted to construction and other expenditures that generate economic activity, employment, and earnings.
- Higher average wages, particularly if those wages are greater than the county average.
- The lack of favorable near-term alternative uses of the site.

It is hoped that this tool will provide a worthwhile input for the evaluation of tax abatements. However, it is important to bear in mind that the tool does not absolve the Economic Development Department and City Council from using their best judgment in setting up a particular case for evaluation and considering whether to grant an abatement. The tool was explicitly designed under a conservative approach, placing a heavy emphasis on the possibility that the abatement is not really needed in attracting or retaining the applicant, the wage levels of the jobs that the abatement produces, and the alternative uses that the site might accommodate in the future.

As discussed earlier, there are financial considerations that cannot be incorporated into the tool because of the lack of underlying data that would permit estimates to be generated. Chief among these is the lack of data concerning business income taxes and purchases that are subject to sales taxes. This causes the NPVs for Columbus and Franklin County to be somewhat understated. Additionally, granting an abatement may encourage development of a previously blighted site. This would be expected to lead to increased property values and property taxes in the neighborhood, possibly provide increased job opportunities for nearby residents, and enhance the quality of life. These benefits too cannot be easily quantified. These factors, together with the possible tendency of applicants to understate eventual employment impacts, suggests that the results of these analyses are more likely to be too low than too high.

As the cases including TIFs illustrate, the level of TIF liability relative to the offsetting income taxes often causes a positive NPV under an abatement to go negative. It might be best to treat the TIF as a financing scheme to allow the city to pay for needed public infrastructure improvements benefiting an area rather than an arrangement that should generate a positive return. That is why NPVs are calculated before and after the TIF.

Tax Incentive Programs in Area Municipalities

The discussion in the earlier section has made clear that the tax incentive policies in nearby municipalities can and do have a significant impact on the ability of Columbus to attract and retain jobs and investment. To assess the current tax abatement strategies in these nearby municipalities, commercial properties with abatements and tax increment financing arrangements were catalogued. While the accompanying listing is probably not totally comprehensive, it includes most commercial properties with some type of property tax abatement or TIF arrangement in each of the municipalities. It should also be kept in mind that a custom-designed incentive package may be offered for a particularly large potential project regardless of the observed or stated policy of the municipality.

Community Reinvestment Areas (CRAs) have different terms depending on whether they were enacted before or after July 1, 1994. As summarized in Ohio Development Services Agency (n.d.), real property tax exemptions in pre-1994 CRAs must be 100%, while those in post-1994 CRAs can be 100% or less, and are negotiated for individual projects.¹¹ The maximum term of commercial exemptions is up to 12 years for remodeling and up to 15 years for new construction for both pre-1994 and post-1994 CRAs. The term is specified in the legislation creating the pre-1994 CRA, while it is negotiated under post-1994 CRAs.

However, to establish a baseline, it is worth reviewing the commercial unabated tax rates of various municipalities in the area. These are listed in Table 4. The table includes the name of the community, the tax district number, the effective commercial/industrial tax rate in mills (dollars per \$1,000 of value), this rate converted to a percentage of market value (reflecting the fact that under Ohio law, the tax rate is applied to only 35% of market value), and the percentage premium or discount relative to Columbus. There are more than 400 property tax districts in the region – approximately 150 in Franklin County alone. In most cases, the rate given is for the municipality and the predominant school district; e.g., Hilliard city and the Hilliard City School District. However, three rates are given for Columbus out of the dozens of tax districts within city limits. District 010 is Columbus city and Columbus City Schools, district 495 is Columbus city, Columbus City Schools, and Hamilton Township (the Rickenbacker area), and Delaware County district 45 is one of two Columbus districts in the Polaris area.

¹¹ If a pre-1994 CRA is amended more than twice after July 1, 1994, it becomes subject to the post-1994 rules, and must receive confirmation of the area from the Ohio Development Services Agency.

Table 4
Commercial/Industrial Tax Rates in Selected Central Ohio Tax Districts, 2019

District name	District number	Tax rate as given (mills)	Tax rate on market value	Premium/discount rel. to Columbus
Columbus	010	82.359895	2.883%	---
Columbus-Hamilton Township	495	101.051799	3.537%	22.7%
Columbus-Olentangy School Dist.- Delaware County	45	70.771117	2.477%	-14.1%
Bexley	020	96.991894	3.395%	17.8%
Delaware	14	74.055799	2.592%	-10.1%
Dublin-Franklin County	273	100.498808	3.517%	22.0%
Gahanna	025	90.570970	3.170%	10.0%
Gahanna-Jefferson Township	027	88.539880	3.099%	7.5%
Grandview Heights	030	99.953044	3.498%	21.4%
Grove City	040	90.915493	3.182%	10.4%
Groveport-Madison Township	185	86.707852	3.035%	5.3%
Heath	030	61.975573	2.169%	-24.8%
Hilliard	050	102.683317	3.594%	24.7%
Lancaster	053	48.965530	1.714%	-40.5%
London	31	46.495353	1.627%	-43.5%
Marysville	29	80.530000	2.819%	-2.2%
New Albany	222	90.942161	3.183%	10.4%
Newark	054	51.141244	1.790%	-37.9%
Obetz	153	73.729034	2.581%	-10.5%
Pickerington	041	75.035526	2.626%	-8.9%
Reynoldsburg	060	91.811234	3.213%	11.5%
Upper Arlington	070	90.539479	3.169%	9.9%
West Jefferson	10	62.162900	2.176%	-24.5%
Westerville-Franklin County	080	95.402057	3.339%	15.8%
Westerville-Delaware County	18	85.449638	2.991%	3.8%
Whitehall	090	81.436828	2.850%	-1.1%

Source: Delaware County Auditor (2019), Fairfield County Treasurer (2019), Franklin County Auditor (2019b), Licking County Auditor (2019), Madison County Treasurer (2019), Union County Treasurer (2019).

As Table 4 makes clear, district 010, the predominant Columbus district, is not the highest-taxed district in the area, nor is it the lowest. Many Franklin County suburbs have higher rates, but rates are generally lower in the outlying counties – some markedly so. However, district 495 in the Rickenbacker area is taxed both by Columbus and Hamilton Township and has one of the highest tax rates in the region. This may be a partial explanation for the Rickenbacker development pattern analyzed above.

Bexley

Bexley has three post-1994 community reinvestment areas. The Cassady-Delmar CRA lines Cassady Avenue north of Ruhl Avenue to the city limits and east along Delmar Drive. The Main Street Redevelopment District follows the Main Street corridor through the city. The Southwest Bexley CRA covers commercial and residential areas north of Livingston Avenue and along and west of College Avenue south of Astor Avenue. There is also a TIF district along Main Street available to both

commercial and residential properties. Property owners subject to the TIF can be reimbursed for eligible expenses from the TIF fund for the lesser of 50% of the expense or 30% of the property's contribution to the TIF fund in that year.

CRA terms published at City of Bexley (n.d.) offer commercial abatements in only two of the three areas. New construction and renovations in the Main Street District can receive abatements of up to 100% for up to 15 years. The Cassady-Delmar Redevelopment Area offers 75% abatements for 10 years on remodeling or new construction of commercial projects and 75% abatements for 12 years on mixed-use projects.

Despite the considerable redevelopment occurring along East Main Street, few of these properties are covered by incentives. The only commercial property with a CRA abatement is the 2008 Bexley Gateway development at 2152-2158 East Main Street. This has a 15-year, 50% CRA abatement. The other major recent development, the 2013 Giant Eagle supermarket, is not abated. It is subject to the Main Street TIF, however, as are most of the properties along Main Street. The most common rate on land is 51% on land. The rate on improvements varies widely, but is up to 100%.

Canal Winchester

According to City of Canal Winchester (n.d.), Canal Winchester has two pre-1994 CRAs, and offers 100% incentives for up to for 15 years. CRA #1 is generally north of Groveport Road and south of the railroad tracks. Several parcels south of Groveport Road and west of Gender Road are included, as is an area west of Gender Road, north of the railroad tracks and south of Winchester Square Shopping Center. CRA #2 is along Diley Road, south of Busey Road and generally north of Route 33.¹² Fairfield County property records do not indicate incentive details on properties, but a survey of City Council minutes over just the past nine months revealed the approval of two 100%, 15-year incentives.

Delaware

Delaware offers both CRA abatements and TIF agreements. CRA abatement terms are outlined in City of Delaware (n.d.). The city has three CRAs covering much of the central and southern area of the city.¹³ One CRA is pre-1994. Abatements are offered up to 100% for terms up to 15 years; retail and restaurant projects are limited to a maximum 10-year term. PILOTs to the impacted school district and career center are typically required for projects with less than \$1 million in new payroll that receive a 100% abatement. These total 30% of what the district would have received for the life of the abatement. Preference in awarding incentives is given to projects in the city's primary industry targets as described in City of Delaware (2014, pp. 15-17): boutique manufacturers, research and development, industries within professional and technical services, finance and insurance, wholesale trade, and information.

A formal return on investment calculation is used to determine the level of abatement. This is:

¹² Maps are at <https://www.canalwinchesterohio.gov/DocumentCenter/View/658/CRA-Map-1?bidId=> and <https://www.canalwinchesterohio.gov/DocumentCenter/View/659/CRA-Map-2?bidId=>

¹³ A map showing the collective boundary of the CRAs is at <http://www.delawaremeansbusiness.com/resources/Documents/Plans/CRA%20Map2016.pdf>

Projected income tax from new¹⁴ payroll for the term of the abatement times the most recent IMPLAN multiplier for industrial or commercial,
Less projected incentive package value over the term of the incentive, net of the total of any school district PILOTs,
Quantity divided by projected incentive package value over the term of the incentive, net of the total of any school district PILOTs.

Dublin

Dublin has no CRAs, and seems not to offer tax abatements. A series of TIF areas cover the Bridge Park development and various scattered sites, however. As summarized in City of Dublin (n.d.), incentives include performance-based cash payments based on withholding growth, land and broadband assistance, energy audits, and grants for relocation, wiring and technology upgrades, façade improvements in Historic Dublin, and cash grants payable upon LEED certification. Preference for incentives is given to companies in Dublin's targeted industries: corporate headquarters, information technology, non-clinical medical biosciences and healthcare, business support services, and automotive, mobility, and logistics.

Gahanna

Gahanna has five community reinvestment areas. Three pre-1994 and one post-1994 CRAs cover the southern industrial/commercial area of the city; a pre-1994 CRA covers Creekside and the downtown area. A total of 19 properties are covered by CRA abatements. These are often 100% for 15 years, although two recent abatements are 10 years at 75%.

