

The Equity Impacts of Municipal Tax Incentives: Leveling or Tilting the Playing Field?

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Abstract

The widespread use over the past two decades of Michigan's PA 198 Industrial Tax Abatement program provides an opportunity to assess the inter-urban equity impacts of this economic development tool. Not only has PA 198 been used relatively more often by suburban municipalities, local governments at the metropolitan periphery are more likely to use abatements to attract new plants and new jobs. The older central cities primarily use the program to retain existing jobs, albeit at high cost of lost tax revenues. On balance, it appears that PA 198 has done little to alter the location decisions of participating firms.

One of the perennial questions about the use of municipal tax incentives to foster economic development is that of inter-local equity. Some research has suggested that abatements can produce a more even distribution of development across jurisdictions within a state or metropolitan area, but only if targeting is part of the incentive legislation (Goss & Phillips, 1999). Absent state imposed restrictions limiting the use of incentives to distressed areas or those with cost structures that inhibit business investment, what types of municipalities are most likely to use abatements? There has always been the suspicion, supported by some research, that widely available incentives will be primarily used by wealthy communities that can afford the luxury of tax expenditures to become even richer (Brierly, 1986; Reese, 1991). Yet, other research has indicated that poor cities use abatements to a greater extent (thus leveling the playing field), even though extensive use of abatements by poor communities may weaken already shaky local economies (Rubin & Rubin, 1987). And, it is very possible that the forgone taxes provide little benefit to local economies, either rich or poor (Wassmer & Anderson, 2001).

Public Act 198 of 1974 permits municipalities in Michigan wide discretion to abate industrial property taxes, which they do at one of the highest levels in the nation (Reese & Fasenfest, 1997). More than 14,000 Industrial Facilities Tax Abatements were granted between 1980 and 2001. Because of its widespread availability and use, PA 198 might best be considered an effort to increase the state's competitiveness rather than a program designed primarily to assist specific distressed communities. Most of Michigan's local governments are eligible to participate and about one-third have granted at least one industrial tax abatement (Sands & Zalmezak, 2001). This widespread use and lack of targeting allows for a comprehensive assessment of inter-city equity over time.

A database containing information on all PA 198 abatements granted between 1980 and 2001, as well as census and property value data, is used here to address the following key questions:

- Which communities are the most likely participants in and beneficiaries of this tax abatement program? In particular, does the level of distress in a municipality make it more or less likely to have used the program over time?

- How have the municipalities that were most distressed in 1980 fared over time? Do those distressed communities using abatements evidence healthier fiscal profiles in later periods than those not using abatements?
- Do tax abatements appear to help the rich get richer, are they an incentive tool that benefits most municipalities equally, or are they an unnecessary tax expenditure that essentially has no discernable effect on the relative health of municipalities?

The goal of this analysis, then, is to profile the abatement practices of municipalities that differ in their economic health. Data are currently not available to allow for a full evaluation of the economic impacts of PA 198 abatements and this is not the purpose here. Rather, from a public policy standpoint, since tax abatements represent the loss of public revenue, it is critical to understand the inter-local equity effects of such expenditures with the goal of making explicit the impacts of non-targeted tax expenditures. In short, if they serve to tilt rather than level (or even if they have little effect on) the economic playing field, are they a desirable public policy?

Tax Abatements and Economic Development

Over the past two decades, scholars and evaluators have made a number of recommendations for reshaping local economic development policies. No analyst has recommended increasing the use of property tax abatements. Yet their continued use belies the many concerns about their effectiveness raised in an evaluation literature spanning decades (see for example, Ahlbrandt & DeAngelis, 1987; Due, 1961; Fisher & Peters, 1998; Peters & Fisher, 2004; Schwarz & Volgy, 1992). Tax abatements are criticized because they:

- are only effective at the margins in business location decisions;
- only serve to increase the “zero sum” aspect of local development;
- tend to redistribute public sector revenues to private sector interests;
- are used primarily by healthy cities which can “afford” to forgo the potential tax revenues; and
- tend not to produce jobs and tax base benefits commensurate with the loss of local revenues.

Surveys of firms receiving tax abatements have indicated that the incentives were effective in impacting local decisions and hence generating economic growth (Calzonetti & Walker, 1991; Premus, 1982; Rubin, 1991). Other assessments, however, concluded that incentives were basically ineffective in stimulating local economic growth (Schmenner, 1982). Literature indicating either negative (or no positive) outcomes has suggested that abatements:

- have not achieved the levels of growth desired and have negative secondary impacts (Hood, 1994; Lynch, Fishgold, & Blackwood, 1996);

- are essentially useless because firms would have remained in place or even expanded, absent the incentives, and thus cities are “pirating” jobs from each other (Lynch et al., 1996);
- fail to have an additive impact on overall business activity and have only very short-lived positive effects (Wassmer, 1994);
- are not large enough to counterbalance negative attributes of undesirable or high-cost locations (Dabney, 1991; Peters & Fisher, 2002)

Although some research has found positive outcomes related to tax incentives under particular conditions—such as when they are targeted or focused on a limited geographic area (Bartik, 1991; Dardia, 1998; Gramlich, 1997; Oakland & Testa, 2000), a recent meta-analysis by Peters and Fisher (2004) concludes that their overall effectiveness remains in doubt. Among the ten studies examined, three showed at least minor benefits, an equal number showed no discernable impacts of incentives, and four had completely ambiguous effects. Overall, the authors conclude that even after four decades of research there is no consensus on whether tax incentives have any effect at all. And, in summary they state, “the best case is that incentives work about 10% of the time, and are simply a waste of money the other 90%” (2004, p. 32).

Are Tax Abatements an Equitable Development Tool?

Regardless of the substantial questions about their effectiveness, tax incentives remain widely used among municipalities in their efforts to foster economic growth. In the mid-1990s tax abatements were the seventh most commonly used economic development incentive; by 2001, they had risen a notch to the sixth most relied upon local incentive. Overall, 54% of cities in the United States were using tax abatements and other tax incentives to attract and retain business investment (Reese & Rosenfeld, 2004). The level among Michigan cities for the same time period is higher (68%). Usage rates in 2003 are down just slightly, at 64% (Reese, 2004).

Because the use of abatements is unlikely to go away, it is important for policymakers and scholars alike to consider the equity implications of nontargeted abatement policies such as PA 198 in Michigan. Tax abatements are generally presented as a tool that struggling cities can use to level the playing field in terms of locational desirability. Barriers to development—ranging from a negative image through low tax base to a workforce skill deficit—can be offset by tax reduction.

At a more micro level, research suggests that the equity benefits of tax abatements tend not to appear in practice. Wassmer and Anderson (2001) found that, while tax abatements were positively related to increased property values and decreased local poverty, they were also associated with decreased resident employment, as jobs tended to go to workers outside the city providing the abatement. Further, reductions in local poverty may be due to displacement of the poor as property values increase and gentrification ensues. Similarly, a study of Nebraska’s business tax incentives indicated that they exacerbated inequities among county growth patterns and were more effective in generating growth in low-unemployment counties, making them counterproductive. In short, “the evidence found in this study suggests that LB775, the centerpiece of Nebraska’s economic

development program, is encouraging divergence in economic performance across the state” (Goss & Phillips, 1999, pp. 226–227).

The potential for wealthy cities to become even better off through the use of tax abatements explains why several states in the United States and many provinces in Canada do not allow cities to offer abatements without state/provincial legislative approval (Reese & Malmer, 1994). Most states, however, allow cities to offer abatements with few restrictions. This potentially allows prosperous cities to offer development incentives to a greater degree than less prosperous cities, using their greater financial capacity to promote further growth.

