

# **The Increasing Use of Property Tax Abatement as a Means of Promoting Sub-Sub-National Economic Activity in the United States\***

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December 12, 2007

\* John Anderson, Nathan Anderson, Nancy Augustine, Michael Bell, and David Brunori offered helpful comments on an earlier draft.

*Tax exemption for industrial encouragement, like a protective tariff, is a device of local mercantilist policy. It must be justified or opposed on the same grounds as a tariff. On economic grounds, the presumption is against both. The principal claim for exemption must be the infant industry argument. In the industrially developing southern states, there are probably valid bases for exemption on that ground, despite the hazards that such a policy, adopted in one state, must tend to lead others in self-defense to adopt it also.* Jens P. Jensen (1931, 158)

## **1. Introduction**

A business is driven by the profit motive when deciding where to locate a new facility, or to rehabilitate an existing facility. Holding all else constant, a reduction in property taxes through abatement raises a business' expected profit in a given location. Realizing this, many sub-national governments in the United States grant temporary relief for certain parcels from the non-residential property tax payments normally due. The desired outcome is an increase in the attractiveness of a particular jurisdiction to business for new investment or the rehabilitation/retention of an existing investment. But property tax abatement is only one strategy by which to attract or retain a business by appealing to its profit motive. Others include an increase in sub-national expenditures that benefit business or the skills of the labor they employ, or a reduction in regulations viewed as burdensome by business.

Dalehite, Mikesell, and Zorn (2005) use the phrase “stand-alone property tax abatement programs,” or “SAPTAPs” to characterize such programs that: (1) allow for a full or partial reduction in property tax liability for selected manufacturing, commercial, and/or retail parcels, (2) impose a time limit on the length of the reduction, (3) have a stated purpose beyond relief from high property taxes, and (4) need not be used in conjunction with other state or local economic development programs. The stated goal of most SAPTAPs is an increase in employment and/or income generated in the jurisdiction offering them. Nevertheless,

practitioners often give similar credence to the ability of these programs to increase a jurisdiction's property tax base and the revenue generated from it (Wolman and Spitzley 1996).

As an illustration, consider that cities or townships in Michigan can grant stand-alone property tax abatement to a manufacturer under the State's Plant Rehabilitation and Industrial Development Act (Public Act 198). Established in 1974, this act allows officials to freeze the assessed value a rehabilitated industrial parcel at its pre-rehabilitation level, or for a new industrial parcel to pay property tax payments equivalent to half of what would be due without it. The period of industrial abatements is for up to 12 years and renewable.<sup>i</sup> If the manufacturer would have completed the rehabilitation of their existing parcel or built their new plant without the granting of this abatement, then the abatement is a loss of property tax revenue to all the levels of local government that normally would have collected it (including the city or township's independent school district(s) and overlapping county government). If "but for" the abatement the existing manufacturer would have left the granting jurisdiction or the new industrial parcel would have never located there, then the abatement has resulted in a retention or gain in property tax revenue that otherwise would have been lost.

Are the "water glasses" that could be used to represent the property tax bases in sub-national jurisdictions throughout the entire United States best considered "half-full" or "half-empty" due to the existence of stand-alone property tax abatement programs in the United States? This important question is the basis for why this chapter on property tax abatement appears in a volume of work dedicated to the larger issue of property tax base erosion in the United States. Taking the point of view that the economic activity would not have occurred but for 50 percent abatement, the appropriate conclusion using the water glass analogy is that it is

half full. On the other hand, if the economic activity would have occurred even without 50 percent abatement, the more appropriate conclusion is that the glass is half empty.

The “but for” assertion is crucial in regard to discussing the role that SAPTAPs play in property tax base erosion in the United States. Assuming that the non-abated rate of average property taxation across the entire United States is not sufficiently high to drive business activity out of the country, then it is reasonable to conclude that the existence of SAPTAPs cause the entire country’s non-residential property tax base to approach half-empty. However, the observed mobility of business activity between sub-national locations, and the belief that the rate of property taxation can initiate such mobility, causes many to conclude that the offering of SAPTAPs in otherwise high property tax rate jurisdictions results in their non-residential property tax bases being better considered half-full.

In the forms of evidence on the increasing use of property tax abatement in the United States, and the arguments previously put forth in favor and against the use of this form of industrial incentive, the remainder of this introduction contains further reasons for examining stand-alone property tax abatement programs in the United States. The introduction concludes with a description of the chapter’s remaining layout.

#### The Increasing Use of Property Tax Abatement in the United States

The earliest recorded use of commercial property tax abatement in North America occurred in 1640 in what would become the State of Connecticut. Connecticut, along with other eastern states throughout the 19<sup>th</sup> Century were regularly granting property tax exemptions for the production of manufacturing items such as oil from flax seed (to generate employment for the poor), iron and steel (to keep the large sums of money spent on such input purchases in the state), and malt liquor (to diminish citizen use of stronger spirits).<sup>ii</sup> After the Civil War, the practice of

temporarily excusing certain industrial property tax payments spread to the Southern States with the expressed goal of recruiting industry from the Midwest and Northeast. The post World War II boom in United States manufacturing, and the desire by state and local officials to provide high-paying employment opportunities to returning veterans and later their baby-boomer children, stimulated a further increase in the states allowing SAPTAPs. In one of the earliest accounting of the prevalence of these programs, Alyea (1967) finds that in 1964 the number of states offering them stood at 15 (30 percent).

For the two and a half decades that followed Alyea's account of stand-alone property tax abatement programs, Kantor and David (1988) document the simultaneous rapid increases in the allowance by states of local economic development programs and the number, size, and power of local government in the United States. As recorded in Gold (1979), the number of states in that year allowing state and/or local exemptions for the taxation of business property had grown to 31 (62 percent). The National Association of State Development Agencies tallied the number of states allowing SAPTAPs in 1991 at 33 (66 percent).

In the most recent, and perhaps most comprehensive inventory ever of these programs, Dalehite, Mikesell, and Zurn (2005) find that 35 states (70 percent) in 2004 allowed for some form of stand-alone property tax abatement. In 2007 there are at least seven other states that allow localities to offer a full or partial reduction in sub-national property taxes paid within their boundary, but only in conjunction with a larger economic development program (and therefore not a stand-alone program). Wolman and Spitzley (1996) point to four complimentary reasons for the rapid rise in the use of abatement in recent decades: (1) a perceived increase in the potential mobility of all business activity, (2) an international economic restructuring that has even further increased the potential and actual mobility of traditional manufacturing, (3) slower

industrial growth nationwide, and (4) cutbacks in intergovernmental aid to local governments.

Though as covered next, a vigorous debate still exists as to whether the pros of sub-national property tax abatement use in the United States are greater than the cons.

### Pros and Cons of Property Tax Abatement Use

If widespread agreement existed that the overall benefits of stand-alone property tax abatements are greater than the costs, then it would be easy to view the nationwide erosion in sub-national property tax bases they have generated as a necessary social cost that yields a greater social benefit. Such an agreement does not exist. A scan of the previous literature on this topic generates a list of arguments against stand-alone property tax abatements that is as long as the list in favor of them. Chi and Leatherby (2000), in their second edition of a Council of State Governments' report on the prevalence of state business incentives, include the following arguments that have been used to dissuade policymakers from their use (including property tax abatement): (1) taxes are not the only factor considered in business location decisions, (2) the selective use of abatements raise questions of equity, (3) some empirical studies have shown abatements to be cost ineffective, (4) abatements pull public dollars away from local expenditures that benefit business, and (5) the ability to offer abatements create a self destructive zero-sum game. Gold (1979) and Nunn (1994) also point out that local property taxes are a small portion of overall costs faced by a firm, are deductible against federal income taxes, and high sub-national business tax rates often go hand-in-hand with a higher provision of sub-national services that benefit business. While Bartik (1991), Fisher and Peters (1998), and Anderson and Wassmer (2000) argue that the potential attractiveness of abatement to business are mitigated by the rise in local land prices they can cause, and their attractiveness to local job

seekers is diminished by the inflow of new non-local job seekers that the offering of abatement can generate.

In the same Council of State Government's report, Chi and Leatherby (2000) record the alternative arguments used to persuade policymakers on the favorable use of SAPTAPs: (1) both surveys of business leaders and some empirical evidence show that taxes effect business location decisions, (2) abatements finance local job creation and thus are cost effective, (3) abatements foster competitiveness and dissuade sub-national governments from imposing too high a business property tax burden, and (4) abatements offer local officials the ability to be "action oriented" in their approach to economic development. Alyea (1967) notes that SAPTAPs allow a local jurisdiction to neutralize a state and local tax system they otherwise have little influence over, but is often viewed by business interest as onerous. Gold (1979) believes that the offering of local abatement allows local politicians to send out a positive signal on the locality's "pro-business climate." Bartik (1991), Fisher and Peters (1998), and Anderson and Wassmer (2000) clarify that if abatement offers are restricted to localities with high poverty and unemployment rates, they can disproportionately benefit people of color and of low income.