Gahanna has four TIF districts encompassing commercial and industrial areas. (A fifth district, the Manor Homes TIF district, was enacted to support the development of a newly annexed residential area.) Two TIF districts cover the industrial and commercial area generally south of Taylor Road to the corporation limit. The Central Park TIF district, covering the western part of this area, was established in April 1999. The Eastgate TIF district was established in August 1999 and covers the eastern portion of this area.

The North Triangle TIF district was enacted in May 2014, and is bounded by parcels west of Hamilton Road on the west, Johnstown Road on the southeast, and the corporation limit along Morse Road to the north. This district encompasses a largely residential area, but commercial properties line Hamilton and Johnstown Roads. Unlike the earlier TIF legislation, this requires the schools to be made whole.

The Olde and West Gahanna TIF district, enacted in 2005, applies to existing commercial and residential properties in much of central Gahanna, extending west across Big Walnut Creek to Agler and Johnstown Roads west of Stygler Road. At least 76 properties are covered by this TIF. The TIF diversion varies widely, but land rates are generally between 15% and 45%; building rates are often between 0% and 25%.

Grandview Heights

Grandview Heights City Council enacted a commercial and residential CRA in January 1998. The commercial portion of the area includes all of what has become the Grandview portion of Grandview

¹⁴ Retained payroll can be included only if it is shown that the company will leave unless an abatement is granted.

Yard, First Avenue east of Oxley Road, the Goodale Boulevard corridor between the city limits and Grandview Avenue, Grandview Avenue south of the railroad tracks, and the small portion of Dublin Road east of Grandview Avenue that lies within city limits. Terms for commercial abatements are negotiable, but retail developments are not eligible.

CRA abatements apply to many of the properties in Grandview Yard. These are not especially generous: they are typically 15 years at 25%, with the remainder of the value increment going to the TIF. This probably reflects the desirability of the development. The abatements on the two hotels, however, are 75% for 15 years. Elsewhere, CRA abatements apply to newly developed properties at 1123 and 1133 Goodale Boulevard; these abatements are 10% for 12 years and 50% for 15 years, respectively.

TIF exemptions also apply to the Grandview Yard development and various properties along Goodale Boulevard, particularly the W.W. Williams warehouse at 835 West Goodale Boulevard, the International Brotherhood of Electrical Workers property at 939 West Goodale, and the parking lots and undeveloped parcels surrounding each property. These properties are being considered for redevelopment. TIF exemptions vary widely, but are often 45% to 60% of land value; building exemptions vary from zero to 100%.

A CRA abatement and TIF exemption were granted in March 2019 for 16 acres east of Grandview Avenue, between the railroad tracks and Dublin Road. This is part of a 53-acre area called Grandview Crossing; the remainder of the land, a former landfill, is in Columbus. Grandview Crossing is proposed to include up to 50,000 square feet of Class A office space, a hotel, and retail space. The CRA abatement is 50% for 15 years, but the hotel abatement can increase to 75% with approval by the school district. The TIF exemption is 100% for 30 years, with make-whole payments to the School District.

Grove City

Grove City has four CRAs, all pre-1994. These are located in the southern end of the city, the downtown area, the far northeast, and the northwest.¹⁵ TIF districts include both commercial and residential areas. The largest commercial areas cover the southern end of the city centered on the I-71/Route 665 interchange, the Beulah Park site, and the commercial area along Stringtown Road.

A total of 24 active CRA abatements were identified. These cover a variety of industrial and commercial properties, including retail, a fast food restaurant, and a social hall. The vast majority of these abatements are 100% for 15 years. Most TIF diversions are relatively large, applying to virtually all the properties' land and building values.

Groveport

The willingness of Groveport to offer incentives was discussed earlier in the analysis of Rickenbacker development. Groveport is divided into five CRA areas, all of which are pre-1994 CRAs. Thus, any CRA abatement that Groveport offers must be 100% of the incremental value for a term of up to 15 years for new commercial construction. According to City of Groveport (n.d.), the term for *all* new commercial and industrial abatements is 15 years. The developer applies for the abatement when the project is nearly or totally completed, usually when a certificate of occupancy is issued.

¹⁵ Maps are at <http://www.grovecityohio.gov/wp-content/uploads/2015/04/groveCityCRAMap.pdf>.

Hilliard

Hilliard has 10 CRAs. These include two pre-1994 CRAs: the City of Hilliard CRA and the Reynolds Drive CRA. The post-1994 CRAs include the Alton-Scioto Darby CRA, certified September 24, 2008; the Britton Central CRA, certified July 15, 2004; the Hilliard-Rome Road CRA, certified November 24, 2008; the I-270 West CRA, the Mill Run CRA, certified June 2, 2005; the Old Hilliard CRA, certified January 28, 2014; the SOMA CRA, certified December 5, 2000; and the Verizon CRA, certified July 16, 2008.

Recent Hilliard City Council resolutions suggest that the level of abatements granted varies widely, and depends on the use, investment, and payroll of the project. All abatements but one granted over the last two years have been for projects in the I-270 West CRA. A senior living center was granted a 15-year, 30% abatement April 23, 2018. A hotel received a 10-year abatement on June 26, 2018. The percentage was 75% for the first five years and 50% for the second five years. A 50%, 10-year CRA abatement was granted July 9, 2018, for a second hotel project. An expansion of the facilities of Rich Products Corporation, a food service wholesaler, was granted a 50%, 12-year abatement on December 10, 2018. An Amazon data center to be built in the Alton-Scioto Darby CRA received a 100%, 15-year abatement December 9, 2019.

Lancaster

Large portions of the city of Lancaster are covered by CRAs. According to City of Lancaster (2019), Lancaster City Council in 1979 designated two CRAs plus the Historic District at the center of the city as eligible for abatements. All three of these areas remain subject to the pre-1994 rules.¹⁶ An abatement of 12 years is available for commercial renovations with a cost at least 50% of the current building value, and for new construction where the value of improvements is at least \$250,000. Industrial properties are subject to a 15-year exemption for renovations with a cost of at least 10% of the building value, and for new construction with at least a \$250,000 improvement value. A residential CRA was designated by City Council June 10, 2019. Abatements of up to 100% for 15 years are permitted.

Two sites are covered by enterprise zones, Rockmill and Quarry Commerce Center. The abatement is for up to 75% percent for up to 10 years, according to City of Lancaster (2017).

Marysville

Much of central Marysville is within a CRA.¹⁷ According to City of Marysville (2018), approval of abatements is on a case-by-case basis and depends on the amount of investment and the number of jobs created or retained. Remodeling projects of at least \$10,000 are eligible for up to a 100%, 10-year abatement. New construction can qualify for abatements of up to 100% for up to 15 years. These are the maximum abatements available, but a scoring matrix is used to determine the incentive offered in a given case.

¹⁶ The CRAs are mapped at

<https://lancastergis.maps.arcgis.com/apps/webappviewer/index.html?id=8a025f02a45946c195d1f3723732554f>

¹⁷ A map is at <https://marysvilleohio.org/DocumentCenter/View/3010/CRA-District-Map?bidId=>

New Albany

New Albany has four CRAs, all post-1994. These include the New Albany Central College CRA, the New Albany Oak Grove CRA, the Oak Grove II CRA, and the Village Center CRA. Terms are detailed in City of New Albany (n.d.). Corporate office projects exceeding 150,000 square feet are eligible for abatements of 100% for 15 years, while those less than 150,000 square feet can qualify for 100%, 10-year abatements. Projects must meet revenue generation requirements, which are based on 90% of total square footage and adjusted every three years by the Consumer Price Index.

Manufacturing facilities also qualify for abatements of up to 100% for 15 years. Revenue benchmarks are based on site acreage and income tax collection. Projects must meet minimum New Albany Green Building Standards. Data centers qualify for abatements of up to 65% for up to 15 years, and require the use of the municipal fiber optic network. As detailed below, though, at least two recent data center projects have received larger abatements. Lost school revenues are reimbursed from income tax revenues.

A review of recent abatements offered and awarded by New Albany over the past several years suggests that abatement offers are aggressive and tend to be at the maximum allowable level. These abatements include:

- A 15-year, 100% abatement for a 266,000 square-foot speculative multitenant industrial building developed by Pizzuti in the New Albany International Business Park, as reported by King (2016).
- An offer of a 15-year, 100% abatement for a proposed data center for Sidecat on Beech Road; see Sole (2017).
- An offer of a 15-year, 100% abatement for a proposed data center for Montauk Innovations LLC, a subsidiary of Google; see Sole (2018).
- A 15-year, 100% abatement for an Amazon Web Services data center in the New Albany International Business Park, reported by Sole (2019).
- A 15-year, 100% abatement for two manufacturing and distribution buildings on Innovation Campus Way West, approved February 18, 2020, as reported by Sole (2020).

Reynoldsburg

There are no designated CRAs in Reynoldsburg. TIFs are used for specific developments. The Walgreens store at 6320 East Main Street (at Brice Road) has a TIF diversion of 50% of the land value and 100% of the building. A TIF was enacted in 2018 to support the development of a 100,000 square-foot Kroger at 6600 East Main Street. A TIF district covering commercial and residential projects is bounded by Main Street on the north, Waggoner Road on the east, Livingston Avenue on the south, and Brice Road on the west. The Auditor's website identifies no TIF valuation for any of these properties, however.

Upper Arlington

There is one specified CRA in Upper Arlington covering the northwest portion of the city, bounded by Henderson Road on the south, Sawmill Road on the east, the corporation limit on the north, and Riverside Drive on the west. The abatement terms in this small area are 40% for 10 years. These properties are also covered with a TIF diverting 24% of land value and the remaining building value.

Other scattered properties are covered by TIF agreements. Notable among these are Scioto Country Club; although the land value is not covered, 31% of the building value is. TIF properties are concentrated at Kingsdale and the revitalizing area of West Lane Avenue. The Kingsdale properties' land diversions are typically less than 20%, although 47% of the center's land is diverted. The diversion often applies to a higher percentage of the land value along Lane Avenue – often somewhat more than 50%. The entirety of most building values is diverted.

Westerville

Westerville currently has four CRAs. The Commerce Center CRA, enacted in 1993 and expanded in 1999 and 2005, covers 136 acres on the northern edge of the city. It is an irregular area, generally south of Maxtown Road and east of North State Street. The Alum Creek CRA was established in 1994 in a small area of southwestern Westerville, including portions of Collegeview and Cooper Roads, and Cleveland Avenue. A 2003 expansion included Mount Carmel St. Ann's Hospital. The East Broadway CRA, enacted in 2007, covers the commercial districts along East Broadway, South State Street south of Walnut Street, Brooksedge Boulevard and Eastwind Drive. The Northwest CRA was enacted in 1999, and covers much of the area north of the Delaware county line between Worthington Road and Cleveland Avenue.