Research has indicated that firms prefer to locate in areas that are already economically successful, permitting healthy cities to prosper without the use of incentives (Brierly, 1986; Reese, 1991). Nevertheless, firms are likely to seek incentives from attractive cities (Rubin, 1988; Schneider, 1986), and those cities “successfully recruiting new businesses are more likely to adopt a wide variety of economic development policies” (Green, 1995, p. 177). Put succinctly, “left to their own devices, communities that do not exhibit high unemployment and fiscal blight increasingly offer local economic development incentives” (Wassmer & Anderson, 2001, p. 146). Local incentives will have little effect on the distribution of growth when used outside central or distressed cities or in areas that are already growing and will increase inequities because they are more heavily used in high-investment areas (Dewar, 1998; Goss & Phillips, 1999).

Although apparently in the minority, Bartik suggests that tax incentives can increase inter-city economic equity (1991). High taxes in central cities *can* initiate a negative growth spiral by reducing service to businesses, prompting firm relocation, increasing poverty, ratcheting up tax burdens on the poor, reducing local services, and ultimately reducing employment opportunities. Tax incentives can short-circuit this process because they permit cities to address market failures that undervalue jobs and encourage businesses to locate where they otherwise would not. Still, later research has provided little support that high-unemployment areas benefit most from tax incentives (Fisher & Peters, 1998), and suggests that any potential equity benefits can only be achieved if tax incentives are targeted by states to stressed cities to reduce unhealthy competition (Burstein & Rolnick, 1995). Peters and Fisher provide a scathing criticism of the equity effects of tax abatements that essentially summarizes the state of the field:

It is possible that incentives do induce significant new growth, that the beneficiaries of that growth are mainly those who have greatest difficulty in the labor market, and that both states and local governments benefit fiscally from that growth. But after decades of policy experimentation and literally hundreds of scholarly studies, none of these claims is clearly substantiated. Indeed, as we have argued in this article, there is a good chance that all of these claims are false. (2004, p. 35)

Background, Data, and Research Propositions

The Origins and Evolution of PA 198

The restructuring of the global economy in the early 1970s forced local and state public officials across the country to react with economic development incentives. While the economy of Michigan in 1974 was generally stressed from changing

global forces, a more specific set of circumstances led to the passage of Public Act 198. The Chrysler Corporation threatened to discontinue rehabilitation of its dilapidated Mack Avenue stamping plant on Detroit's eastside unless some tax relief was provided. State and local officials, in response to Chrysler's threat and to reduce further economic hemorrhaging, passed the industrial property tax abatement law (Sands & Zalmezak, 2001). The act has been amended several times, generally increasing the coverage and flexibility of the property tax exemptions permitted.

The Industrial Tax Abatement Process

The tax abatement process in Michigan allows a local government unit to establish a plant rehabilitation district or an industrial development district or both, if it levies taxes that equal or exceed 30 mills. Such a district can be initiated by the municipality or by request of the owner of the industrial property located within a proposed district. Industrial property includes facilities related to a manufacturing operation under the same ownership, including office, engineering, research and development, warehousing, or parts distribution facilities, as well as research and development laboratories of suppliers to manufacturers. The local government must approve or disapprove the application within 60 days. If approved, the state issues an industrial facilities exemption certificate and the applicant must comply with several requirements before final approval:

- the restoration, replacement, or construction of the facility has not occurred earlier than one year before filing the application,
- the facility will create, retain, or prevent loss of employment in the community in which the facility is situated,
- the activity primarily has the effect of restoring, replacing, or updating the technology of obsolete industrial property—not merely the addition of new machinery and equipment, and
- the abatement shall not exceed 5% of the total state equalized valuation of the local governmental unit unless local and state governments determine such an amount shall not substantially impede the operation of the local government or impair its financial soundness.

Finally, the duration of the tax abatement is a maximum of 12 years from the completion of the facility. The abatement can be revoked if the industrial facility improvements or construction is not complete within two years or if the company leaves the area. Both real and personal property in these districts is subject to an industrial facility tax, which in the case of a replacement facility is determined by multiplying the total mills levied in proportion paid by all others in that year (within the district) by the SEV of the real and personal property of the obsolete industrial property for the tax year preceding the issuance of the tax exemption certificate. In essence, the company pays taxes based on the obsolete property, not the improved property. In the case of a new facility, the industrial facility tax is half of the tax that would be paid if not granted an exemption.

The Data

The data for this study come from several sources. First, data on tax abatements come from the files of the Michigan Economic Development Corporation and its predecessor agencies. These data cover all abatements awarded from 1980 to 2001 and include the number of abatements, projected real and personnel property investment, and projected retained and created jobs. Census and property assessment information for the years 1980, 1990, and 2000 were then added to the abatement dataset.²

Several caveats are worth noting. First, the data here do not permit an assessment of the outcomes of tax abatements in any experimental sense. The dataset contains information on projected jobs and investment drawn from tax abatement applications as opposed to actual outcomes. There is every reason to believe that such projections are inflated due to the desire on the part of firms to get their PA 198 application approved and local officials to be able to report their economic development success. Second, while the dataset includes census and tax value information over time, it is essentially cross-sectional in that it does not include information on the control variables necessary to conclude that abatements did or did not cause any changes in fiscal health, nor does it include local budget data. That said, the data present a description of change in economic health over time in the context of abatement practices and an assessment of the research propositions regarding inter-city equity that follow.

Research Propositions

Testing whether usage patterns of PA 198 tax abatements are “equitable” is a complex task for two primary reasons: ultimate outcome data in the form of actual jobs and investment are not available, and “equity” is a concept without a widely accepted operational definition. While the first challenge is insurmountable at this point, it is possible to provide an operating definition of equity for the purposes of this research and then present logical propositions regarding what an equitable usage pattern would be in the context of that definition.

The definition of equity used here is needs-based and emphasizes sustainability. Specifically, use of PA 198 tax abatements would promote inter-city equity if they:

- were more heavily employed in distressed communities;
- operated to favor central cities and inner-ring suburbs with existing infrastructure and residents with generally higher needs;
- served to reduce or at least contain sprawl that directs resources, residents, and businesses to outlying greenfield sites and away from central cities and inner-ring suburbs;
- seem to be related to economic growth in distressed areas; and,
- appear to be an effective way for distressed communities to enhance their financial positions, particularly vis-à-vis less distressed areas

Thus, expressed as research propositions, tax abatements may enhance inter-city equity if:

1. Abatement activity, in total or relative to population, is higher among distressed communities, many of which are central cities and inner-ring suburbs.
 - The number of abatements is higher in distressed communities.
 - Investment and job creation are greater in distressed communities.
2. The tax revenue cost of job creation and retention via abatements is limited in distressed communities.
3. Communities using abatements more heavily experience greater economic growth or at least less decline than communities not using abatements.

Findings

Three levels of analysis are used to assess equity patterns: all municipalities in the state; all communities with a population of at least 10,000 in 1980; and, selected municipalities in two metropolitan areas, Detroit and Grand Rapids. These different perspectives allow for a comprehensive assessment of the range of PA 198 use in the state, narrowing to a focus on the larger metropolitan areas most likely to be encouraging economic development through abatements and other means (Sands, Reese, & Kahn, in press), and finally exploring in-depth the two metropolitan areas with the greatest use of tax abatements over the time period.³

Proposition 1: Abatement activity, either in total or relative to population, is higher among distressed communities, many of which are central cities and inner-ring suburbs.

- The number of abatements is higher in distressed communities.
- Investment and job creation are greater in distressed communities.