#### Remainder of the Chapter

The swift increase in property tax abatements allowed within the United States (from 30 percent of the states allowing them in 1964 to 70 percent in 2004), the nationwide erosion in property tax base they likely generate, and the wide variety of arguments given both pro and con for the continued existence of these programs are reasons enough for their further exploration. Such an examination occurs in the five sections that follow. In the next section I summarize the economic theory indicating why sub-national abatement may promote sub-national economic development. Section 3 describes the types and prevalence of SAPTAPs currently in the United

States. Section 4 summarizes the best empirical evidence that exists on the effects of property tax abatements. The conclusion in Section 5 offers my own recommendations in regard to how sub-national decision makers should view the offering of SAPTAPs and policy suggestions for the future of abatement in the United States.

## **2. How Property Tax Abatement Could Promote Economic Development**

The proceeding section describes in relatively simple terms the somewhat complex theories developed by economists to better understand how sub-national property taxation and the abatement of it can influence the location of business activity. But as Bartik (1991, 37) aptly concludes: “The effect of taxes on state and local business growth is the most controversial issue in economic development policy.”

### Property Taxation and Sub-National Business Activity

To understand the expected impact of sub-national property tax abatement on business location choices it is first necessary to have a rudimentary understanding of the expected “incidence” (or who pays) of a state or local tax levied on business property. Zodrow (2001) offers an accessible summary of the two views that now dominate economic thinking on this issue.

Though 35 years has passed since Mieszkowski (1972) first proposed it, the “New View” considers business property taxation to be a distortionary levy on land and equipment (capital) used in production. The distortion arises from both a nationally generated “profits tax” component and locally generated “excise tax” component. Assuming that the amount of land and capital available in the country is fixed, the profits tax component of the New View predicts the rate of return on business property to fall by the average burden imposed by all sub-national business property tax rates in the United States. The distortion induced by the excise tax component occurs because of the difference between the jurisdiction’s rate of property taxation and the national average. Holding other factors constant, business capital is attracted by the

profit motive to sub-national jurisdictions with a local rate of property taxation below the average national rate.<sup>iii</sup> A jurisdiction (fixed in square miles) that imposes a lower rate of business taxation than others (while maintaining its level of locally provided business services) is expected to experience a rise in business activity, an increase in land prices because of increased business demand for it; and depending upon the mobility of the local labor force, either only an increase in employment (if labor is fully mobile), only a rise in wages (if labor is not at all mobile), or a combination of both. Working through this theory uncovers the sources of pressure placed upon state and local politicians to lower their jurisdiction's rate of business property taxation. Pressure is put forth not only by current and potential local business interests, but also from local land owners and citizens desiring employment in the locality that they reside.

The appropriately deemed "Benefit View" offers a different way of looking at the incidence of property taxation. As applied to business property taxation, Fischel (1975) and White (1975) concurrently developed this second way of thinking about who pays non-residential property taxes. The Benefit View considers the effects of firm mobility if all sub-national jurisdictions practice "perfect fiscal zoning" and/or "perfect fiscal capitalization" occur. Perfect fiscal zoning takes place when a jurisdiction always refuses the entry of a firm whose total benefits to the jurisdiction (i.e., revenues, employment, agglomeration, etc.) are not greater than all the additional costs it is expected to generate (i.e., expenditures, environmental, etc.). Perfect fiscal capitalization occurs when the net benefits to a specific type of firm of locating in a jurisdiction is positively capitalized into the land price paid to locate there. Under the existence of these perfect occurrences, the property tax that a firm pays in any sub-national jurisdiction in the United States is identical to the benefits that they receive from paying them. Under the Benefit View, local property taxes levied on business no longer distort business location

decisions. In every sub-national jurisdiction, business property taxation becomes a benefit tax (or acts like a user charge in that business pays for exactly the benefits it receives in a jurisdiction) and in of itself cannot motivate business to leave one jurisdiction for another.

In thinking about the impact of sub-national property taxation on distorting business location, the validity of the New View verses Benefit View depends upon the soundness of the assumptions made in each. Though Fischel (2001) offers a compelling survey of evidence put forth in support of fiscal zoning and fiscal capitalization in the housing sector, little to no evidence exists for these perfect occurrences in the taxation of business property. In fact, as described in Wolman and Spitzley (1996), there is ample evidence that political factors (e.g., short-term time horizon and credit-claiming), uncertainty, and imperfect information drive many sub-national decision makers to implement less than perfect fiscal zoning in economic development decision making. Zodrow (2001, 98) observes that there is modest evidence that the degree of intra-jurisdictional capitalization of differences in business property taxes is perfect. As Nechyba (2001, 117) concludes, the evidence "...lead us in the direction of the New View when thinking about business property taxes."

#### Why Abate Business Property Tax Payments?

The New View of the expected economic effects of business property taxation offers a theoretical insight as to why SAPTAPs exist in the United States. Excise tax effects illustrate the incentive for mobile business capital to never enter (or if already there, leave) a jurisdiction that levies a rate of property taxation higher than charged at alternative locations. Driven by the profit motive, business firms searching for new locations or existing firms able to convey a reasonable threat of mobility, lobby politicians representing high property tax jurisdictions for relief as a condition for entry or remaining.<sup>iv</sup> Local representatives of high business tax

jurisdictions in a state then proceed to ask their state's lawmakers for the right to grant the requested compensation and the ability to offer stand-alone property tax abatements within a state is born.<sup>v</sup> However, once the previously highest tax jurisdiction offers abatement, another jurisdiction in the state or region must assume that role and faces the same pressure to offer abatement. This series of events is the likely reason for the observed proliferation of SAPTAPs across the States and the copy-cat behavior of local abatement offers within a state as documented by Anderson and Wassmer (1995 and 2000).

Encompassing the basic theoretical argument just given for the abatement of business property taxes, Glaeser (2002) offers five reasons for the existence of sub-national tax incentives. The first is that the some firms generate a "consumer surplus" to citizens in the jurisdiction they locate. That is they offer benefits greater than what the jurisdiction pays in the form of locally provided business services and/or possible local environmental degradation. A second reason is that the increased capital investment and educated workforce brought by some firms to a locality generate "agglomeration economies" to existing local firms in the form of increased productivity (through a greater exchange of ideas and/or a bigger pool of labor to draw from). The demanding of abatement by a firm is an attempt to recapture all or a portion of these two forms of benefits. If the firm can reasonably locate elsewhere, it is rational for the jurisdiction to offer an incentive (including abatement) up to the value of these benefits. A third reason stems from the fact that most local incentives are intended to be temporary. By locating in a jurisdiction, a business commits immobile and taxable capital to a place for longer than the period of the incentive. The incentive thus becomes an up-front payment for a stream of guaranteed future tax payments.

Glaeser's fourth reason for the existence of sub-national incentives stems from the fact that a jurisdiction often possesses monopoly power in that it can offer a truly unique product (location) that some firms desire more than others. If so, it is in the best interest of the jurisdiction trying to capture the greatest business property tax revenue to charge different tax prices to different types of firms. A jurisdiction charges a higher tax price (standard property tax assessment) to firms that really want to be there, while revenue maximization requires a lower tax price (through abatement) to firms that have other location options. Furthermore, a community could attract capital with a low tax rate at one point in time, and then exploit the immobility of that capital by later raising the tax rate on that capital. The final reason offered for abatement is corruption and influence. As Glaeser (2002) sees it, instead of a tool designed to maximize the welfare of the jurisdiction or future tax revenues, business incentives could also be a result of coercion/bribery by the firm and/or the corruption of sub-national government leadership.

All of the previous ideas offered for the existence and continued propagation of SAPTAPs rely on differences in the rate of property taxation as influencing the actual or potential mobility of business firms across sub-national jurisdictions. After reviewing the theoretical and empirical evidence on the relationship between sub-national taxes and business location, both Bartik (1991) and Anderson and Wassmer (2000) conclude that for many firms, locations in different states provide similar access to desired markets, labor, and suppliers. Furthermore, for all firms decided upon a site somewhere in a specific state or region, there are numerous jurisdictions that serve their bottom-line equally well. In these situations, high sub-national property taxes dissuade a business from one location over another, and abatement could

theoretically weaken such a result. I turn next to a description of the different forms of SAPTAPs currently used in the United States and how these forms have evolved over time.

### **3. Types of Property Tax Abatement and Their Use in the United States**

#### Trends in Use over Time

Johnson (1962) offers one of the first nationwide summaries of stand-alone property tax abatement programs in the United States and finds that in 1961 a total of 14 states had formal programs. Based upon information gathered for 12 of these states, the average maximum length abatement allowed by law was 7.4 years. For the nine states for which information was recorded, seven of them ceded the authority to grant SAPTAPs to local jurisdictions. In a similar report compiled by Bridges (1965) on the presence of state and local industrial incentive programs in the United States in 1963, he finds that in just two years, two more states had allowed the offering of SAPTAPs. Information on the 14 states offering abatements in 1963 and the maximum years of abatement allowed by law in 12 of them is in column 2 of Table 1. Bridges (1965, 9) observes in the early 1960s that only jurisdictions in Alabama, Kentucky, Louisiana, Mississippi, Rhode Island, South Carolina, and Vermont widely used their legal authorization to offer abatement.