Eight active CRA abatements were identified, four in Franklin County and four in Delaware County. Terms are a 100% abatement for 12 years, except for a renovated building at 7-9 North State Street. That abatement is 100% for 11 years.

Insights from Incentive Best Practices and Policies Elsewhere

The earlier arguments suggest that businesses choosing a location in which to relocate or expand will weigh attributes such as workforce, infrastructure, real estate, and business costs far more heavily than tax incentives. This section provides an overview of other states' and cities' economic development incentives – emphasizing larger cities in the Midwest (other than Chicago whose size puts it in a different class) and cities in other parts of the country with size and/or growth comparable to that of Columbus. In all, the incentive policies and practices of 20 cities were studied. The intent of the analysis is to identify case studies of programs that could potentially be adapted for Columbus. These must be considered within the context of the revenue structure of cities in other states and strategies permitted under Ohio state law.

Pew Charitable Trusts (2017) evaluated incentive policies at the state level for all 50 states and the District of Columbia. The study's three-step process for evaluating state-level incentives is relevant at the municipal level as well: (1) Make a plan; (2) Measure the impact; (3) Inform policy choices. The first step involves designing a strategic evaluation plan that includes all incentive programs and evaluates the effectiveness of these programs according to a regular schedule. At the municipal level, this evaluation would include property tax abatements, job creation tax credits, and job growth incentives. Which of these programs is the most effective at creating jobs and payroll? The Columbus Tax Incentive Review Council, including representatives of government, the schools, and the public, evaluates the performance of tax abatements, informed by extensive documentation and presentations by Economic Development Department staff. However, there is no comparable external review of the effectiveness of the income tax incentives. The data certainly exist to compare these incentive programs, but all of them share the same problem: it is unclear whether the incentive was really necessary to attract the operations that benefit from the incentive.

The second step in the Pew Charitable Trusts (2017) process is to measure the impact of the incentive. One suggested aspect of this analysis is to put the value of the incentive in the context of the overall costs of the recipient. An incentive that is only a small share of total costs matters less than a substantial one. As discussed earlier, Bartik (2019) estimated that the typical tax incentive is equivalent to subsidizing 3% of wages for 20 years, so this would imply that tax incentives are unimportant and thus unlikely to alter the behavior of the business. Recipients of Columbus tax incentives submit their payroll total to the city, so it would be tempting to replicate this calculation by comparing abatement benefits to payroll. This would overestimate the value of the benefit to the company, though: had Columbus not offered the abatement, a suburb might have done so. This suggests that the actual net benefit of the incentive to the business is smaller than its gross amount, and substantiates the earlier point that tax incentives matter only at the margin.

The impact of the incentive also includes measurement of the tradeoffs and indirect impacts of the incentive, evaluating whether incentives are designed to achieve their goals, and determining whether the programs themselves are being administered efficiently. Pew Charitable Trusts (2017, p. 16) proposed evaluating the tradeoff of using funds for the incentive rather than other public purposes. If it is true that the development would not have occurred without the incentive, however, the abated tax revenues would not have been available for the alternative budget items. This approach is thus incorrect. However, Pew Charitable Trusts (2017) suggested that impact measurements should also include the indirect and induced impacts that are an element of the model developed above. The model also measures a tradeoff, albeit a different one: the tradeoff between inducing development of the parcel now that precludes a possibly more favorable project later.

The final step in the process is to use the analysis of the program and its operation to inform public policy. This step provides the oversight to help ensure the appropriateness of the specific incentives granted and the efficiency of the process and administration. At the state level, this oversight can result in legislative changes, but because the operation of Columbus incentive programs is governed by state law, the possibility of legislative change is limited. The value of the oversight at the municipal level is to review the outcomes of specific abatements and revise policies as necessary. All abatements and the annual report of the Tax Incentive Review Council are reviewed by City Council's Economic Development Committee and approved by City Council. It is important that this review and approval process be approached critically, without simply rubber-stamping the actions of staff.

The Pew Charitable Trusts (2017) evaluation of state-level abatement policies revealed 10 states that are leading in the management of the incentive process, 18 states (including Ohio) that are making progress, and 23 that are trailing. The report describes the criteria for assigning these rankings as follows:

The leading states have well-designed plans to regularly evaluate tax incentives, experience in producing quality evaluations that rigorously measure economic impact, and a process for informing policy choices. The states that are making progress have made a plan by enacting a policy that requires regular evaluation of major tax incentives. The trailing states lack a well-designed plan to regularly evaluate major tax incentives (p. 2).

The 10 states ranked highest by Pew Charitable Trusts (2017) are Florida, Indiana, Iowa, Maine, Maryland, Minnesota, Mississippi, Nebraska, Oklahoma, and Washington. The characteristics of effective evaluators are an ability to draw conclusions that are relevant to policy formation, experience in program evaluation, experience in the measurement of economic and fiscal impact, and an impartial,

nonpartisan perspective. These states have well-designed plans to provide regular evaluations of incentive programs, rely on evaluators – whether internal or external – with appropriate skills, and act legislatively on the basis of the evaluation findings. Florida, for example, allowed its Enterprise Zone Program to expire in 2015 on the basis of a finding that it was mostly moving activity within Florida and was delivering a weaker return on investment than other programs. Similarly, Washington ended two programs intended to encourage research and development spending were costing tens of millions but producing few jobs relative to that cost.

Pew Charitable Trusts (2017, pp. 94-95) ranked Ohio as “making progress.” The study highlighted the state’s plan to undertake regular evaluation of tax incentives, and the creation of the legislative Tax Expenditure Review Committee. The Committee studies tax expenditures on an eight-year cycle, and recommends whether the expenditure should be continued, modified, or terminated. However, Pew Charitable Trusts (2017) argues that the Committee’s work would be more effective if it were informed by written professional evaluations.

A survey of the economic development policies of 20 larger cities in Ohio and the Midwest and cities around the country that are similar to Columbus in size and/or numerical growth brought to light a number of innovative policies and approaches to economic development incentives. These feature an emphasis on incentives that promote equitable development, local hiring, living wages, and small businesses. These are discussed in the following paragraphs.

Austin, Texas, receives more than 60% of its revenue from utility charges and fees for services. Property taxes comprise 28% of non-fee revenue, and sales taxes comprise 10%. The city property tax rate is 4.331 mills compared to the Columbus rate of 1.099 mills on market value. Details of Austin’s economic development incentive programs are outlined in City of Austin (n.d.). The primary incentive is the Chapter 380 program, named after the enabling Texas state statute. Expanding businesses that have operated within the city limits for at least 12 months and create at least five jobs over five years paying at least the city of Austin living wage (currently \$15 per hour) can receive up to 3% wage reimbursement per job per year, with a maximum of \$1,800 per job. These companies can also receive up to 50% reimbursement of property taxes. The same incentive is available to relocating companies pledging to create at least 75 jobs over 10 years paying at least the living wage. Companies hiring at least one individual in targeted populations or with barriers to employment at a rate of at least the city living wage can receive up to \$3,000 per job per year. The city published a detailed five-year plan in 2018 outlining the principles, policies, and objectives of the Chapter 380 program; see City of Austin Economic Development Department (2018). The city has also integrated its Cultural Arts Division into the Economic Development Department; this seems to be the Austin analogue to the Greater Columbus Arts Council. The purpose of this action was to recognize the important role that the arts play in the development of the community.

The city of Indianapolis is initiating incentives that emphasize inclusive economic development. The strategy is laid out in HR&A Advisors (2019), a report supported by the city of Indianapolis, Develop Indy, Indy Chamber, and LISC Indianapolis. The release of the plan was summarized by Burris (2019). The plan is designed to address racial disparities in employment access, improve access to high-quality education and supportive services, support workforce training programs, and focus on underinvested neighborhoods. Under the plan, wages must be at least \$18 per hour, and employers must emphasize local hiring and eliminate barriers such as access to childcare, transportation, and skills training in order to receive incentives from the city. The plan was scheduled to be implemented in January 2020.

The city of Grand Rapids released a detailed strategic economic development and mobility plan in January 2020 (City of Grand Rapids, 2020). Like the Indianapolis plan, the Grand Rapids plan emphasizes equitable economic development. A number of these strategies, such as corridor revitalization and strategies targeting minority and women-owned businesses, are already in play in Columbus. Other strategies, however, might be considered for adoption in Columbus.

The plan's contrast between traditional and equitable approaches to economic development and mobility summarizes this focus (p. 8):

Traditional Approach	Equitable Approach
Increasing the total number of jobs	Increasing the total number of jobs and access to jobs for low-income populations
Private investment leveraged with public capital	Private investment leveraged with public capital and increasing property ownership among existing residents and businesses
Constructing new transit routes with a focus on Return-on-Investment and efficiency	Constructing new transit routes with a focus on Return-on-Investment and efficiency and focusing on connectivity to jobs and services, as well as a reduction in rider time and cost
Adopting auto-oriented policies that mitigate traffic congestion	Adopting auto-oriented policies that mitigate traffic congestion and addressing health and safety indicators in communities of color
Gathering input from influential city leaders	Gathering input from influential city leaders and public input from businesses, residents, and other stakeholders

Among the many strategies to make economic development more inclusive are improving the accessibility of the city's economic development services by launching a clear, simplified incentive information hub and a simplified online application process, and conduct public outreach to promote awareness of incentives (p. 48). The city plans to identify and promote businesses that adopt inclusive practices (p. 50). The city will establish new development project scoring criteria that will include measures of equity, and will include these criteria in impact reporting (pp. 54-55). An important part of the strategy to support business attraction jointly with economic development partners is to connect businesses with workforce development organizations that can provide access to inclusive hiring and training (p. 73-74). In Columbus, this would involve connecting businesses not only with Ohio Means Jobs Columbus but also with organizations that provide employment services for members of minority groups, the differently abled, older workers, ex-offenders, and more.