Economic health is measured by the health of individual households in the community, a criterion employed in much past research (Feiock, 1992; Fleischmann, Green, & Kwong, 1992; Reese & Rosenfeld, 2001; Sharp, 1991; Wolman, 1996). In a factor analysis of census variables, median family income, percent of households in poverty, and unemployment loaded on one factor, indicating that they are measuring a single concept of community economic health. These three variables were used to construct a single index of community economic health (the factor analysis data are presented in the Appendix).⁴

Several correlation analyses were run to assess the relationship between community economic health and abatements, with mixed results. For example, among *all municipalities* in the state there is a significant correlation between distress level in 1980 and the use of tax abatements. However, the least distressed communities in 1980 according to the health index are making the greatest use of abatements over time (Pearson correlation = 0.12, significant at 0.01). There is also a positive correlation between central cities and inner-ring suburbs and tax abatement use (Pearson correlation = 0.29, significant at 0.01).

Table 1. Change in Health Index 1980–2000

MUNICIPALITY	Change 1980–2000	MUNICIPALITY	Change 1980–2000
Big Rapids	-2.4945	Benton Harbor	1.2607
East Lansing	-1.0503	Frenchtown township	0.8963
<i>Bloomfield township</i>	-0.9501	Genoa township	0.7150
Kalamazoo	-0.9073	Coldwater	0.7018
Mount Pleasant	-0.8018	Battle Creek	0.6716
Southfield	-0.7593	Oxford township	0.6522
Dearborn	-0.7108	Green Oak township	0.6300
Sturgis	-0.6811	Hamtramck	0.5797
<i>Delta township</i>	-0.6126	Monroe township	0.5777
Flint	-0.5742	Macomb township	0.5713
Alpine township	-0.5150	Lyon township	0.5495
<i>West Bloomfield township</i>	-0.5007	Antwerp township	0.5319
Saginaw township	-0.4698	Ferndale	0.4933
Riverview	-0.4689	Brownstown township	0.4793
Trenton	-0.4586	Sumpter township	0.4719
Davison township	-0.4444	Hamburg township	0.4625
<i>Southfield township</i>	-0.4395	White Lake township	0.4614
Ecorse	-0.4185	South Lyon	0.4354
Midland	-0.4035	Huron township	0.4219
Gaines township	-0.3778	Burton	0.4195
Portage	-0.3456	Brandon township	0.4107
<i>Livonia</i>	-0.3415	Romulus	0.4074
Mount Morris township	-0.3392	Bay City	0.4023
Dearborn Heights	-0.3373	Springfield township	0.3962
<i>Saint Joseph township</i>	-0.3315	Monroe	0.3830

Correlation analysis using just *municipalities over 10,000* indicates that the more distressed communities in 1980 issued significantly more abatements overall and more abatements per capita than less distressed communities (Pearson correlations = -0.35 and -0.29 , respectively, significant at the 0.01 level). This may be somewhat misleading, however, since many of these communities did not issue any abatement certificates. When only those larger *municipalities issuing any abatement* over the 20 years are considered, there are no significant differences in rates of abatement according to level of economic distress. Thus, among all those participating in the PA 198 program, usage rate is not related to economic distress either for total certificates or per capita certificates (Pearson correlations = -0.09 and 0.05 respectively).

Larger Municipalities

For a more micro view, Table 1 illustrates change in the health index between 1980 and 2000 for the 25 municipalities that experienced the greatest declines and increases on the index. Communities originally among the most distressed in 1980 are indicated in bold, while those among the least distressed are in italics. The communities experiencing the greatest declines in health over the 20-year period include about equal numbers of communities from the top and the bottom of the 1980 health index list. But relative improvement is much more likely to have occurred among the initially distressed communities: 5 of the most improved municipalities were originally among the most distressed; none of the 25 healthiest in 1980 are among this group. Municipalities experiencing the greatest declines in community economic health tend to be inner ring-suburbs of central cities; 16

Table 2. Investment and Jobs

MUNICIPALITY	Certificates	Investment Per Capita	MUNICIPALITY	Certificates	PA198 Jobs/ Labor Force
Wixom	19	\$95,710	Buena Vista township	39	6.39
Auburn Hills	158	\$80,031	Ecorse	10	2.51
Battle Creek	182	\$48,685	Cadillac	149	2.28
Wayne	23	\$47,178	Holland	373	2.04
Holland	373	\$38,709	Holland township	478	1.96
Ecorse	10	\$35,355	Ionia	45	1.88
Buena Vista township	39	\$35,201	Sturgis	118	1.59
Milford township	19	\$31,277	Grand Haven	158	1.57
Woodhaven	9	\$30,348	Battle Creek	182	1.47
Dearborn	53	\$29,824	Spring Lake township	128	1.44
Holland township	478	\$28,982	Lincoln township	106	1.32
Thomas township	15	\$28,328	Auburn Hills	158	1.31
Spring Lake township	128	\$26,916	Coldwater	132	1.17
Trenton	7	\$24,715	Niles	73	1.07
Romulus	56	\$24,021	Comstock township	53	0.96
Midland	134	\$22,950	Flint	99	0.86
Wyoming	261	\$21,658	Lansing	77	0.84
Sturgis	118	\$19,454	Wyoming	261	0.79
Sterling Heights	145	\$18,607	Muskegon	125	0.67
Kentwood	187	\$18,445	Port Huron	111	0.65
Gaines township	30	\$18,304	Walker	186	0.65
<i>Cascade township</i>	89	\$17,806	Wixom	19	0.64
Grand Haven township	52	\$17,018	Wayne	23	0.55
Ionia	45	\$15,760	Warren	99	0.52
Cadillac	149	\$15,073	Benton township	124	0.50

of the 25 fall into this category. Fourteen of the gainers are townships in the Detroit metropolitan area as opposed to “outstate” areas.

The data on the number of PA 198 certificates issued by each community from 1980 to 2001 reveal no clear pattern between abatement activity and health gains or declines. Among the 25 communities experiencing the greatest community health declines are seven that granted no abatements at all, as well as several—Kalamazoo, Sturgis, Midland, and Portage—that made extensive use of abatements. Nine of the top 25 gainers used few or no tax abatements while 3—Coldwater, Battle Creek, and Bay City—each granted more than 100.

Communities vary considerably with respect to the benefits gained from abatements in terms of jobs and investment projections. Table 2 compares the projected number of new and retained jobs relative to the labor force and the value of estimated investment associated with abatements. Of the 25 highest relative jobs gainers, 10 were among the most distressed communities in 1980. Nineteen of these communities were also among the top 25 in granting abatements. However, the most distressed communities (Detroit, Benton Harbor, Highland Park, and Muskegon Heights) are not among them.

The picture of investment per capita tied to abatements is not as favorable to distressed communities. Only four of the top municipalities in terms of per capita investment were among the most distressed in 1980. Less than half of the municipalities with the highest per capita investment are among the most generous in granting abatements. Several of the communities with high investment per capita that have relatively little abatement activity have major auto plants. For these communities, the property tax abatements provide the means to retool these facilities.