Just over a quarter of the states allowed stand-alone property tax abatement in 1963. However, as shown by the Census Region groupings in Table 1, this fraction of the states was far from equal in its geographic distribution. Nearly three-quarters of the states in the East South Central, West South Central, and Pacific Regions of the United States allowed abatement, while no states in the Mid Atlantic, East North Central, and West North Central Regions allowed it. Since a much larger fraction of the nation's manufacturing activity in the early 1960s was

**Table 1: Property Tax Abatement Programs by State**

<u>Census Region / State</u>	<u>Characteristics of SAPTAPs in 2007<sup>C</sup></u>							
	<u>SAPTAPs in 1963 - Duration<sup>A</sup></u>	<u>Other PTAPs in 2007<sup>B</sup></u>	<u>SAPTAPs in 2007 - # Prog's<sup>C</sup></u>	<u>Award Process<sup>D</sup></u>	<u>Duration - Clawback or Sunset<sup>E</sup></u>	<u>Abated Property Type<sup>F</sup></u>	<u>Method of Property Abatement<sup>G</sup></u>	<u>Who Bears Cost<sup>H</sup></u>
<b><i>New England</i></b>	33%		66%					
Connecticut			Yes - 3	LD, GUA	7, 5, & 2 yrs	C, M, & R	AV & VF	AW&RM
Maine			Yes - 1	SD	12 yrs	C, M, & P	RE	RM
Massachusetts		Yes <sup>I</sup>						
New Hampshire								
Rhode Island	Yes-10yrs		Yes - 3	LD	25, 20, & 1 yrs	C, M, & R	AV & VF	AW
Vermont	Yes - na		Yes - 2	SD, SLD	10 & 2 yrs, C	C & M	AV	SLO&RM
<b><i>Mid Atlantic</i></b>	None		100%					
New Jersey			Yes - 1	LD	5 yrs., S	R	VA	AW
New York			Yes - 3	SLD, GUA	10 & 3 yrs.	C, M, & R	VA	LO
Pennsylvania			Yes - 1	LD	10 yrs.	C,M,P&R	AV	AW
<b><i>East North Central</i></b>	None		80%					
Illinois			Yes - 4	LD, GUA	20 yrs, C	C, M, & R	CR	LO&AW
Indiana			Yes - 2	LD	10 & 5 yrs, C, S	C, M, & R	VA	LO
Michigan			Yes - 4	SLD	12 & 15 yrs, S	C & M	VF	LO,SE,&RM
Ohio			Yes - 2	LD	15 yrs, C, S	C, M, & R	AV	LO
Wisconsin								
<b><i>West North Central</i></b>	None		86%					
Iowa			Yes - 2	LD	10 yrs	C,M,P&R	VA	LO
Kansas			Yes - 1	SLD	10 yrs, C	C & M	AV	SLO&SE
Minnesota			Yes - 6	LD, SLD	15, 10, & 5 yrs, C	C, M, & R	CR & VA	LO,SLO,AW
Missouri			Yes-2	LD, GUA	25 yrs	C,M,P&R	AV,VA,&PA	LO,SLO,AW
Nebraska								
North Dakota			Yes - 2	LD	20 & 10 yrs	C, M, & R	CR,VA,&PA	SLO
South Dakota			Yes - 1	LD	5 yrs	C,M,P&R	VF	LO
<b><i>South Atlantic</i></b>	25%		50%					
Delaware								
Florida			Yes - 1	LD, PREF	10 yrs, S	C & M	VA	AW
Georgia		Yes <sup>J</sup>						
Maryland	Yes - na		Yes - 7	LD	12, 10 & 1 yrs, C	C,M,P&R	CR & VA	AW
North Carolina								
South Carolina	Yes - 5yrs		Yes - 1	GUA	5 yrs	M	RE	CO
Virginia		Yes <sup>K</sup>						
West Virginia			Yes - 2	SD	10 & 5 yrs, S	C & M	AV	LO
<b><i>East South Central</i></b>	75%		75%					
Alabama	Yes-10yrs		Yes - 1	LD	10 yrs	M	CR	SLO & SE
Kentucky	Yes - 5 yrs		Yes - 2	LD	5 yrs	C, M, & R	AV & VF	AW
Mississippi	Yes-10yrs		Yes - 1	SLD	10 yrs	C & M	VA & PA	LO & SE
Tennessee		Yes <sup>L</sup>						
<b><i>West South Central</i></b>	75%		75%					
Arkansas	Yes - 7yrs							
Louisiana	Yes-10yrs		Yes - 2	SD, SLD	10 yrs	C, M, & R	VA & VF	LO
Oklahoma	Yes - 5 yrs		Yes - 2	LD, GUA	10 & 5 yrs, C	M	AV & VA	LO & RM
Texas			Yes - 1	LD	10 yrs, C, S	C, M, & R	VA	AW
<b><i>Mountain</i></b>	13%		42.9%					
Arizona		Yes <sup>M</sup>						
Colorado		Yes <sup>N</sup>	Yes - 1	LD	10 yrs, C	C, M, & P	CR & RE	AW & RM
Idaho								
Montana	Yes - 3yrs		Yes - 2	LD	10 yrs	C, M, & P	VA	AW
Nevada			Yes - 1	SD	10 yrs.	C,M,P&R	CR	LO
New Mexico								
Utah								
Wyoming		Yes <sup>O</sup>						
<b><i>Pacific</i></b>	60%		100%					
Alaska	Yes-10yrs		Yes - 1	LD	10 yrs.	C, M, & R	VA & DF	LO
California			Yes - 2	LD	15 & 5 yrs, C, S	M	CR & RE	AW & SE
Hawaii	Yes - 5 yrs		Yes - 1	SD	5 yrs, C	C & M	CL	LO
Oregon	Yes - 2 yrs		Yes - 3	SLD&GUA	17 & 15 yrs, C, S	C & M	AV	SLO
Washington			Yes - 1	LD	10 yrs, C	R	AV	AW

## Notes for Table 1:

A – Derived from Johnson (1962, Table 1) and Bridges (1965, Table 1).

B – Derived from Internet Google search.

C – Derived from Dalehite, Mikesell, and Zorn (2005, Table 1) and Internet Google Search to confirm continued existence.

D – “LD” is local discretion on case-by-case basis, “SD” is state discretion on case-by-case basis, “SLD” is joint state/local discretion on case-by-case basis, “GUA” is guaranteed to all whom apply and meet stated criteria, and “PREF” is public referendum required.

E – “C” is for clawback which refers to a specific abatement taken away before granted full duration if certain economic conditions not met by firm. “S” is for a sunset provision in abatement legislation that terminates an entire specific statewide program after a specified number of years unless renewed by law.

F – “C” is commercial property, “M” is manufacturing property, “P” is primary property (agriculture, forestry, and mining), and “R” is residential property.

G – “CR” is credit based on property taxes owed, “RE” is reimbursement after property taxes paid, “AV” is percentage reduction in total assessed value used for property tax calculation, “VA” is percentage reduction in only additional assessed value due to new property investment, “VF” is property taxation only based on value before new investment, “CL” is a reclassification of property into a different class with a lower rate of taxation, “PA” is a negotiated payment in place of taxes that is lower than what property tax payments would have been, and “DF” is a deferral of owed property taxes to a later date.

H – “LO” is only all overlapping localities, “SLO” is state and all overlapping localities, “AW” is only the awarding locality, “SE” is property tax payments to local schools excluded from abatement, “CO” is county only, and “RM” is the state reimburses localities for all or portion of property tax payments lost through abatement.

I – Massachusetts’s Economic Development Incentive Program offers within its package of incentives a special property tax assessment in the form of a phased-in assessment of the total value of the project’s property.

J – In addition to property tax abatement, companies investing in Georgia's less developed counties and in less developed areas in otherwise generally affluent counties are eligible for state grants based on investment and the number of full-time jobs created.

K – Fifty-seven enterprise zones have been designated in Virginia in which property tax abatements are offered to businesses and investors locating within them.

L – Local government in the State of Tennessee are not permitted to grant abatement to private properties. AS an alternative, the PILOT program Conveys the ownership of private property to the Industrial Development Board, which results in the reclassification of the property as “tax exempt” and the private owner leases the property from the IDB for a specified annual payment.

M – Arizona’s Government Property Lease Excise Tax (GPLET) eliminates the real property tax obligation for a company in a central business district, replacing it with a predetermined excise tax that is dependent on the type of use.

N – Colorado's Enterprise Zone program provides incentives to encourage businesses to locate and expand in designated economically distressed areas of the state. In addition to other incentives; any city, county, or special district within an enterprise zone is authorized to negotiate with individual taxpayers who have qualifying new business facilities an incentive payment or property tax credit.

O – Available for a 10-year period, a property participating in Wyoming’s Qualified Empire Zone Enterprise (QEZE) is allowed a refundable credit against their business tax equal to the percentage of real property taxes paid in the zone and the percentage of employment increase.

concentrated in the regions not allowing abatement, this pattern is indicative of states with a desire to gain their share of manufacturing adopting such programs. In the early 1960s, states that had more than their share of the nation's industrial activity did not as of yet feel compelled to offer abatement. This has clearly changed in the three and a half decades that have followed. Gold (1979, Table 6.1) finds that in 1979 there were 32 states that offered full or partial exemptions for business real and personal property. As recorded by Dalehite, Mikesell, and Zorn (2005, Table 1), the number of states allowing SAPTAPs rose to 35 in 2004 (or by 150 percent from the 14 states offering them in 1963). A Google search confirmed that in 2007 these 35 stand-alone abatement programs still exist and no new states have adopted SAPTAPs. The same search found that of the 15 states without SAPTAPs in 2007, seven of them allow the abatement of property taxes within the state's borders in conjunction with a larger program. Column 3 of Table 1 indicates the states with these "Other PTAPs".