The city of San Diego updated its business incentive program in 2018 to include a focus on expanding, attracting, and retaining small and mid-size base-sector firms. These are firms that produces goods or services that are customarily sold outside the region. According to the City of San Diego (2018), "A key characteristic of a base-sector firm is its ability to move a significant portion or all of its operations to another region without suffering a negative impact on the firm's revenue or customer base" (p. 3). (These firms are also referred to as export businesses.) Available incentives include payment of city fees, secured or unsecured financing, funding to support employee hiring or training, and dedicated technical assistance greater than the maximum of 120 hours per year. The minimum requirements to qualify for

an incentive are to create or retain 10 jobs or three jobs in a low to moderate-income (LMI) area, or make a \$5 million capital investment. Firms meeting these base requirements are eligible for a \$10,000 incentive. Higher incentive levels are available to firms that participate in Community Goal activities: workforce development, educational investments, sustainability, location in an LMI area, community investment, and transportation and mobility. Firms meeting the base requirements plus additional goal activities can qualify for up to \$100,000 in incentives. These additional incentives encourage equitable development similar to the Indianapolis model.

The city of Cleveland's Economic Development Department offers a number of targeted grant and loan programs. The Gardening for Greenbacks grant program is designed to assist entrepreneurs seeking to start for-profit urban farms. The program is summarized by City of Cleveland Economic Development (2020a). The grant is between \$3,000 and \$5,000, and may be used for: "Purchase of gardening tools, irrigation equipment, construction materials for hoop houses and raised beds construction, display tables and booths, soil, signage, and rain barrels" (City of Cleveland Economic Development, 2020a). Qualifying for the grant requires successfully completing market garden training, an executed lease on a plot of land, and agreements to sell the garden's output to local entities. Documentation of job creation and sales to the local community is required at year-end. This program encourages the use of abandoned land in blighted neighborhoods, creates employment, and can be a partial solution to supplying nutritious food in food deserts.

Two of Cleveland's programs are designed to assist the development of small businesses. The Municipal Small Business Initiative provides grants that reduce the equity requirement of a project funded by the U.S. Small Business Administration (SBA). As outlined in City of Cleveland Economic Development (2020b), the SBA normally takes a 25% equity share in these projects, but this grant, funded half by the city and half by Cuyahoga County, provides up to 15% of the project costs – as much as \$50,000 – to reduce this equity share to as little as 10%. This allows the small business to keep more of the revenue from the project. Only capital projects are eligible for funding. These include property acquisition, construction, or purchase of equipment, furniture, or fixtures. Projects must create at least one full-time job; the city tracks job creation for up to three years. The business must also execute a Workforce Development Agreement, a free service of Ohio Means Jobs that matches unemployed skilled workers with available positions.

The other noteworthy Cleveland program is the Neighborhood Retail Assistance Program; see City of Cleveland Economic Development (2020c). This initiative targets loan funds to locally owned, non-chain retail, restaurants, and cafés and is one of the few programs in the country to do so. Loans of as much as \$50,000 are available for machinery, equipment, furniture, and fixtures; construction and renovation; design and engineering costs; exterior fencing, signage, and lighting; and information technology installation. In order to be eligible, businesses must create at least one full-time W-2 job in the city and provide an equity stake of at least 10%. Loan terms are interest-free during construction, then 3% for up to five years. Up to \$3,000 of the loan can be forgiven if the recipient installs sustainable and energy efficient components.

Retail incentives are rare because the standard economic development thinking is that retail and restaurants do not create jobs or wealth. Rather, they merely circulate dollars that are already in the local economy and do not bring wealth into the region. However, City of Cleveland Economic Development (2020c) argues that, "The projects increase the 'walkability' of neighborhoods adding vitality by providing street level goods and services ultimately improving quality of life." But an even more compelling argument is the one rooted in the series of Civic Economics (n.d.) studies discussed

earlier: locally owned, locally serving retail and restaurants improve local income by trapping dollars that would otherwise leave the economy. In contrast to chain retailers and restaurants that centralize suppliers of inventory, supplies, and business services, most local businesses create multiplier effects by dealing with local suppliers and local business service providers. As argued earlier, trapping wealth that would otherwise leave the Columbus economy has the same economic effect as bringing wealth in.

Another retail incentive is offered by Washington, DC. This incentive benefits supermarkets locating in specific neighborhoods that lack access to groceries and fresh food (food deserts). According to District of Columbia (n.d.), qualifying full-line supermarkets can receive a real property tax exemption, a business license fee exemption, a personal property tax exemption, and/or a sales tax exemption on building materials for up to 10 years after development or renovation.

The city of Philadelphia provides a contrary example. The city implemented a 10-year, 100% tax abatement program in 2000, but according to Coen (2018), the City Council was reconsidering the need for this policy among sharply rising property values. City Controller Rebecca Rhynart stated that development increased 376% in the city, while falling 11% in the suburbs. Although the city was receiving \$48.1 million annually from the formerly abated developments, there was a concern over the amount of money being diverted from the underperforming school system. The school funding obligations caused S&P Global Ratings to downgrade the city's bonds by a notch.

Possibilities being considered included eliminating the abatement entirely, amortizing it over a 10-year period, exempting the most profitable ZIP codes, or removing the 55% share going to the schools from the abatement. On December 3, 2019, City Council voted unanimously to advance a less aggressive bill phasing out only residential abatements, reducing the 100% abatement in ten percentage point steps over 10 years, reaching 10% in its 10th and final year. According to McCrystal (2019), the legislation passed unanimously, but still needed final enactment. There has been no movement on this final passage yet. It will be valuable to monitor the impact of this initiative on Philadelphia's development once it is put in place.

Conclusions and Recommendations

This analysis has made clear that there are both benefits and significant costs in granting incentives. There are also costs in not doing so. In the Rickenbacker case discussed earlier, development in Columbus has lagged far behind that in Groveport and Obetz, whose incentives were more generous. Similarly, Dublin lost BMW Financial Services to Hilliard due at least in part to the willingness of Hilliard to outbid Dublin significantly for these jobs. The consequences of significantly scaling back or eliminating incentives could thus be severe.

However, this does *not* mean that every competitor community's incentive bid should be matched. It depends on the benefits and costs of doing so, and should include the recognition that the applicant may well be deliberately playing one municipality off against another to maximize the incentive. It should also be realized that a large project locating in a suburb will provide a fiscal benefit to Columbus. It is true that the city does not receive the income tax revenue generated by those jobs, except to the extent that employees live in Columbus and the city's 2.5% tax rate exceeds that of the suburb. In addition, the Columbus residents employed by the project spend some of their earnings in Columbus businesses, sustaining taxed employment and generating taxed business profits.

There are also non-monetary reasons for businesses to choose a given location for a project. The author heard from a number of developers in the late 1990s that certain suburbs were far easier to work with than was Columbus at the time. Great strides have been made since then, but it is essential that city personnel make the process of developing a project as straightforward and timely as possible, and that they continue to commit to providing outstanding customer service. This can itself lower the cost of development.

The primary reason for awarding an incentive is to encourage the developer to locate a project in Columbus and discourage development elsewhere. Incentives should thus consider whether a project could feasibly be developed elsewhere, particularly within the Columbus area. The AirSide One project in particular was a distribution project adjacent to John Glenn Columbus International Airport – a unique project. The developer was based in Columbus. If the project had been developed elsewhere, it would not have been the same project. It is not certain that a less generous incentive (or no incentive) would have resulted in the project being developed in Groveport or at a different airport, but it is unlikely.

It is also important to focus tax incentives on the projects with the highest probability of success. In general, these will be projects in industries that are regional economic drivers. An economic driver is an industry that is larger than average in the region in terms of either employment or output and with long-term growth faster than average. The above-average success of local firms in these industries points to a combination of economic and environmental factors that are especially positive for their growth. These factors could include a concentration of related industries, infrastructure, and in many cases an appropriately skilled workforce. Jobs Ohio follows this strategy by prioritizing nine focus industries.

None of the Columbus incentive projects analyzed include PILOTs, but consideration should be given to using this means to offset at least some of the diverted school funding. The costs of diverting funding from schools go far beyond than the immediate loss of revenue. As Bartik (2019) made clear, the loss of school funding has long-term impacts on the quality of the workforce. This in turn negatively impacts the skills, earnings, and employability of workers, and consequently the future profitability and competitiveness of local businesses. The diminished workforce quality and school effectiveness will make it harder for the region to compete for development in the future.

Payroll targets for abatements should always be indexed to inflation if it is legal to do so. Even at a modest 2% inflation rate, a \$1,000,000 payroll in the first year is equivalent to an \$821,000 payroll in the tenth. Thus, the purchasing power of a company's payroll can decline by as much as 18% and it can remain in compliance. There needs to be a specified, mutually agreed upon means of measuring inflation. It is suggested that the adjustment be based on the annual average Current Price Index for All Urban Consumers (the U.S. all-city, all-items average CPI-U), available from the Bureau of Labor Statistics in January. (The annual average is available only from the not seasonally adjusted series.)

TIF agreements also divert funding from other municipal needs. Using this funding to provide access, enhance the attractiveness of the site, and improve infrastructure can convey significant benefits to the site and its neighborhood, perhaps making an undevelopable site developable. A TIF can be a way to fund these projects that might not otherwise be feasible. Ensuring a state-of-the-art information infrastructure is particularly important. As LaFayette, Curtis, Bedford, and Iyer (2019) discussed, information infrastructure is as crucial for the emerging knowledge economy as road and rail networks were for the agricultural and industrial economies.

However, the diversion of funds from other worthy purposes must be acknowledged. A TIF may provide benefits greater than alternative uses early in its term, but less so in its final years. TIF agreements should have clear objectives, a public purpose, budgets, and timelines. The city's current TIF agreements routinely include 30-year terms, which could be much longer than the funds are needed. In this case, the effect is to divert funding from other needs that could become a much higher priority. It is thus recommended that TIF agreements have expiration dates consistent with the underlying needs. The term of these agreements should be affirmatively extended by City Council for good cause and only if necessary. The improvements funded by at least some TIFs have a private as well as a public benefit; e.g., improving access to a specific development site or sites. This implies that it may in some cases be reasonable to expect those benefiting from the improvements to make some contribution to their funding. Consideration should be given in some cases to implementing a special improvement district or a special assessment as a supplement to, or in lieu of, a TIF district.

As Sands, Reese, and Khan (2006) pointed out, many communities in Michigan do not conduct a serious analysis of incentives before they are granted, as evidenced by the fact that in 88% of Michigan jurisdictions, abatement requests are seldom or never rejected. This suggests that any conditions on the abatement are window dressing. In many cases, there are no means to assess compliance with the abatement conditions after the fact. Assuming that companies are aware of this, they have an incentive to inflate the number of jobs or the amount of investment that they intend to create. This leads to a high likelihood that incentives are granted that result in substantial net costs for the municipality.