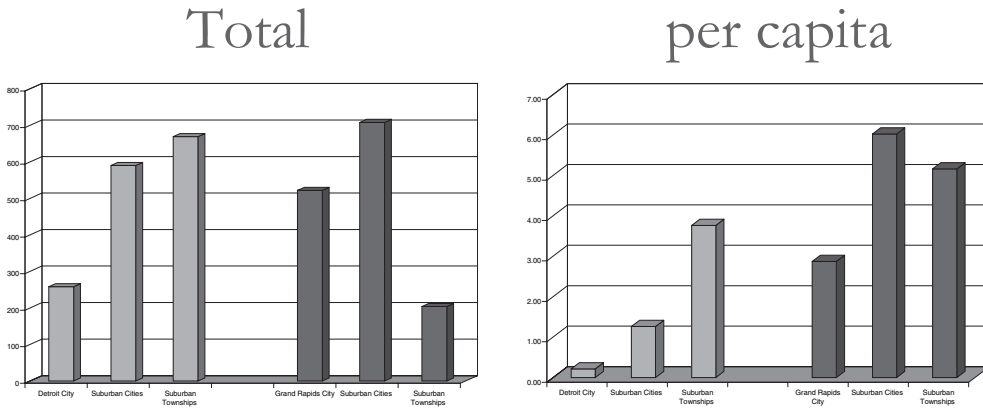


Figure 1. Certificates

Case Regions

To assess equity issues among central cities, suburbs, and exurbs, a more intensive examination was made of the Detroit and Grand Rapids metropolitan areas. Of the top 25 municipalities using abatements, 10 are in the Grand Rapids metropolitan area on the west side of the state, while 6 are in the generally more distressed Detroit metropolitan area. Comparisons are made between the two central cities of Detroit and Grand Rapids, as well as between older (typically cities) and newer (peripheral townships) suburbs in both metropolitan areas. None of the suburban municipalities were distressed in 1980 according to the community economic health index. All of the suburban municipalities were active in granting industrial property tax abatements. Each of the 10 suburbs in the Detroit area granted at least 70 abatements, while the 8 Grand Rapids suburbs each granted at least 30. For these areas, certificates relative to investment and jobs illustrate an equity pattern favoring exurban areas.

Certificates—Although more distressed based on any measure, the city of Detroit issued far fewer certificates in total, and even fewer per capita, than did Grand Rapids and the suburban cities (Figure 1). The most abatements overall were issued by Grand Rapids' suburban cities, followed by Detroit's townships. Grand Rapids, which issued more certificates than any other jurisdiction in the state, was out-abated on a per capita basis by both its own and Detroit's suburbs and by Detroit-area townships. In the Detroit metropolitan area, abatements per capita increase steadily as distance from the central city increases. This is not the case for the Grand Rapids area, where extremely low populations in some of the surrounding townships contribute to the low level of economic development activity.

Investment—Total projected investment associated with abatement certificates over the 20-year period is highest in Detroit and its suburban cities, about \$5 billion. Detroit's suburban townships and Grand Rapids' suburban cities each had about \$3 billion in projected investment. Despite having issued the largest number of abatements, Grand Rapids has the lowest total projected investment, about half a

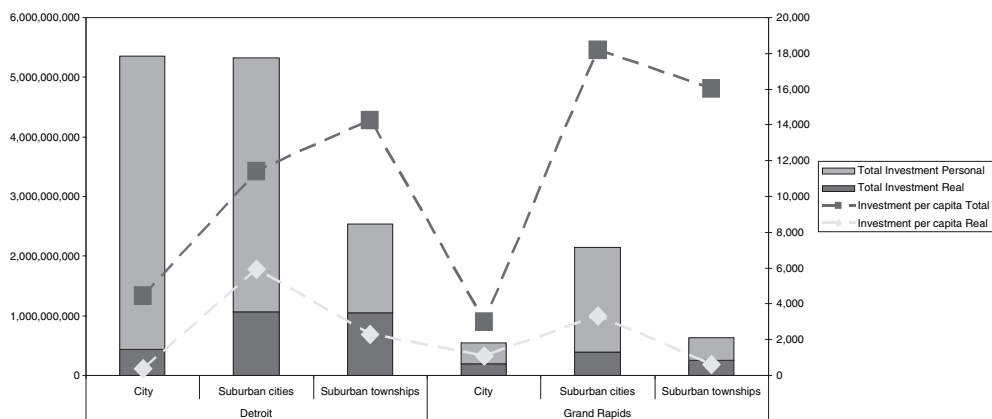


Figure 2. Investment

billion dollars. In all cases, most of the projected investment is in personal, as opposed to real property. The amount and share of real property investment in metropolitan Detroit increases with distance from the center, supporting the argument that abatements are making significant contributions to sprawl.

Detroit, and to a somewhat lesser extent, Grand Rapids, has relatively little real property investment per capita associated with abatements in comparison to its suburbs and exurbs (Figure 2). Here the decentralizing effects of new real property investments are quite clear: investment in new buildings is by far the highest in suburban townships. Investment in new buildings and facilities increases steadily from older to newer communities. However, all of the suburban areas are much higher in per capita investments, both buildings and equipment, than are their respective central cities. Overall, it is also clear that projected investment in personal property (that is, equipment) is more common than is investment in real property, particularly in central cities. This suggests that retooling of existing factories is the most typical purpose of abatements in Michigan, with investment in new buildings and equipment tending to go into greenfield exurban communities.

Detroit does better than any other area in terms of projected investment per certificate followed by Detroit suburban cities. The average investment per certificate is about \$20 million in Detroit, but less than \$1 million in Grand Rapids. Again, it should be remembered that investment figures are projections drawn from applications. Absent outcome data—neither collected nor required by the state—it is not clear how reliable these figures might be. It seems reasonable to assume, however, that Detroit is likely to have substantially higher investment than Grand Rapids as a result of the abatements it granted, regardless of the accuracy of the estimates.

Overall, Detroit issued about 250 abatements designed to attract more than \$5 billion dollars in investment. Grand Rapids gave about twice as many abatements but received only \$550 million in investment. Thus, it appears that Grand Rapids has a higher transaction cost for each dollar invested. Indeed, they have granted an average of one abatement every 2 weeks for the last 20 years, but are well down on the list of overall total investment purportedly attached to the abatements.

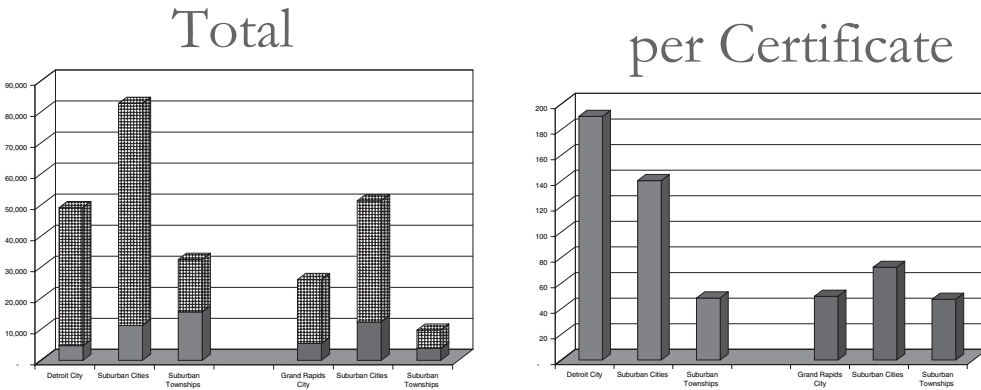


Figure 3. Jobs

Jobs—Overall, abatements in metropolitan Detroit involved many more projected jobs than in the Grand Rapids area; the 11 municipalities in the Detroit metro area provided abatements that involved almost 180,000 new and retained jobs (Figure 3). The total for the Grand Rapids area communities is less than 100,000. The absolute number of jobs was highest in Detroit suburban cities, followed by Grand Rapids suburbs. In all areas, the majority of jobs were existing jobs retained rather than “new” jobs. The largest number of projected new jobs was in Detroit suburban townships.

A different pattern emerges when the average number of jobs per certificate is considered. In the city of Detroit, each certificate involved an average of 200 jobs while Grand Rapids averaged fewer than 60. While suburban cities in both metropolitan areas fared well in the number of jobs associated with each certificate, Detroit outpaces both its suburbs and exurbs. Suburban cities in the Grand Rapids metro area have the highest number of projected jobs per certificate in that metropolitan area.

Figure 4 relates the number of jobs involved in abatements to the total labor force in each community. Abatements in Grand Rapids suburban cities affected almost 60% of the labor force; Detroit’s suburbs are the next highest with abated jobs representing about 35% of the labor force. Suburban townships in both metropolitan areas, along with the Grand Rapids suburban cities, granted abatements that promised relatively large proportions of new jobs. Abatements promised little job growth in other areas, especially the city of Detroit, where abatements served at best to minimize job losses.