The growth in states that adopted stand-alone property tax abatement programs in the United States during the last three and a half decades is astounding. The Mid-Atlantic, East North Central, and West North Central Regions of the United States have gone from their states offering no abatement, to respectively 100, 80, and 86 percent of states within these regions offering them. In the Mountain and Pacific Regions, the states offering SAPTAPs have respectively risen in the last 35 years from 13 and 60 percent, to 43 and 100 percent. While state activity on abatements in both the New England and South Atlantic Regions doubled now that respectively two-thirds and half of the states in these regions offer them. The only Census Regions that experienced no increase in the percentage of their states allowing the use of stand-alone abatement were the East South Central and West South Central Regions. However, three-quarters of the states in these southern regions were already offering them in the early 1960s. If

counting the allowance of Other PTAPs along with SAPTAPs, property tax abatement is now available in 42 of the 50 states.

Attributable to the economic, political, and institutional factors that have driven businesses to request this abatement, and the vast majority of the states responding to this request, there has been a relatively recent diffusion of SAPTAPs throughout the United States. Before turning in Section 4 to a discussion of the likely effects of the now prevalent use of abatement, I offer a description of the variation in some of the important characteristics of these programs.

#### Types and Methods of Abatements

The last five columns in Table 1 list important characteristics of the stand-alone property tax abatement programs currently available in the United States. As shown in column 7 of Table 1, abatements are offered to all possible types of uses: manufacturing (M), commercial (C), primary (P), and residential (R). As compiled by Dalehite, Mikesell, and Zorn (2005), of the 35 states that offer SAPTAPs, 33 offers some form to manufacturing and 29 states allow commercial abatement. Next in popularity is the promise to developers of abatement of future residential property taxes if a housing development is built in a certain location (20 states of 35).<sup>vi</sup> Only nine – or about one fourth of the 35 states offering any form of SAPTAPs – allow abatement in the primary sector (agriculture, forestry, and mining). There has been little to no research on the affect of the primary and residential forms of SAPTAPs.<sup>vii</sup>

Primary sector production at a particular location is heavily dependent on the presence of the natural resources necessary for it (fertile soil and water, trees, and mineral deposits).

Housing production is heavily dependent on the presence of residents that desire to live at a specific location. The offering a SAPTAP in these two sectors is much less likely to be the

deciding factor in whether primary production or residential activity occurs at a specific location. It is hard not to conclude that the offering of abatements to these sectors is motivated primarily by the political desire to offer concessions to a special interest in a state or locality. Due to the greater potential mobility of manufacturing property between jurisdictions within a state and between states, and of the potential mobility of larger forms of commercial property (whose customer base extends beyond a locality) between jurisdictions within a metropolitan area, it is easier to argue that the offering of a SAPTAP within these sectors would more likely help decide where a business decides to locate. Therefore, it is not surprising that abatements of these types are the most prevalent and subsequently most studied.

It is also interesting to consider the variety of methods by which a reduction in normal property tax payments occurs through abatement. For the 35 states currently offering SAPTAPs, column 8 of Table 1 offers a summary of abatement methods used. The most popular way of abatement, with 15 states using it for one or more of their abatement programs, is a reduction in a firm's property tax payments based upon only the value of the incremental property added to a site after abatement (VA). This approach, along with a value freeze (VF) whereby renovated business property is taxed only based upon the assessed value before renovation (used by six states), are the two methods that best tie the magnitude of the property tax reduction given by the jurisdiction to the possible benefits (increased current and future employment, increased current and future income, and/or increased future property tax revenues after the abatement expires) received by the granting jurisdiction after abatement. Only eleven states (Alaska, Florida, Indiana, Iowa, Louisiana, Michigan, Montana, New Jersey, New York, South Dakota, and Texas) chose to restrict their method of property tax reduction to one or both of these two preferred methods.

The least desirable ways for a jurisdiction to match an abatement award to the possible benefits derived from it are through: (1) a property tax credit (CR), (2) a percentage reduction in assessed value (AV), or (3) a reclassification of property for tax purposes (CL). The calculation of these award methods relies upon the total amount of property in use at a site, and not the amount that is new or rehabilitated. I label these as undesirable because there is little to no relationship between a jurisdiction's abatement award and the benefits received by the granting jurisdiction from the new or rehabilitated property. Of the 35 states using SAPTAPs in 2007, eight use the CR method, twelve use the AV method, and one uses the CL method in figuring out the abatement amount offered in at least one of their programs. A total of 11 states (Alabama, Hawaii, Illinois, Kansas, Nevada, Ohio, Oregon, Pennsylvania, Vermont, Washington, and West Virginia) exclusively use one or both of these methods in figuring out the value of all abatements granted in their state. Furthermore, there are three states (Mississippi, Missouri, and North Dakota) that allow abatements in the form of a negotiated payment in lieu of higher property taxes (PA); and four state programs (California, Colorado, Maine, and South Carolina) that require the payment of all property taxes, but instead offer a negotiated reimbursement (RE) to the firm. Though there could be a tie between these negotiated payments and reimbursements, there is nothing inherent to their design that requires it. Finally, the SAPTAP in Alaska allows for only a deferral (DF) of property tax payments due now and not their complete forgiveness.

#### Process for Granting and Administering Abatements

There are also procedural differences across the states in granting and administering SATAPs. All local governments in the United States can only grant abatement after a program to do so has been authorized by the state. As shown in column 5 of Table 1, about two-thirds of the states (23 out of 35) allow full local discretion in regard to what firms receive abatement. However, in

three of these local discretion states (Alaska, Alabama, and Florida) the abatement decided upon by a local official must also be confirmed by public referendum.<sup>viii</sup> In six states, discretion on a case-by-case basis regarding what firms receive abatement is held by the state alone. In eight states, abatement is given only after both the state and affected local government approve it. Case-by-case discretion has been taken away from both the state and local decision makers in seven state abatement programs and instead given “as-of-right.”

Theoretical arguments exist for both the discretionary and as-of-right method of granting SATAPs. An as-of-right abatement requires an award to any firm meeting certain requirements – usually related to the increase in employment or property value they are expected to bring to a jurisdiction. In favor of this method is that such a requirement protects citizens from political decision makers whose requisite for granting abatement can be less than the as-of-right stipulation. Against this method is the as-of-right requirement disallows: (1) the possibility for a rational decision maker to deny abatement to a firm meeting (or promising) the state-set requirements, but whose long-term benefits after abatement are judged to be less than the costs, or (2) to offer abatement to a firm not meeting the state requirement, but whose long-term benefits are rationally evaluated to outweigh costs. As discussed in Burnier (1992), Wolman and Spitzley (1996), and Loveridge (1996), the debate on the rational verses political motivation behind abatement remains unresolved – but perhaps not surprisingly economists tend to side with rationality and political scientists with political motivations – and thus a judgment on the desirability of as-of-right verses discretion in abatement offers is difficult. Regardless of whether rationally or politically motivated, if discretion is used in abatement offers to firms on a case-by-case basis, some form of both state and local approval is the best course since both parties have a stake in the decision. The state, in desiring that abatement is only used to lure a

business from another state or to locate a business in a jurisdiction within the state that offers benefits to residents not found if it located within another jurisdiction in a state, needs the ability to deny local abatement offers not used for these purpose.<sup>ix</sup> While a locality needs the ability to veto a state-approved abatement because of the loss in local property tax revenue it entails.

Two interesting features adopted for some SAPTAPs are a “sunset” clause in the enabling legislation and a “clawback” feature in the award to a specific firm. Nine of the 35 states have abatement programs that are scheduled to end in the future unless new enabling legislation is passed. In principal, sunset is a positive feature since it requires a future assessment of the efficacy of a program. However, anecdotal evidence points to most state programs being renewed with little formal evaluation. Fourteen abatement programs also allow a jurisdiction to rescind a previously granted abatement to a firm if contractually promised outcomes are not achieved. As discussed in Ledebur and Woodward (1990, 53) such arrangements can help policymakers “...avoid expensive mistakes if they tie incentives to written guarantees of job creation and other benefits”. Still, policymakers are hesitant to adopt such clauses because they reduce the expected value of abatement to a firm.

The data offered in column 6 of Table 1 indicates that 10 is the most prevalent choice of the maximum number of years an abatement can be offered. At the extremes are Missouri and Rhode Island that allow a certain form of abatement for up to a 25-year duration, and Rhode Island and Maryland that have SAPTAPs that only grant a one-year period of property tax forgiveness. Though as Wassmer and Anderson (2000, Chapter 3) observed for Michigan, most of these programs allow abatement terms that can be renewed upon expiration and jurisdictions are usually quick to do so.

The final administrative issue that varies across state abatement programs is which entity suffers the loss in potential property tax revenue. The most popular approach occurs in the 16 state programs in which all overlapping sub-state property tax collecting units (local governments, schools, special districts, and county) grant an abatement of their property taxes regardless of which one chose to offer it (LO), and the 15 state programs in which only the awarding unit's property tax payments are reduced (AW). In seven state programs similar to LO, the state is also required to cut its property tax collections when a sub-state jurisdiction makes an award (SLO). In Colorado, Maine, Michigan, Oklahoma, Vermont, and Washington the state chooses to reimburse local government for a portion or all of the local property tax revenue lost through abatement. Recognizing the importance of property tax revenue to local school districts, SAPTAPs in Alabama, California, Kansas, Michigan, and Mississippi explicitly exclude the school portion of a firm's property tax payment from abatement.