Fortunately, this is not the case in Columbus or a number of other municipalities in the area. Columbus has instituted a scorecard that determines the advisability of granting an abatement. The score also dictates the incentive's rate and term. There is a preliminary vetting of the applicant's suitability for an abatement before the scorecard is ever filled out. As a result, only a small minority of abatement requests result in an abatement.

Once abatements are granted, the recipient is required to submit created and retained employment, payroll, and investment annually. These results are analyzed by a Tax Incentive Review Council including city, county, and school district staff, other stakeholders, and private citizens. The committee can recommend that the abatement be continued or reduced. These recommendations are accepted by City Council resolution. In some cases, this review may result in the opposite problem: an understatement of projected employment and investment. Actual results were significantly better than the goal in a number of the 14 cases analyzed. This implies the possibility that the model created in this study may be delivering understated results and may result in a greater-than-optimal number of rejections. However, it is hoped that the model will be one more tool to analyze the impacts of an incentive both before and after the fact. It must be used thoughtfully; it must not be a substitute for careful evaluation.

Columbus may wish to consider developing a comprehensive economic development plan, using those of Indianapolis and Grand Rapids as models. The incentive policies that place a heavy emphasis on equity and inclusiveness are recent, so this seems to be a highly desirable emerging trend. The incenting of retail may be economic development heresy, but there are arguments for doing so. Not only can neighborhood retail build a stronger urban infrastructure, locally owned, locally serving retail and restaurants prevent the leakage of sales dollars and economic impact to the distant headquarters of retail and restaurant chains.

References

- Bartik, T. J. (2019). *Making Sense of Incentives: Taming Business Incentives to Promote Prosperity*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research. Retrieved from https://research.upjohn.org/cgi/viewcontent.cgi?article=1277&context=up_press
- Burris, A. (2019, July 26). City unveils new tax incentive policy. *Indianapolis Star*, p. A1.
- City of Austin. (n.d.). Business expansion incentive program. Retrieved from <https://www.austintexas.gov/department/business-expansion-incentive-program>
- City of Austin Economic Development Department. (2018). *Chapter 380 policy*. Retrieved from http://www.austintexas.gov/sites/default/files/files/Chapter_380_Policy_2018.pdf
- City of Bexley. (n.d.). Property tax abatements. Retrieved from <http://www.bexley.org/property-tax-abatements>
- City of Canal Winchester. (n.d.). Incentives. Retrieved from <https://www.canalwinchesterohio.gov/245/Incentives>
- City of Cleveland Economic Development. (2020a). Gardening for Greenbacks Program. Retrieved from <https://makeitincleveland.org/incentives/gardening-for-greenbacks-program>
- City of Cleveland Economic Development. (2020b). Municipal Small Business Initiative. Retrieved from <https://makeitincleveland.org/incentives/municipal-small-business-initiative>
- City of Cleveland Economic Development. (2020c). Neighborhood Retail Assistance Program. Retrieved from <https://makeitincleveland.org/incentives/neighborhood-retail-assistance-program>
- City of Delaware. (2014). Economic development plan. Retrieved from http://www.delawaremeansbusiness.com/Resources/Documents/2014_ED_Plan.pdf
- City of Delaware. (n.d.). Community reinvestment area tax abatements (CRA). Retrieved from <http://www.delawaremeansbusiness.com/cra>
- City of Dublin. (n.d.). Incentives. Retrieved from <https://www.econdev.dublinohiousa.gov/incentives/>
- City of Grand Rapids, (2020). *Grand Rapids equitable economic development and mobility strategic plan*. Retrieved from <https://www.grandrapidsmi.gov/files/assets/public/departments/economic-development/eedmsp/gr-eedmsp-final-draft-1-22-2020.pdf>
- City of Groveport. (n.d.). Business incentives. Retrieved from <https://www.groveport.org/248/Business-Incentives>
- City of Lancaster (2017). Business incentives. Retrieved from <https://www.ci.lancaster.oh.us/330/Business-Incentives>

- City of Lancaster. (2019). Tax abatement program. Retrieved from <https://www.ci.lancaster.oh.us/623/Tax-Abatement-Program>
- City of New Albany. (n.d.). Incentives and permitting. Retrieved from <https://newalbanybusiness.org/incentives-and-permitting/>
- City of San Diego. (2018). Council policy: Business incentive program. Retrieved from https://www.sandiego.gov/sites/default/files/cpd_900-12.pdf
- Civic Economics. (n.d.). Indie impact study series. Retrieved from <http://www.civiceconomics.com/indie-impact.html>
- Coen, A. (2018, May 11). As development booms, Philadelphia asks if tax abatements are still needed. *Bondbuyer.com*, p. 1-1.
- Delaware County Auditor. (2019). Rates of taxation in Delaware County for tax year 2019. Retrieved from <https://auditor.co.delaware.oh.us/wp-content/uploads/sites/23/2018/03/Tax-RatesTY19Revised.pdf>
- District of Columbia. (n.d.). Supermarket tax incentives. Retrieved from <https://dmped.dc.gov/page/supermarket-tax-incentives>
- Fairfield County Treasurer. (2019). Property tax rates for 2019 expressed in dollars and cents on each one thousand dollar assessed valuation. Retrieved from <https://www.co.fairfield.oh.us/TREASURER/pdf/rates19.pdf>
- Franklin County Auditor. (2019a). Property records. Retrieved from http://property.franklincountyauditor.com/_web/maps/mapadv.aspx. Accessed December 28, 2019.
- Franklin County Auditor. (2019b). 2019 property tax rates for 2020. Retrieved from <https://www.franklincountyauditor.com/AUDR-website/media/Documents/Real%20Estate/Tax%20Rates/Tax-Rates-for-2019.pdf>
- HR&A Advisors. (2019.). Inclusive incentives: A roadmap for economic development in Indianapolis. Retrieved from <https://citybase-cms-prod.s3.amazonaws.com/77cee643c403482f8f467a7fe64e46bf.pdf>
- Huntington Bancshares Incorporated. (2019). *Form 10-K 2019*. Retrieved from SEC EDGAR website <http://www.sec.gov/edgar.shtml>
- Jensen, N.M. (2018). Bargaining and the effectiveness of economic development incentives: An evaluation of the Texas Chapter 313 program. *Public Choice* 177, 29-51. <https://doi.org/10.1007/s11127-018-0583-8>
- Kang, S.H., Reese, L. & Skidmore, M. (2016). Do Industrial Tax Abatements Spur Property Value Growth? *Journal of Policy Analysis and Management* 35, 388-414. <https://doi.org/10.1002/pam.21862>

- Khan, H.L., Reese, L.A. & Sands, G.J. (2006). Implementing tax abatements in Michigan: A study of best practices. *Economic Development Quarterly*, 20(1), 44-58. doi: 10.1177/0891242405279369
- King, A. (2017, Feb. 11). Tax deal secures Pizzuti facility. *This Week in New Albany*, p. 1A.
- LaFayette, B. (2016). Economic and tax impacts of the North Market.
- LaFayette, B., Curtis, W., Bedford, D. & Iyer, S. (2019). *Knowledge Economies and Knowledge Work*. Bingley, UK: Emerald Publishing.
- Licking County Auditor. (2019). Rates for the 2019 tax year. Retrieved from <https://www.lickingcountyohio.us>
- Madison County Treasurer. (2019). 2019 tax rates for Madison County. Retrieved from <http://madisonoh.ddti.net/Forms/Misc/ Tax%20Rates%20for%202019.pdf>
- McCrystal, Laura. (2019, Dec. 4). Philadelphia City Council advances bill to reduce controversial 10-year tax abatement. *Philadelphia Inquirer*.
- Narciso, D. (2004, May 26). Hilliard gives up a bundle for BMW: \$12 million in incentives are being offered to lure business away from Dublin. *The Columbus Dispatch*, p. 1B.
- Ohio Department of Taxation (2020). Current agricultural use value (CAUV). Retrieved from https://www.tax.ohio.gov/real_property/cauv.aspx
- Ohio Development Services Agency. (n.d.). The Ohio community reinvestment area. Retrieved from https://www.development.ohio.gov/bs/bs_comreinvest.htm
- Ohio Labor Market Information Bureau. (2018). Covered employment for the city of Columbus and Franklin County: First quarter 2017. Retrieved from http://archive.ohiolmi.com/cep_data/quarterly_n/2017_Geocode_Columbus.pdf
- Ohio Labor Market Information Bureau. (2020). Industry employment and wages – QCEW. Available from https://ohiolmi.com/Home/DS_Results_QCEW
- Partridge, M., Tsvetkova, A., Schreiner, S. & Patrick, C.E. (2019). The effects of state and local economic incentives on business start-ups in the U.S.: County-level evidence (working paper).
- Pew Charitable Trusts. (2017). *How states are improving tax incentives for jobs and growth*. Retrieved from https://www.pewtrusts.org/-/media/assets/2017/05/edti_how_states_are_improving_tax_incentives_for_jobs_and_growth.pdf?la=en&hash=30874D04D965B7C2AEBEA57ECE303ABDB2D8A71
- Reese, L.A. & Sands, G. (2006). The equity impacts of municipal tax incentives: Leveling or tilting the playing field? *Review of Policy Research* 23, 71-94.
- Reese, L.A., Larnell, T.B. & Sands, G. (2010). Patterns of tax abatement policy: Lessons from the outliers? *The American Review of Public Administration* 40(3), 261-283. doi: 10.1177/0275074009340051.

- Regionomics. (2015). Fiscal analysis. In MKSK, *City of Powell Comprehensive Plan* (pp. 84-102). Powell, OH: City of Powell. Retrieved from <https://cityofpowell.us/wp-content/uploads/2019/04/fiscal-analysis.pdf>
- SID Tools. (2018). *Web solutions for conferences and schools*. <http://www.sidtools.com/index.html>
- Sole, S. (2017, Aug. 10). Incentives offered to lure data center. *This Week in New Albany*, p. 4A.
- Sole, S. (2018, Dec. 20). New Albany makes offer for Google subsidiary's data center. *This Week in New Albany*, p. 1A.
- Sole, S. (2019, Nov. 14). Amazon adding another local data-center site. *This Week in New Albany*, p. 1A.
- Sole, S. (2020, Feb. 20). VanTrust Real Estate plans two more buildings in New Albany International Business Park. *This Week in New Albany*, p. 4A.
- Union County Treasurer. (2019). Union County 2019 property tax rates. Retrieved from <https://www.co.union.oh.us/media/Officials/Treasurer/2019%20County%20Tax%20Rates%20List.pdf>
- Wassmer, R.W. & Anderson, J.E. (2001). Bidding for business: New evidence on the effect of locally offered economic development incentives in a metropolitan area. *Economic Development Quarterly* 15, 132-148.
- Wince, L. (2011, March 17). Bob Evans move is boon for village. *ThisWeek Community Newspapers*, p. 1A.