Proposition 2: The tax revenue cost of job creation and retention via abatements is limited in distressed communities.

There are two ways to view the projected investment figures just discussed. On the one hand, central cities generally, and Detroit in particular, appear to do well in the amount of investment to be generated by each abatement. However, what this means should be carefully considered. First, most of the investment is in personal property, meaning abatements are being used in central cities and older suburbs primarily for retooling *existing* facilities. Firms with existing facilities are

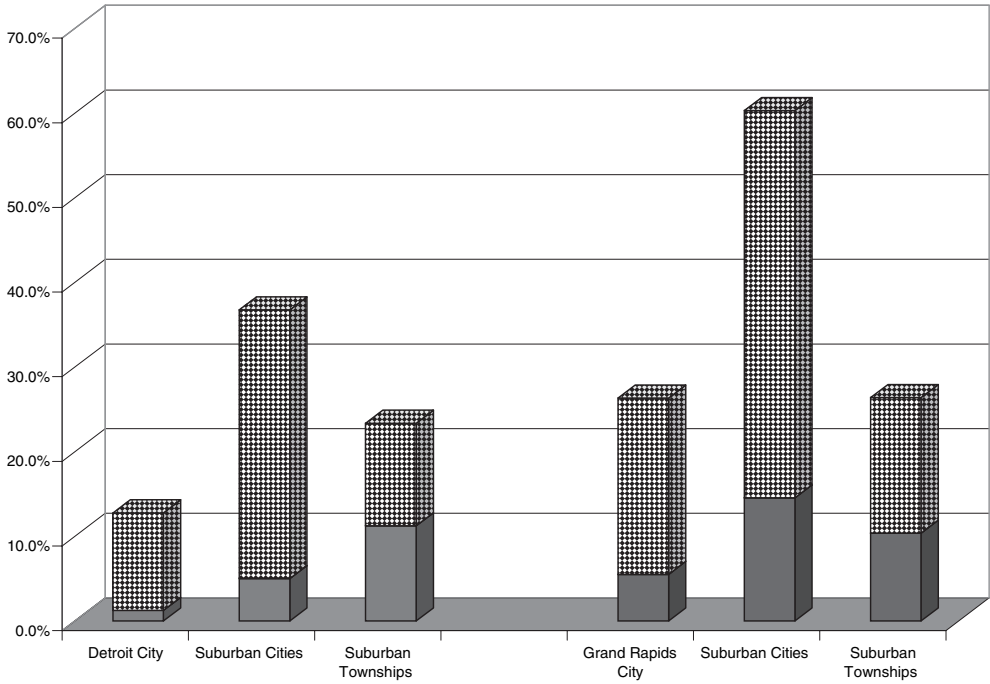


Figure 4. Jobs as Percent of Labor Force

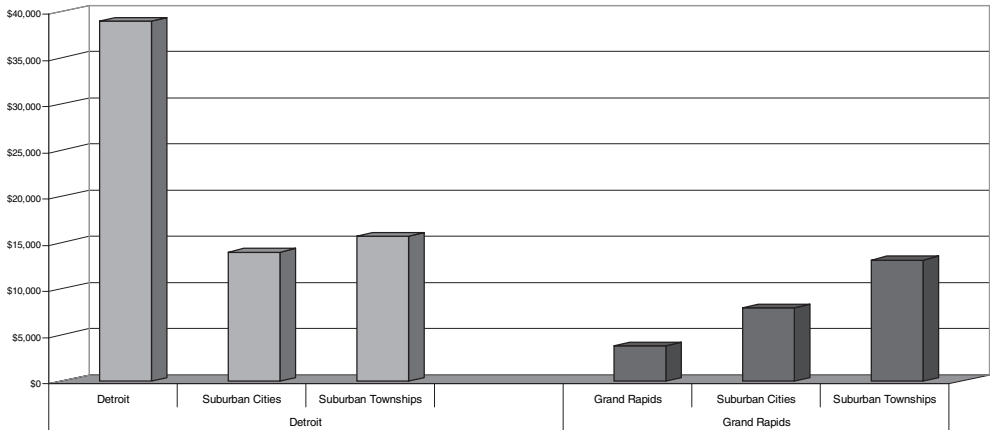


Figure 5. Tax Revenue Lost per Job

primarily upgrading equipment. If these businesses would have remained or retooled absent the abatement, then the value of the investment is, in effect, a measure of forgone tax revenue. Based on this reasoning, Figure 5 shows the average amount of foregone property tax revenue for each new or retained job over the 12-year life of the abatement.⁵ Clearly, Detroit is paying a very high price in terms of foregone taxes for each job, while Grand Rapids pays a much lower price for each job. Overall, metropolitan Detroit municipalities are giving up more per job than is the case in the Grand Rapids metropolitan area. At a cost of about

\$40,000 per new job, Detroit suburban and exurban communities have higher investments associated with each certificate than is the case in the Grand Rapids area. Average cost per retained job for all Detroit and Grand Rapids municipalities was well below \$20,000 in forgone taxes. Detroit gave up over \$1 million in tax base for each new job. In part, the cost for Detroit is the result of the city's high tax rates; if Detroit's property tax rate was 50 mills (roughly the average of other metropolitan Detroit communities included here) the cost per job would be about \$23,000, still the highest.

For all suburban townships and Detroit suburban cities, the cost in lost property tax revenue for each job ranges from \$13,000 to \$15,700. Among the individual suburban municipalities, Alpine Township paid the most per job, \$19,615, the City of Walker the least at \$4,789. A PA 198 job in Sterling Heights—a Detroit suburb—cost \$19,004, almost double the \$9,620 in Warren, an inner-ring Detroit suburb. Growing suburban townships generally had to give up more property tax revenue per job than established suburban cities, perhaps because townships abated more real as well as personal property.

Proposition 3: Communities using abatements more heavily experience greater economic growth or at least less decline than communities not using abatements.

This proposition is explored first by using all municipalities in the state to assess change in score on the community economic health index; health changes in the two metropolitan areas are then examined. Figures 6, 7, and 8 show mean scores on the community health index in 1980, 1990, and 2000 for three types of

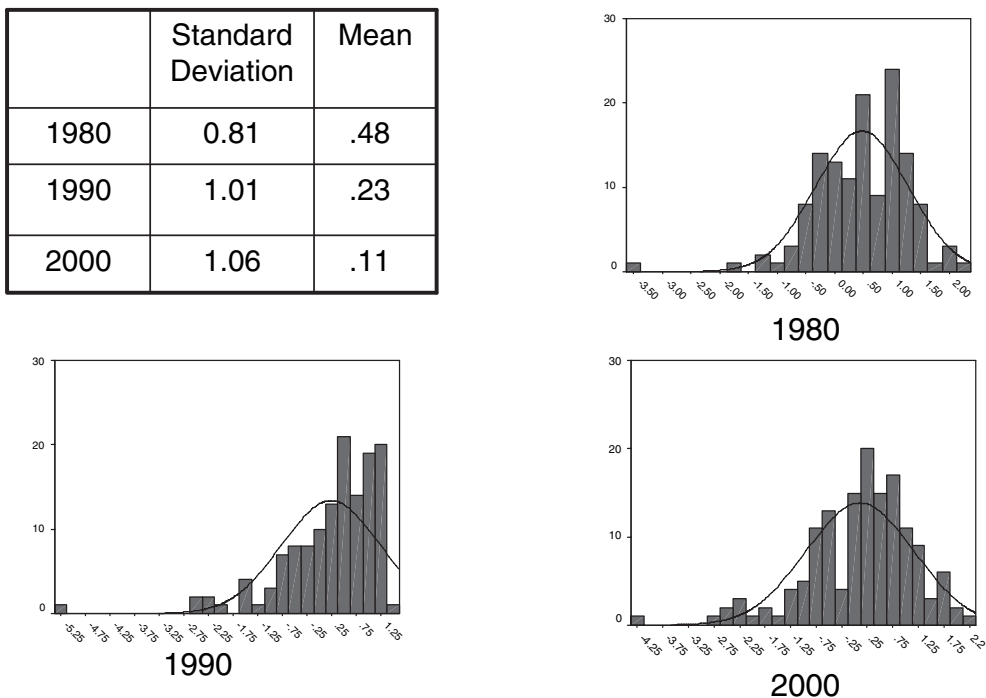
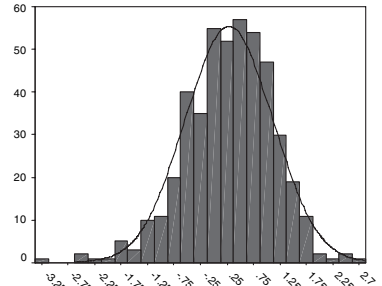
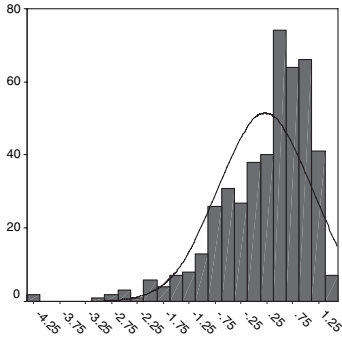