#### **4. Empirical Evidence on the Effects of Property Tax Abatements**

*[T]axes are much more effective in determining business location within a metropolitan area than between metropolitan areas or states, but the benefits [of such location] basically accrue to one locality at the expense of another in the same area (Michael Dardia, 1997, 17).*

Dardia's statement offers a concise summary of the current thinking by economists on the role of property taxation, and its abatement, on determining the location of inter-regional and intra-regional business activity. This thinking is largely the result of data-based regression studies that correlate some measure of a jurisdiction's existing economic activity or change in this activity with a set of explanatory variables that are theoretically expected to affect it. The beauty of regression for policy analysis is that it allows the researcher to separate the independent effect of one casual variable of interest, in this case the degree of property taxation or abatement, from other casual variables expected to also influence sub-national economic activity. Based upon the

results of regression analysis, researchers can reasonably claim that holding other important casual factors constant, a given change in property taxation/abatement results in an expected change in a chosen measure of economic activity. However, regression analysis is not the only data-based method that researchers have used to assess the affect of property taxation or abatement on sub-national business activity. Other methods include surveys and case studies using a “representative” firm. In this section of this chapter I describe these non-regression methods and the empirical evidence they have produced in regard to the expected effects of abatements. But since much of the available evidence is derived through regression analysis, more space is devoted in the later part of this section to a summary of empirical results derived from this method.

### Surveys

Surveys that ask individual decision makers within firms about the importance of sub-national taxes to where a business locates have been used to gather such information for its own sake and in the creation of state “business climate” studies.<sup>x</sup> The now classic survey of Fortune 500 firms by Schmenner (1982) found that only one percent of respondents listed taxes as a “must factor” in selecting an inter-regional location, but 35 percent of them describe low taxes as “desirable” in helping to steer their choice to a particular site within a region. Few surveys have specifically asked a firm’s decision makers about abatement, but Walker and Greenstreet (1991) find that 37 percent of new manufacturing firms surveyed in Appalachia report that tax incentives were decisive in their final location decision. Burnier (1992) interviewed local economic development officials in Ohio and summarizes relevant findings with the declaration that firms now expect tax abatements to be offered. Fisher and Peters (1998, 14) observe that surveys administered in the late 1980s and 1990s are more likely to report that sub-national tax levels are important to

business location decisions than ones completed earlier. However, academics (e.g., Courant and Fulton (1985) and Fisher (2005)) have long been skeptical of only soliciting the personal opinions of business interests on this issue. Decision makers in business are very likely to view the answering of such a question as an opportunity to lobby for a public policy change that increases their bottom line and in doing so do not consider the possible secondary effects of low business taxes (i.e., low business services). Usually the reported findings from a survey are too vague to truly understand the specific effect of a given SPTAP and the questions asked do not get at the specific stage of a business location decision where taxes become important.

### Case Studies of Representative Firms

A second way to evaluate the degree that abatements influence business activity is through case studies of “representative” firms. To accomplish this, a researcher categorizes the specific industrial sectors to be studied and builds a model for a typical firm in each sector that shows how differences in sub-national taxes and tax incentives affect the different typical firms’ profit margins. L. Papke (1987) and J. Papke (1995) are two of the earlier and better constructed studies that have used this method. J. Papke finds that abatements exhibit very modest influences on the net returns to different forms of new manufacturing investment across the Great Lakes states. He finds that certain state tax provisions (like the apportionment formula used for corporate taxes and the treatment of sales to non-nexus states) affect the after-tax rate of return across these states more than differences in feasible abatement offers.

To date, the most thorough hypothetical-firm study of the effects of tax incentives on sub-national economic development is contained in Fisher and Peters (1998). Based upon 1992 data from the 24 largest manufacturing states and a sample of 112 cities within these states, Fisher and Peters first calculate sub-national tax differences and the “standing-offer” tax

incentive expected in each place. They then build a mathematical model that predicts the earnings for a typical firm in 16 different manufacturing sectors across all of these locations. They find that existing state tax systems tend to yield higher manufacturing returns in states with lower unemployment rates. Fisher and Peters also find that this perverse result is not offset by the pattern of state and local tax incentives across the country. They conclude that after "...the widespread adoption of pro-development tax policies and incentives, states and cities have produced a tax and incentive system that provides no clear inducement for firms to invest in higher-unemployment places" (Fisher and Peters, 1998, 200).

There is much to be said in support of the hypothetical firm approach to studying the effect of SAPTAPs. It is thus regrettable that more studies of this type do not exist and that their findings are not more used by policymakers. Exceptions to this are the works of Persky, Felsenstein, and Wiewel (1997) and Luger and Bae (2005) that show how a relatively simple version of this approach could respectively be used in Chicago, Illinois and is being used in North Carolina to analyze the effectiveness of business tax incentives. Bartik *et al.* (1987) also offers a superb *ex post* application of this method to General Motor's decision on where to locate its new Saturn Plant among six different Midwestern locations. Even so, caveats to the hypothetical firm approach must be noted. Results are extremely sensitive to the assumptions made about whom ultimately pays each of the taxes considered in the model, differences in personal taxes (sales and income) that can also influence business location decisions are usually not controlled for, and all firms in a specific manufacturing sector do not necessarily behave in the "average" way modeled.

### Regression Analyses

Regression analysis is a highly appropriate way in which to investigate the influence of property taxes and abatement on sub-national economic activity. It allows for the calculation of the expected effect that taxes/abatement exerts on some measure of state or local economic development, holding the other factors that can influence differences in sub-national economic development constant. An illustrative example of such analysis begins with the researcher gathering data from a metropolitan area where the unit of analysis would be all local jurisdictions in the area. The dependent variable, or the measure that the researcher desired to explain observed differences in it, could be the number of manufacturing jobs in each of the local jurisdictions. To complete the regression analysis, the researcher would need to gather data on all causal variables expected to cause differences in this dependent variable. The crucial explanatory variable would be some measure of differences in the degree of manufacturing property tax abatement activity across these jurisdictions. To measure the true marginal effect of what would be expected to happen to manufacturing employment if a jurisdiction offered more manufacturing abatement, the researcher also needs to gather data on other casual factors expected to cause differences in this dependent variable. This would necessarily include measures of the square mile size of the localities, local transportation networks desired by manufacturing, local business expenditure programs that can attract manufacturing; and local tax, regulatory, and/or zoning activities that can repel manufacturing. Once these appropriate variables are gathered, a statistical process called regression analysis yields a regression coefficient for the manufacturing property tax explanatory variable that is interpreted as the expected percentage change in local manufacturing employment if local manufacturing abatement activity increase by one percent. Economists refer to this measure as the abatement “elasticity” of manufacturing activity. Findings in regard to these elasticities are discussed next.

When considering the evidence that has been produced through regression analysis on the effect of abatements on economic activity it is important to divide the examination into two categories: (1) those that attempt to determine the overall influence of property taxes (or business taxation) on different measure of economic activity, and (2) those that attempt to determine the specific influence of abatement activity on different measures of economic activity. The first category of regression study is by far more prevalent. Bartik (1991) produced a comprehensive review of all United States based studies in the first category that had been completed prior to the publication of his book. His conclusions (38-39) that "...most recent business location studies have found some significant negative effects of state and local taxes on regional business growth" and "tax effects on business location decisions are generally much larger for intra-metropolitan business location decisions than for inter-metropolitan or inter-state..." are now accepted by the majority of economists working in the area.<sup>xi</sup> Bartik observed that most of the 57 studies completed before 1991 that used regression analysis to examine how inter-metropolitan or inter-state activity is influenced by sub-national taxation used some aggregate measure of state and local business taxes weighted by population or income, while a majority of the 24 intra-metropolitan or intra-state studies used a measure of the local effective property tax rate. From the 70 percent of inter-area studies that contained statistically-significant tax effects, Bartik calculates a middle-value elasticity of between -0.15 and -0.35. From the 62 percent of intra-area studies that contained statistically significant results, Bartik reports a median elasticity between -1.59 and -1.95. In layperson terms this translates into the research indicating that a one percent increase in a state or region's sub-national rate of taxation is expected in the long-term to reduce a measure of economic activity in this state or region by between 0.15 to 0.35 percent. While a one percent increase in the effective rate of property taxation in a locality within a

region or a state is expected in the long-term to reduce a measure of economic activity in this locality by between 1.59 and 1.95 percent. These empirical findings are consistent with the theories of property tax incidence described earlier in that sub-national taxes are expected to exert a greater influence on sub-national economic activity the greater the potential mobility of firms. Wasylenko (1997) has also completed a review of the economic literature relating to taxation and economic development and concluded that taxes do not appear to have a substantial effect on economic activity across states, but he does find convincing evidence that sub-national taxes can matter to intra-state levels of local employment, employment growth, manufacturing employment, and births of manufacturing firms. He reports a reasonable range for the taxation elasticity of business activity within a region that is very similar to Bartik.