Table A-1
Airside One Abatement Net Present Value (50% but-for percentage, as of 2014)
In 2019 equivalent dollars

City of Columbus	
Benefits	
Tax on construction earnings-direct	35,099
Tax on construction earnings-indirect and induced	11,519
Tax on operating earnings, created-direct	66,286
Less income tax share to the schools	0
Tax on operating earnings, created-indirect & induced	29,202
Tax on operating earnings, retained-direct	1,228,806
Tax on operating earnings, retained-indirect & induced	562,785
Non-abated incremental property taxes	22,965
Total	1,956,661
Costs	
Abated property tax (if abatement unnecessary)	15,608
Tax on later construction earnings-direct	27,501
Tax on later construction earnings-indirect and induced	9,026
Tax on later operating earnings, created-direct	78,076
Tax on later operating earnings, created-indirect & induced	33,882
Tax on later operating earnings, retained-direct	556,945
Tax on later operating earnings, retained-indirect & induced	243,199
Total	964,237
Net present value – City of Columbus	992,424
Gahanna-Jefferson Public Schools	
Benefits	
Non-abated incremental property taxes	373,255
Income tax share from the City	0
Total	373,255
Costs	
Abated property tax (if abatement unnecessary)	265,785
Income tax share, later development	0
Total	265,785
Net present value – Gahanna Jefferson Public Schools	107,471
Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	152,874
Household sales taxes-construction earnings	3,508
Household sales taxes-created operating earnings	4,988
Total	161,369
Costs	
Abated property tax (if abatement unnecessary)	105,278
Household sales taxes-created operating earnings, later development	3,446
Total	108,724
Net present value – Franklin County and agencies	52,645
Net present value – total public sector	1,152,540

Table A-2
Coulter Properties Abatement Net Present Value (50% but-for percentage, as of 2015)
In 2019 equivalent dollars

Benefits	
Tax on construction earnings-direct	175,849
Tax on construction earnings-indirect and induced	57,713
Tax on operating earnings, created-direct	534,385
Less income tax share to the schools	(116,852)
Tax on operating earnings, created-indirect & induced	431,575
Tax on operating earnings, retained-direct	3,418,512
Tax on operating earnings, retained-indirect & induced	2,760,830
Non-abated incremental property taxes	59,159
Total	7,321,171
Costs	
Abated city property tax (if abatement unnecessary)	92,680
Tax on later construction earnings-direct	68,891
Tax on later construction earnings-indirect and induced	22,610
Tax on later operating earnings, created-direct	446,151
Less income tax share to the schools	(139,719)
Tax on later operating earnings, created-indirect & induced	292,055
Tax on later operating earnings, retained-direct	1,670,588
Tax on later operating earnings, retained-indirect & induced	1,334,960
Total	3,788,215
Net present value	3,532,956
TIF impacts	
Benefits	
Tax on construction earnings, direct	3,821
Tax on construction earnings, indirect & induced	1,751
Total	5,572
Costs	
TIF payments – Municipal	781,646
Net present value	(776,074)
Total net present value – Columbus	2,756,882
Columbus City Schools	
Benefits	
Non-abated incremental property taxes	519,040
TIF payments – School	1,331,131
Income tax share from City	116,852
Total	1,967,023
Costs	
Abated property tax (if abatement unnecessary)	1,736,701
Income tax share from City, later development	116,947
Total	1,853,648
Net present value	113,374

Continued

Table A-2 (continued)
Coulter Properties Abatement Net Present Value (50% but-for percentage, as of 2015)
 In 2019 equivalent dollars

Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	179,503
Household sales taxes-construction earnings	17,575
Household sales taxes-created operating earnings	31,255
Household sales taxes-TIF construction earnings	312
Total	228,645
Costs	
Abated property tax (if abatement unnecessary)	600,149
Household sales taxes-created operating earnings, later development	21,920
Total	622,070
Net present value	(393,425)
Net present value – total public sector	3,252,905

Table A-3
CSE Leasing Abatement Net Present Value (50% but-for percentage, as of 2016)
In 2019 equivalent dollars

City of Columbus	
Benefits	
Tax on construction earnings-direct	3,491
Tax on construction earnings-indirect and induced	1,146
Tax on operating earnings, created-direct	10,901
Less income tax share to the schools	0
Tax on operating earnings, created-indirect & induced	0
Tax on operating earnings, retained-direct	490,663
Tax on operating earnings, retained-indirect & induced	0
Non-abated incremental property taxes	2,794
Total	508,994
Costs	
Abated property tax (if abatement unnecessary)	1,519
Tax on later construction earnings-direct	2,735
Tax on later construction earnings-indirect and induced	898
Tax on later operating earnings, created-direct	13,316
Less income tax share to the schools	0
Tax on later operating earnings, created-indirect & induced	0
Tax on later operating earnings, retained-direct	324,944
Tax on later operating earnings, retained-indirect & induced	0
Total	343,412
Net present value – City of Columbus	165,582
Columbus City Schools	
Benefits	
Non-abated incremental property taxes	49,523
Income tax share from the City	0
Total	49,523
Costs	
Abated property tax (if abatement unnecessary)	30,848
Income tax share from the City, later development	0
Total	30,848
Net present value – Columbus City Schools	18,676
Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	17,559
Household sales taxes-construction earnings	349
Household sales taxes-created operating earnings	820
Total	18,728
Costs	
Abated property tax (if abatement unnecessary)	10,668
Household sales taxes-created operating earnings, later development	1,002
Total	11,670
Net present value – Franklin County and agencies	7,059
Net present value – total public sector	191,316

Table A-4
DSW, Inc., Abatement Net Present Value (50% but-for percentage, as of 2006) – Prospective
In 2019 equivalent dollars

City of Columbus	
Benefits	
Tax on construction earnings-direct	44,650
Tax on construction earnings-indirect and induced	28,031
Tax on operating earnings, created-direct	669,940
Less income tax share to the schools	(169,426)
Tax on operating earnings, created-indirect & induced	273,745
Tax on operating earnings, retained-direct	2,529,384
Tax on operating earnings, retained-indirect & induced	1,033,534
Non-abated incremental property taxes	27,779
Total	4,437,639
Costs	
Abated property tax (if abatement unnecessary)	19,565
Tax on later construction earnings-direct	34,985
Tax on later construction earnings-indirect and induced	21,963
Tax on later operating earnings, created-direct	409,352
Less income tax share to the schools	(125,054)
Tax on later operating earnings, created-indirect & induced	167,266
Tax on later operating earnings, retained-direct	1,064,316
Tax on later operating earnings, retained-indirect & induced	975,748
Total	2,568,142
Net present value – City of Columbus	1,869,497
Columbus City Schools	
Benefits	
Non-abated incremental property taxes	640,026
Income tax share from the City	169,426
Total	809,452
Costs	
Abated property tax (if abatement unnecessary)	344,892
Income tax share from the City, later development	125,054
Total	469,946
Net present value – Columbus City Schools	339,506
Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	144,919
Household sales taxes-construction earnings	5,469
Household sales taxes-created operating earnings	71,010
Total	221,398
Costs	
Abated property tax (if abatement unnecessary)	181,731
Household sales taxes-created operating earnings, later development	43,389
Total	225,120
Net present value – Franklin County and agencies	(3,722)
Net present value – total public sector	2,205,281

Table A-5
DSW, Inc., Abatement Net Present Value (50% but-for percentage, as of 2006) – Retrospective
In 2019 equivalent dollars

City of Columbus	
Benefits	
Tax on construction earnings-direct	44,650
Tax on construction earnings-indirect and induced	28,031
Tax on operating earnings, created-direct	4,408,776
Less income tax share to the schools	(1,083,313)
Tax on operating earnings, created-indirect & induced	1,801,475
Tax on operating earnings, retained-direct	5,277,878
Tax on operating earnings, retained-indirect & induced	2,156,599
Non-abated incremental property taxes	27,779
Total	12,661,877
Costs	
Abated property tax (if abatement unnecessary)	19,565
Tax on later construction earnings-direct	34,985
Tax on later construction earnings-indirect and induced	21,963
Tax on later operating earnings, created-direct	409,352
Less income tax share to the schools	(125,054)
Tax on later operating earnings, created-indirect & induced	167,266
Tax on later operating earnings, retained-direct	1,064,316
Tax on later operating earnings, retained-indirect & induced	975,748
Total	2,568,142
Net present value – City of Columbus	10,093,735
Columbus City Schools	
Benefits	
Non-abated incremental property taxes	640,026
Income tax share from the City	1,083,313
Total	1,723,339
Costs	
Abated property tax (if abatement unnecessary)	344,892
Income tax share from the City, later development	125,054
Total	344,892
Net present value – Columbus City Schools	1,378,448
Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	218,543
Household sales taxes-construction earnings	5,469
Household sales taxes-created operating earnings	331,749
Total	555,761
Costs	
Abated property tax (if abatement unnecessary)	125,714
Household sales taxes-created operating earnings, later development	22,915
Total	148,629
Net present value – Franklin County and agencies	704,390
Net present value – total public sector	12,176,572

Table A-6
Hamilton Crossing/Big Lots Abatement Net Present Value (50% but-for percentage, as of 2016)
In 2019 equivalent dollars

Benefits	
Tax on construction earnings-direct	148,811
Tax on construction earnings-indirect and induced	48,839
Tax on operating earnings, created-direct	54,755
Less income tax share to the schools	0
Tax on operating earnings, created-indirect & induced	22,373
Tax on operating earnings, retained-direct	9,818,113
Tax on operating earnings, retained-indirect & induced	4,011,789
Non-abated incremental property taxes	23,341
Total	14,128,020
Costs	
Abated city property tax (if abatement unnecessary)	128,891
Tax on later construction earnings-direct	116,597
Tax on later construction earnings-indirect and induced	38,267
Tax on later operating earnings, created-direct	27,290
Less income tax share to the schools	0
Tax on later operating earnings, created-indirect & induced	11,151
Tax on later operating earnings, retained-direct	4,093,524
Tax on later operating earnings, retained-indirect & induced	1,672,659
Total	6,088,379
Net present value	8,039,641
TIF impacts	
Benefits	
Tax on construction earnings, direct	101,120
Tax on construction earnings, indirect & induced	33,187
Total	134,308
Costs	
TIF payments – Municipal	(1,884,873)
Net present value	(1,750,565)
Total net present value – Columbus	6,289,077
Columbus City Schools	
Benefits	
Non-abated incremental property taxes	444,389
TIF payments – School	3,837,975
Income tax share from City	0
Total	4,282,364
Costs	
Abated property tax (if abatement unnecessary)	2,408,105
Income tax share from City, later development	0
Total	2,408,105
Net present value	1,874,259