Figure 6. Health Index, Frequent Users

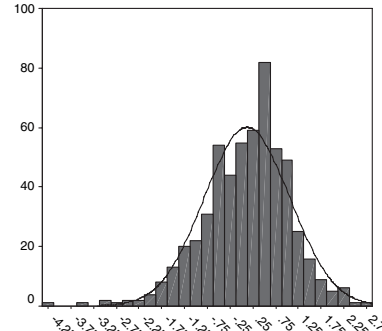
	Standard Deviation	Mean
1980	0.83	.29
1990	0.89	.22
2000	0.94	.12



1980



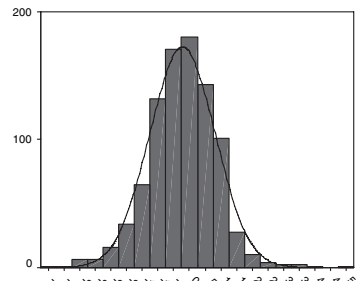
1990



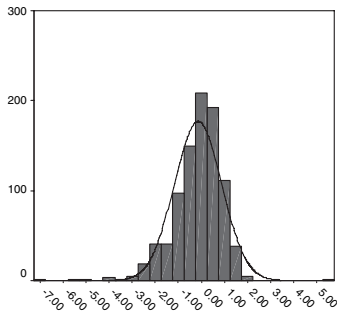
2000

Figure 7. Health Index, Occasional Users

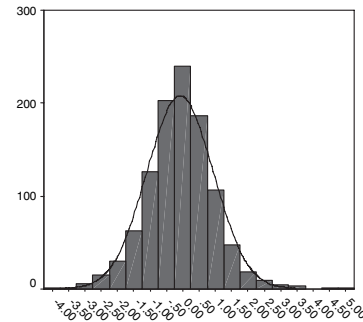
	Standard Deviation	Mean
1980	1.04	-.22
1990	1.03	-.14
2000	1.02	-.08



1980



1990



2000

Figure 8. Health Index Nonusers

municipalities: frequent users (those issuing more than 70 abatements during the history of the program), occasional users (municipalities issuing at least one abatement), and nonusers (those issuing no abatements). Histograms are also included to provide a visual depiction of dispersion in residential health.

Frequent Tax Abatement Users—Communities that have granted numerous tax abatements have community health profiles that indicate a relatively large *decrease* in health over time, as well as increasing dispersion among their relative health scores. It is clear that by 1990 there is a negative skew to the distribution; several of the frequent users have begun to show very low community economic health scores. Relative to occasional users and nonusers, the frequent users have the largest decrease in community health over time. In 1980, mean health is highest for frequent users and they exhibit less dispersion than the other groups of municipalities. By 1990 the frequent and occasional users are almost identical in community health, and by 2000 the occasional users have overtaken the more frequent users in mean health index score.

Occasional Tax Abatement Users—Patterns are slightly different for municipalities using abatements to a more moderate extent. First, while occasional users become increasingly diverse over time, the changes are much smaller than for frequent users. And, while their community economic health index also declines over time, the rate of change is smaller than for frequent users. By 1990 occasional users have almost caught up with the health of the frequent users and by 2000 they have surpassed them, exhibiting the highest average community health of the three groups of municipalities.

Communities making modest use of tax abatements show a health pattern that slowly decreases relative to all other municipalities, although they have become the healthiest communities by 2000. They also remain relatively similar to each other, indicating that the relative change in health is quite uniform, certainly more uniform than changes in health among more frequent users.

Abatement Nonusers—There are several prominent patterns among the abatement nonusers. First, they have the lowest community health levels in all three periods of time. However, they are also the only group that has consistently improved in health over time. While still not as healthy overall, nonusing municipalities show significant improvement in their economic health relative to other communities. They also have increasingly small standard deviations, indicating that this growth pattern has occurred at a similar rate across these communities. In short, they appear to be increasing in health in almost lockstep fashion. Whether they will overtake the frequent and occasional users by the 2010 census is open to debate, but this may well happen.

Abatements and Metropolitan Health Patterns—While the forgoing discussion provides an aggregate sense of abatement and health patterns, an exploration of the two metropolitan areas provides a more detailed picture. Again, since this is essentially a descriptive analysis, no claims are made that change in health indicators is the result of tax abatements.

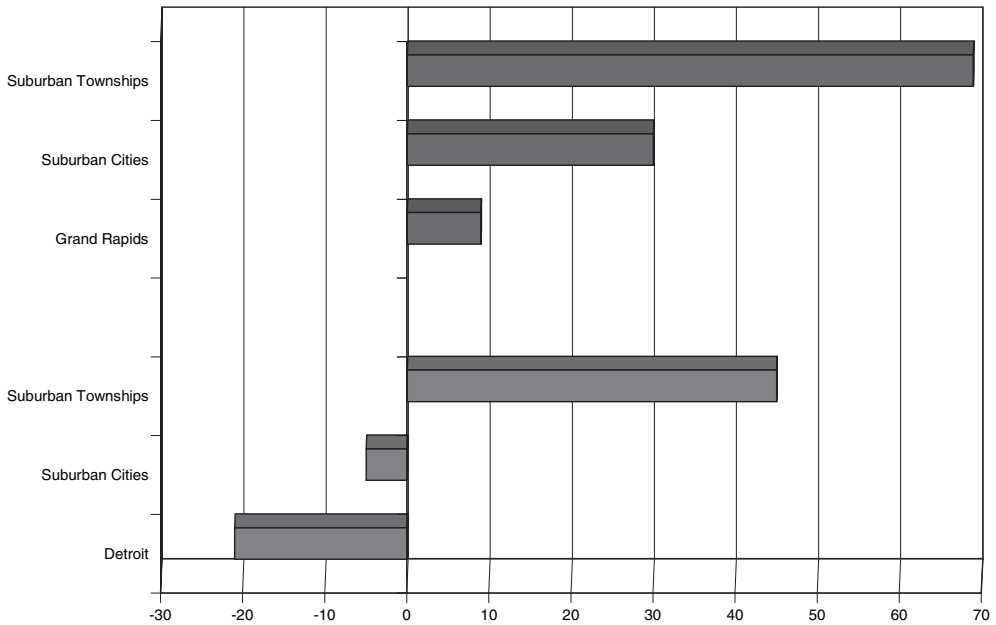


Figure 9. Change in Health Index

It might be expected that there would be a positive relationship between abatement activity and the health index over time. However, this appears not to be the case (Figure 9). Despite their heavy use of abatements, five of the six categories of metropolitan communities showed declining health over time. While it is possible that abatements limited this decline, their effects were clearly not enough to produce increased growth. Only the exurban townships around Detroit showed a slight improvement in the community health index. Central cities in both areas showed the largest declines. It should be noted that while suburban cities in both metropolitan areas had declines in community economic health, they still had positive health scores in 2000.