It must be remembered that the range of negative elasticities reported above have been calculated from regression studies that attempt to determine the overall influence of business taxation on some measure of aggregate economic activity. That is they relate to the expected change in economic activity in a jurisdiction if it changes its sub-national tax policy for all firms in the jurisdiction. SAPTAPs by definition are selective and do no such thing. Instead they result in property tax reductions to only selected firms. It is therefore unwise to assume that a certain percentage reduction in overall property taxation in a jurisdiction caused by stand-alone property tax abatements will result in a change in economic activity in the jurisdiction equivalent to the abatement-induced percentage reduction multiplied by the elasticities quoted above. It is for this reason that I separately describe the limited regression studies that determine the specific influence of abatement alone.

Bartik's (1991) survey of literature mentions only one pre-1991 study by McHone (1984) that attempted to isolate the independent effect of abatement on sub-national economic activity.

For 26 standard metropolitan statistical areas that straddled state borders, McHone chose the one county in the SMSA with the greatest manufacturing employment. Using shift-share analysis he broke the 1970 to 1979 growth in this variable down to two components; that due to national average growth and that due to the county's competitive advantage (or disadvantage) in manufacturing. Using regression analysis, he explains variation in the comparative advantage component by factors expected to cause it, including the ability to offer abatement. He found no relationship between the two, but when comparative advantage was reduced to a dichotomous variable where one represented a positive comparative advantage and zero a comparative disadvantage, a second regression found that the ability to offer abatement exerted a positive influence on variation in comparative advantage across these counties and explained about 22 percent of the variation in it.

More recent regression-based studies of abatement have been accomplished by Anderson and Wassmer. Wassmer (1994) tries to address the policy-relevant question of whether a positive correlation between abatement by a jurisdiction and economic activity in that jurisdiction is truly causal or just correlative. This is the "but-for" distinction emphasized earlier. Did the abatement really cause the economic improvement or was it merely offered at the same time as an improvement that would have occurred regardless. He does this by statistically checking whether the abatement pulls the jurisdiction off its long-term trend in different measures of local economic activity. In only 5 of the 31 metropolitan Detroit area cities examined was manufacturing or commercial abatement found to exert the desired positive effect. Importantly, he also finds that this expected effect was more likely to be found for measures of manufacturing activity and in localities that exhibited characteristics that made them particularly unattractive to business.

The motivation for a second regression study by Anderson and Wassmer (1995) was a game-theoretic model of how localities in a metropolitan area are expected to behave over time in their offering of manufacturing abatements. Such a decision is made in two stages by a community. First it must decide if it wishes to offer any form of abatement. If this is affirmative, the second choice is how much of its total manufacturing property tax base, subject to state restrictions, does it abate. Anderson and Wassmer's first regression analysis revealed that the rate of property taxation, the percentage of property base in manufacturing, distance to the metropolitan area's central business district, median income, and population all exerted a positive influence on whether or not to offer abatement. Regression coefficients on the included time dummies also increased in value the longer the state sanctioned SAPTAP had been in place. A second regression discovered that after controlling for other important casual factors, abatement amounts for the typical city rose on average nearly 12 percent a year from the previous year's amount. These findings support the notion that in part, localities in a metropolitan area offer abatement because other communities are doing the same.

In a book-length treatment of the impact of Michigan's manufacturing and commercial SAPTAPs in the Detroit metropolitan area, Anderson and Wassmer (2000) offer an analysis of the expected effects of these two forms of abatement on local values of manufacturing property base, commercial property base, employment rate, poverty rate, property tax rate, industrial development bonds, tax increment finance adoption, and downtown development adoption. Data for their analysis is drawn from 112 municipalities over four years observed between 1977 and 1992. Of interest to policymakers are their simulated findings in regard to what a \$10 million dollar increase in the yearly abatement of property base in a locality is expected to have on the other simultaneous outcomes in the system.<sup>xii</sup> For the period 1974 to 1977 (or the first four years

the statewide abatement program was in place), the simulated increase in manufacturing abatement is expected to on average generate for a Detroit area community a 7.6 million dollar increase in their actual (but not taxable) manufacturing property base. This increase in turn is expected to cause the average local poverty rate to fall from 5.36 to 5.34 percent, municipal expenditure per capita to fall \$0.78 from an average of \$457.72, and the average property tax rate to rise 0.13 from an average of 60.57 mills (yearly property taxes paid per \$2,000 market value). Furthermore, the offering of this additional manufacturing abatement by a locality is expected to be correlated with an increase in the likelihood of the same locality offering greater commercial abatements and industrial development bonds over the same period, and a decrease in the likelihood of implementing a tax increment finance authority and downtown development authority. The same \$10 million increase in manufacturing abatement was found to not be correlated with manufacturing property value if offered between 1978 and 1982, and a negative correlation with local manufacturing value if offered between 1983 and 1987. Since Anderson and Wassmer (2000, 66) report that the average percentage of taxable property value granted abatement across the 112 Detroit communities was around two percent in 1977 and rose to nearly 35 percent in 1992, they believe this change is very likely the result of abatements losing their potency after more and more localities began offering them and firms began expecting them.

For the two periods in their Anderson and Wassmer sample that commercial property tax abatements were offered, regression-based simulations show that a \$10 million dollar local increase in this form of abatement was related to a local decrease in commercial property value. This is consistent with communities offering this form of abatement to try and offset local losses in commercial activity, but the offers having little impact. Such a result supports the theory that

the intra-metropolitan location of commercial activity corresponds with the strength of a local market and local property tax reductions can do little to offset a weak local market.

In wrapping up this review of regression studies it is worthwhile to briefly note four others whose findings are policy relevant. The first is by Mullen (1990) and finds, using data drawn from all New York State communities, that as the percentage of a town's total property value partially exempt from paying property taxes increases, so does a measure of its local fiscal stress. Specifically, a one-percentage increase in local property granted partial exemption is expected to result in a 0.83 percent increase in the jurisdiction's property tax effort relative to a representative tax rate necessary to generate the median revenue yield across all communities. As in the findings of Anderson and Wassmer (2000), the granting of local abatement is related to an increase in the rate of property taxation applied to unabated property. Two of the remaining three regression studies yield equally gloomy results on the expected effects of abatement.

Swenson and Eathington (1998) offer the only study found that examines the effect of SAPTAPs guaranteed to future owners of homes as a way to encourage developers to construct them.. The authors assess the impact of Iowa's widely used program that allows the abatement of residential property taxes in areas within the state's 48 largest cities and find no statistically-significant correlation between variation in the use of local residential abatement and variation in local housing growth rates or increased local capital investment per housing unit. Bollinger and Ihlanfeldt (2003) is a regression study of determinants of variation in economic activity at the neighborhood level in Atlanta, Georgia over 13 years beginning in 1985. Commercial and manufacturing properties that newly located in Census tracts designated as "depressed" by Georgia (based upon high current poverty rate, current unemployment rate, and/or rate of job loss over the last five years) received a full abatement for five years that declined to 20 percent in

the last five years of a guaranteed 25 year abatement. In addition, “under populated” and economically depressed Census tracts received a similar residential abatement beginning in 1987. The state program that allowed these abatements in Atlanta is not considered a SAPTAP, but instead an Other PTAP that is part of a larger enterprise zone designation. Bollinger and Ihlanfeld find that the offering of this non-residential abatement results in about 80 new jobs per annum in a Census tract. The promise of future residential abatement exerted no measurable influence on new housing development in a Census tract offering it.

Finally, Fullerton and Aragoes (2006) offers evidence in support of the ineffectiveness of abatement in the City of El Paso, Texas. They do this by performing regression causality tests between yearly changes in the total value of abatement offered in the City and measures of yearly changes in economic activity that includes real gross metropolitan product, median price of existing city homes, personal city income, retail city sales, and city employment. In 14 of the 16 causality regressions they run, they find that these measures of changes in economic activity are not caused by previous changes in abatement levels.

#### What We Know and What More Needs to Be Known

Designed for policy makers, what follows next is a bullet-point summary of the information garnered from this literature review follows in the form of what we know and what more needs to be known.

##### *What we know*

- Be very careful in the interpretation of surveys of business people regarding the expected influence of business taxes on business location. Better to observe what they actually do, than to rely upon they say will do.
- Evidence based upon calculating the profit expected to be earned by hypothetical firms in different industries, and in different states, show that low unemployment states are more likely to offer business a higher rate of return after business taxes and business incentives (including abatement) are considered.

- Rather than the selective use of abatement to specific firms, the overall reduction of business property taxes in a jurisdiction has been more consistently shown to increase business activity in that jurisdiction.
- If one jurisdiction in a metropolitan area lowers its overall rate of business taxation and others keep theirs the same, the expected effect on business activity in that jurisdiction is expected to be far greater than if all jurisdictions in a metropolitan area equally lowered their rates of business taxation.
- The offering of stand-alone property tax abatements by jurisdictions in a metropolitan area are far more effective at redistributing manufacturing activity among the jurisdictions in this metropolitan area than commercial activity.
- There is evidence of copy-cat behavior among jurisdictions in a metropolitan area regarding the offering of abatement. Over time, a jurisdiction is more likely to offer abatement just because other jurisdictions in the metropolitan area are doing so.
- Copy-cat behavior reduces the long-term effectiveness of abatement in a metropolitan area at redirecting business activity because if all are offering them, abatement can no longer be the swing factor in choosing one jurisdiction over another.
- Abatement is likely to generate fiscal stress through the potential revenue lost and increased business services provided after they are offered.