Continued

Table A-6 (continued)
Hamilton Crossing/Big Lots Abatement Net Present Value (50% but-for percentage, as of 2016)
 In 2019 equivalent dollars

Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	659,526
Household sales taxes-construction earnings	14,873
Household sales taxes-created operating earnings	4,120
Household sales taxes-TIF construction earnings	9,625
Total	688,144
Costs	
Abated property tax (if abatement unnecessary)	832,915
Household sales taxes-created operating earnings, later development	2,054
Total	834,969
Net present value	(146,825)
Net present value – total public sector	8,016,511

Table A-7
Huntington National Bank Abatement Net Present Value (50% but-for percentage, as of 2017)
In 2019 equivalent dollars

City of Columbus	
Benefits	
Tax on construction earnings-direct	101,694
Tax on construction earnings-indirect and induced	63,844
Tax on operating earnings, created-direct	8,799,628
Less income tax share to the schools	(2,541,664)
Tax on operating earnings, created-indirect & induced	0
Tax on operating earnings, retained-direct	9,992,817
Tax on operating earnings, retained-indirect & induced	0
Non-abated incremental property taxes	45,493
Total	16,461,812
Costs	
Abated property tax (if abatement unnecessary)	24,689
Tax on later construction earnings-direct	79,680
Tax on later construction earnings-indirect and induced	50,023
Tax on later operating earnings, created-direct	5,212,932
Less income tax share to the schools	(1,834,891)
Tax on later operating earnings, created-indirect & induced	0
Tax on later operating earnings, retained-direct	6,756,771
Tax on later operating earnings, retained-indirect & induced	0
Total	10,289,204
Net present value – City of Columbus	6,172,607
Columbus City Schools	
Benefits	
Non-abated incremental property taxes	849,550
Income tax share from the City	2,541,664
Total	3,391,214
Costs	
Abated property tax (if abatement unnecessary)	461,270
Income tax share from the City, later development	1,834,891
Total	2,296,161
Net present value – Columbus City Schools	1,095,052
Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	293,926
Household sales taxes-construction earnings	12,456
Household sales taxes-created operating earnings	662,150
Total	968,532
Costs	
Abated property tax (if abatement unnecessary)	159,544
Household sales taxes-created operating earnings, later development	508,430
Total	667,974
Net present value – Franklin County and agencies	300,558
Net present value – total public sector	7,568,217

Table A-8
MSC Industrial Abatement Net Present Value (50% but-for percentage, as of 2012)
In 2019 equivalent dollars

City of Columbus	
Benefits	
Tax on construction earnings-direct	155,693
Tax on construction earnings-indirect and induced	51,098
Tax on operating earnings, created-direct	843,728
Less income tax share to the schools	(200,402)
Tax on operating earnings, created-indirect & induced	291,172
Tax on operating earnings, retained-direct	0
Tax on operating earnings, retained-indirect & induced	0
Non-abated incremental property taxes	115,912
Total	1,257,201
Costs	
Abated property tax (if abatement unnecessary)	96,030
Tax on later construction earnings-direct	121,990
Tax on later construction earnings-indirect and induced	40,036
Tax on later operating earnings, created-direct	894,698
Less income tax share to the schools	(272,969)
Tax on later operating earnings, created-indirect & induced	359,626
Tax on later operating earnings, retained-direct	0
Tax on later operating earnings, retained-indirect & induced	0
Total	1,239,411
Net present value – City of Columbus	17,790
South-Western City Schools	
Benefits	
Non-abated incremental property taxes	2,115,722
Income tax share from the City	200,402
Total	2,316,124
Costs	
Abated property tax (if abatement unnecessary)	1,763,607
Income tax share from the City, later development	272,969
Total	2,036,576
Net present value – Columbus City Schools	279,548
Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	1,378,251
Household sales taxes-construction earnings	15,560
Household sales taxes-created operating earnings	63,488
Total	1,457,300
Costs	
Abated property tax (if abatement unnecessary)	574,792
Household sales taxes-created operating earnings, later development	67,324
Total	642,116
Net present value – Franklin County and agencies	815,184
Net present value – total public sector	1,112,522

Table A-9
NetJets Abatement Net Present Value (50% but-for percentage, as of 2008) – Prospective
In 2019 equivalent dollars

City of Columbus	
Benefits	
Tax on construction earnings-direct	444,971
Tax on construction earnings-indirect and induced	146,037
Tax on operating earnings, created-direct	188,316
Less income tax share to the schools	(32,016)
Tax on operating earnings, created-indirect & induced	72,465
Tax on operating earnings, retained-direct	0
Tax on operating earnings, retained-indirect & induced	0
Non-abated incremental property taxes	65,072
Total	884,844
Costs	
Abated property tax (if abatement unnecessary)	53,470
Tax on later construction earnings-direct	348,646
Tax on later construction earnings-indirect and induced	114,424
Tax on later operating earnings, created-direct	85,431
Less income tax share to the schools	(1,846)
Tax on later operating earnings, created-indirect & induced	56,303
Tax on later operating earnings, retained-direct	0
Tax on later operating earnings, retained-indirect & induced	0
Total	30,397
Net present value – City of Columbus	198,019
Columbus City Schools	
Benefits	
Non-abated incremental property taxes	926,063
Income tax share from the City	15,271
Total	941,334
Costs	
Abated property tax (if abatement unnecessary)	767,891
Income tax share from the City, later development	3,176
Total	771,067
Net present value – Columbus City Schools	170,267
Gahanna-Jefferson City Schools	
Benefits	
Non-abated incremental property taxes	252,228
Income tax share from the City	4,307
Total	256,535
Costs	
Abated property tax (if abatement unnecessary)	188,285
Income tax share from the City, later development	448
Total	188,733
Net present value – Gahanna-Jefferson City Schools	67,803

Continued

Table A-9 (continued)
NetJets Abatement Net Present Value (50% but-for percentage, as of 2008) – Prospective
In 2019 equivalent dollars

Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	423,985
Household sales taxes-construction earnings	44,472
Household sales taxes-created operating earnings	14,170
Total	482,627
Costs	
Abated property tax (if abatement unnecessary)	354,794
Household sales taxes-created operating earnings, later development	6,428
Total	361,222
Net present value – Franklin County and agencies	121,405
Net present value – total public sector	557,494

Table A-10
NetJets Abatement Net Present Value (50% but-for percentage, as of 2018) – Retrospective
In 2019 equivalent dollars

City of Columbus	
Benefits	
Tax on construction earnings-direct	444,971
Tax on construction earnings-indirect and induced	146,037
Tax on operating earnings, created-direct	878,230
Less income tax share to the schools	(209,249)
Tax on operating earnings, created-indirect & induced	337,947
Tax on operating earnings, retained-direct	0
Tax on operating earnings, retained-indirect & induced	0
Non-abated incremental property taxes	65,072
Total	1,663,009
Costs	
Abated property tax (if abatement unnecessary)	53,470
Tax on later construction earnings-direct	348,646
Tax on later construction earnings-indirect and induced	114,424
Tax on later operating earnings, created-direct	85,431
Less income tax share to the schools	(1,852)
Tax on later operating earnings, created-indirect & induced	56,303
Tax on later operating earnings, retained-direct	0
Tax on later operating earnings, retained-indirect & induced	0
Total	656,422
Net present value – City of Columbus	1,006,587
Columbus City Schools	
Benefits	
Non-abated incremental property taxes	926,063
Income tax share from the City	163,214
Total	1,089,276
Costs	
Abated property tax (if abatement unnecessary)	767,891
Income tax share from the City, later development	1,444
Total	769,335
Net present value – Columbus City Schools	319,942
Gahanna-Jefferson City Schools	
Benefits	
Non-abated incremental property taxes	252,228
Income tax share from the City	46,035
Total	298,263
Costs	
Abated property tax (if abatement unnecessary)	188,285
Income tax share from the City, later development	407
Total	188,692
Net present value – Gahanna-Jefferson City Schools	109,571

Continued

Table A-10 (continued)
NetJets Abatement Net Present Value (50% but-for percentage, as of 2018) – Retrospective
In 2019 equivalent dollars

Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	423,985
Household sales taxes-construction earnings	44,472
Household sales taxes-created operating earnings	66,085
Total	534,542
Costs	
Abated property tax (if abatement unnecessary)	354,794
Household sales taxes-created operating earnings, later development	6,428
Total	361,222
Net present value – Franklin County and agencies	173,320
Net present value – total public sector	1,609,418

Table A-11
PEDC/Midwest Motor Supply Abatement Net Present Value (50% but-for percentage, as of 2014)
In 2019 equivalent dollars

City of Columbus	
Benefits	
Tax on construction earnings-direct	45,628
Tax on construction earnings-indirect and induced	14,975
Tax on operating earnings, created-direct	546,242
Less income tax share to the schools	(102,707)
Tax on operating earnings, created-indirect & induced	261,743
Tax on operating earnings, retained-direct	3,560,149
Tax on operating earnings, retained-indirect & induced	1,705,920
Non-abated incremental property taxes	13,991
Total	6,045,942
Costs	
Abated property tax (if abatement unnecessary)	17,567
Tax on later construction earnings-direct	35,751
Tax on later construction earnings-indirect and induced	11,733
Tax on later operating earnings, created-direct	703,997
Less income tax share to the schools	(207,789)
Tax on later operating earnings, created-indirect & induced	337,335
Tax on later operating earnings, retained-direct	1,639,047
Tax on later operating earnings, retained-indirect & induced	785,384
Total	3,323,024
Net present value – City of Columbus	2,722,918
Hilliard City Schools	
Benefits	
Non-abated incremental property taxes	376,505
Income tax share from the City	102,707
Total	479,212
Costs	
Abated property tax (if abatement unnecessary)	696,190
Income tax share from the City, later development	207,789
Total	903,980
Net present value – Hilliard City Schools	(424,768)
Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	109,589
Household sales taxes-construction earnings	4,560
Household sales taxes-created operating earnings	41,103
Total	155,252
Costs	
Abated property tax (if abatement unnecessary)	114,682
Household sales taxes-created operating earnings, later development	52,974
Total	167,656
Net present value – Franklin County and agencies	(12,404)
Net present value – total public sector	2,285,746