All areas experienced increases in median family income, the largest absolute gains occurring in the suburban cities and townships. For both metropolitan areas, the gap between central city and suburban incomes is increasing. The Detroit suburbs had greater increases in income than did the Grand Rapids suburbs, however, the pattern for the central cities is the opposite. Changes in housing values follow a similar pattern. Detroit townships saw absolute increases in housing value three times those of Detroit. The ratio for Grand Rapids and its townships is just two to one. The pattern of change in per capita state equalized property value is similar, with Detroit townships gaining per capita tax base at six times the increase in the city of Detroit despite opposite population trends (Figure 10).

While unemployment increased across the board in these communities, Detroit experienced an increase of almost six percentage points (Figure 11). Suburban areas of both central cities saw increases of two percentage points or less. Given population changes over the two decades, the suburbs actually had a net increase in employment while Detroit lost residents and jobs. Similarly, while the number

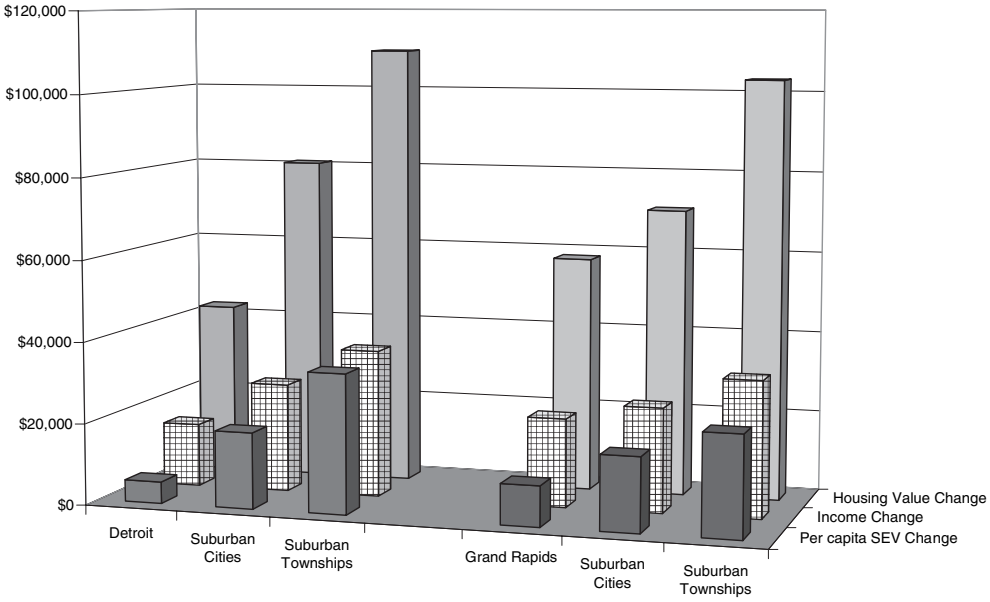


Figure 10. Changes in SEV per Capita, Income and Housing Values

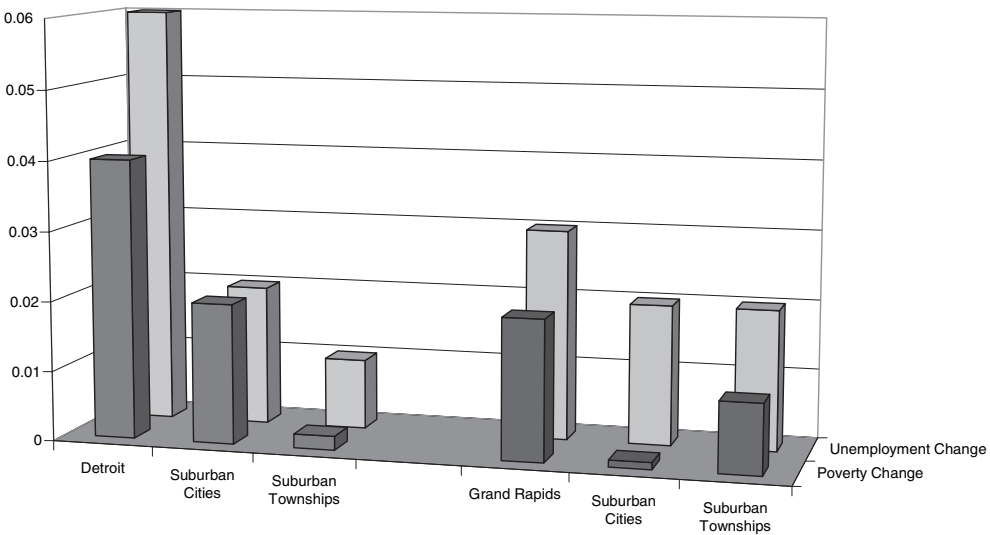


Figure 11. Changes in Poverty and Unemployment Rates

of persons in poverty increased noticeably in all areas, Detroit had the largest increase followed by its suburban cities and Grand Rapids.

Summary

The analysis has presented a wealth of descriptive data on the changing economic health and abatement patterns of municipalities in the state of Michigan; the findings inform an assessment of the inter-city equity affects of PA 198 abatements as they have been implemented in the state. The equity impacts are summarized below by proposition:

Proposition 1 Observed Equity Patterns

- Among those municipalities that have ever given an abatement, distressed communities are no more likely to give abatements than healthy ones.
- Gross use rates are higher for central cities. However, per capita use of abatements is higher in smaller cities and growing townships.
- The record of projected jobs per capita generated is fairly good among smaller or more isolated distressed communities, but not for the larger, most distressed communities.
- Healthy, growing suburbs and townships have the best record in projected investment generated per capita.
- The suburbs get the most investment per capita and have significantly more jobs per capita associated with abatements.
- The projected investment in exurban areas tends to be for new buildings and jobs while investment abated in central cities is for retooling of existing equipment and job retention.

Based on these summary conclusions, it appears that the patterns necessary for Proposition 1 to be supported are not present in Michigan. Abatement use does not appear to favor distressed areas and, if per capita use is considered, the generally healthy exurbs have offered more abatements per capita than central cities and inner-ring suburbs. While central cities like Detroit and Grand Rapids appear to have done relatively well in the number of jobs retained and created, they are also likely to have a higher percentage of abated jobs relative to the workforce. Investment patterns, particularly new development, and new jobs favor exurban areas. In short, the pattern where central cities and distressed areas make the greatest use of abatements to retain and generate new jobs and investment in order to “catch-up” with their suburban and exurban counterparts does not appear to be present. Many communities, of all health profiles, are using abatements and new investment patterns are clearly favoring exurban, greenfield areas. Thus, it can be posited that abatement use among exurbs is supporting the movement of business, people, and infrastructure investment further from existing central cities, thus contributing to sprawl rather than to urban redevelopment.

Proposition 2 Observed Equity Patterns

- Grand Rapids offers numerous abatements, with low levels of forgone revenue, and generates high levels of jobs.
- Detroit has a lower number of abatements, with higher forgone tax cost per abatement, and significantly less job generation.

When investment estimates are considered as forgone tax revenue, it is clear that distressed areas are spending more to create or retain each job. And, central cities such as Detroit and Grand Rapids are having to abate or “buy” larger proportions of jobs relative to their workforce than suburban or exurban communities in the

same metropolitan areas. Grand Rapids, a far healthier city than Detroit, appears to be using abatements more efficiently to generate jobs and investment, suggesting that they can be used in a manner that elicits benefits relative to costs for some communities.