*What more needs to be known*

- The use of hypothetical firm models should be used more often to better inform sub-national decision makers on the likely impact of abatement at specific locations on the profitability of different types of firms.
- State governments need to collect more publicly available data on the amount of abatement (and all local economic development incentives) offered by all jurisdictions within their boundaries. The lack of research on the impact of abatement is largely due to a lack of data.
- More research needs to be completed on the use of abatement in the primary and residential sectors before any definitive conclusions can be reached on their effects in these sectors.

## **5. Conclusion**

### Summary

This chapter has summarized the arguments for and against the use of stand-alone property tax abatement, documented its increasing prevalence and the various forms of its use across the United States, and described the theoretical and empirical evidence that can help policymakers better understand the expected effects of abatement. Since this chapter is included in a broader volume on the erosion of the sub-national property tax base in the United States, it is appropriate to also summarize the relationship between this issue and abatement.

Based upon the evidence offered here, a water glass representing the country's entire sub-national property tax base after abatement is better thought of as half-empty than half-full. Theory points to abatement not increasing the overall economic activity in the country. When offered, it acts to reduce the country's total sub-national property base upon which taxes are levied. Regarding a glass that symbolizes the property tax base of only one sub-national jurisdiction in the United States, the answer to how to best view the effect of abatement in that jurisdiction on its contents can only be answered as it depends. If the jurisdiction under consideration is an entire state or region, then theory and empirical evidence shows abatement made within it does little but deplete the entire state's or region's base of property taxation. This is especially true if other states or regions competing for the same mobile businesses offer incentives of equivalent or greater value.

Though it is not unreasonable for a local policymaker to apply the glass analogy to their taxable jurisdiction's manufacturing property base and conclude that their use of a SAPTAP is the cause of it being half-full. In the long term, manufacturing firms can locate in many different sites within a region and still earn the same profit. Local government choices that hurt (taxes and regulations) and help (abatement, other incentives, and business services) a firm's bottom line are thus more likely to become the swing factor that determines the particular jurisdiction that

manufacturing firm locates in. If a locality offers abatement (or more likely uses abatement in a larger incentive package) and another locality in the same region does not put together an equivalent or greater incentive, the abatement could make the difference in the manufacturing firm's location decision. So even though abatement causes a loss of potential property tax revenue, the local policymaker can believe that the firm would not have come without it. Thus to the local policymaker, the glass is often considered half-full, and not half-empty.

Of course, stressing the importance of abatement to securing mobile business activity serves the self interests of firms, business lobbyists, and site location services. As indicated by the increasing prevalence of SAPTAPs in the United States, all this results in a sort of "arms-race" mentality among state governments that in the extreme causes them all to allow abatement and for all jurisdictions within them to offer it. At such an extreme, the distribution of mobile business activity is unchanged from what it would have been if abatement never existed. The only result being business is paying fewer taxes to sub-national governments (the glass representing property tax base for a locality offering SAPTAPs is now best considered half-empty). These scenarios are helpful in the formulation of advice to the administrators of abatement programs and in the crafting of recommended changes in the way SAPTAPs are offered in the United States.

This chapter continues with advice and policy recommendations to administrators of abatement programs in the United States. In offering this advice I am assuming that the abatement administrator at the state level has the interest of the entire state in mind, while the local official is only interested in what is best for their locality when deciding whether or not to offer abatement.

Advice to Administrators on Expected Effects of Abatement

Economic theory indicates that the expected effect of abatement on sub-national economic activity depends on the degree of mobility of the business offered the property tax reduction. In the empirical work just reviewed this is reflected in a clear difference in findings depending upon both the unit of analysis and type of business examined. Because of the greater likelihood of inter-regional mobility than intra-regional mobility, a greater response to abatement has been found in data sets drawn from localities within a region than from data sets drawn from jurisdictions across different states/regions. Empirical analysis also shows that manufacturing activity is more responsive to abatement than commercial (and residential) because it is more “footloose” in its ability to choose alternate locations. Therefore, if asked to advise a sub-national policymaker on what to expect in regard to influencing economic activity through abatement in their jurisdiction, I would first need to know whether I was speaking to a state policymaker considering the effect of abatement on the inter-state location of large manufacturing firms, or whether it was a local policymaker considering the effect of abatement on the inter-metropolitan location of commercial firms or small manufacturing firms or housing that were very unlikely to leave the state even if an abatement is not offered.

Realize that the advice that follows is not about whether granting abatement to one firm will make the difference in its location decision. Advice along these lines are best made on a case-by-case basis and accomplished in a manner that involves modeling the cost factors important to a representative firm like the one offered abatement, and assessing whether competing jurisdictions are likely to match the abatement offer.<sup>xiii</sup> The advice I can offer concerns the expected long-term impact on an aggregate measure of economic impact if abatement is pursued to a degree that they can be reasonably interpreted as cutting business property taxation in that jurisdiction by a certain percentage. Though policymakers do not like

it, honest advice can only be given within wide margins of possibility due to the range of findings derived primarily from regression analysis.

The offering of abatement is only a sound strategy under certain circumstances that depends on the level of government from which abatements are offered, how abatements are structured, and the expected response from other jurisdictions vying for the same economic development activity. For instance, to a state policymaker asking for policy advice on whether an abatement program, in of itself, can attract new manufacturing to their state or stem the flow of existing manufacturing out of their state, I would respond that the existing evidence requires my response to be in the range of “absolutely not” to “if pursued greatly enough, and in conjunction with other statewide industrial incentives, then perhaps only slightly”. If pressed on a more exact response to the upper-end possibility, I would add a statewide property abatement program that resulted in an overall 10 percent decrease in business taxation is likely to increase manufacturing activity in the state by only 1.5 to 3.5 percent. Very importantly, a response of even this magnitude is predicated on the other states competing for this new manufacturing activity keeping their business taxes and incentives constant and not matching this state’s offers. The expected effect of an abatement program targeted at commercial or residential activity in the state would very likely be none.

To any sub-national policymaker asking whether an abatement program can reallocate manufacturing or commercial activity between localities within their state or within a metropolitan area in their state, I would respond that with some caveats the chances of this happening are far greater than this program attracting new or retaining existing state business activity. Holding other factors constant, the evidence indicates that a ten percent reduction in overall local business taxation accomplished through abatement is likely to result in a long-term

15 to 20 percent increase in the local economic activity generated by firms that are mobile between communities. But in accepting these numbers, the policymaker must also realize that: (1) that the change is very likely “zero-sum” – one locality’s gain comes at the expense of another locality-within-the-state’s loss, (2) that the forecast change will only occur if state policymakers are diligent in restricting abatement and other business incentives to localities at a comparative advantage, and (3) a response of the magnitude predicted is for most manufacturing firms and only some commercial firms (like regional retail malls, auto malls, or large “big-box” stores whose market they serve consists of most of the region).

The benefits from a jurisdiction offering abatement arise due to an increase in economic activity that in turn could create more jobs for existing residents in the locality, more tax revenue for the locality, and greater agglomeration economies for existing firms in the locality. The potential costs of a jurisdiction offering an abatement that generates greater economic activity is that it can also generate further public service needs that are greater than additional revenue available after abatement to provide for them (fiscal stress) and a reduction in the physical environment of a community. Understanding this, the final bit of advice I would offer a policymaker considering the offering of a new SAPTAP is to fully and rationally weigh the likely benefits of it against the likely costs. Abatement should only be chosen if a healthy positive margin exists between reasonable expectations of benefits compared to costs.<sup>xiv</sup> Of note for such an assessment, empirical evidence was earlier offered by Mullen (1990) that a percentage increase in partial property tax exemptions (that occur through abatement) is also likely to yield a near equal increase in one measure of local stress.

*Decision criteria*

If pressed to design specific economic decision criteria – that ignores the political reasons to offer abatement – on whether a state or local decision maker should offer abatement to a specific firm, it would involve a four-step, sequential question process:

Question 1: With a significantly high probability, can the business asking for the abatement legitimately locate elsewhere?

*Answer yes:* Ask next question.

*Answer no:* Do not grant abatement.

Question 2: Is the profitability of the business asking for the abatement likely to be higher in the possible alternative location(s) if your jurisdiction offers abatement (and other foreseeable incentives) and the alternative location(s) do the same?

*Answer yes:* Do not grant abatement.

*Answer no:* Ask next question.

Question 3: Is the offering of the abatement (and other foreseeable incentives) to this firm expected to generate greater or less fiscal stress in your jurisdiction? (That is will the foreseeable revenues that come from this firm after abatement and the incentive package offered to it be greater than the anticipated increase in expenditures do to it locating or remaining in your jurisdiction?)

*Answer less fiscal stress:* Grant abatement

*Answer greater:* Ask next question

Question 4: Is the cost of the increased fiscal stress generated in your jurisdiction by offering the abatement and getting the business to locate there more than offset by other tangible benefits offered by the firm (i.e., jobs for residents, the attraction of other taxpaying firms, revitalization of a neighborhood, etc.)? To answer this question the decision maker necessarily must put a dollar value on these other tangible benefits.

*Answer yes:* Grant abatement.

*Answer no:* Never grant abatement.