Table A-12
Pizzuti Office Abatement Net Present Value (50% but-for percentage, as of 2012)
In 2019 equivalent dollars

Benefits	
Tax on construction earnings-direct	61,883
Tax on construction earnings-indirect and induced	20,310
Tax on operating earnings, created-direct	409,559
Less income tax share to the schools	(79,485)
Tax on operating earnings, created-indirect & induced	0
Tax on operating earnings, retained-direct	1,314,297
Tax on operating earnings, retained-indirect & induced	0
Non-abated incremental property taxes	296,889
Total	2,023,452
Costs	
Abated city property tax (if abatement unnecessary)	264,334
Tax on later construction earnings-direct	53,457
Tax on later construction earnings-indirect and induced	17,544
Tax on later operating earnings, created-direct	286,713
Less income tax share to the schools	(55,528)
Tax on later operating earnings, created-indirect & induced	0
Tax on later operating earnings, retained-direct	503,426
Tax on later operating earnings, retained-indirect & induced	0
Total	1,069,946
Net present value	953,506
TIF impacts	
Benefits	
Tax on construction earnings, direct	119,815
Tax on construction earnings, indirect & induced	39,988
Total	159,803
Costs	
TIF payments – Municipal	735,231
Net present value	(575,428)
Total net present value – Columbus	378,079
Columbus City Schools	
Benefits	
Non-abated incremental property taxes	761,379
TIF payments – School	1,839,018
Income tax share from City	79,485
Total	2,679,882
Costs	
Abated property tax (if abatement unnecessary)	760,732
Income tax share from City, later development	55,528
Total	816,261
Net present value	1,863,621

Continued

Table A-12 (continued)
Pizzuti Office Abatement Net Present Value (50% but-for percentage, as of 2012)
In 2019 equivalent dollars

Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	593,778
Household sales taxes-construction earnings	6,185
Household sales taxes-created operating earnings	30,818
Household sales taxes-TIF construction earnings	12,025
Total	642,806
Costs	
Abated property tax (if abatement unnecessary)	264,334
Household sales taxes-created operating earnings, later development	37,882
Total	302,216
Net present value	340,590
Net present value – total public sector	2,582,290

Table A-13
Time Warner Cable Midwest Abatement Net Present Value (50% but-for percentage, as of 2005)
Prospective

In 2019 equivalent dollars

Benefits	
Tax on construction earnings-direct	124,301
Tax on construction earnings-indirect and induced	40,795
Tax on operating earnings, created-direct	884,041
Less income tax share to the schools	(226,729)
Tax on operating earnings, created-indirect & induced	0
Tax on operating earnings, retained-direct	2,904,358
Tax on operating earnings, retained-indirect & induced	0
Non-abated incremental property taxes	8,058
Total	3,734,824
Costs	
Abated city property tax (if abatement unnecessary)	62,652
Tax on later construction earnings-direct	102,263
Tax on later construction earnings-indirect and induced	33,562
Tax on later operating earnings, created-direct	812,507
Less income tax share to the schools	(244,893)
Tax on later operating earnings, created-indirect & induced	0
Tax on later operating earnings, retained-direct	2,389,690
Tax on later operating earnings, retained-indirect & induced	0
Total	3,155,782
Net present value	579,042
TIF impacts	
Benefits	
Tax on construction earnings, direct	0
Tax on construction earnings, indirect & induced	0
Total	0
Costs	
TIF payments – Municipal	1,052,642
Net present value	(1,052,642)
Total net present value – Columbus	(473,600)
Columbus City Schools	
Benefits	
Non-abated incremental property taxes	127,359
TIF payments – School	2,606,193
Income tax share from City	226,729
Total	2,960,281
Costs	
Abated property tax (if abatement unnecessary)	1,102,181
Income tax share from City, later development	244,893
Total	1,347,074
Net present value	1,613,207

Continued

Table A-13 (continued)
Time Warner Cable Midwest Abatement Net Present Value (50% but-for percentage, as of 2005)
Prospective
In 2019 equivalent dollars

Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	47,130
Household sales taxes-construction earnings	12,423
Household sales taxes-created operating earnings	66,522
Household sales taxes-TIF construction earnings	0
Total	126,075
Costs	
Abated property tax (if abatement unnecessary)	401,880
Household sales taxes-created operating earnings, later development	61,139
Total	463,020
Net present value	(336,945)
Net present value – total public sector	1,855,305

Table A-14
Time Warner Cable Midwest Abatement Net Present Value (50% but-for percentage, as of 2005)
Retrospective

In 2019 equivalent dollars

Benefits	
Tax on construction earnings-direct	124,301
Tax on construction earnings-indirect and induced	40,795
Tax on operating earnings, created-direct	2,187,297
Less income tax share to the schools	(510,428)
Tax on operating earnings, created-indirect & induced	0
Tax on operating earnings, retained-direct	6,965,670
Tax on operating earnings, retained-indirect & induced	0
Non-abated incremental property taxes	8,058
Total	8,815,693
Costs	
Abated city property tax (if abatement unnecessary)	62,652
Tax on later construction earnings-direct	102,263
Tax on later construction earnings-indirect and induced	33,562
Tax on later operating earnings, created-direct	812,507
Less income tax share to the schools	(244,893)
Tax on later operating earnings, created-indirect & induced	0
Tax on later operating earnings, retained-direct	2,389,690
Tax on later operating earnings, retained-indirect & induced	0
Total	3,155,782
Net present value	5,659,912
TIF impacts	
Benefits	
Tax on construction earnings, direct	0
Tax on construction earnings, indirect & induced	0
Total	0
Costs	
TIF payments – Municipal	1,052,642
Net present value	(1,052,642)
Total net present value – Columbus	4,607,269
Columbus City Schools	
Benefits	
Non-abated incremental property taxes	127,359
TIF payments – School	2,606,193
Income tax share from City	510,428
Total	3,243,980
Costs	
Abated property tax (if abatement unnecessary)	62,652
Income tax share from City, later development	244,893
Total	307,545
Net present value	2,936,435

Continued

Table A-14 (continued)
Time Warner Cable Midwest Abatement Net Present Value (50% but-for percentage, as of 2005)
Retrospective
In 2019 equivalent dollars

Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	29,576
Household sales taxes-construction earnings	12,423
Household sales taxes-created operating earnings	164,589
Household sales taxes-TIF construction earnings	0
Total	206,588
Costs	
Abated property tax (if abatement unnecessary)	401,880
Household sales taxes-created operating earnings, later development	61,139
Total	463,020
Net present value	(256,432)
Net present value – total public sector	7,532,165

Table A-15
V&S Columbus Galvanizing Abatement Net Present Value (50% but-for percentage, as of 2012)
In 2019 equivalent dollars

City of Columbus	
Benefits	
Tax on construction earnings-direct	38,603
Tax on construction earnings-indirect and induced	24,235
Tax on operating earnings, created-direct	97,391
Less income tax share to the schools	0
Tax on operating earnings, created-indirect & induced	59,457
Tax on operating earnings, retained-direct	982,510
Tax on operating earnings, retained-indirect & induced	599,828
Non-abated incremental property taxes	13,620
Total	1,815,644
Costs	
Abated property tax (if abatement unnecessary)	13,838
Tax on later construction earnings-direct	15,123
Tax on later construction earnings-indirect and induced	9,494
Tax on later operating earnings, created-direct	78,558
Less income tax share to the schools	0
Tax on later operating earnings, created-indirect & induced	88,906
Tax on later operating earnings, retained-direct	405,021
Tax on later operating earnings, retained-indirect & induced	265,267
Total	876,207
Net present value – City of Columbus	939,437
Columbus City Schools	
Benefits	
Non-abated incremental property taxes	259,922
Income tax share from the City	0
Total	259,922
Costs	
Abated property tax (if abatement unnecessary)	258,104
Income tax share from the City, later development	0
Total	258,104
Net present value – Columbus City Schools	1,819
Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	86,934
Household sales taxes-construction earnings	4,728
Household sales taxes-created operating earnings	7,328
Total	98,991
Costs	
Abated property tax (if abatement unnecessary)	90,980
Household sales taxes-created operating earnings, later development	5,911
Total	96,891
Net present value – Franklin County and agencies	2,100
Net present value – total public sector	943,356

Table A-16
Whirlpool Abatement Net Present Value (50% but-for percentage, as of 2007)
In 2019 equivalent dollars

Benefits	
Tax on construction earnings-direct	312,551
Tax on construction earnings-indirect and induced	102,577
Tax on operating earnings, created-direct	1,148,165
Less income tax share to the schools	(303,129)
Tax on operating earnings, created-indirect & induced	550,167
Tax on operating earnings, retained-direct	0
Tax on operating earnings, retained-indirect & induced	0
Non-abated incremental property taxes	(1,798)
Total	1,808,534
Costs	
Abated city property tax (if abatement unnecessary)	107,209
Tax on later construction earnings-direct	244,892
Tax on later construction earnings-indirect and induced	80,372
Tax on later operating earnings, created-direct	1,132,568
Less income tax share to the schools	(402,891)
Tax on later operating earnings, created-indirect & induced	542,693
Tax on later operating earnings, retained-direct	0
Tax on later operating earnings, retained-indirect & induced	0
Total	1,704,843
Net present value	103,691
TIF impacts	
Benefits	
Tax on construction earnings, direct	25,695
Tax on construction earnings, indirect & induced	8,433
Total	34,128
Costs	
TIF payments – Municipal	5,760,354
Net present value	(5,726,226)
Total net present value – Columbus	(5,622,535)
Columbus City Schools	
Benefits	
Non-abated incremental property taxes	12,085
TIF payments – School	9,722,900
Income tax share from City	303,129
Total	10,038,114
Costs	
Abated property tax (if abatement unnecessary)	2,600,981
Income tax share from City, later development	402,891
Total	3,003,872
Net present value	7,034,242

Continued

Table A-15 (continued)
Whirlpool Abatement Net Present Value (50% but-for percentage, as of 2007)
In 2019 equivalent dollars

Hamilton Township	
Benefits	
Non-abated incremental property taxes	373,719
Costs	
Abated property tax (if abatement unnecessary)	708,955
Net present value	(335,236)
Franklin County and agencies	
Benefits	
Non-abated incremental property taxes	345,572
Household sales taxes-construction earnings	31,237
Household sales taxes-created operating earnings	86,397
Household sales taxes-TIF construction earnings	1,284
Total	463,206
Costs	
Abated property tax (if abatement unnecessary)	938,663
Household sales taxes-created operating earnings, later development	85,223
Total	1,023,886
Net present value	(560,680)
Net present value – total public sector	515,791