Proposition 3 Observed Equity Patterns

- Overall there is a negative correlation between abatements and improvements in economic health over the 20-year period.
- Municipalities that do not grant abatements have had the greatest relative improvement in the community health index over the 20-year period of the study.
- Frequent abatement users have had the greatest declines in health.
- Occasional abatement users, while also experiencing some health declines, are at the highest health index levels by 2000.
- Central cities, such as Detroit and Grand Rapids, that used abatements very heavily, continued to decline relative to their suburbs and particularly their exurbs.
- The greatest population, tax base, and income increases occurred among exurbs that were regular users of abatements.

These results lead to several speculations about abatement use and the distribution of economic health. One conclusion that could be reached about abatements is that they simply do not have an impact on community health. Municipalities using abatements heavily have worsened relative to other municipalities, even though they have abated to attract and retain jobs. Thus, the forgone tax revenue is greater in these communities but it has not produced community economic health. It is also possible that these cities would have been far worse off had they not offered abatements at all. But it is clear that, even given abatements they are losing ground and in some instances quite significantly. The statistically significant inverse correlation (at the 0.01 level) between total certificates employed and change in community economic health score from 1980 to 2000 (Pearson correlation, -0.18) suggests that abatements are not leveling the playing field. Although neither a causal nor a temporal connection can be concluded, it is clear that there is an association between distress and abatement use, which does not seem to favor stressed municipalities.

On the other hand, occasional use of abatements appears to better stem economic loss. While it cannot be concluded that an absence of abatements causes the greatest economic growth, it is clear that nonuse of abatement has not hindered growth trends in those communities not using abatements at all. This group of municipalities has experienced apparently spontaneous economic growth without forgoing tax revenue, obviously the most efficient way to foster economic growth.

The fact that exurban communities exhibit the highest levels of growth in population, tax base, and income relative to their central cities and inner-ring suburbs suggests that the health gaps among communities are widening. That tax abate-

ment use is widespread among communities of all types indicates that they are exacerbating extant inequities among communities rather than ameliorating them.

Policy Implications

This analysis suggests that Michigan's industrial tax abatements, because they are so widely available, do little to affect the patterns of private investment and job creation in the state. Public Act 198 Tax Abatements appear to contribute to metropolitan decentralization because of their extensive use by peripheral townships. While granting abatements does not guarantee a suburban community improved economic health, this seems to be the result in many instances. Central cities, on the other hand, seem likely to experience economic decline whether or not they grant abatements. This tilting of the playing field away from distressed communities can be seen in the comparisons of central cities. Detroit, in particular, pays a high price in foregone property tax revenue for each job and still lags in economic growth. Other cities, Grand Rapids, for example, appear to use abatements much more effectively with relatively little foregone property tax revenue and improving economic health. In short, it appears that the patterns of tax abatement use are exacerbating existing inter-city inequities in economic health.

A variety of policy implications emanate from and might logically address the patterns found in this research. There are changes in the state enabling legislation for PA 198 abatements that could be made to reduce inequity patterns in the use of abatements and their questionable effects on distressed communities. These include:

- Limit tax abatements to distressed areas, particularly prohibiting the use of abatements in exurban townships except in exceptional circumstances.
- Limit or cap the number of abatements that can be given by an individual municipality in a particular time period.
- Limit the dollar value of the investment that can be abated, particularly for distressed communities.
- Favor applications for abatements that involve new jobs and real property investment, particularly in already urbanized areas.
- Collect outcome data as a state requirement and regularly report that information.
- Require cost-benefit assessments as part of the abatement application process, insuring a consideration of forgone revenues per job retained and created.
- Increase outreach efforts to educate local officials and citizens about the impacts of PA 198 as currently implemented.

Obviously, limiting the use of tax abatements to distressed communities would change the nature of PA 198 from a generalized business-retention program to one more focused on addressing the needs of distressed areas in the state. Given that the extant literature suggests that abatements work more effectively and equitably when targeted in some manner, this change in enabling legislation seems critical.

Setting caps on the number or value of abatements offered also seems desirable. First, this would limit the tendency of distressed central cities such as Detroit to forgo tax revenues at high rates in return for relatively few jobs. Second, given the dire fiscal straits of many municipalities in the state (Citizens Research Council, 1999), state enabling legislation limiting the amount of forgone revenue would put communities in a better bargaining position vis-à-vis businesses that demand abatements (i.e., it would be harder for firms to play cities off against each other for abatements).

As currently used, tax abatements in Michigan primarily subsidize retooling existing facilities in central cities, retaining existing jobs, and in some cases are used to build new industrial facilities in exurban greenfield sites. A state formula that favored applications for new jobs and investment, provided they were being located in urbanized areas, would focus abatements on new development and ensure that public subsidies are not used to develop industrial sites in exurban or rural areas without infrastructure.

Finally, ensuring that the necessary data are available to fully evaluate tax abatement outcomes is critical both in understanding the potential benefits of this use of public dollars but also in targeting of the abatements that do get offered. It may well be that state legislators really do not want to know the effects of abatements, particularly in a legislature that favors west and out-state areas such as Grand Rapids and its suburbs. Yet, local officials or citizen groups, armed with the right data, might be able to apply some pressure on state officials to modify the current PA 198 legislation so that it more effectively allocates incentives and reduces budgetary pressures on already stressed local governments.

Notes

- 1 An earlier version of this paper was presented at the annual meeting of the Southern Political Science Association, New Orleans, January 2005. The research has been supported by grants from the State Policy Center, College of Urban, Labor and Metropolitan Affairs, Wayne State University and from the Land Policy Program, Michigan State University.
- 2 Property values are drawn from 1982, 1991, and 2001 since each point is capturing the prior year's valuation. This allows the property value data to more closely match the decennial census data. Data from 1982 are used instead of 1981 because electronic files were not available until that point.
- 3 The table below shows the top 25 certificate granting municipalities along with their metropolitan area.

Municipality	Certificates	Metro Area
Grand Rapids	522	Grand Rapids
Holland township	478	Grand Rapids
Holland	373	Grand Rapids
Wyoming	261	Grand Rapids
Detroit	258	Detroit
Clinton township	226	Detroit
Kalamazoo	216	Kalamazoo
Kentwood	187	Grand Rapids
Walker	186	Grand Rapids
Battle Creek	182	Kalamazoo
Fraser	173	Detroit
Jackson	167	Jackson
Grand Haven	158	Grand Rapids
Auburn Hills	158	Detroit
Cadillac	149	

Norton Shores	146	Grand Rapids
Sterling Heights	145	Detroit
Midland	134	Saginaw
Coldwater	132	
Spring Lake township	128	Grand Rapids
Muskegon	125	Grand Rapids
Benton township	124	Benton Harbor
Portage	123	Kalamazoo
Chesterfield township	121	Detroit
Sturgis	118	

4 For the factor analysis, the standard SPSS default modes were employed including varimax rotation, listwise deletion of missing data, and principle components analysis. A 0.50 or higher loading was the criteria used for inclusion in a factor. No variable loaded on more than one factor. Factor scores were converted to *f* or standardized scores due to differences in measurement frame and added to create an index score.

5 This value was calculated by multiplying the State Equalized Value of the abated investment times the 2003 property tax rate for the individual municipality and discounting the result (at six percent) over the twelve year life of the abatement.

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Appendix

Factor Analysis: Community Economic Health Index 1980*

Variable	Factor Loading
Percent of residents of working age employed	0.80
Percent of households not in poverty	0.88
Median household income	0.88

*The health index is based on factor analysis from 1980 so that all years include the same variables.