### Policy Recommendations Regarding the Continued Use of SAPTAPs

In a chapter in a recent book on *Reining in the Competition for Capital*, Thomas (2007) reemphasizes that a sub-national business incentives like SAPTAPs exist for at least a couple of reasons. First, sub-national governments need the revenue and jobs provided by basic economic investment within their boundaries. Second, much of this investment is quite mobile. In such a market for sub-national business investment the sellers (business) have three advantages over the buyers (state and local governments): (1) the potential mobility of business is rising, (2) relevant information asymmetries favor sellers, and (3) sellers usually act in a coordinated matter, while buyers do not. Thomas suggests the answer is greater coordination among all sub-national

governments on abatement and other activities related to the offering of economic development incentives. Others have suggested that the outright elimination of SAPTAPs and other sub-national incentive programs is the best approach. While others believe that nothing needs to be done and any policy changes would in fact lead to a less socially desirable outcome. These arguments are summarized next.

### *Do nothing*

Mattey and Spiegel (1997) and Glaeser (2002) are three commentators that have looked at some of the same evidence presented in this chapter and conclude that nothing needs to be done to curtail the use of SAPTAPs. They reason that the sub-national use of abatement actually enhances the efficiency of business location decisions. Their reasoning is based upon firms generating benefit to a jurisdiction if they locate there and these benefits varying both by location and by firm. If abatement, or some other form of tailored economic development incentive cannot be offered to firms, jurisdictions will extract these benefits for distribution to their citizens without the appropriate compensation to the business owners and corporate shareholders that generate them. In this argument, rational policymakers competing with each other for mobile business activity offer an incentive to a specific firm equal to the value of the benefits that the firm is expected to convey to the locality if it locates there. The greatest local incentive is offered where the business conveys the greatest local benefits, and if other location factors are constant, that is where the business locates after receiving full compensation for providing the location-specific benefits it generates. Mattey and Spiegel, and Glaeser, all recognize that this could limit the redistribution of resources from wealthy to poor residents within sub-national jurisdictions because the surpluses provide by business to do so are lost. But their response is such redistribution is better done at the federal level. This line of reasoning is theoretically

sound providing that information asymmetries on the benefits and costs of a firm locating in a jurisdiction do not exist, and that policymakers act in a purely rational fashion in crafting an incentive offer. Since I believe as Thomas (2007) that information asymmetries greatly favor business in the abatement process, and side with Wolman and Spitzey (1996) on their conclusion that the type and amount of a sub-national incentive offered is usually not determined through a purely rational process, I reject the do nothing policy course as the optimum.

*Eliminate them*

An extreme policy course in regard to SAPTAPs in the United States would be to seek an outright elimination of them. Observers that reach this conclusion include Burnstein and Rolnick (1995), Lynch (1996), and McEntree (1997). The argument usually given for doing so is that abatement in the long-term only produce state and local property tax base glasses that are half-full. The loss in property tax revenue generated by abatement has forced sub-national government to seek other forms of more regressive local revenue (sales taxes, user charges, or fees) or cut services that primarily benefited the poor. Furthermore, supporters of elimination believe that the impact of abatement on redirecting economic activity to more socially beneficial locations is minimal at best. I respectfully disagree and do not favor outright prohibition of SAPTAPs (and the offering all other sub-national economic development incentives) for two reasons. The first is purely practical. How could it even be possible for the federal government to prevent state and local governments from using their own funds to attract business? As noted by Fisher and Peters (1998, 220), participants in a national conference on ending the “economic war between states” offered few proposals on how to do so and the ones suggested would surely be challenged as unconstitutional. My second reason for not favoring an outright ban is that I agree with Bartik (2007) in that selectively offered abatement under the reformed system

suggested next is very likely to produce socially beneficial outcomes in the form of directing basic economic activity to jurisdictions most in need of it.

*Mend, but do not end*

The majority of previous academic studies that examined sub-national business incentives, and concluded with a policy prescription on what should be done, side with the remaining policy alternative of “mend but do not end” abatements.<sup>xv</sup> Such a policy prescription involves finding ways in which to curtail the current use of abatement such that it is only offered by locations with high levels of unemployment, poverty, existing infrastructure, and/or fiscal stress (measured by local expenditure needs exceeding available local revenue); and where there is evidence that a property tax reduction would result in the location of greater business activity in the location offering it. As discussed in Anderson and Wassmer (2000, 174-175), this may be best brought about by state legislation designed to restrict the offering of SAPTAPs to specific amounts determined for each of the different economic regions or metropolitan areas in the state. Discussions offered in Ihlanfeldt (1999), Bartik (2007), and Leroy (2007) offer a great start in the creation of a list of the specifics that would be desirable in such a reform and include: (1) more selective use of abatement, (2) greater transparency concerning the type and amount of abatement offered in a jurisdiction, (3) more publicity on abatement availability and the goals meant to be achieved through their offering, (4) mandated benefit-cost assessment of each local abatement offer by a state-appointed commission of experts, (5) greater use of front-loading in abatement schemes, (6) further use of clawbacks specifically designed to better insure the promised social benefits of abatement (e.g., increased tax revenue, quality employment of low income residents, physical improvements to community, etc.), (7) supplemental input requested of school boards and other overlapping tax jurisdictions before the approval of an abatement that

fiscally impacts them, (8) site location consultants required to register as business lobbyists in the states they practice in, and (9) restricting abatement to only the mobile property that meets the redirect goal(s) of the entire program. Bartik and Bingham (1997) offer a well-reasoned response to critics that believe economic development programs cannot be evaluated and thus they cannot require specific outcomes.

I believe that if this type of reform is going to come to the current system of SAPTAPs in the United States it must be generated in each state from the grassroots level of cities in the state's large metropolitan areas and regions banding together and calling for change. This can occur because many suburban communities would benefit from a reduction in the unnecessary abatement that now does little to affect the amount of economic activity in their boundaries, but does reduce their taxable property bases. If depressed neighborhoods (usually in the central city and inner-ring suburbs) were only allowed to use abatement, they would benefit from having a more effective tool at their disposal to steer needed economic activity to within their boundaries.

Given what we know about the effects of abatement, my concluding recommendation is that stand-alone property tax abatements are only a sound policy strategy under very limited circumstances which are usually out of the control of the jurisdiction offering the abatement. Returning to the water glass metaphor for property tax base used in the introduction, the distinction needs to be drawn between the offering of a SAPTAP in a depressed jurisdiction where it more likely produces a property-tax-base water glass that is best thought of as half-full, and an abatement offered elsewhere that is better thought of as yielding a half-empty glass. The reason being the much stronger evidence in favor of the appropriateness of the assumption that "but for" the abatement in a depressed jurisdiction, the economic activity would have more than likely located elsewhere. But the strategy of a depressed jurisdiction offering a SAPTAP is only

a sound strategy if other jurisdictions vying for the same economic activity do not offer the same. Unless the state restricts the offering of these other abatements by other jurisdictions in the state (which is possible), and in some instances the federal government restricts the offering of these abatements by jurisdictions in other states (which is very likely impossible), the circumstances do not exist for stand-alone property tax abatements to be considered a sound long-term development strategy.

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### Endnotes

<sup>i</sup> See Anderson and Wassmer (2000, Chapter 3) for details on this program and an analogous program once available in Michigan for commercial property.

<sup>ii</sup> See Alyea (1967, 140).

<sup>iii</sup> See Wassmer (1993) for a further graphical explanation of the New View of property taxation.

<sup>iv</sup> It is also in the interest of business in general to convey to the general public, landowners, and labor that they stay away from some sub-national jurisdictions for these reasons. For evidence of this, see the business climate and site survey literature reviewed in Bartik (1991, 36), Anderson and Wassmer (2000, 32), and Fisher (2005).

<sup>v</sup> In the preface to their book on economic development incentives in the Metropolitan Detroit Area, Anderson and Wassmer (2000, xi-xii) describe this exact occurrence in the real world creation of the manufacturing property tax abatement program that currently exists in Michigan.

<sup>vi</sup> The important distinction here is that the residential SAPTAPs referred to here are promised to the developers of such property before they are built to encourage their building on a specific site or in a specific jurisdiction. This is different that the residential property tax relief measures that are given to the owners of such property after they acquire them. The prevalence of these measures are discussed elsewhere in this book by Bowman.

<sup>vii</sup> One exception is the working paper by Swenson and Eathington (1998) discussed later. More work along these needs to be done.

<sup>viii</sup> Nunn (1994) offers a compelling argument in favor of a public vote requirement for the granting of a local abatement.

<sup>ix</sup> See Anderson and Wassmer (1995) for empirical evidence of such in the form of “copy-cat” abatements in a metropolitan area.

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<sup>x</sup> See Fisher (2005) for a highly critical assessment of the value of business climate studies.

<sup>xi</sup> For a critical assessment of Bartik's conclusions see McGuire (1992).

<sup>xii</sup> The average manufacturing property value in a Detroit area community over the entire period examined was \$174.5 million and average commercial property value was \$148.4 million.

<sup>xiii</sup> For the suggested steps on how to do this, see the decision criteria offered later.

<sup>xiv</sup> Anderson and Wassmer (2000, 147) offer an example of how to do this using data generated for a typical community in the Detroit metropolitan area.

<sup>xv</sup> Examples of the studies that call for policy reform of local incentives, but not total elimination are Bartik (1991), Nunn (1994), Wolman and Spitzey (1996), Fisher and Peters (1998), Ihlanfeld (1999), Anderson and Wassmer (2000), and Leroy (2007)

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